GM 49285

REVERSE CIRCULATION OVERBURDEN DRILLING AND HEAVY MINERAL GEOCHEMICAL SAMPLING, CASA-BERARDI PROPERTY

CAMBIOR INC.

CASA-BERARDI PROPERTY

CASA-BERARDI TOWNSHIP, QUEBEC

REVERSE CIRCULATION OVERBURDEN DRILLING AND HEAVY MINERAL GEOCHEMICAL SAMPLING

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OVERBURDEN DRILLING MANAGEMENT LIMITED

JUNE, 1989

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1. SUMMARY

The report outlines the results of a reverse circulation overburden drilling/heavy mineral geochemical sampling program conducted by Cambior Inc. on its Casa-Berardi property in the Abitibi Greenstone Belt in northwestern Quebec. One hundred and ninety-seven vertical holes were drilled and overburden and bedrock were sampled to test for glacially dispersed mineralization indicative of subcropping bedrock gold deposits and to delineate deformation and/or alteration zones that could host deposits at depth or along strike from the drill holes. Total project costs averaged \$96.04/metre (\$29.27/foot).

The Casa-Berardi property is underlain by Archean-age, greenschist facies rocks that comprise a wedge shaped, basalt-dominated core enveloped on three sides by turbidites. Minor rock units include ultramafic and intermediate volcanics, iron formation and gabbro. The major FC-1 to FC-4 volcanic/sedimentary contacts are characterized by interbedding of the volcanic and sedimentary units and often by brittle shear deformation and hydrothermal alteration, indicating that the contacts are both stratigraphic and structural features. Similar shearing also occurs along three east-northeast trending oblique faults but not along a north-south trending cross fault at the Theo River. The main alteration effects are bleaching of chlorite and introduction of Fe/Mg carbonate and arsenopyrite, especially along the FC-1 contact where it is intersected by one of the east-northeast trending faults. The bleached shear zones appear to have been mistaken for tuff horizons by some previous workers; tuffs are not present and the property has no potential for base metal massive sulphide mineralization. The FC-1 contact lies just 2 km south of the Golden Pond gold deposits and has the same east-west strike as the Casa-Berardi Fault which hosts these deposits. Unfortunately the arsenic enrichment identified along FC-1 and in other areas of the property is not accompanied by gold enrichment as it is at Golden Pond.

Overburden thickness in the drill holes averages 26 m. Quaternary strata are of Late Illinoian to Holocene age. Pockets of southwesterly transported Lower Till of Late Illinoian age are preserved in bedrock valleys and in the lee of bedrock ridges. They are overlain by more extensive Sangamon interglacial and Early Wisconsinan glaciolacustrine sediments of the Missinaibi Formation. Matheson Till of Late Wisconsinan age forms a nearly continuous blanket over the Casa-Berardi

property and is typically in direct contact with bedrock, making it a good sampling medium. Most of the Matheson Till was transported in a south-southeasterly direction following a shift from earlier westerly ice flow; however, the westerly flow appears to be recorded in the lower part of a thick till wedge in a deep bedrock valley along FC-3/FC-4. The Matheson Till is locally supplanted by coeval glaciofluvial sediments associated with the Golden Pond Esker and one small moraine, but not to a degree that significantly affects the excellent exploration coverage provided by the till samples. Glaciolacustrine sand, silt and clay deposited in Lake Ojibway II during ice retreat overlie the Matheson Till and glaciofluvial sediments and are capped by a veneer of Holocene organics.

The visible gold grain counts and gold assays for the overburden heavy mineral concentrates are low considering the high frequency of major shear zones on the property, but match the generally negative bedrock gold geochemistry. Of 112 detected heavy mineral gold anomalies, 97 are nugget or cluster anomalies caused by background gold grains and five others are artificial delicate or occluded gold anomalies generally caused by drill bit milling of auriferous clasts or bedrock, and in one case by laboratory contamination. Only nine anomalies in four holes are true dispersal train-type anomalies, and these are all weak and/or appear to be related to off-property sources. The gold in two of the four drill holes is attributed to reworked dispersion from the Golden Pond deposits. One of the other occurrences is attributed to a known, subeconomic source along FC-1, and one is attributed to an unknown, subeconomic source near FC-2.

Heavy mineral copper, zinc and silver anomalies on the property are typically weak and all of the dispersal train-type anomalies are indicative of minor, vein-hosted mineralization without a gold association. Heavy mineral arsenic anomalies are very common, and match the bedrock arsenic anomalies both in their distribution and in their unfortunate lack of a significant gold association.

The reverse circulation drilling program has considerably downgraded the potential for near-surface gold mineralization on the Casa-Berardi property. Future work should be directed toward testing the bedrock arsenic mineralization, especially on FC-1, for gold-arsenic zoning that could indicate a potential for deep gold mineralization related to the brittle/ductile shear transition.

2. INTRODUCTION

2.1 Project Outline

From January 2, 1989 to February 15, 1989 Cambior Inc. conducted a 197 hole reverse circulation drilling program for the purpose of heavy mineral geochemical sampling of Quaternary overburden and chip sampling of the Archean bedrock subcrop on its joint venture Casa-Berardi mineral property in the Abitibi Greenstone Belt in northwestern Quebec (Figs. 1, 2). The property is located 1.5 km south of the Inco/Golden Knight shear-hosted Golden Pond gold deposits that occur along the east-west trending Casa-Berardi Fault.

The objectives of the drilling program were to test the overburden for glacially dispersed mineralization indicative of subcropping, shear-hosted gold deposits and to delineate zones of intense bedrock deformation and/or alteration that could host deposits at depth or along strike. Most of the holes (CB-89-01 to 190) were drilled at reconnaissance scale (Plans 1, 2) to test three conductive corridors -- FC-1, FC-2 and FC-3/FC-4 (Fig. 3) -- that cross the property. These targets were believed by some of Cambior's associates (Landry and Gauthier, 1988) to represent sheared volcanic/sedimentary contacts, the primary target being FC-1 in the north which trends parallel to and lies 3 km south of the Casa-Berardi Fault. The last seven holes (CB-89-191 to 197) were drilled at detailed scale to pinpoint the source of gold dispersion identified in reconnaissance hole No. 109 on FC-1.

Cambior contracted Overburden Drilling Management Limited (ODM) of Nepean, Ontario to manage the program and Heath and Sherwood Drilling (1986) Inc. of Kirkland Lake, Ontario to perform the drilling using two rigs. Geologists D. Holmes and S. Averill of ODM in consultation with Cambior's M.-F. Bugnon planned the hole layout. Geologists S. Averill, K. MacNeil, D. Holmes, P. Collins and R. Turner, together with geotechnicians M. Crawford, K. Graham, B. Rudnicki, H. Eder and G. Chase spotted, logged (Appendix A) and sampled the drill holes and supervised the drilling at various periods during the program.

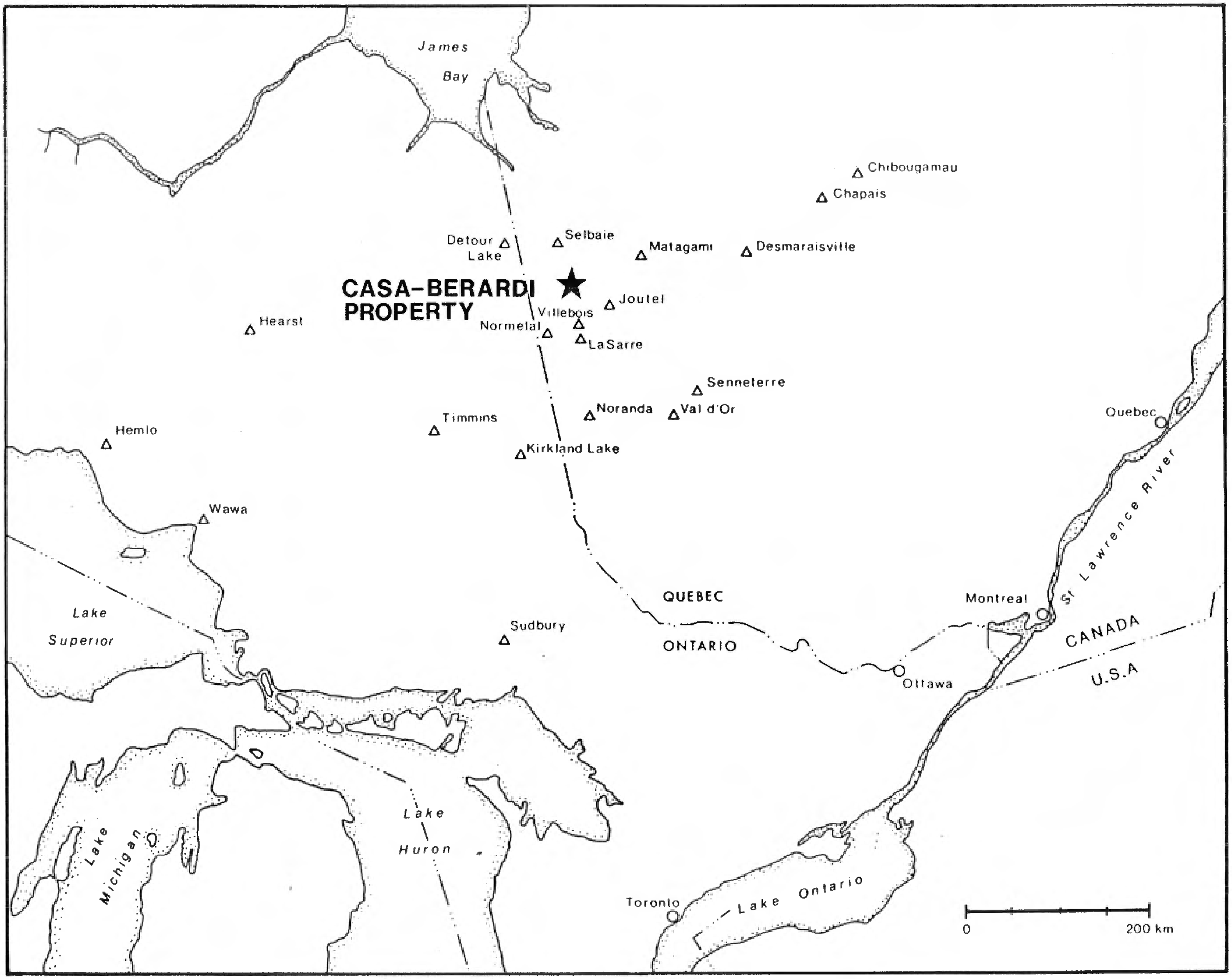
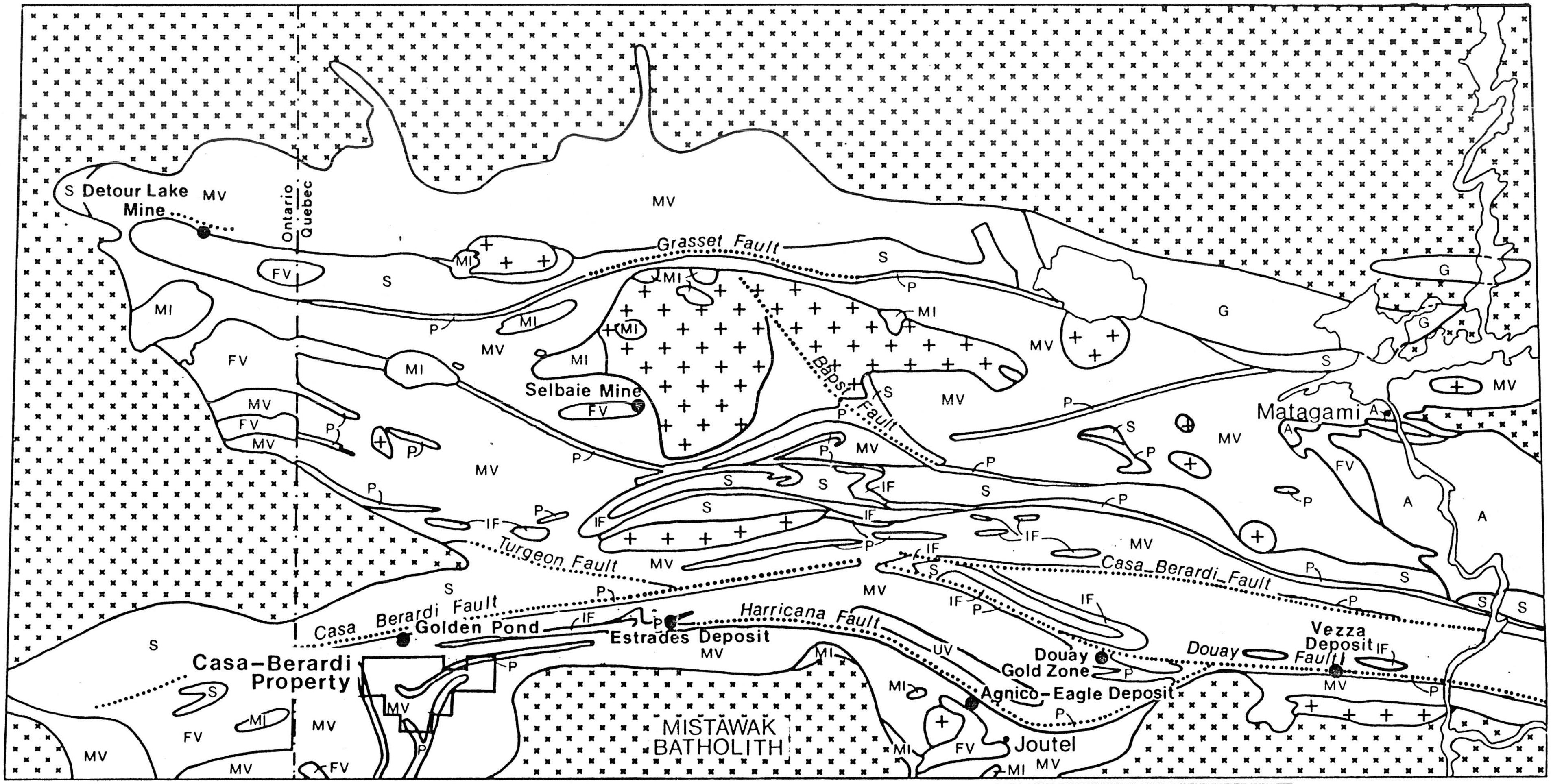


Figure 1 - Casa-Berardi Property Location



LEGEND

+	Massive granite, syenite, monzonite
×	Gneissic tonalite, granodiorite, trondhjemite
G	Gneiss, migmatite
A	Stratiform anorthosite complex
MI	Mafic intrusive
S	Metasediments
P	Pyroclastics, volcaniclastics, shales, exhalites (airborne EM conductors)
FV	Felsic metavolcanics
MV	Mafic metavolcanics
UV	Ultramafic metavolcanics
IF	Iron formation

0 10 20 km

Figure 2 - Geological Setting of the Casa-Berardi Property

(Source: Lacroix, 1986)

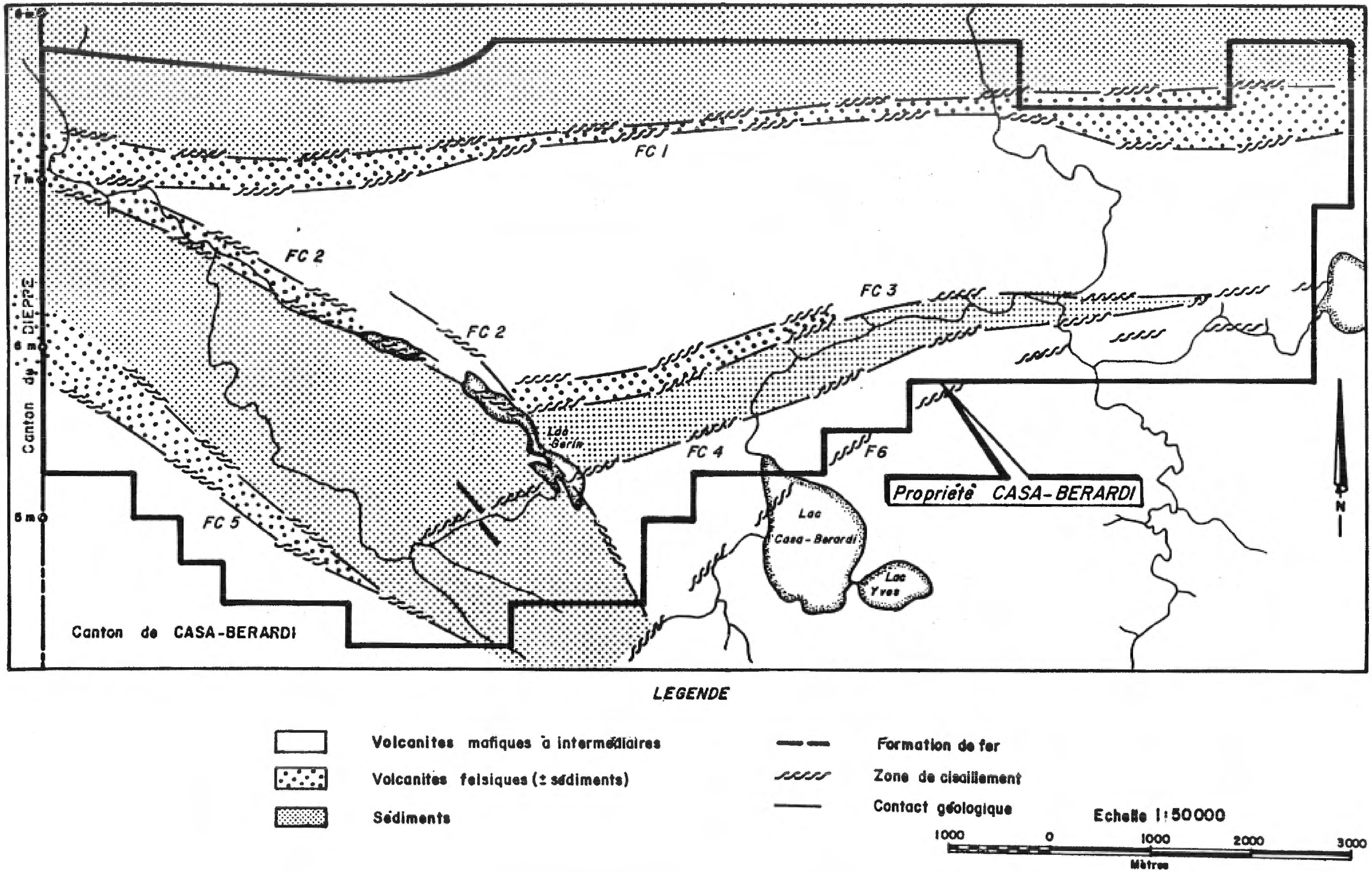


Figure 3 - Geology of the Casa-Berardi Property
(Source: Landry and Gauthier, 1988)

All of the drill holes penetrated the entire overburden section and were extended approximately 1.5 metres into bedrock. In total, 1521 overburden and 209 bedrock samples were collected (Table 1).

Heavy mineral concentrates (Appendix B) were prepared from the overburden samples at ODM's laboratories in Rouyn-Noranda, Quebec and Nepean, Ontario. Gold particles sighted during processing were measured to determine their individual contributions to the overall gold content of the concentrates and were classified according to their distance of glacial transport (Appendix C).

The bedrock chip samples were logged under a binocular microscope (Appendix D) and were analyzed for the major oxides; their lithologies and chemistry were then used to map the property geology (Plan 3). Subsamples of the bedrock chips and 3/4 splits of the heavy mineral concentrates were analyzed for gold, arsenic, copper, zinc and silver (Appendices E and F). Subsequently the 1/4 splits of some concentrates that unexpectedly yielded gold anomalies were panned and submitted for check analysis (Appendix G).

This report documents the work performed and results obtained. A detailed analysis of local Archean stratigraphy and structure and Quaternary stratigraphy is included and used in the interpretation of the bedrock and heavy mineral geochemistry.

2.2 Principles of Deep Overburden Geochemistry in Glaciated Terrain

During the Pleistocene epoch of the Quaternary period, the crowns of all ore bodies that subcropped beneath the continental ice sheets of North America were eroded and dispersed down-ice in the glacial debris. The dispersal mechanisms were systematic (Averill, 1978) and the resulting ore "trains" in the overburden are generally long, thin and narrow but most importantly are several hundred times larger than the subcrop of the parent ore bodies. These large trains can be used very effectively to locate the remaining roots of the ore bodies.

Hole Number	Grid Co-ordinates		Metres Drilled		Hole Depth (metres)	Samples Collected	
			Overburden	Bedrock		Overburden	Bedrock
CB-89- 01	L54E;	25+00N	5.5	1.5	7.0	2	1
02	48+25E;	23+75N	12.4	1.1	13.5	7	1
03	L52E;	26+00N	13.7	2.3	16.0	3	1
04	L50E;	23+00N	4.9	2.1	7.0	2	1
05	L50E;	26+50N	6.5	1.0	7.5	2	1
06	L52E;	22+25N	7.0	2.0	9.0	2	1
07	L44E;	16+25N	19.0	1.5	20.5	1	1
08	54+75E;	21+00N	6.0	1.5	7.5	1	2
09	L42E;	13+00N	1.3	1.2	2.5	0	1
10	57+75E;	TL20N	6.0	1.0	7.0	1	1
11	38+75E;	14+50N	9.2	1.3	10.5	2	1
12	L60E;	22+00N	22.5	0	22.5	10	0
12A	L60E;	21+97N	20.0	1.5	21.5	6	1
13	L36E;	16+00N	20.6	1.2	21.8	2	1
14	L62E;	21+25N	24.5	1.0	25.5	3	1
15	L34E;	20+50N	36.0	2.0	38.0	18	1
16	65+25E;	20+00N	19.0	1.5	20.5	3	1
17	L54E;	16+50N	6.1	2.9	9.0	2	2
18	L62E;	26+00N	8.2	1.8	10.0	1	1
19	14+50E;	BL 0	28.0	1.5	29.5	5	1
20	L64E;	25+00N	35.0	2.5	37.5	12	1
21	L0;	8+25N	15.2	1.8	17.0	1	1
22	L66E;	24+50N	23.5	2.0	25.5	3	1
23	L2E;	12+75N	9.0	1.1	10.1	1	1
24	L47E;	27+50N	13.5	2.0	15.5	5	1
25	L6E;	15+50N	8.5	2.0	10.5	1	1
26	L42E;	22+00N	10.2	1.8	12.0	1	1
27	L8E;	15+00N	14.6	2.4	17.0	3	2
28	L40E;	22+50N	12.0	2.0	14.0	1	1
29	L10E;	14+25N	5.3	2.2	7.5	0	1
30	L38E;	0+25N	21.5	1.5	23.0	8	1
31	12+75E;	13+00N	31.7	1.3	33.0	6	1
32	L42E;	0+75N	45.7	2.3	48.0	18	1
33	L11E;	17+75N	24.0	1.5	25.5	2	1
34	L46E;	BL 0	86.8	3.2	90.0	36	2
35	13+25E;	20+75N	28.3	0.7	29.0	7	1
36	34+25E;	0+25N	6.0	1.5	7.5	1	1
37	15+75E;	19+75N	20.4	2.1	22.5	2	1
38	30+25E;	3+00S	29.0	2.0	31.0	14	1
39	19+95E;	22+40N	13.5	-	13.5	2	0
39A	19+80E;	22+40N	23.3	1.7	25.0	7	1

Table 1 - Drilling and Sampling Statistics

Hole Number	Grid Co-ordinates		Metres Drilled: Overburden	Metres Drilled: Bedrock	Hole Depth (metres)	Samples Collected: Overburden	Samples Collected: Bedrock
CB-89- 40	L26E;	4+25S	50.6	3.4	54.0	20	2
41	L18E;	15+50N	7.1	1.4	8.5	1	1
42	L22E;	4+50S	35.9	3.1	39.0	4	1
43	L16E;	23+25N	15.8	1.7	17.5	5	1
44	L22E;	0+25N	7.5	1.8	9.3	1	1
45	L10E;	21+75N	22.5	2.0	24.5	4	1
46	L14E;	7+50S	25.0	1.5	26.5	7	1
47	5+00E;	TL20N	24.1	1.4	25.5	5	1
48	L18E;	7+00S	51.6	2.6	54.2	17	1
49	L8E;	19N	34.4	1.1	35.5	11	1
50	23+50E;	12S	48.3	1.7	50.0	14	1
51*	L9E;	20+60N	13.0	2.0	15.0	4	1
52	20+50E;	13+50S	32.2	1.8	34.0	6	1
53*	4+50E;	21+25N	20.5	2.0	22.5	7	1
54	L10E;	8+00S	32.5	2.0	34.5	16	1
55	15+00E;	16+50N	2.9	1.6	4.5	0	1
56	L6E;	8+25S	30.4	1.6	32.0	12	1
57	15+50E;	11N	25.7	0.8	26.5	8	1
58	L24E;	7+75N	8.7	1.8	10.5	1	1
59	L18E;	TL10N	23.0	1.0	24.0	3	1
60	L26E;	6+50N	7.8	1.7	9.5	1	1
61	21+00E;	9+25N	22.3	1.7	24.0	2	1
62	29+00E;	5+50N	6.7	1.5	8.2	1	1
63	L44E;	28+50N	18.7	1.3	20.0	10	1
64	31+25E;	4+00N	12.5	1.5	14.0	2	1
65	L46E;	24+50N	8.9	1.6	10.5	4	1
66	L50E;	1+00N	71.1	2.4	73.5	37	2
67	L44E;	25+25N	19.9	1.6	21.5	12	1
68	50+50E;	2+75S	39.0	1.5	40.5	20	1
69	L42E;	26+00N	38.1	2.4	40.5	16	1
70	L54E;	BL 0	40.0	1.5	41.5	10	1
71	39+50E;	27+00N	27.2	1.3	28.5	11	1
72	L54E;	4+00S	47.0	2.0	49.0	16	1
73	L36E;	28+50N	13.8	2.2	16.0	6	1
74	L58E;	BL 0	52.2	3.3	55.5	29	2
75	L38E;	23+50N	20.6	1.9	22.5	7	1
76	L58E;	4+50N	65.8	2.2	68.0	33	1
77	L36E;	24+00N	22.7	1.8	24.5	3	1
78	L62E;	4+00N	63.5	2.0	65.5	28	1
79	33+00E;	25+00N	40.4	1.6	42.0	7	1
80	L62E;	BL 0	50.2	2.3	52.5	24	1

*West Grid

Table 2 - Drilling and Sampling Statistics (cont'd)

Hole Number	Grid Co-ordinates		Metres Drilled		Hole Depth (metres)	Samples Collected	
			Overburden	Bedrock		Overburden	Bedrock
CB-89- 81	L30E;	26+00N	27.4	1.6	29.0	7	1
82	L66E;	3+00N	47.8	1.7	49.5	23	1
83	55+00E;	28+50N	19.1	0.9	20.0	12	1
84	L70E;	1+25N	72.0	2.0	74.0	33	1
85	L52E;	29+00N	22.7	0.8	23.5	10	1
86	L74E;	1+75N	57.0	1.5	58.5	10	1
87	24+25E;	24+00N	12.6	1.9	14.5	2	1
88	L50E;	6+75S	26.6	1.9	28.5	4	1
89	27+00E;	23+25N	16.9	1.6	18.5	1	2
90	46+50E;	4+00S	30.9	1.6	32.5	11	1
91	L30E;	22+25N	14.9	2.1	17.0	5	1
92	46+25E;	7+00S	34.0	1.5	35.5	8	1
93	L32E;	21+50N	7.1	1.9	9.0	3	1
94	42+25E;	3+25S	73.2	1.8	75.0	33	1
95	47+00E;	14+50N	1.5	1.5	3.0	1	1
96	38+50E;	3+75S	72.2	1.8	74.0	39	1
97	L50E;	17+50N	9.6	1.9	11.5	3	1
98	34+50E;	3+75S	10.2	1.8	12.0	1	1
99	L50E;	13+00N	9.1	1.4	10.5	1	1
100	L30E;	11+00S	50.2	1.3	51.5	11	1
101	L54E;	5+50N	33.5	1.5	35.0	11	1
102	34+25E;	9+75S	40.5	2.0	42.5	16	1
103	51+00E;	8+25N	26.9	1.1	28.0	6	1
104	38+50E;	9+50S	43.5	2.0	45.5	17	1
105	L48E;	TL10N	10.6	1.9	12.5	3	1
106	L42E;	8+00S	34.8	1.7	36.5	14	1
107	45+00E;	11+25N	18.8	2.2	21.0	9	1
108	16+50E;	15+25S	30.0	1.5	31.5	4	1
109	32+50E;	17+50N	20.1	1.9	22.0	12	1
110	L10E;	1+25S	32.5	1.5	34.0	10	1
111	L30E;	18+50N	0.5	2.0	2.5	0	1
112	L2E;	2+25S	39.4	2.1	41.5	10	1
113	27+50E;	19+50N	3.0	1.5	4.5	2	2
114	L2W;	2+25S	34.5	1.5	36.0	14	1
115	L26E;	16+25N	3.0	1.5	4.5	1	1
116	L6E;	2+25S	49.8	1.7	51.5	18	1
117	L24E;	17N	14.3	1.7	16.0	4	1
118*	L14E;	14+50N	47.2	1.3	48.5	10	1
119	L22E;	17+50N	4.4	1.6	6.0	1	1
120*	L9E;	16+50N	17.3	2.2	19.5	4	1

*West Grid

Table 1 - Drilling and Sampling Statistics (cont'd)

Hole Number	Grid Co-ordinates		Metres Drilled Overburden	Metres Drilled Bedrock	Hole Depth (metres)	Samples Collected Overburden	Samples Collected Bedrock
CB-89- 121	20+50E;	18+25N	5.0	2.0	7.0	2	1
122*	5E;	18+00N	6.1	2.4	8.5	2	1
123	L22E;	21+25N	26.5	1.5	28.0	5	1
124*	3E;	17+00N	13.6	2.9	16.5	6	1
125	L50E;	5+00N	18.0	1.5	19.5	3	1
126*	1+00E;	16+25N	9.5	2.5	12.0	3	1
127	L86E;	1+75	74.2	2.8	77.0	35	2
128*	L4E;	25+00N	34.1	1.4	35.5	18	1
129	L90E;	4+00N	49.0	1.5	50.5	20	1
130*	L4E;	25+00N	21.8	2.2	24.0	7	1
131	L82E;	4+00N	49.7	1.8	51.5	12	1
132*	L7E;	26+75N	22.4	2.6	25.0	5	1
133	L78E;	5+75N	67.5	2.5	70.0	30	1
134*	L3W;	15+00N	31.1	1.9	33.0	8	1
135	79+25E;	8+75N	31.6	1.6	33.2	8	1
136*	L5W;	13+75N	27.9	2.1	30.0	9	1
137	L82E;	7+75N	57.2	1.3	58.5	24	1
138*	L8W;	13+50N	13.1	2.9	16.0	1	2
139	L86E;	6+00N	60.0	1.5	61.5	30	1
140*	L6W;	18+00N	24.8	2.2	27.0	10	1
141	L90E;	8+50N	42.8	1.7	44.5	24	1
142*	L10W;	15+75N	12.6	2.4	15.0	2	1
143	L94E;	7+00N	49.6	2.2	51.8	18	1
144*	L4W;	18+00N	22.1	1.9	24.0	6	1
145	L82E;	21+75N	36.0	1.5	37.5	14	1
146*	L2W;	19+00N	15.7	2.3	18.0	4	1
147	L84E;	21+75N	17.5	1.5	19.0	1	1
148*	L12E;	18+25N	10.1	1.9	12.0	2	1
149	L86E;	21+00N	27.0	2.5	29.5	5	1
150*	L11E;	12+75N	32.9	1.6	34.5	7	1
151	L88E;	TL20N	10.2	1.6	11.8	2	1
152*	L8E;	12+75N	41.1	2.4	43.5	2	1
153	L90E;	19+25N	5.0	2.0	7.0	0	1
154*	L5E;	11+25N	30.9	1.6	32.5	9	1
155	L80E;	22+50N	29.5	1.5	31.0	8	1
156*	L2E;	TL10N	42.4	2.1	44.5	10	1
157	78+50E;	23+00N	40.0	1.3	41.3	16	1
158*	L2W;	TL10N	33.0	1.5	34.5	2	1
159	L76E;	24+50N	44.0	2.5	46.5	22	1
160*	L2E;	20+50N	16.0	1.5	17.5	5	1

* West Grid

Table 1 - Drilling & Sampling Statistics (cont'd)

Hole Number	Grid Co-ordinates		Metres Drilled Overburden	Metres Drilled Bedrock	Hole Depth (metres)	Samples Collected Overburden	Samples Collected Bedrock
CB-89- 161	L88E;	23+50N	21.2	1.8	23.0	4	1
162*	L2W;	23+50N	8.7	1.8	10.5	1	1
163	L94E;	26+50N	49.3	1.7	51.0	18	1
164	L0;	4+00N	41.8	1.7	43.5	15	1
165	L98E;	25+50N	31.2	1.6	32.8	9	1
166	LO;	13+75N	6.6	1.9	8.5	1	1
167	L96E;	LT20N	32.6	1.9	34.5	12	1
168	L4E;	16+50N	26.0	1.5	27.5	9	1
169	L2E;	17+00N	23.0	1.5	24.5	7	1
170	L2E;	20+75N	13.3	1.7	15.0	2	1
171	L0;	17+50N	27.4	1.6	29.0	13	1
172	L4E;	4+50N	16.7	1.8	18.5	1	1
173	L8E;	4+50N	19.0	2.0	21.0	2	2
174	L63E;	7+50N	26.8	1.7	28.5	9	1
175	L70E;	5+00N	31.2	1.8	33.0	1	1
176	L70E;	9+00N	29.3	1.7	31.0	2	1
177	L74E;	12+00N	13.0	1.5	14.5	2	1
178	76+75E;	TL10N	28.0	1.5	29.5	11	1
179	L74E;	8+00N	49.5	1.5	51.0	17	1
180	L86E;	24+75N	41.6	1.9	43.5	15	1
181	L72E;	23+50N	24.0	1.5	25.5	10	1
182	L92E;	22+25N	18.5	2.0	20.5	4	1
183	L68E;	23+50N	25.2	1.8	27.0	3	1
184	L94E;	21+25N	11.2	1.8	13.0	1	1
185	L69E;	14+50N	20.4	1.6	22.0	3	1
186	L66E;	16+00N	24.8	1.7	26.5	9	1
187	L64E;	17+00N	8.5	1.5	10.0	3	1
188	L68E;	18+50N	45.8	1.7	47.5	11	1
189	L61E;	17+50N	3.5	2.0	5.5	1	1
190	57+75E;	15N	4.5	2.5	7.0	0	1
191	32+25E;	18+50N	8.6	2.4	11.0	5	1
192	33+00E;	TL 20N	8.7	1.8	10.5	1	1
193	31+00E;	20+25N	3.4	1.6	5.0	0	1
194	31+00E;	21+00N	11.2	2.3	13.5	6	1
195	L30E;	21+00N	3.5	2.5	6.0	0	1
196	28+50E;	21+00N	4.0	2.0	6.0	1	1
197	27+25E;	21+00N	4.5	1.5	6.0	2	1
TOTALS			5,117.6	354.9	5472.5	1,521	209

*West Grid

Table 1 - Drilling and Sampling Statistics (cont'd)

Because the dispersal trains originated at the base of the ice, they are either partly or entirely buried by younger, nonanomalous glacial debris. Most trains are confined to the bottom layer of debris deposited during glacial recession -- the basal till. In fact, the sampling of glacial overburden for exploration purposes is commonly referred to as "basal till sampling". It is important to note, however, that in areas affected by multiple glaciations the bottom layer of debris in the overburden section may be only the lowermost of several stacked basal tills, and that a dispersal train may occur at any level within any one of the basal till horizons. Consequently, the term "basal till sampling" is not synonymous with the collection of samples from the base of the overburden section. Moreover, the term is not strictly correct because significant glacial dispersal trains can occur in formations other than basal till.

From the foregoing statements it can be seen that glacial dispersion and glacial stratigraphy are interdependent. Consequently, the effectiveness of overburden sampling as an exploration method is related to the ability of the sampling equipment to deliver stratigraphic information from the unconsolidated glacial deposits. In areas of deep overburden, including most of the Abitibi Greenstone Belt in northwestern Quebec, drills must be used. Most drills have been designed to sample bedrock and are unsuitable for overburden exploration, but in the last fifteen years rotasonic coring rigs and reverse circulation rotary rigs have been developed to sample the overburden as well as the bedrock. Both drills provide accurate stratigraphic information throughout the hole and also deliver large samples that compensate for the natural inhomogeneity of glacial debris.

Reverse circulation rotary rigs are much more widely used in the Abitibi than are rotasonic coring rigs. They employ dual-tube pipe and a tricone bit with the outer pipe acting as a casing to contain the drill water for recirculation and to prevent contamination of samples by material caving from overlying sections. Air and water are injected at high pressure through the annulus between the outer and inner pipes to deliver a continuous sample of the entire overburden section through the small inner pipe (Fig. 4). The sample is disturbed but returns to surface instantly, and the precise positions of stratigraphic contacts can be identified. Full sample recovery is possible in all formations regardless of porosity or consistency, although sample loss due to blow-out commonly occurs in the first 1 to 3 metres of the hole until a sediment seal is made around the outer pipe.

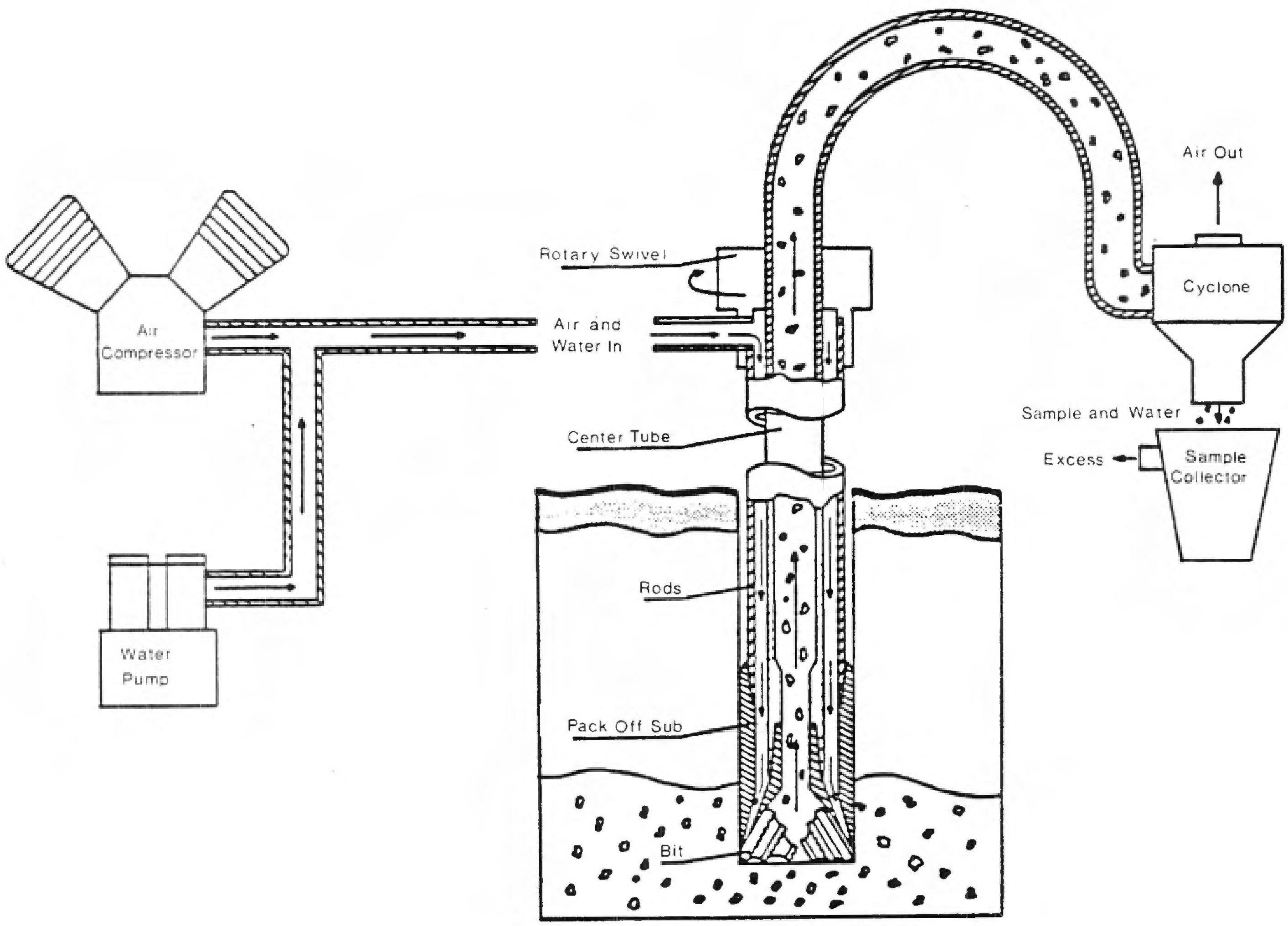


Figure 4 - Schematic Diagram of a Typical Reverse Circulation Rotary Drilling System

Reverse circulation holes are normally extended 1.5 metres into bedrock. Cuttings of maximum 1 cm size are obtained. These cuttings are used to determine the bedrock stratigraphy, structure and geochemistry and are also compared to the till clasts to help determine ice flow directions and glacial dispersal patterns.

Most of the glacial overburden in Canada is fresh, and metals in the overburden occur in primary, mechanically dispersed minerals rather than in secondary chemical precipitates. While ore mineral dispersal trains are very large, they are also weak due to dilution by glacial transport and are difficult to identify from a normal "soil" analysis of the fine fraction of the samples. Consequently, heavy mineral concentrates are prepared to amplify the primary anomalies, and analysis of the fines is normally reserved for areas where significant post-glacial oxidation is evident. The heavy mineral concentrates are very sensitive, and special care must be taken to avoid the introduction of contaminants into the samples. On gold exploration programs, it is advantageous to separate and examine any free gold particles because most gold anomalies in heavy mineral concentrates are caused by background nugget grains that are of no interest.

2.3 Property Description and Access

The Casa-Berardi property consists of 315 contiguous mining claims in the north half of Casa-Berardi Township extending eastward from the western township boundary (Fig. 5, Table 2). The property was staked in 1981 and 1982 by Newmont Exploration Ltd. and is now jointly owned by Newmont and Cambior Inc. Cambior's interest in the property was originally held by SOQUEM -- Newmont's joint venture partner -- and was acquired in July, 1986 when Cambior was assigned SOQUEM's assets. Both Sphinx Mining Inc. and Goldstack Resources Ltd. presently have a right to earn minority interests in the property through exploration expenditures. They funded the present reverse circulation drilling program.

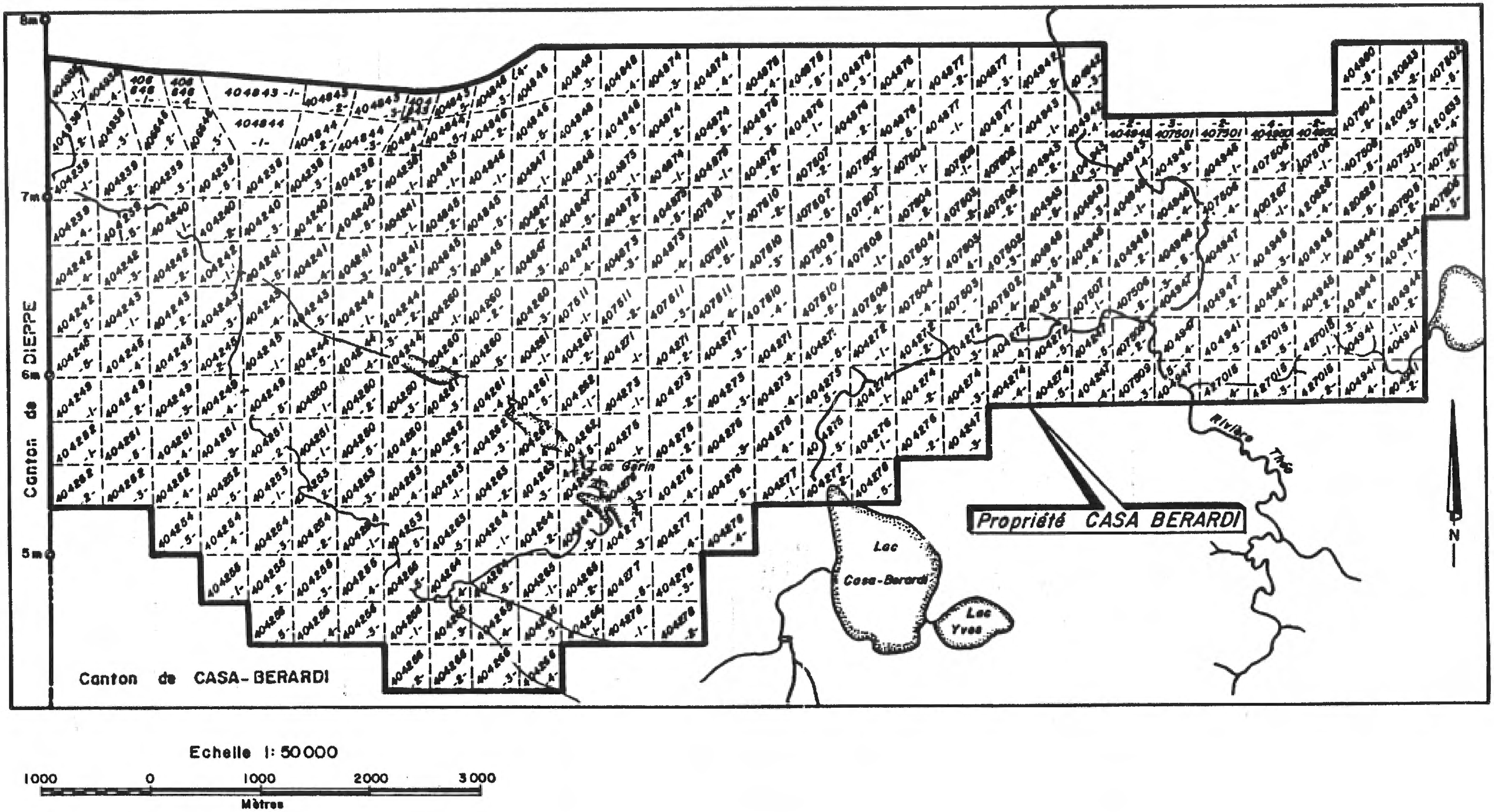


Figure 5 - Casa-Berardi Property Claim Map

LICENSE NO.	CLAIM NO.	TOWNSHIP	LICENSE NO.	CLAIM NO.	TOWNSHIP
400266	2 and 3	Casa-Berardi	404845	1 to 5	Casa-Berardi
400267	1	Casa-Berardi	404846	1 to 5	Casa-Berardi
404238	1 to 5	Casa-Berardi	404847	1 to 5	Casa-Berardi
404239	1 to 5	Casa-Berardi	404848	1 to 5	Casa-Berardi
404240	1 to 5	Casa-Berardi	404873	1 to 5	Casa-Berardi
404241	1 to 5	Casa-Berardi	404874	1 to 5	Casa-Berardi
404242	1 to 5	Casa-Berardi	404875	1 to 5	Casa-Berardi
404243	1 to 5	Casa-Berardi	404876	1 to 5	Casa-Berardi
404244	1 to 5	Casa-Berardi	404877	1 to 4	Casa-Berardi
404245	1 to 5	Casa-Berardi	404940	1 to 5	Casa-Berardi
404247	3 to 5	Casa-Berardi	404941	1 to 5	Casa Berardi
404249	1 to 5	Casa-Berardi	404942	2 to 5	Casa-Berardi
404250	1 to 5	Casa-Berardi	404943	1 to 5	Casa-Berardi
404251	1 to 5	Casa-Berardi	404944	1 to 5	Casa-Berardi
404252	1 to 5	Casa-Berardi	404945	1 to 4	Casa-Berardi
404253	1 to 5	Casa-Berardi	404946	1, 3 to 5	Casa-Berardi
404254	1 to 5	Casa-Berardi	404947	1 to 5	Casa-Berardi
404255	1 to 5	Casa-Berardi	404948	1 to 5	Casa-Berardi
404256	1 to 5	Casa-Berardi	404949	1, 2 and 5	Casa-Berardi
404260	1 to 5	Casa-Berardi	404950	2, 4 and 5	Casa-Berardi
404261	1 to 5	Casa-Berardi	406646	1 to 4	Casa-Berardi
404262	1 to 5	Casa-Berardi	407501	2, 3 and 5	Casa-Berardi
404264	1 to 5	Casa-Berardi	407502	1 to 5	Casa-Berardi
404265	1 to 5	Casa-Berardi	407503	1 to 4	Casa-Berardi
404266	1 to 4	Casa-Berardi	407504	1 to 5	Casa-Berardi
404271	1 to 5	Casa-Berardi	407505	1, 2 and 5	Casa-Berardi
404272	1 to 5	Casa-Berardi	407506	1, 3 to 5	Casa-Berardi
404273	1 to 5	Casa-Berardi	407507	1 to 5	Casa-Berardi
404274	1 to 5	Casa-Berardi	407508	1, 2 and 5	Casa-Berardi
404275	1 to 5	Casa-Berardi	407509	2, 3 and 5	Casa-Berardi
404276	1 to 5	Casa-Berardi	407510	1 to 5	Casa-Berardi
404277	1 to 5	Casa-Berardi	407511	1 to 5	Casa-Berardi
404278	1 to 5	Casa-Berardi	420628	4 to 5	Casa-Berardi
404843	1 to 5	Casa-Berardi	420633	2, 3 and 4	Casa-Berardi
404844	1 to 5	Casa-Berardi	420715	1 to 5	Casa-Berardi

Table 2 - List of Mining Claims

Access to the centre of the property is gained from LaSarre by proceeding north on Highway 393 through Villebois, then 20 km further northward on the Selbaie Road, then proceeding northwestward for 27 km along the Casa-Berardi Road that accesses the Golden Pond Mine, and thence 10 km eastward along a gravel logging road. The drill camp was established along this logging road adjacent to Lac Gérin. A network of unmaintained logging roads provides truck access throughout the centre of the property (Plan 1). Where necessary, tractor roads were cut and bulldozed to hole sites. Daily access to the rigs was by truck, snowmobile, and muskeg tractor.

Hole sites were predetermined from geophysics and were located in the field using 1986 stereo air photos at 1:15,000 scale in conjunction with three existing grids (Plans 1, 2): 1) the western part of the main grid, with north-south cross lines at 200 m intervals added in 1986 to an east-west base line cut in 1981, all still in good condition and herein called the New Main Grid; 2) the eastern part of the main grid, herein called the Old Main Grid because it was all cut in 1981 and is now in poor condition; and 3) an old western grid, herein called the West Grid, cut in 1981 and now in poor condition, with a northwest trending base line and cross lines at 100 m intervals. The base line and several tie lines of the New Main Grid and Old Main Grid were re-picketed at the start of the present program to facilitate hole spotting, and tie lines 10N, 15N and 20N of the New Main Grid were extended westward through the West Grid. Unfortunately the line cutting contractor did not tie in the cross lines and correct them for deviation.

2.4 Physiography and Vegetation

The Casa-Berardi property lies within the north-central portion of the Abitibi Upland (Bostock, 1968), a north-sloping clay belt region that was covered by glacial Lake Ojibway 10,000 years ago during Late Wisconsinan ice withdrawal. The southern boundary of the clay belt is the Hudson Bay - St. Lawrence River drainage divide, which roughly coincides with the southern edge of the Abitibi Greenstone Belt. Average overburden thickness in the clay belt ranges from 10 metres in the south where Lake Ojibway was shallow to 30 metres in the north where the lake was deeper. Average overburden thickness in the 197 Casa-Berardi drill holes was 26 metres.

Relief on the property is subdued, with elevations ranging from 270 metres above sea level along water courses to slightly over 300 m elsewhere. The property is generally well drained, and lies in the Turgeon River drainage basin of the James Bay watershed. The east half of the property is drained by the north-flowing Théo River and its tributary creeks. Lac Janelle at the east end of the property and Lac Casa-Berardi in the south both discharge into these creeks. The west half of the property is drained by a meandering, northwest-flowing creek. In the southwest quadrant of the property, both the sinuous Lac Gérin and a smaller lake to the northwest are drained by tributaries of the northwest-flowing creek. These lakes occupy two of a series of kettle depressions that define the axis of an esker (herein informally named the Golden Pond Esker) that extends southward through Golden Pond and swings southeastward on the southern part of the property. Outcrops on the property are rare, occurring only immediately west of the Théo River, on two low ridges north of Lac Gérin, and in the extreme southwest.

Vegetation on the property consists of typical boreal forest with numerous small bogs. Mature spruce have been extensively clear-cut throughout the centre of the property, leaving only scattered poplars.

2.5 Previous Work

Remick (1969) mapped the Harricana-Turgeon area, encompassing the Casa-Berardi property, at a scale of 1:63,360 (one inch to one mile) for the Quebec government in the 1950s. He examined a number of outcrops on the property and mapped them as intermediate to basic lava with a roughly east-west trending, steeply north-dipping foliation.

The Ministère de l'Énergie et des Ressources du Québec (MERQ) conducted regional airborne magnetic/electromagnetic (INPUT) surveys over the area in the seventies (MERQ, 1980, 1983a). The magnetic response on the Casa-Berardi property is largely overshadowed by an east-west trending, steeply south-dipping, magnetic high related to a pair of banded iron formations on the Inco property to the north (Fig. 6). Much weaker magnetic highs form bull's-eyes south and west of Lac Gérin.

The INPUT survey identified an extensive conductive zone that crosses the south half of the property (Fig. 7). This zone strikes southeasterly in the west, where it coincides with Cambior's FC-2 structure (Fig. 3), and east-northeasterly in the east, where it coincides with FC-3/FC-4. Several shorter conductors are also present on the property. Although the aeromagnetics indicate uniformly east-west trending stratigraphy across the north of the property the electromagnetics identify significant variations to this regional trend on the rest of the property.

Pilote (1987) mapped the west end of Casa-Berardi Township and all of adjoining Dieppe Township for the Quebec government, but did not visit any of the outcrops on the Casa-Berardi property. Extrapolating from the west, Pilote interprets the west end of the property to be underlain predominantly by basalt and interprets the INPUT conductors to represent thin interflow beds of volcaniclastics, pyroclastics, argillite, and/or exhalites. The only other government-sponsored work covering the property is regional-scale gold soil geochemical surveys (Beaumier, 1980 and 1984).

Assessment work on the Casa-Berardi property up to 1983 is compiled by MERQ in geoscientific bibliographies (MERQ, 1983b) and portrayed on compilations (MERQ, 1983c; Fig. 8) It consists of geological, geophysical (magnetic/electromagnetic) and limited geochemical surveys and diamond drilling, mostly conducted in pursuit of base metals. Diamond drilling of ground conductors commonly intersected thin graphitic or pyritic horizons. Cross-sectioning of the magnetic high north of the property intersected extensive magnetite-chert iron formation.

Microfilm

PAGE DE DIMENSION HORS STANDARD MICROFILMÉE SUR 35 MM ET POSITIONNÉE À LA SUITE DES PRÉSENTES PAGES STANDARDS

Numérique

PAGE DE DIMENSION HORS STANDARD NUMÉRISÉE ET POSITIONNÉE À LA SUITE DES PRÉSENTES PAGES STANDARDS

Newmont staked the Casa-Berardi property in 1981, three years before Inco discovered its major Golden Pond East deposit in Casa-Berardi Township and identified the Casa-Berardi Fault as the main structure controlling gold mineralization in the region. Newmont's target was the formational conductor identified in the MERQ (1980) Input survey and later referred to as the Casa-Berardi South Fault by Newmont (Middleton and Archer, 1981a) and FC-2/FC-3/FC-4 by Sphinx/Goldstack (Landry and Gauthier, 1988). This conductive horizon was thought to represent a time-stratigraphic marker that extended westward from the Agnico-Eagle gold deposit (Middleton and Archer, 1981). At that time, the Agnico-Eagle deposit was thought to be a volcanogenic, exhalative gold deposit (Barnett et al., 1981), but subsequent work indicates that it is a typical, epigenetic, shear-controlled gold deposit hosted by carbonate iron formation (Wyman et al., 1986).

Since acquiring the property Newmont and Cambior have cut the three grids described in Section 2.3 and have performed magnetic and horizontal loop electromagnetic (HEM Max Min II) surveys over most of the gridded area, and induced polarization (IP) surveys in selected areas. Geophysical targets were tested with forty-three reverse circulation overburden drill holes in 1981 and 1982 (Middleton and Archer, 1981b; Archer and Middleton, 1982). The overburden heavy mineral geochemistry of the 1981 and 1982 programs was interpreted as indicative of dispersion in seventeen holes defining six broad trains. This interpretation was based largely on assay values as no more than three gold grains were observed in any one sample. Forty-three diamond drill holes (11,677 m) were drilled in 1983, 1986 and 1987. Outcrop mapping and sampling were performed in 1986. Cambior recently commissioned a compilation and interpretation of all of the geophysical work (Lambert, 1988) and Sphinx and Goldstack subsequently commissioned an evaluation of the property's geology and mineral potential for financing purposes (Landry and Gauthier, 1988).

Lambert's (1988) geophysical compilation required jigging the intersections of the three grids as these grids had not been properly corrected and tied together in the field. The ground magnetic pattern on the property is basically that identified by the airborne survey (Fig. 6) although the ground survey distinguishes a weak, east-west trending high between FC-1 and FC-3 that is barely discernible on the airborne map. The ground electromagnetics also conform to the Input data (Fig. 7) except that a new, intermittent, east-west trending conductor crossing the north of the property (FC-1) was identified in the ground survey. The strong conductors are plotted on Plan 3 in relation to the bedrock geology outlined in the present reverse circulation drilling program. The IP data are of little value but serve to confirm a metallic origin for some of the conductors (Lambert, 1988). Lambert interprets most of the anomalies as stratigraphic effects (i.e. magnetic anomalies are attributed to iron formation and strong conductors are attributed to graphitic or pyritic sediments or tuffs), but he does infer a set of northwest trending faults centred on Lac Gérin which both truncate (FC-1, 3, 4) and follow (FC-2) conductors, displacing a segment of the Golden Pond iron formation 7 km southeastward to the bull's-eye magnetic highs southwest of Lac Gérin.

Landry and Gauthier's report (1988) presents a different interpretation of the geophysics, and ascribes most of the conductivity along all three trends to shear zones. In their model, the property lithologies comprise a central, triangular block of andesite and basalt in fault contact to the north (FC-1), south (FC-3) and southwest (FC-2) with bands of clastic sediments containing some thin felsic tuff horizons. Further to the south (FC-4) and southwest (FC-5) the sediments in turn are in fault contact with more andesite and basalt.

The bedrock samples obtained from outcrops and drilling are commonly carbonatized and sericitized. Gold mineralization, often accompanied by arsenopyrite as at Golden Pond (Pattison et al., 1986), has been intersected along two diamond drill cross sections of the northern shear zone (FC-1) but is typically of low grade (less than 1,000 ppb) and narrow (0.5 to 1.5 m). Elsewhere gold mineralization is rare. Diamond drilling of the bull's-eye magnetic highs in the southwest intersected oxide facies iron formation.

2.6 Project Costs

Budgeted and actual costs for the 1989 reverse circulation drilling program are presented in Table 3.

The budget figure of $551,313.75 ($111.27/metre) was based on:

1. One hundred and sixty-five drill holes totalling 4,950 metres (average 30 metres per hole).

2. Drilling productivity of 7.0 metres per operating hour.

3. An average bit life of 60 metres.

4. A total of 990 overburden samples (average six samples per hole).

One hundred and ninety-seven holes were drilled. Hole depth averaged 27.8 metres which is very close to the budget estimate. Drilling productivity was 8.2 m per hour, or 17 percent better than the budget estimate. Bit life averaged 85 m, or 42 percent better than the budget estimate. The average number of overburden samples per hole was 7.7, or 29 percent above the budget estimate, despite the fact that the overburden thickness was accurately predicted. The high drilling productivity and the long bit life more than offset the rise in samples per hole so that, excluding line cutting, the per metre cost fell to $96.04 and the total costs fell to 525,604.49 even though thirty-two extra holes were drilled.

	Service	Company	Budget $ Total	Budget $/Metre	Budget $/Foot	Actual $Total	Actual $/Metre	Actual $/Foot
1.	Pre-drilling	ODM	2,000.00	0.40	0.12	4,839.55	0.88	0.27
2.	Road clearing and drilling operations	H&S	371,650.00	75.08	22.89	287,549.78	52.54	16.02
3.	Field supervision, logging and sampling	ODM	78,270.00	15.81	4.82	78,194.85	14.29	4.36
4.	Sample shipping and processing	Various, ODM	43,972.50	8.88	2.70	74,589.50	13.63	4.15
5.	Analytical	Bondar-Clegg	28,421.25	5.74	1.75	41,332.50	7.55	2.30
6.	Report	ODM	27,000.00	5.45	1.66	39,106.31	7.15	2.17
	TOTALS		551,313.75	111.37	33.96	525,602.49	96.04	29.27

Table 3 - Budgeted and Actual Costs of the 1989 Reverse Circulation Drilling Program

3. DRILLING AND SAMPLING

3.1 Drill Hole Pattern

Heavy mineral dispersal trains from known gold deposits display varying configurations depending on the relationship between the orientation of the deposit and the direction of ice flow (Fig. 9). Dispersal trains from deposits oriented parallel to ice movement are generally ribbon-like, with widths of 100 to 200 m and a detectable length of a kilometre or more (e.g. the EP train, Table 4). In contrast, dispersal trains from deposits oriented perpendicular to ice movement are apron-like with widths of 300 to 400 m (including low grade fringes related to the anomalous alteration haloes that enclose most gold deposits) and an average detectable length of 500 m.

On the Casa-Berardi property, the main tills were deposited in Late Illinoian time and in Late Wisconsinan time by southwestward (roughly 225 degrees) and south-southeastward (160 to 180 degrees) flowing ice masses, respectively. However, numerous indicators suggest that the south-southeastward trend represents a relatively minor shift during glacial recession from major west-southwesterly flow (240 to 270 degrees) during most of the Wisconsinan glaciation (Veillette, 1986; Veillette et al., in press). Both directions should be considered when tracing dispersion in the Late Wisconsinan till horizon which is the most common and widespread till unit in the area. As the last vector of ice movement for this till was south-southeast and the bedrock strata and structures in most of the drill area trend roughly east-west, then apron-type trains are the most likely overburden target. However, mineralization along the southeast trending FC-2 corridor in the southwest corner of the property would generate ribbon-type trains in Late Wisconsinan time. For the earlier, more westerly ice movements the relationship between train type and bedrock trend would be reversed.

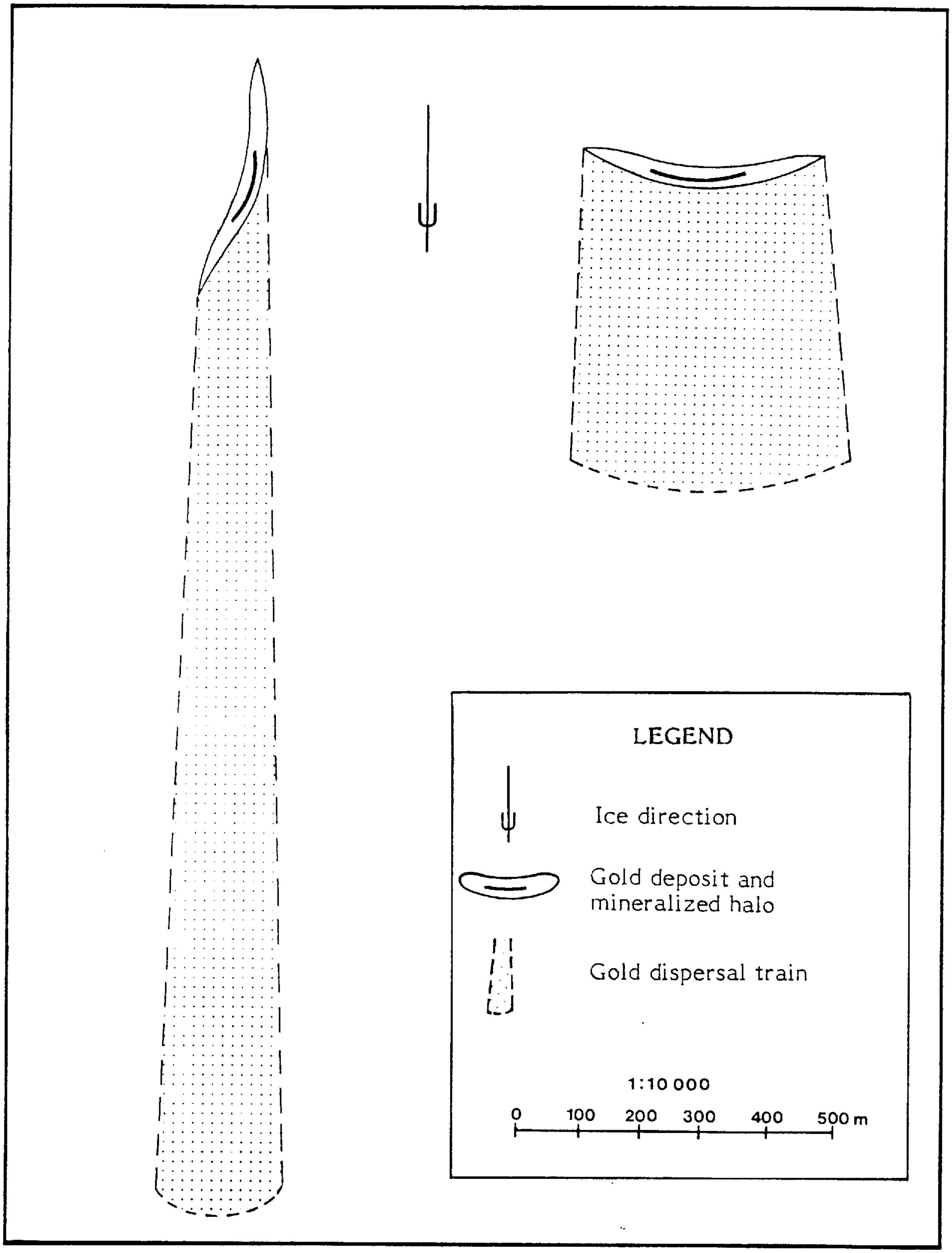


Figure 9 - Typical Sizes and Shapes of Gold Dispersal Trains For Ice-Parallel and Cross-Ice Trending Bedrock Sources

PROVINCE	GOLD DEPOSIT	TRAIN LENGTH[1] (m)	
		TRACED	EST. TOTAL
Saskatchewan	Lake "X"[2]	300	300
Saskatchewan	Star Lake	300	800
Saskatchewan	Lake "Y"	500	1000
Saskatchewan	EP[2]	600	2000
Ontario	McCool	300	400
Quebec	Cooke Mine[3]	800	1000
Quebec	Golden Pond West	300	400[4]
Quebec	Golden Pond	400	500[4]
Quebec	Golden Pond East	800	1000[4]
Quebec	Orenada	100	200
Quebec	Kiena	100	300
Quebec	Chimo	600	1000
Newfoundland	Devil's Cove	2000	2000

1 - Based on minimum 10 gold grains of similar size and shape per 8 kg sample for free gold trains and on coincident high gold and base metal assays for invisible gold trains

2 - Deposit oriented parallel to glacial ice advance

3 - Occluded gold deposit

4 - Train foreshortened and/or gapped by erosion in last ice advance

Table 4 - Heavy Mineral Gold Dispersal Trains Identified by Overburden Drilling Management Limited Laboratory

In the primary FC-1 target corridor across the north of the property, the drill holes were spaced at 200 m intervals along traverses oriented at 110 degrees with a separation of 400 m. This drill pattern was designed to detect not only apron-type trains hosted in till deposited after the Late Wisconsinan ice shift, but also ribbon-type trains in earlier till because dispersion from Golden Pond is of the latter type (Veillette et al., 1989). Of equal importance, the traverses are oblique rather than parallel to the bedrock trend and therefore should provide optimum bedrock stratigraphic, structural and topographic information. On the other targeted corridors -- southeast trending FC-2 and east-northeast trending FC-3/FC-4 -- the hole spacing was doubled (400 m) but the same traverse separation was maintained. Traverse orientation varied from 090 degrees to 110 degrees. This less dense drilling pattern was designed to detect apron-type dispersal trains and to obliquely section the bedrock targets at reconnaissance scale. In all areas, the holes were positioned away from outcrops and diamond drill holes, and emphasis was also placed on positioning holes directly over and immediately down-ice from geophysical targets, where available, to identify the bedrock stratigraphic/ structural settings of these zones as well as their geochemical signatures in the overburden.

As noted in Section 2.3, the drill holes were located in the field by reference to the three grids as well as to 1:15,000 air photos, providing precise positioning relative to the geophysical targets and terrain, respectively. Many of the lines of the New Main Grid are visible on the air photos (Plan 1), allowing both the grid and the drill holes to be easily tied in to the terrain. These grid lines were probably established with a transit as they show little deviation. The lines of the Old Main Grid and West Grid are not visible on the photos, have very few useable pickets, and show more deviation than Lambert (1988; Plan 2) indicates. On these grids, the relevant lines were located on the ground, in part using the old diamond drill and reverse circulation drill set-ups which form prominent clearings on the air photos, and were then re-chained to the desired reverse circulation drill hole co-ordinates. The holes and lines were then tied in to the terrain using the air photos.

At the intersection of the West Grid with the New Main Grid, a major discrepancy was identified between the actual terrain positions of the drill holes

(Plan 1) and the terrain positions predicted by the grids as laid down on the topographic base by Lambert (Plan 2). By expending considerable effort both in the field and in the office, it was found that Lambert had twisted or rotated the New Main Grid 3 to 5 degrees clockwise from its true position. Once this grid is rotated counterclockwise back to its correct position, a further problem in the east with misalignment of the base line and tie lines of the New Main Grid and Old Main Grid on the Lambert map also disappears. This correction has been made on the photomosaic base of Plan 1. On the bedrock geology maps (Plans 3, 4, 5), which do not have a photomosaic or topographic base, we have avoided costly redrafting of the grids by retaining the Lambert orientation of the New Main Grid, instead shifting relevant portions of the other two grids to mesh with this grid. The West Grid shifts a substantial 250 to 300 metres north-northeast. While this reverse shifting may seem awkward, the net result is the same as that obtained by rotating the New Main Grid, and the reader can overlay Plan 3, 4 and 5 on Plan 1 and make the rotation himself. Minor discrepancies in hole locations that appear when this is done result from slight distortions in the photomosaic and from the fact that many of the grid lines still have not been corrected for deviation. On the Quaternary geology map (Plan 6), which has an accurate topographic base but does not require the grids since geophysics is not considered, the hole locations are the corrected ones from the photomosaic (Plan 1) with minor additional adjustments to correct scale distortions in the photomosaic.

The position of the property boundary on Lambert's map (Plan 2) is governed by the position of the grids. Since the grid positions are incorrect, the boundary has not been transferred to the other plans.

3.2 Drilling Equipment

Each of the Heath and Sherwood drill rigs employed an Acker MP drill head with a 3-metre feed cylinder. Each drill, together with all its ancillary equipment including air compressor, water pump and logging and sampling facilities, was unitized and enclosed on the bed of a GT-3000 tracked carried for all-terrain mobility and all-weather operation. Each drill rig was supported by a GT-1000 muskeg tractor equipped with two 250 gallon, exhaust-heated water tanks.

Each rig employed an air compressor with a rated capacity of 300 cfm at 160 psi and a water pump having a capacity of 20 gpm at 600 psi. Water flow was normally restricted to 4 to 5 gpm to improve recovery of fines. Each rig was equipped with a 12-volt DC fluorescent fixture employing Cool White tubes that simulate natural sunlight for accurate sample logging. All equipment on each rig except the air compressor and tracked carrier was operated hydrostatically from a central diesel engine. Each rig carried twenty 3-metre drill rods.

Heath and Sherwood supplied temporary camp facilities for all personnel and prepared drill roads using a Caterpillar D-6 wide pad bulldozer. Sam Bosum of Chibougamau cut and re-picketed selected grid lines and pre-cut some of the bulldozer roads.

3.3 Logging and Sampling

The Casa-Berardi overburden samples were collected in two 20 litre buckets coupled with a plastic tube. This procedure ensures a quiet settling environment thus reducing the loss of fines encountered if only one bucket is used and allowed to overflow. Most of the clay is still lost but a research study made by ODM (Dimock, 1985) showed that sand loss is insignificant and silt loss is reduced to 40 percent compared to 72 percent with the one-bucket system. Interestingly, fine gold is lost in direct proportion to fine minerals of low specific gravity such as quartz and feldspar because the flake shape rather than high density of fine gold is the primary factor controlling the rate of settling. Further research conducted by ODM (Kurina, 1986) on various inlet/outlet attachments on the second bucket showed an additional 33 percent of the fine material in the overflow could be retained by utilizing a horizontally curved inlet tube, which induces spiral flow, and a vertical stack skimmer on the outlet. The two-bucket system with the modified flow configuration was employed on the Casa-Berardi program.

A 10-mesh (1700 micron) screen was employed over the first bucket to separate and discard the majority of rock cuttings and thereby increase the proportion of matrix material which is used to identify and trace dispersal trains.

The +10 mesh rock cuttings were constantly monitored for any variations which could give clues to overburden stratigraphy, or for any clasts indicative of an environment suitable for gold or base metal mineralization. Approximately 20 percent of the cuttings were kept for future reference. The degree of sorting of the -10 mesh matrix was monitored to differentiate till from sand and gravel.

Till units and interglacial sand and gravel were sampled continuously using an average sample interval of 1.5 metres. Glaciofluvial sediments were sampled over longer, 3 to 6 metre intervals because they are far-travelled and thus generally ineffective for mineral tracing. Glaciolacustrine clay and silt were not sampled because they are of no exploration value.

In the field, both the overburden and bedrock samples were assigned an alphanumeric designation indicating the drilling project, the year the hole was drilled, the position of the hole in the drilling sequence (even numbers were assigned to one rig and odd numbers were assigned to the other until the program was near completion), and the position of the sample in the drill hole. Thus a designation such as CB-89-25-03 indicates the third sample collected from Hole 25, which was drilled in 1989 on the Casa-Berardi property.

Following collection, the overburden samples were reduced to 7-9 kilograms with an aluminum scoop, packed in heavy plastic bags and shipped in 20-litre metal pails to ODM's processing laboratories in either Rouyn-Noranda, Quebec or Nepean, Ontario.

3.4 Sample Processing

ODM's processing procedures for overburden samples are illustrated in the flow sheet of Figure 10 and may be summarized as follows:

First, a 250 gram character sample is extracted from the bulk sample using a tube-type sampler. This character sample is dried and stored for future reference. On some programs, its minus 250 mesh fraction is separated and analyzed to check

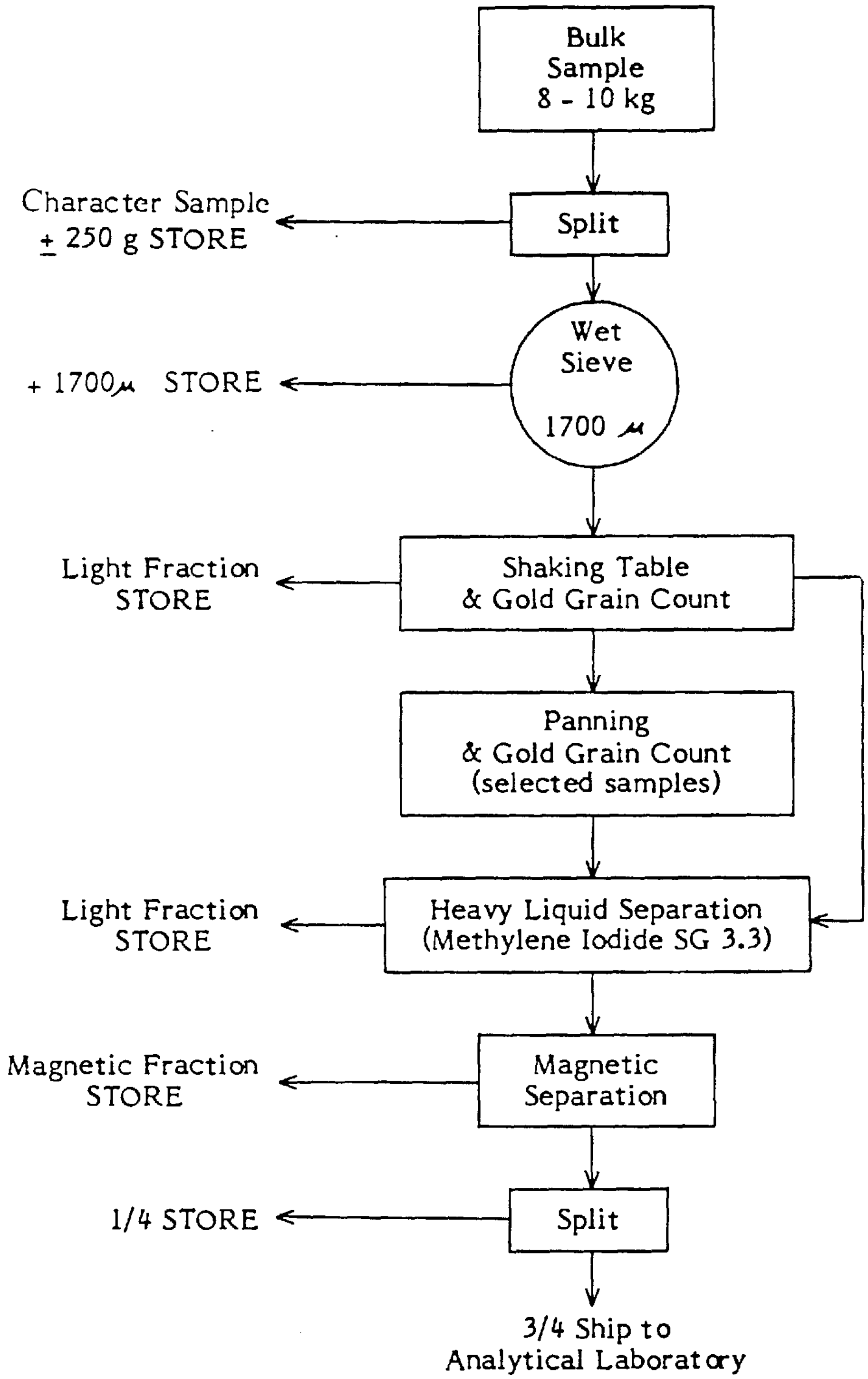


Figure 10 - Sample Processing Flow Sheet

for metals that are occluded in low density minerals and therefore not recovered in the heavy mineral concentrates.

The remainder of the bulk sample is weighed wet and is sieved at 1700 microns (10 mesh) to separate the clasts from the matrix. The +1700 micron clasts are weighed wet and the -1700 micron matrix is processed on a shaking table to obtain a preconcentrate (Fig. 11). The table concentrate and all fractions obtained from it are weighed dry. The sample weights are listed in Appendix B.

While the samples are being tabled, special procedures developed by ODM are used to effect the separation of gold grains from the other heavy minerals. These grains are picked from the deck, placed under a binocular microscope, measured to obtain an estimate of their contribution to the eventual assay of the concentrate (Table 5), and classified as delicate, irregular or abraded (Fig. 12) to determine their approximate distance of glacial transport. Photomicrographs (35 mm slides) are taken if more than 10 gold grains are present.

Magnetite, with a specific gravity of 5.2, is the heaviest of the common minerals and normally forms the top mineral band on the table above garnet and epidote/pyroxene. Common flake gold coarser than 125 microns separates completely from the magnetite and is readily counted. Fine gold, thick gold and delicate gold travel with the magnetite due to size and shape effects, and only 10 to 20 percent of such grains are readily sighted on the table. Gold particles can also be obscured by pyrite which, if it is abundant, tends to cross the table in the gold path. However, ODM has developed a special panning technique to recover the hidden particles together with some copper, lead and arsenic pathfinder minerals. Samples are normally panned if two or more gold particles are sighted on the table or if any delicate gold is seen or if the table concentrate contains more than 10 percent pyrite. The table and pan gold counts are listed in Appendix C.

Size Classification	Flake Diameter (microns)	ppb Au
Very Fine	50	10
"	100	100
Fine	150	330
"	200	760
Medium	300	2,400
"	400	5,400
"	500	10,000
Coarse	600	16,200
"	700	24,000
"	800	33,300
"	900	43,700
"	1,000	55,000
Very Coarse	1,000+	55,000+

Table 5 - Geochemical Contribution of One Gold Grain to a Fifteen Gram Sample

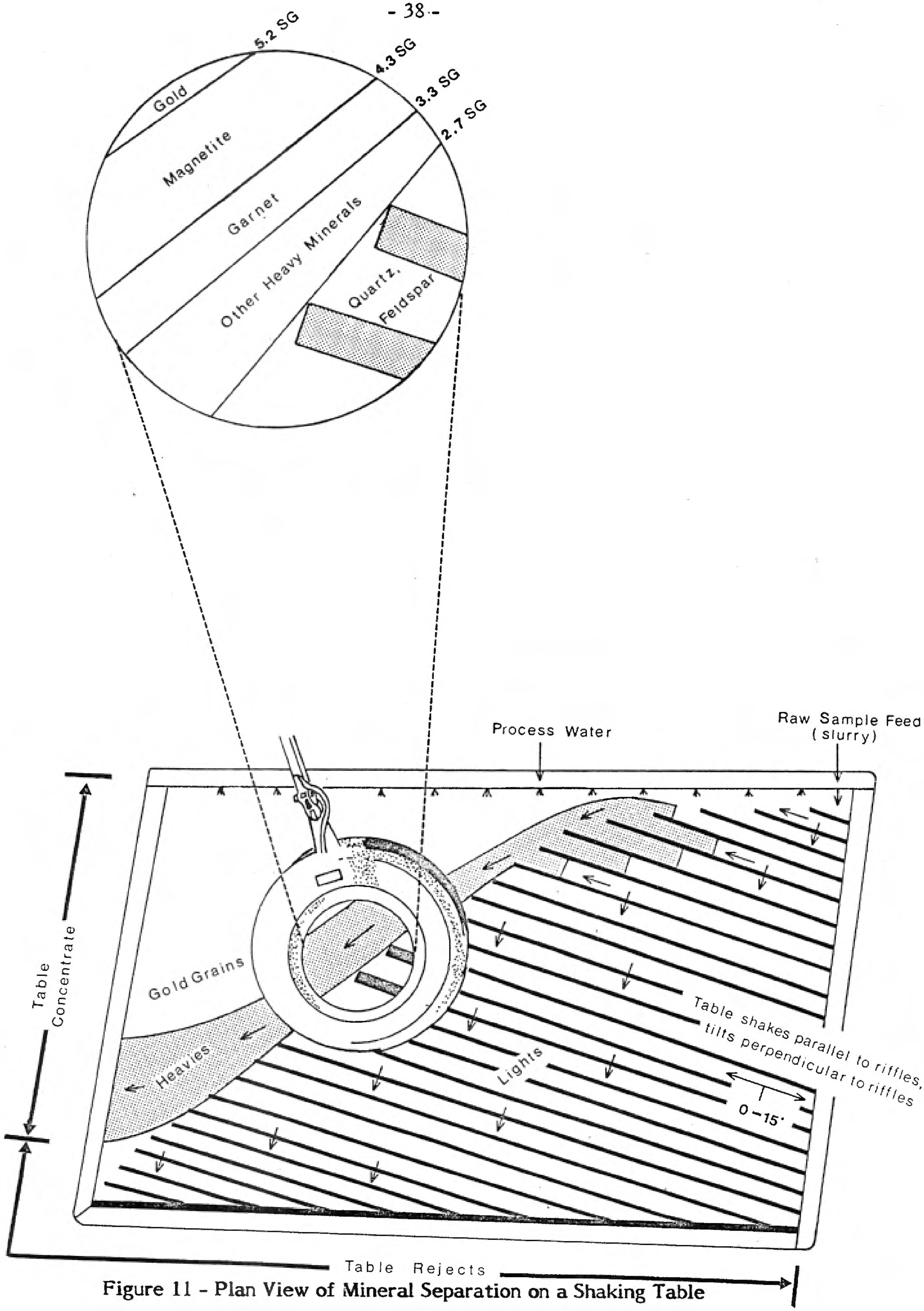


Figure 11 - Plan View of Mineral Separation on a Shaking Table

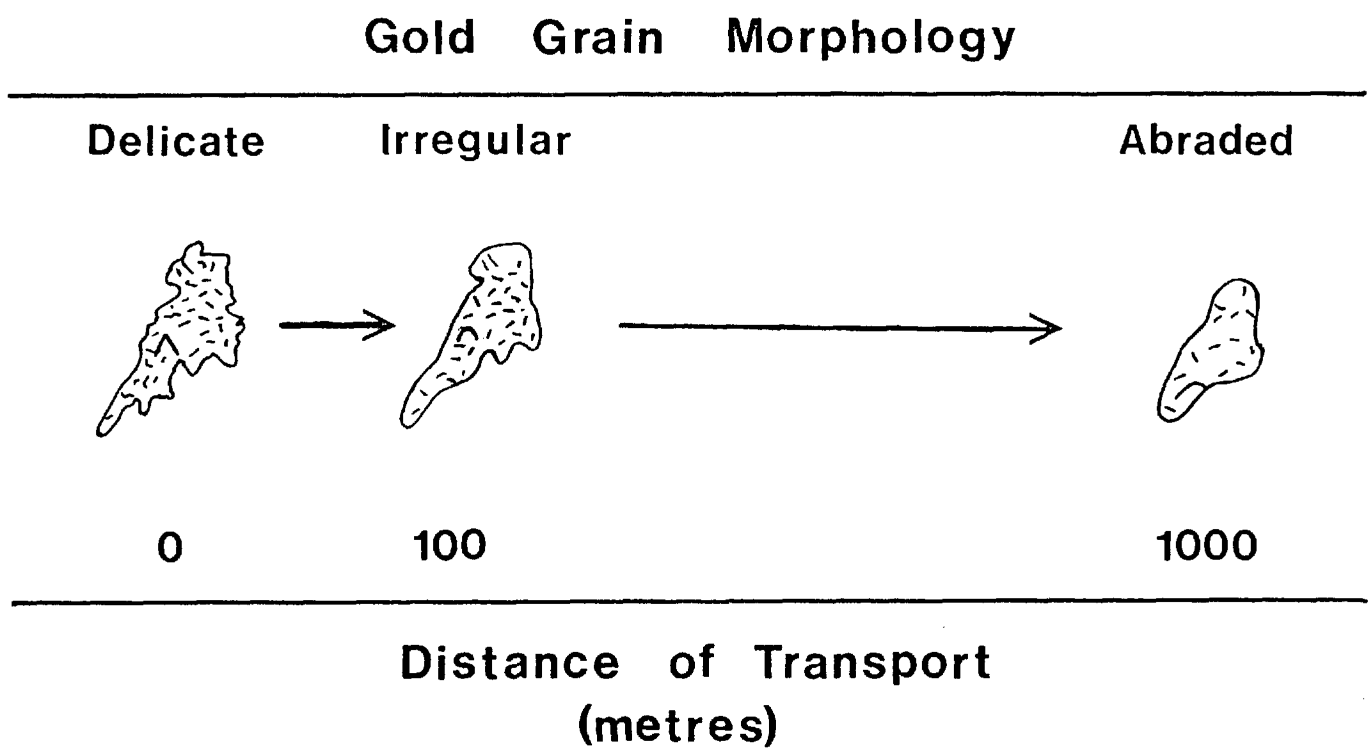


Figure 12 - Effects of Glacial Transport on Gold Particle Size and Shape
(Developed by Overburden Drilling Management Ltd.)

After the gold grains have been examined, they are recombined with the table concentrate. This concentrate is dried and a heavy liquid separation in methylene iodide (specific gravity 3.3) is performed. The light fraction (S.G. less than 3.3) is stored and the heavy fraction undergoes a magnetic separation to remove drill steel and magnetite. The magnetic separates are checked to ensure that they contain not more than five percent pyrrhotite. The non-magnetic heavy minerals are separated into a 3/4 analytical subsample and a 1/4 library subsample using a riffled microsplitter.

Brass contamination was introduced during drilling to all samples collected from even numbered Holes 76 to 110 (18 holes, approximately 350 samples). The brass filings were so abundant and so similar to gold grains, both visually and in their behaviour on the table, that the gold grains could not be counted. The brass would, of course, also produce anomalous Cu and Zn assays. Therefore all of the non-magnetic heavy mineral concentrates of the contaminated samples were bathed in a 3 to 1 nitric acid : water solution to leach out the brass, and were then panned to obtain gold grain counts. It was determined that a 3 minute acid bath followed by five cold water rinses effectively removed the contamination but left sulfide minerals intact (Vu, 1989).

3.5 Sample Analysis

At the analytical laboratory, subsamples of the bedrock chips (Appendix E) and 3/4 splits of the non-magnetic overburden heavy mineral concentrates (Appendix F) were homogenized by pulping in a shatter-box and were then analyzed for gold by fire assay with atomic absorption finish, for Cu, Zn and Ag by atomic absorption, and for As by colourimetry. Whole rock compositions for the bedrock samples were determined by direct current (DC) plasma and gravimetric loss-on-ignition (LOI) methods, and compositions were plotted on Jensen diagrams (Appendix E). Carbon dioxide determinations were also obtained on the bedrock samples by colourimetry. All analytical work was done by the Ottawa laboratory of Bondar-Clegg and Company Limited to the specifications shown in Table 6.

Sample Type	Sample Preparation	Element		Lower Detection Limit		Extraction	Method
Heavy Mineral Concentrates							
Standard 3/4 splits	Pulverize to -200 mesh	Cu	Copper	1	ppm	HCl-HNO_3, (1:3)	Atomic Absorption
		Zn	Zinc	1	ppm	HCl-HNO_3, (1:3)	Atomic Absorption
		Ag	Silver	0.1	ppm	HCl-HNO_3, (1:3)	Atomic Absorption
		As	Arsenic	2	ppm	HNO_3-$HClO_4$	Colourimetric
		Au	Gold	5	ppb	Aqua Regia	Fire Assay AA
Pulp and metallics 3/4 splits	Pulverize to -200 mesh; screen 150 mesh, weigh +150 and -150	Au	-150	0.01	ppm	Aqua Regia	Fire Assay AA
		Au	+150	0.01	ppm	Aqua Regia	Fire Assay AA
		Au	Average				Calculated
Selected 1/4 splits	None	Au	Gold	5	ppb	None	Neutron Activation
Bedrock Chips	Pulverize to -200 mesh	SiO_2	Silica (SiO_2)	0.01	pct	Borate Fusion	DC Plasma
		TiO_2	Titanium (TiO_2)	0.01	pct	Borate Fusion	DC Plasma
		Al_2O_3	Alumina (Al_2O_3)	0.01	pct	Borate Fusion	DC Plasma
		Fe_2O_3*	Total Iron (Fe_2O_3*)	0.01	pct	Borate Fusion	DC Plasma
		MnO	Manganese (MnO)	0.01	pct	Borate Fusion	DC Plasma
		MgO	Magnesium (MgO)	0.01	pct	Borate Fusion	DC Plasma
		CaO	Calcium (CaO)	0.01	pct	Borate Fusion	DC Plasma
		Na_2O	Sodium (Na_2O)	0.01	pct	Borate Fusion	DC Plasma
		K_2O	Potassium (K_2O)	0.01	pct	Borate Fusion	DC Plasma
		P_2O_5	Phosphorous (P_2O_5)	0.01	pct	Borate Fusion	DC Plasma
		LOI	Loss on Ignition	0.01	gram		Gravimetric
		Total	Whole Rock Total	0.01	pct		Calculated
		CO_2	Carbon Dioxide	0.01	pct	HNO_3-$HClO_4$	Colourimetric
		Cu	Copper	1	ppm	HCl-HNO_3, (1:3)	Atomic Absorption
		Zn	Zinc	1	ppm	HCl-HNO_3,(1:3)	Atomic Absorption
		Ag	Silver	0.1	ppm	HCl-HNO_3, (1:3)	Atomic Absorption
		Au	Gold	5	ppb	Aqua Regia	FA-AA @ 10 gm weight

Table 6 - Bondar-Clegg Analytical Specifications

Gold grains are malleable and thus are difficult to homogenize with the rest of the sample, often forming flattened "metallics" in the pulp. To alleviate this problem and improve assay representativity, concentrates that were known to contain one or more coarse gold grains (generally over 200 microns) capable of producing an anomalous assay (over 1000 ppb) were pulped for shorter periods and screened at 150 mesh after pulping. Separate gold determinations were then made on the -150 mesh pulp and the +150 mesh metallics, and a weighted average assay was calculated.

Following receipt of the heavy mineral assays, a number of unexplained gold anomalies were noted. To check the reproducability and significance of these 3/4 concentrate anomalies, the corresponding 1/4 library concentrates were examined for visible gold by panning and submitted to Bondar-Clegg for non-destructive INA gold analysis at their nuclear facility in Buffalo, New York.

4. BEDROCK GEOLOGY

4.1 Regional Geology

The Casa-Berardi area is on the northwestern edge of the Abitibi Greenstone Belt. Rocks of the Abitibi Belt are of Archean age (approximately 2700 to 2750 million years old). They comprise repeated komatiitic through tholeiitic to calc-alkalic cycles of lavas and volcaniclastics with coeval clastic and exhalative sedimentary rocks, porphyries, layered mafic-ultramafic sills, and plutons of potassium poor dioritic to tonalitic composition. These rocks have been complexly deformed, metamorphosed to the sub-greenschist to greenschist facies and intruded by late kinematic granodiorite and monzonite plutons (Gariepy et al., 1984).

Due to the thick and extensive overburden cover in the Casa-Berardi region, bedrock stratigraphic and structural relationships are not well defined (MERQ-OGS, 1983). With the high level of exploration activity that has followed the discovery of the Golden Pond deposits, the Quebec Government has attempted to rectify this problem through the extensive use of airborne magnetic and electromagnetic surveys and limited regional mapping. In a preliminary geological synthesis (Fig. 2; Lacroix, 1986 and 1987), the term Harricana - Turgeon Trench has been coined for the supracrustal sequence extending from the northwest edge of the Abitibi Belt southward to the granitoid Mistawak Batholith and eastward and southeastward to the felsic volcanic centres at Matagami and Joutel, respectively. Rocks within the trench are said to include poorly differentiated submarine plain ultramafic to mafic volcanics, strongly differentiated central complex type mafic to felsic volcanics and pyroclastics with associated synvolcanic intrusives, clastic sediments and iron formation, and post-volcanic/tectonic intrusives. The units trend approximately east-west and are cut by major bedding parallel faults such as the Casa-Berardi Fault and by northwest-southeast trending subsidiary (?) faults. The lithologies and structure are said to be analogous to those found in the La Motte - Vassan Trench (Imreh, 1984) of the southern Abitibi Belt. However, this simplistic model has been refuted by extensive ODM-managed drill tests across the region; other rocks are present including a large crustal block of Pontiac-type rocks (as defined by Lajoie and Ludden, 1984) north of Golden Pond.

The principal mineral deposits of the Casa-Berardi region are (Fig. 2):

1. Inco's three Golden Pond deposits 1.5 km north of the Casa-Berardi property which are typical, epigenetic, shear-hosted, quartz-carbonate vein deposits having a strong gold-arsenopyrite association (Pattison et al., 1986). Total pre-production reserves of the three zones are approximately 10 million tons grading 0.22 ounces Au per ton (Inco Limited, Annual Report, 1987). Production from the Golden Pond East zone began in September, 1988 and Inco recently announced that production from the Golden Pond West zone will begin by mid-1990.

2. Teck's Estrades deposit 20 km east-northeast of the Casa-Berardi property which is a syngenetic Au-Cu-Zn-Ag massive sulphide deposit. Geological reserves in three zones are 2.26 million tons grading 0.12 ounces Au/t, 1.02 percent Cu, 7.71 percent Zn and 3.59 ounces Ag/t (The Northern Miner, March 27, 1989).

3. The Agnico-Eagle Mine at Joutel 60 km east-southeast of the Casa-Berardi property which is an epigenetic, shear-hosted gold deposit having a strong arsenopyrite association (Wyman et al., 1986) but occurs mainly in carbonate-facies iron formation and has been mistakenly described as a syngenetic deposit (e.g. Barnett et al., 1982). Reserves in 1987 were approximately 1.5 million tons grading 0.2 ounces Au per ton (Canadian Mines Handbook, 1987).

4. Placer-Dome's Detour Lake Gold Mine in Ontario 60 km northwest of the Casa-Berardi property which is a shear-controlled, epigenetic, quartz-carbonate vein deposit (Marmont, 1986). Production began in 1983 with reserves of 27,733,000 tonnes grading 3.88 g/t Au, 4.66 g/t Ag and 0.205 percent Cu (Canadian Mines Handbook, 1983).

5. BP's Selbaie Mine 35 km northeast of the Casa-Berardi property where three semi-syngenetic, vein-type Cu-Zn-Ag deposits have been identified in a caldera environment (Deptuck et al., 1982). The B and A1 Zones with pre-production reserves of 3.07 million tonnes grading 4.49 percent Cu, 0.80 percent Zn, 39.4 g/t Ag and 1.2 g/t Au, and 32.11 million tonnes grading 0.39 percent Cu, 2.30 percent Zn, 35.7 g/t Ag and 0.3 g/t Au, respectively, have been mined since 1981 and 1986 (Canadian Mines Handbook, 1987).

The Casa-Berardi property is in the southwestern part of the Harricana-Turgeon Trench and covers strata 1.5 to 8.0 km south of the Casa-Berardi Fault and the Golden Pond gold deposits. The Golden Pond deposits are in the Golden Pond Sequence (Pattison, et al., 1986), an E-W trending, predominantly sedimentary unit flanked to the north and south by oxide facies iron formation. The southern iron formation is a strongly magnetic linear marker horizon and is 1 km north of the Casa-Berardi property (Fig. 6). Most compilation maps (Rive, 1985; Latulippe, 1976) show volcanic rocks as being predominant south of this iron formation.

Immediately west of the Casa-Berardi property in the Dieppe Hills of eastern Dieppe Township, Pilote (1987) has mapped a series of basaltic flows, often with very thin interflow iron formation and fine sedimentary and pyroclastic rocks. These trend NNW along the nose of a broad, steeply west plunging and ENE trending syncline. To the north, the conductive Golden Pond Sequence (Fig. 7) shows no deviation from its regional E-W trend and apparently is not affected by the syncline. Pilote's synclinal axis is a continuation of one mapped on the Ontario side of the Interprovincial Boundary within a felsic volcanic complex (Johns, 1979). Pilote suggests that the felsic complex continues into Dieppe Township but does not indicate the relationship between the felsic rocks and the basalts that he mapped. Based on a few basalt outcrops well to the east of the Dieppe Hills in the area immediately south of the Casa-Berardi property, Pilote assumes that the intervening western 5 km of Casa-Berardi Township (within his map area but with no rock exposure) is also entirely underlain by basalt. Here geophysics indicates a change in the trend of the rock units to NW-SE (Fig. 6, 7; FC-2/FC-5 trend of Fig. 4) and then ENE to E-W (FC-3/FC-4/FC-6 of Fig. 4) -- parallel to structure and stratigraphy in the Golden Pond Sequence. To account for this change from the NNW trend in the Dieppe Hills, Pilote suggests that a NNW trending fault is present near the Dieppe - Casa-Berardi Township boundary.

Landry and Gauthier's (1988) compilation of previous work on the Casa-Berardi property (Fig. 3), in contrast to Pilote's mapping, shows that sediments (turbidites) are almost exclusively present on the western part of the property and are also present in the north and south. Volcanics occur as a thick wedge in the central part of the property and also on the southwest and southern edges of the property. The great contrast in lithologies and also in structural and geophysical attitudes between eastern Dieppe and western Casa-Berardi Townships suggests that the strata in the two areas are unrelated, and that the NNW trending fault Pilote envisions near the township boundary forms a contact between western volcanic-dominated and eastern sediment-dominated terrains. The predominance of sediments on the southern and western parts of the Casa-Berardi property as well as in the north may indicate that all of these sediments and those at Golden Pond belong to the same series, within which the Golden Pond Sequence forms a restricted, well defined package. Sedimentary rocks in this part of the Abitibi Belt are generally correlated with the Taibi Group of the Matagami area (Pilote, 1987; Latulippe, 1976) but this interpretation is equivocal.

In the Casa-Berardi area, long linear conductive zones generally mark sheared, incompetent, graphitic sedimentary horizons at or near major volcanic-sedimentary contacts. One such conductive zone on the southern part of Cambior's Caribou property, seven kilometres east of the Casa-Berardi property in Estrées Township, has been identified as a shear zone and informally named the Casa-Berardi South Fault (Archer and Middleton, 1982; Averill and Graham, 1988). The conductive zone marking this structure is continuous from Caribou onto the southern part of the Casa-Berardi property where it is called FC-3/FC-4 by Landry and Gauthier (1988). Another conductive zone on northern Caribou lies immediately south of the strongest part of the iron formation that marks the southern limit of the Golden Pond sequence. This conductive zone also marks a shear zone informally named the Casa-Berardi Central Fault (Averill and Graham, 1988). The same conductive zone -- and presumably the same fault -- passes immediately north of the Casa-Berardi property. The presence of these major shear zones within or near the Casa-Berardi property and in geological settings similar to those at the Casa-Berardi Fault suggests a high potential for epigenetic, shear related gold deposits on the property.

4.2 Bedrock Geology of the Reverse Circulation Drill Holes

4.2.1 Bedrock Stratigraphy, Structure, Alteration and Topography

Bedrock lithologies intersected in the 1989 reverse circulation drill holes are listed in Table 7 and their distribution is illustrated on Plan 3.

A 1.5 to 2.5 km thick wedge of volcanic rocks occurs in the central part of the property. The volcanics are mostly basalt with rare intersections of andesite. Ultramafic volcanics occur as a lense in the central part of the volcanic sequence.

The volcanics are enveloped to the north, west and south by a turbidite succession comprising predominant greywacke with lesser siltstone, conglomerate and mudstone. These lithologies are interbedded at both map and sample scale.

6	Gabbro
5	Iron formation, chert
4	Clastic sediments 4a - conglomerate 4b - greywacke 4c - quartzite 4d - siltstone 4e - mudstone
3	Intermediate volcanics
2	Mafic volcanics
1	Ultramafic volcanics

Table 7 - Bedrock Lithologies of the Reverse Circulation Drill Holes

Near the major unit contacts, particularly in the south, basalt layers are present in the sediments. A few beds of fine graphitic sediments and iron formation also occur within the volcanic sequence, suggesting volcanism and sedimentation were essentially synchronous. Landry and Gauthier (1988) indicate that the strata dip south and are overturned -- as is the Golden Pond Sequence (Pattison, et al 1986) -- but whether the major controlling structure is an anticline or a syncline is not clear.

A small plug or sill of gabbro intrudes the southern turbidites near their contact with the central volcanic rocks 1.5 km northeast of Lac Casa-Berardi. Felsic tuffs described by previous workers (Archer and Middleton, 1981 and 1982; Landry and Gauthier, 1988) along the FC-1 to FC-5 structures were not encountered suggesting that deformational and bleaching effects, which are common in mafic volcanics and sediments, were mistaken for tuffaceous texture and felsic composition, respectively. All rock units present on the property display a lower greenschist metamorphic grade.

Many of the intersections in the drill area display visible shearing. The shearing appears to result predominantly in brittle deformation as the most common effects are microbrecciation and fracturing with discrete "fragments" sometimes outlined by vein material (quartz-carbonate) or bleaching. Mylonitization is locally observed but is not common. While brittle deformation is predominant, ductile deformation, manifested by a strong schistosity or shear lamination and alteration, is not uncommon.

Plan 3 shows areas of moderate to strong shear deformation superimposed on the property geology. As seen, only broad discontinuous areas of shearing are defined. These areas encompass major segments of shear zones FC-1 to FC-4 (Fig. 3), which were predicted from limited diamond drilling and the presence of long linear conductive zones (Landry and Gauthier, 1988), and also the major volcanic-sedimentary contacts. Thus, while the shearing is focussed on the volcanic-sedimentary contacts in the manner envisioned by Lacroix (1986), the shear zones themselves are broad, discontinuous or anastomosing features in which largely pristine, unsheared lozenges are often preserved, and single fault/shear planes cannot be accurately defined. We have chosen to show a part of FC-2 on Plan 3 (our positioning differs slightly from that of Lambert (1988) and Landry and Gauthier (1988) because the fault forms the apparent contact between SE and E-W trending conductors as well as the contact between western turbidites and eastern volcanics). Landry and Gauthier (1988) indicate that FC-1 and FC-2 merge in the northwest part of the property, with the east-west FC-1 trend predominating in the northwest corner. A conglomerate horizon occurring parallel to and north of FC-1 shows no structural dislocation, indicating that the conductors here are stratigraphically controlled. This pattern is also evident elsewhere on the property. Thus the FC-2 trend is probably also a stratigraphic feature, and the merging of FC-1 and FC-2 represents a simple stratigraphic pinch-out of the volcanic sequence along the nose of a major fold rather than a fault truncation. The fact that the volcanics form a topographic high (Plan 6), together with the northward polarity of the Golden Pond Sequence on the adjoining Inco property (Pattison et al., 1986) suggests the major fold is a west plunging anticline. However, the major fold could also be an east-plunging, basalt-cored syncline mirroring the west-plunging one mapped by Pilote (1987) in the Dieppe Hills if the Golden Pond fold is only a local feature. If this is the case, then the bedrock topography on the Casa-Berardi property simply reflects the relative competency of volcanics versus sediments (the deepest valleys do occur in sediments in the southern and southwestern parts of the property along shear zones FC-3/FC-4 and FC-2/FC-5, respectively).

Averill (1988), in a preliminary report to Cambior, proposed three northeast trending cross faults on the property -- one to explain a significant bend in the northern volcanic-sedimentary contact between Holes 77 and 121 (part of FC-1) and two to explain an offset in the ultramafic horizon and a bend in a thin conductive sediment horizon that flanks the ultramafic. Other cross faults may also be present but are difficult to identify as the property magnetics are largely overshadowed by the Golden Pond Sequence iron formation and local offsets are not apparent. Lambert (1988) postulated a north-northwest trending cross fault near the Theo River to explain offsets in conductors in this area. This fault (herein informally named the Theo River Fault) in shown on Plan 3 although its trend has been slightly modified to reflect offsets of approximately 300 m in the northern and southern volcanic-sedimentary contacts.

In many of the bedrock samples, shear deformation is accompanied by secondary alteration, particularly carbonatization. Carbonate minerals in the samples include calcite and Fe/Mg carbonate (ankerite, dolomite). Calcite is largely a product a regional greenschist facies metamorphism and is widely distributed. Some calcite — especially that occurring as metacrysts -- is undoubtedly secondary, but it is Fe/Mg carbonate that forms the most common and distinct alteration product. Plan 3, in addition to bedrock geology and shear deformation, also shows the contoured Fe/Mg carbonate content of the bedrock samples. The most striking feature is the close correlation of carbonatization with shear deformation and, in the north and west, the further correlation with FC-1 and FC-2 near the volcanic-sedimentary contact. Obviously, these shear zones are the preferred conduits for hydrothermal fluids. Another area of carbonate alteration is near the central ultramafic horizon which has been shown to be cut by two northeast trending faults, one of which occurs along the thin turbidite/iron formation horizon that flanks the ultramafic. Here, carbonate appears to be quite widespread but this may reflect the relatively open drill hole pattern. Further south, Fe/Mg carbonate alteration also shows a good correlation with sheared samples near FC-3 and FC-4 but is much less continuous.

The only alteration product other than Fe/Mg carbonate with a consistent distribution is arsenic (Plan 4). Arsenic shows a very close correlation with Fe/Mg carbonate and shear deformation as could be expected. The arsenic distribution is of importance considering the strong gold-arsenopyrite association at the Golden Pond deposits (Pattison et al., 1986) and elsewhere along the Casa-Berardi Fault.

Other alteration minerals -- i.e. silica, pyrite, sercite -- are much more localized despite the fact that they generally occur in samples that display Fe/Mg carbonate or arsenic enrichment. Even less common are tourmaline, fuchsite, chloritoid and hematite which occur in a few samples each but typically in low concentrations.

4.2.2 Lithologic Descriptions

Brief binocular lithologic descriptions of the bedrock samples were prepared (Appendix D) to confirm and amplify field descriptions with the objective of producing an accurate stratigraphic map. Particular attention was paid to primary features, and the rocks were assigned genetic names such as mafic volcanics rather than metamorphic names such as chlorite schist.

Reasonably accurate measurements of primary mineralogy, structure, texture, degree of metamorphism, and alteration can be made from chip samples with a binocular microscope, but inherent limitations are present. These limitations include:

1. Inability to differentiate gray plagioclase from pale gray-brown and gray-green pyroxene where the grain size is less than 0.1 mm as in many volcanic rocks. This often impedes differentiation of intermediate volcanics from mafic volcanics in greenstone belts as many of these belts have undergone only subgreenschist facies metamorphism such that primary pyroxene is preserved. In greenschist and amphibolite facies belts where primary pyroxene has been largely converted to green chlorite and black amphibole, respectively, intermediate and mafic units can be reliably differentiated but primary textures are often obliterated.

2. Inability to determine bedding thickness or fragment size where the dimensions of the beds or fragments are greater than the 1 cm diameter of the coarsest drill cuttings.

3. Inability to recognize tops in bedded sections.

4. Difficulty in differentiating certain primary structures such as pillow selvages from secondary veins and shears.

5. Necessity of inferring gross mineralogy of aphanitic samples from rock colour and hardness.

A summary description of each lithologic unit is presented in the following sections.

4.2.2.1 Ultramafic Volcanics (Map Unit 1)

Ultramafic volcanics are present in Holes 07, 11, 13, 95, 97 and 115 in the central part of the basalt area. The ultramafics form a magnetically traceable unit (Val d'Or Geophysique Ltee ground magnetic compilation map) that is partially flanked to the south by a thin conductive band of sediments.

The ultramafics are dark green to black, and with the exception of a well foliated sample in Hole 97 are massive to weakly foliated. They have a relatively coarse grained (0.1 to 0.6 mm), equigranular, interlocking crystalline volcanic texture.

The ultramafics of Holes 11, 13 and 97 are probably komatiites as they are composed of undifferentiated talc/serpentine and chlorite, with 3 to 5 percent disseminated magnetite in Holes 11 and 13 only. Pervasive alteration Fe/Mg carbonate in concentrations of 2 to 20 percent occurs in each sample. The sulfide content (pyrite and pyrrhotite) is less than 0.5 percent.

Ultramafics in Holes 07, 95 and 115 were logged as pyroxenitic volcanics (Appendix D). They differ mineralogically from those in Holes 11, 13 and 97 in that each contains as much as 10 to 20 percent plagioclase along with 40 to 50 percent pale to medium green, partially chloritized pyroxene, and 30 to 50 percent dark green chlorite ± serpentine. The Hole 115 sample also contains 2 to 3 percent small (0.2 to 0.3 mm) olivine crystals. Three to ten percent calcite occurs as disseminations and fracture fillings, or locally as metacrysts (Hole 95). Accessory minerals include one percent leucoxene (locally rutile) in Hole 07 and traces of magnetite in Hole 115. Sulfides are not present.

The mineralogical variations are closely mirrored by chemical variations (Appendix E). Specifically, the komatiitic samples from Holes 11, 13 and 97 have lower SiO_2 (37 to 40 percent) and Al_2O_3 (5 to 10 percent), and higher Fe_2O_3 (15 to 18 percent) and MgO (20 to 23 percent) than do the pyroxenitic samples of Holes 07, 95 and 115 (44 to 52 percent SiO_2; 12 to 16 percent Al_2O_3; 9 to 14 percent Fe_2O_3; 4 to 10 percent MgO). These variations are also distinct on the Jensen diagram (Fig. 13) where the Hole 11, 13 and 97 samples plot as basaltic komatiites, and the Hole 07, 95 and 115 samples plot as high magnesium tholeiitic basalts.

4.2.2.2 Mafic Volcanics (Map Unit 2)

Mafic volcanics (basalt) are present in 86 of the Casa-Berardi drill holes. The basalt samples are fine grained (aphanitic to 0.3 mm and rarely up to 0.8 mm) and range from massive and unfoliated to schistose, sheared and microbrecciated, especially near contacts with sediments (Plan 3). The basalt ranges in colour from dark green to beige with the lighter colour reflecting secondary alteration of sheared samples.

Fine grained basalt (less than 0.3 mm grain size) has an equigranular, interlocking crystalline texture. A few samples contain sparse plagioclase phenocrysts to 1.0 mm in size or fine plagioclase microlites to 0.3 mm. About one-quarter of the fine grained samples contain 1 to 30 percent amygdules up to two millimetres in size and variably infilled with quartz, calcite, chlorite and epidote. Basalt samples coarser than 0.3 mm, found in Holes 24, 32, 42, etc., are finer grained than gabbro but do display a gabbro-like sub-diabasic to diabasic texture.

Mineralogically the least altered basalt is composed of variably saussuritized and sericitized plagioclase with the only other major mineral being 35 to 50 percent chlorite, or more rarely, chloritized pyroxene. One to five percent quartz is sometimes present but is not universal. Leucoxene or primary ilmenite occurs in concentrations of one to three percent in some holes, and small amounts (0.2 to 3 percent) of magnetite are present in Holes 75 and 155.

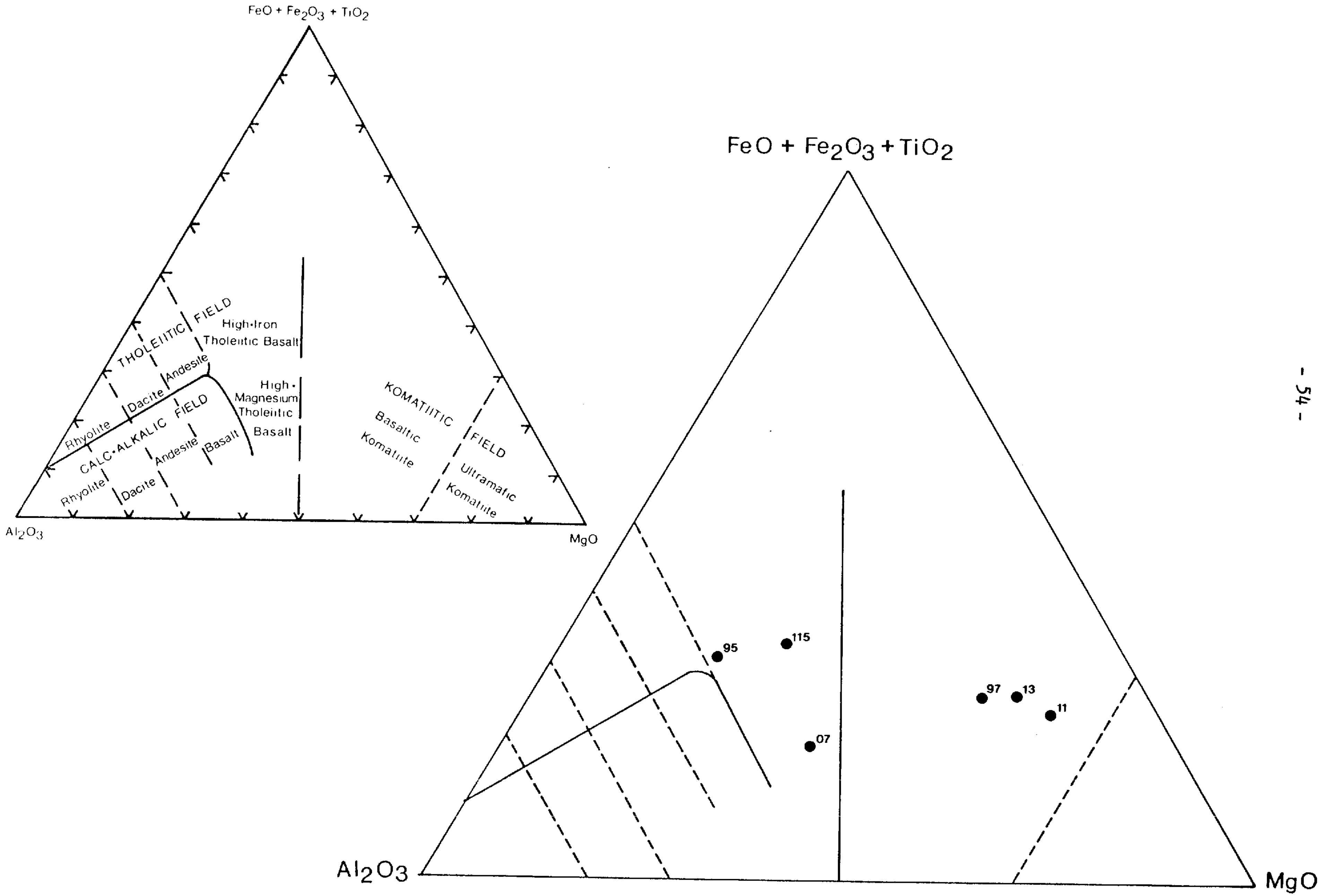


Figure 13 - Jensen Cation Plot of Ultramafic Volcanics (Map Unit 1)

Carbonate is present in all basalt samples except a few that have been weathered. Calcite, largely of metamorphic origin, is present in about 70 percent of the samples in concentrations that average 5 to 12 percent and locally reach 20 percent. It occurs as disseminations, fracture and foliation plane coatings, in veinlets with quartz, and more rarely as metacrysts.

Secondary, hydrothermal Fe/Mg carbonate is present in 35 to 40 percent of the samples, typically in sheared samples lacking calcite. Calcite does occur with Fe/Mg carbonate in five to ten scattered holes but in each case it appears to occur in veinlets that probably post-date Fe/Mg carbonatization. The Fe/Mg carbonate content ranges from 7 to 50 percent (Plan 3), and where most abundant results in a sealing of foliation and shear planes so that shearing is best defined by the carbonatization. This intense carbonatization also bleaches the basalt so that primary groundmass mineralogy is unrecognizable although a vague volcanic texture may remain.

Exclusive of Fe/Mg carbonate, other alteration tends to be weak and erratic. Scattered holes show weak to moderate silicification, and sericite was logged in some samples. Landry and Gauthier (1988) note sericite to be quite common in diamond drill holes where bedrock is carbonatized. With the strong bleaching that accompanies carbonatization, it is probable that they often mistook bleached chlorite for sericite.

Accessory alteration minerals include a trace of fuchsite in Hole 57, trace to 0.5 percent tourmaline in Holes 93 and 179, and 4 to 30 percent chloritoid in Holes 03, 25, 26 and 135. Both of the tourmaline occurrences and the chloritoid occurrence of Hole 25 are in samples containing 10 to 15 percent calcite. The chloritoid and fuchsite in the other holes are accompanied by 15 to 25 percent Fe/Mg carbonate.

The sulfide (pyrite) content of the basalt samples rarely exceeds one percent. The most notable exceptions are 15, 9 and 2 percent pyrite in highly Fe/Mg carbonatized samples of Holes 121, 191 and 195 along the ENE trending fault that offsets FC-1. Associated with the pyrite and Fe/Mg carbonate is 3 percent arsenopyrite in Holes 121 and 191 and 0.5 percent arsenopyrite in Hole 195.

The Jensen compositions (Fig. 14), of the basalt samples show a fairly wide scatter across the calc-alkaline/tholeiitic boundary in both the andesite and basalt fields. This undoubtedly is in part due to alteration, but similar compositions are noted for both altered and unaltered mafic volcanic rocks in the Golden Pond area (Pattison et al., 1986).

4.2.2.3 Intermediate Volcanics (Map Unit 3)

Rocks classified as intermediate volcanics (andesite) on the basis of mineralogy and texture were intersected in Hole 23 near FC-2 and in Holes 129, 157, 163, 165 and 182 east of the Theo River Fault, where they are particularly common near the northern volcanic-sedimentary contact and occur within both the mafic volcanic and sedimentary sequences.

Andesite is light to medium green in colour with local buff bleaching and ochre weathering. The samples range from unfoliated (Hole 23) to strongly schistose or microbrecciated (Hole 157), but are typically moderately well to well foliated. Some of the samples are porphyrytic. The groundmass of each sample has an equigranular, interlocking texture and is composed of very fine grained plagioclase, mafic minerals and quartz -- proportions are usually not determinable but the Hole 23 sample contains 65 to 70 percent plagioclase, 15 to 20 percent chlorite and 10 percent quartz, and the Hole 129 sample contains the same proportion of plagioclase and 20 percent pale green pyroxene. Similar groundmass compositions are assumed for the other andesite samples. The Hole 163 and 182 samples contain 30 to 50 percent subhedral plagioclase phenocrysts of 1 to 5 mm size. Five percent disseminated leucoxene is present in Hole 23.

The andesite generally contains 2 to 8 percent disseminated calcite and locally contains a similar proportion of veinlet calcite. Sulfide concentrations are typically low (less than 0.3 percent), except for one percent each of pyrite and pyrrhotite and a trace of chalcopyrite hosted by quartz-calcite veinlets in Hole 23.

The intermediate character of the samples is confirmed on the Jensen diagram (Fig. 15) where the Hole 23 sample plots as a tholeiitic andesite and the remaining samples plot as calc-alkalic andesite or dacite.

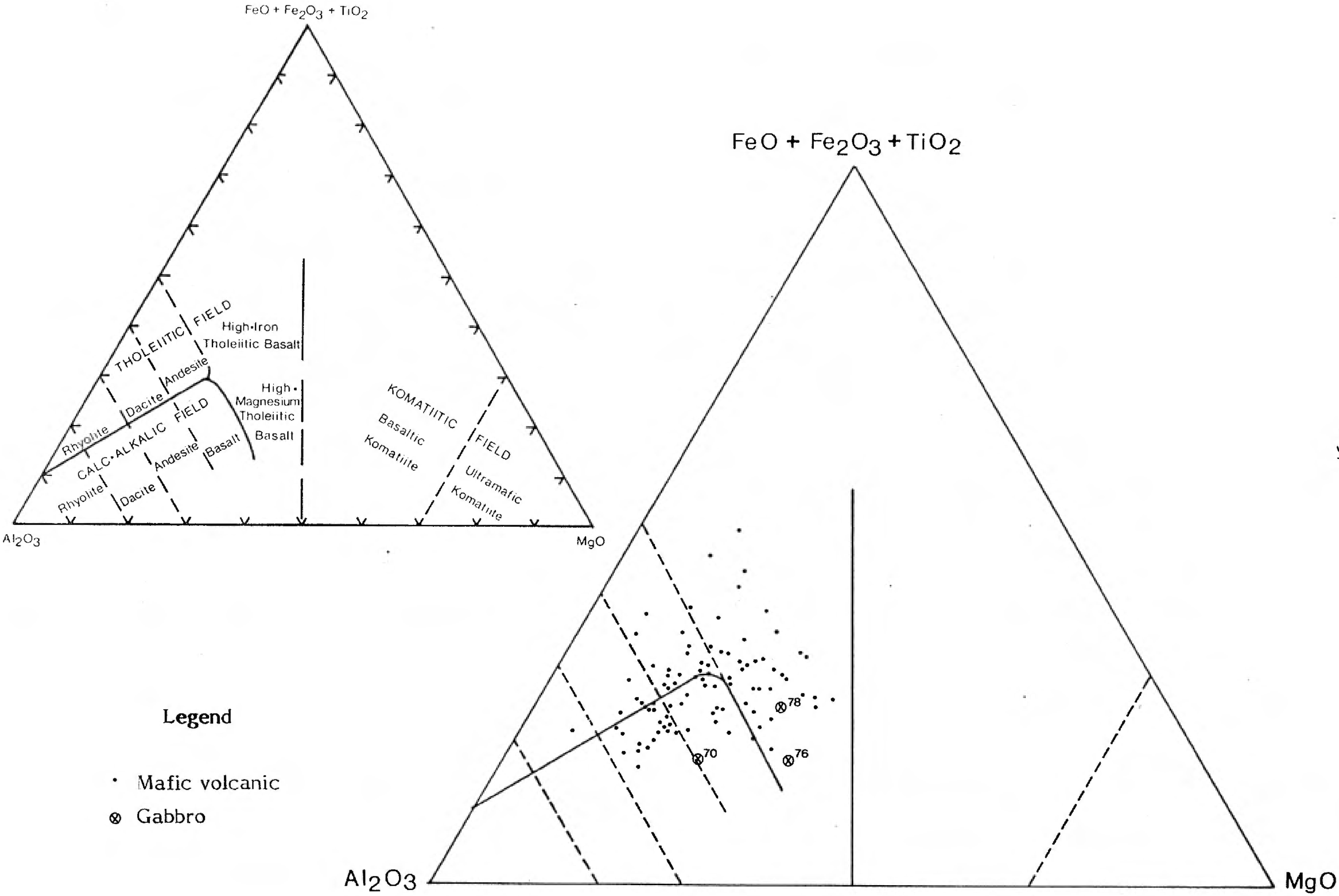


Figure 14 - Jensen Cation Plot of Mafic Volcanics and Gabbro
(Map Units 2 and 6)

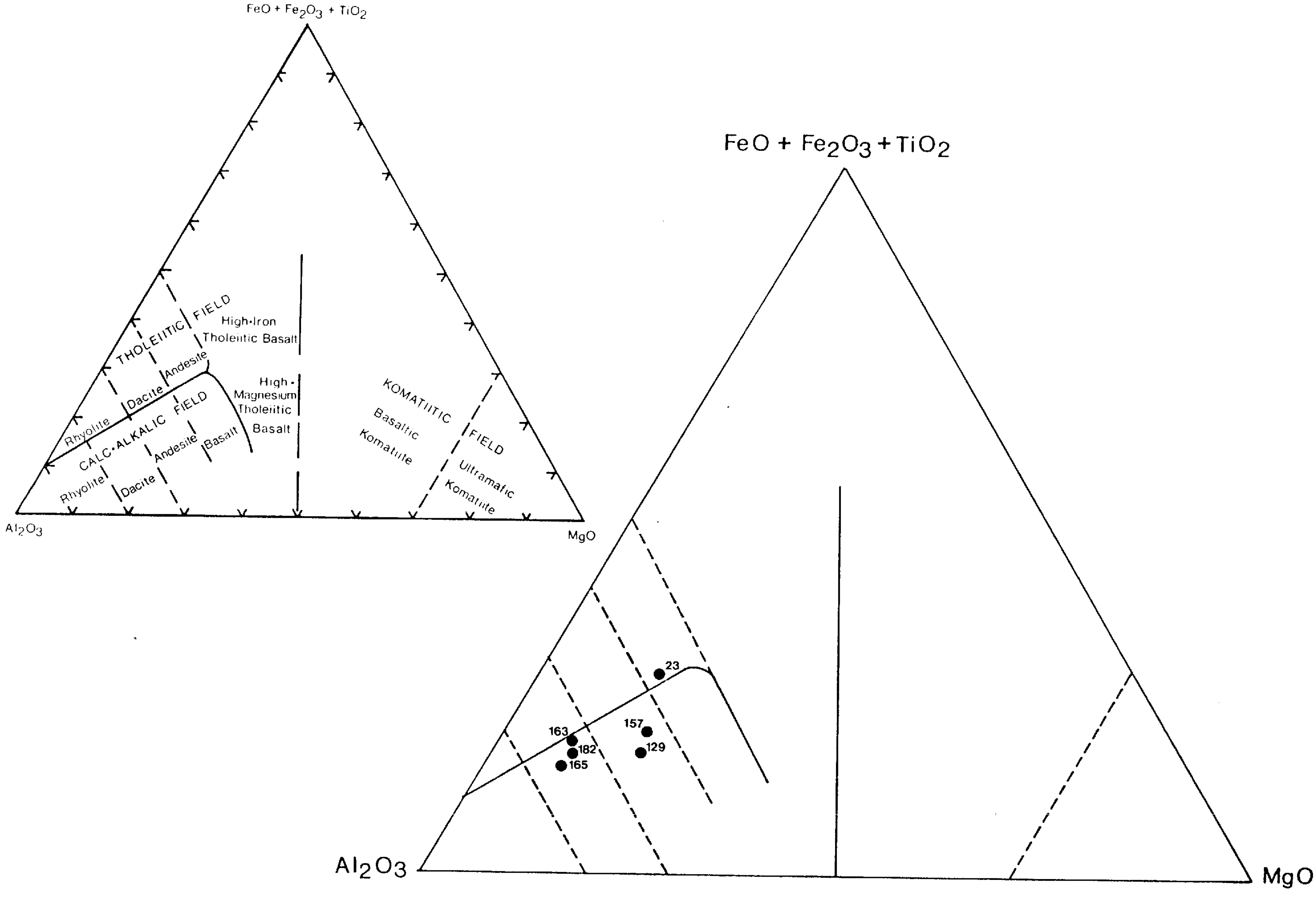


Figure 15 - Jensen Cation Plot of Intermediate Volcanics
(Map Unit 3)

4.2.2.4 Clastic Sediments (Map Unit 4)

Turbidites -- conglomerate, greywacke, siltstone, mudstone -- were intersected in 95 drill holes. They are the only rock types present in holes west of the FC-2 contact. East of FC-2, they enclose and locally are interbedded with the central volcanic sequence. Many of the turbidite samples also display intra-sample bedding -- most typically as siltstone or mudstone beds or partings in greywacke.

Conglomerate (Subunit 4a) was intersected in Holes 43, 45, 130, 144 and 148. The first four holes are in the northwestern part of the property and define a single E-W trending horizon north of FC-1. The Hole 148 conglomerate forms an isolated lense west of FC-2.

The conglomerates are similar to those described in the Golden Pond Sequence (Pattison, et al., 1986). They consist of 40 to 80 percent granules and pebbles ranging from 2 mm to greater than 1 cm in size in a medium to coarse, sorted sand (0.3 to 1 mm) matrix, locally with some very fine sand and silt (less than 0.1 mm). The matrix is composed predominantly of intermediate volcanic ash fragments and plagioclase with only 10 to 20 percent quartz sand and minor chlorite $\pm$ sericite (possibly bleached chlorite). Pebbles in the conglomerate are mostly light coloured, aphanitic intermediate volcanic ash (recycled from tuff) with 2 to 20 percent blue chert and more rarely black mudstone or grey siltstone. The presence of chert, mudstone and siltstone pebbles indicates synsedimentary reworking of the sedimentary pile and this, together with the notable absence of plutonic pebbles, indicates a fairly restricted, local, submarine sediment provenance.

Structurally the conglomerate ranges from unfoliated to schistose but all samples, except the one in Hole 130, display a moderate to strong shear brecciation. The samples from Holes 43, 45, 130 and 144 contain 5 to 10 percent alteration Fe/Mg carbonate as disseminations, fracture fillings and in quartz-carbonate veins. The isolated Hole 148 conglomerate contains 25 percent Fe/Mg carbonate as a pervasive alteration product in both the matrix and pebbles. Pyrite is found in all holes except No. 148. Concentrations range from one to five percent, compared to less than 1 percent in the basalt and andesite samples. This suggests that most of the pyrite is syngenetic, although now it is largely recrystallized, occurring as fine to coarse crystalline diseminations and local semi-massive concentrations near veinlet margins. Only small amounts (0.5 percent) of pristine syngentic pyrite remain, occurring as sand grains in Holes 43 and 45 and as a constituent of chert pebbles in Holes 130 and 144. Faint traces of fuchsite are present in Holes 144 and 148.

Greywacke (Subunit 4b) is typically a pale to medium grey colour but ranges from dark greenish-grey to beige where altered. The samples are poorly to moderately well foliated but many display a shear schistosity or microbrecciation. Millimetre-scale cherty, muddy or silty partings define bedding in some holes. The greywacke is poorly sorted with grain size variations from 0.05 to 1.0 mm although the average grain size is 0.1 to 0.4 mm (i.e. fine to medium sand). The least altered greywacke is composed of about 80 percent visible sand and 20 percent matrix chlorite ($\pm$ sericite). The sand is typically 10 to 20 percent quartz, 40 to 50 percent plagioclase and 20 to 40 percent aphanitic intermediate volcanic lithics (recycled ash) -- the lithics are often weakly bleached and not always distinguishable from plagioclase. Sand-sized mudstone, pyrite and chert grains can also be seen in many samples but proportions are low.

Siltstone (Subunit 4d) is differentiated from greywacke by its finer grain size (less than 0.05 mm), better foliation (often a poor fissility) and its consistently darker grey to grey-green to black colour resulting from a higher chlorite content (greater than 30 percent). Like greywacke, siltstone is sometimes sheared and brecciated. The fine grain size of the siltstone precludes identification of minerals other than chlorite but the composition is probably similar to that of the sand in the greywacke. Thin (less than 10 mm) quartzite beds (Subunit 4c) composed of fine grained (0.1 to 0.15 mm) quartz sand (60 percent), mudstone lithics (5 percent) and grey chlorite to white or ochre/oxidized clay (30 to 35 percent) are interbedded with siltstone in Hole 94. This isolated occurrence of quartzite is the only example of non-turbidite sediments encountered in the turbidite sequences.

Mudstone (Subunit 4e) is a black, aphanitic rock possessing a distinct fissility or slaty cleavage and is sometimes crenulated. Graphitic slip planes are usually apparent and microlaminations of chert and/or pyrite may be present. The mudstone horizons, rather than shearing as postulated by Laundry and Gauthier (1988), probably account for most of the conductivity on the property.

Carbonate is found in essentially all the greywacke, siltstone and mudstone samples as disseminations, fracture/foliation plane coatings and in veinlets and stringers. Calcite occurs in approximately 25 percent of the samples but concentrations rarely exceed ten percent. Fe/Mg carbonate occurs in 75 percent of the samples in concentrations ranging from 1 to 25 percent (Plan 3) but most typically in the 3 to 10 percent range. In general, calcite and Fe/Mg carbonate do not occur in the same samples.

Sulfides are as ubiquitous in the greywacke, siltstone and mudstone as they are in the conglomerate. Concentrations range from trace to eight percent but rarely exceed three percent. Pyrite is most common with pyrrhotite present locally and in low concentrations. Pyrite occurs as fine to coarse crystalline disseminations within the host, as disseminations to semi-massive concentrations within or marginal to veins and as pristine syngenetic laminae, sometimes with chert. It is in samples with pyrite $\pm$ chert laminae that sulfide concentrations usually exceed three percent. Visible arsenopyrite (less than 0.2 percent) is present in Hole 74 near FC-4.

Traces of fuchsite occur in Holes 68, 79 and 123, and traces of tourmaline occur in Hole 94. Except for the Hole 94 sample, which is weathered and bleached, each of the samples also contains 8 to 12 percent Fe/Mg carbonate. Chloritoid metacrysts (0.5 percent) are found in highly Fe/Mg carbonatized greywacke in Hole 124. Specular hematite (0.2 percent) occurs as an alteration product of pyrite in chert-pyrite laminae in Hole 134.

Chemically, most of the turbidite samples are equivalent to calc-alkalic andesite and dacite (Fig. 16). This composition, together with the abundance of intermediate ash fragments and the moderate concentrations of quartz in the greywacke and conglomerate, suggests derivation from calc-alkalic, central complex type volcanic source areas such as those found around the felsic volcanic centres at the Estrades deposit (Phillips, 1987) and in Bradette Township in Ontario (Johns, 1979).

4.2.2.5 Iron Formation, Chert (Map Unit 5)

Iron formation is present in Holes 84, 159 and 178 in the general area of the Theo River. The three occurrences are all proximal to conductors. They variably occur within basalt and turbidite sequences, and several of the turbidite samples also contain two to ten percent chert or chert-pyrite laminae (lean iron formation). Thus chemical and clastic sedimentation and volcanism must have occurred simultaneously.

The Hole 84 iron formation is dark to pale grey and banded on the order of 0.5 to 1 mm. It is massive, aphanitic and composed of: a) 20 percent chert beds enclosing five percent finely disseminated pyrite and one to two percent massive pyrite beds or stringers; and b) 80 percent chert beds containing zero to thirty percent (variable) chlorite, fifty percent hematite (locally limonitized) and two percent coarse cubic pyrite.

The Hole 159 iron formation consists of 80 percent massive, colloform to crystalline pyrite, 5 to 8 percent grey schistose siltstone/mudstone partings and 12 percent quartz veinlets. Some chert-sulfide beds also appear to be present but are not distinct due to the high sulfide content.

The Hole 178 iron formation is distinctly bedded with thin (less than 1 mm) muddy partings, thicker (greater than 5 mm) chert beds, and thin (0.2 mm) pyrite

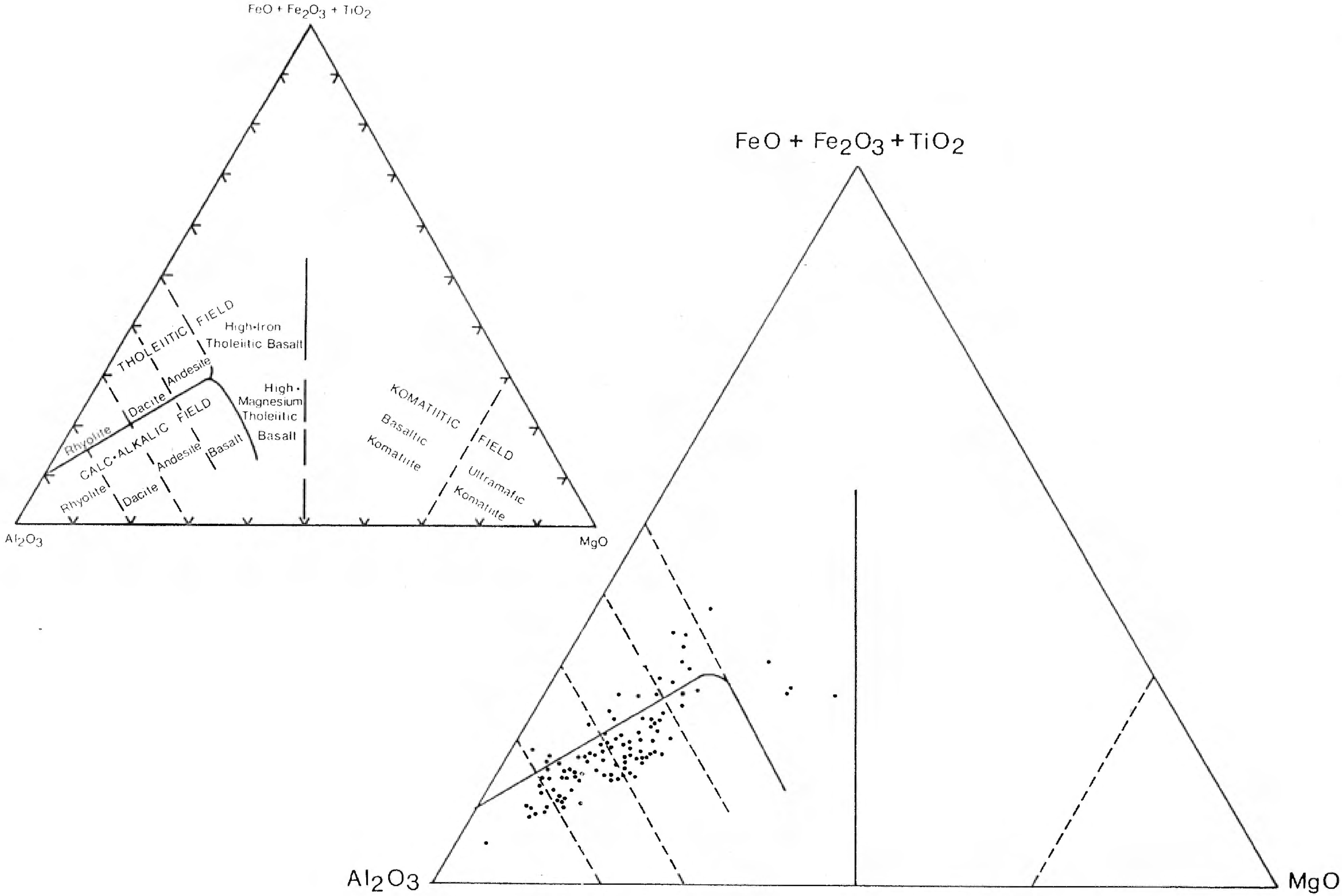


Figure 16 - Jensen Cation Plot of Clastic Sediments
(Map Unit 4)

laminae. The iron formation is schistose and contains five percent quartz-Fe/Mg carbonate veinlets that impart a weak brecciation. Overall, the sample contains 65 to 70 percent chert, 5 percent pyrite and 8 percent Fe/Mg carbonate in veinlets and disseminated in the chert beds. It also contains 15 to 20 percent of a green to black, glassy, pyroxene-like mineral that concentrates parallel to the chert-pyrite bedding. The crystals cross-cut foliation, however, and are therefore secondary. This mineral is believed to be chloritoid produced during hydrothermal Fe/Mg carbonate alteration.

4.2.2.6 Gabbro (Map Unit 6)

Gabbro was intersected in Holes 70, 76 and 78, defining a sill or small plug within the southern sedimentary sequence 1.5 km northeast of Lac Casa-Berardi.

The gabbro samples range from massive and unfoliated (Hole 76) to poorly foliated with a moderate to strong shear fracturing (Holes 70, 78). The massive gabbro in Hole 76 displays a median grain size of 1.0 to 1.5 mm and a sub-diabasic texture. The gabbro in Holes 70 and 78 has a grain size of 0.2 to 1.5 mm and has an inequigranular, interlocking (hypidiomorphic) texture, but due to deformation both grain size and texture are less distinct than in the massive gabbro of Hole 76 and are not markedly different from those of the coarsest grained basalt samples. Groundmass mineralogy is consistently 65 to 70 percent plagioclase and 25 to 35 percent green to buff (bleached) chlorite (Holes 70 and 78) or chloritized pyroxene (Hole 76). One percent quartz is also present in Hole 78, three percent ilmentite/rutile in Hole 70 and less than one percent leucoxene in Holes 76 and 78. Pyrite occurs in trace amounts. Calcite concentrations, excluding vein calcite, do not exceed 5 percent and Fe/Mg carbonate is not present.

The gabbro of Holes 76 and 78 is chemically equivalent to high magnesium tholeiitic basalt while the Hole 70 gabbro plots as a calc-alkalic basalt (Fig. 14). Compared to the mafic volcanic rocks shown in the same figure, the gabbro is slightly enriched in magnesium relative to iron which could suggest the intrusive is not related to area volcanism.

4.3 Bedrock Geochemistry

The Casa-Berardi bedrock chip samples were analyzed for gold, arsenic, copper, zinc and silver. The assay results are reported in Appendix E. Elevated concentrations of gold (10 ppb or higher), arsenic (20 ppm or higher), and zinc (over 200 ppm) are listed in Table 8 and are highlighted on Plan 3 in relation to bedrock stratigraphy, structure and carbonate alteration. Arsenic values of 25 ppm or higher are contoured on Plan 4 and zones containing more than 50 ppm arsenic are highlighted on Plan 5. No elevated copper or silver assays were obtained.

On most of the Bondar-Clegg analytical reports, the majority of the gold assays are below the 5 ppb detection limit. On report 089-50132.0, covering Holes 01 to 24, 24 of the 26 assays exceed the detection limit and range from 5 to 30 ppb indicating a problem with analytical sensitivity. Results of 10 ppb or greater have been included on Plan 3 and in Table 8 but are not considered significant.

Copper values are low, ranging from 8 to 142 ppm. Silver values do not exceed 1.1 ppm and most are below the 0.1 ppm detection limit. Zinc values are mostly in the 14 to 161 ppm background range with only five samples -- in Holes 17 (2 samples), 42, 159, and 178 -- assaying greater than 200 ppm. All of the anomalies are weak (239 to 577 ppm), and sphalerite was not seen in any of the samples. The Hole 159 sample is sulfide iron formation, the Hole 178 sample is chert-pyrite iron formation with chloritoid alteration, and the Hole 17 sample is graphitic mudstone with two to three percent syngenetic chert-pyrite laminae. The implication is that the elevated zinc assays are due to very fine-grained syngenetic sphalerite. The Hole 42 sample is a weathered, brecciated and Fe/Mg carbonatized basalt suggesting the zinc here is secondary. The zinc anomalies are too weak to be of significance in base metals exploration, and none have a significant correlation with gold. The poor Cu-Zn-Ag results, together with the absence of felsic volcanics and tuffs on the property, indicate that there is no potential for base metal deposits.

Hole No.		Sample No.	Au (ppb)	As (ppm)	Cu (ppm)	Zn (ppm)	Ag (ppm)
CB-89-	01	03	16*	L 2	81	54	L 0.1
	02	08	12*	4	65	50	L 0.1
	03	06	13*	178	87	83	L 0.1
	04	03	L 5	39	59	85	L 0.1
	05	03	18*	5	49	98	L 0.1
	07	02	11*	7	23	27	L 0.1
	08	02A	14*	4	60	91	L 0.1
		02B	19*	4	60	102	L 0.1
	09	01	30*	74	69	66	L 0.1
	10	02	6*	70	68	73	L 0.1
	11	03	7*	21	26	14	L 0.1
	12A	07	12*	4	57	97	L 0.1
	13	03	12*	4	32	23	L 0.1
	15	19	7*	60	47	66	L 0.1
	16	04	14*	33	68	85	L 0.1
	17	03	19*	72	34	239	L 0.1
		04	8*	74	28	556	L 0.1
	19	06	14*	8	21	42	L 0.1
	20	13	22*	12	28	117	L 0.1
	21	02	7*	41	17	96	L 0.1
	24	06	13*	6	31	125	L 0.1
	25	02	L 5	40	93	98	0.1
	29	01	101	L 2	12	68	L 0.1
	33	03	5	66	87	72	L 0.1
	34	37B	27	27	29	74	L 0.1
	35	08	L 5	32	48	78	L 0.1
	36	02	195	4	57	73	L 0.1
	37	03	L 5	33	34	69	0.1
	38	15	L 5	73	61	151	L 0.1
	39A	08	L 5	23	31	62	L 0.1
	40	21	L 5	55	29	53	0.4
	42	05	L 5	45	137	331	L 0.1
	43	06	12	18	33	88	L 0.1
	47	06	12	28	41	95	0.3
	49	12	6	28	30	80	L 0.1
	51	05	L 5	37	28	58	L 0.1
	52	07	L 5	29	20	65	L 0.1
	53	08	13	82	46	99	L 0.1

*analytical sensitivity problems

Table 8 - Elevated Bedrock Au, As and Zn Assays

Hole No.	Sample No.	Au (ppb)	As (ppm)	Cu (ppm)	Zn (ppm)	Ag (ppm)
CB- 89- 56	13	L 5	20	25	50	L 0.1
57	09	L 5	98	59	56	L 0.1
58	02	L 5	50	56	76	L 0.1
61	03	16	8	38	81	L 0.1
63	11	9	25	52	77	L 0.1
66	39	L 5	107	37	71	0.3
67	13	19	152	61	61	L 0.1
68	21	8	50	28	67	L 0.1
69	17	L 5	30	44	97	L 0.1
71	12	5	21	42	91	L 0.1
74	30	15	98	46	86	L 0.1
	31	226	896	25	19	0.1
77	04	L 5	106	64	78	L 0.1
79	08	L 5	27	34	63	0.2
84	34	39	61	42	47	L 0.1
87	03	L 5	23	51	93	L 0.1
88	05	12	37	36	86	L 0.1
89	02	5	21	41	72	0.4
91	06	57	1,750	47	161	L 0.1
93	04	L 5	27	56	89	L 0.1
97	04	6	91	45	68	L 0.1
99	02	L 5	98	59	57	L 0.1
100	02	L 5	87	31	65	0.1
103	07	L 5	24	64	68	L 0.1
104	18	L 5	24	39	90	L 0.1
106	15	L 5	21	32	49	L 0.1
107	10	L 5	250	47	104	L 0.1
108	05	258	36	20	55	L 0.1
111	01	L 5	23	65	94	L 0.1
113	04	L 5	36	44	66	L 0.1
116	19	L 5	25	42	71	0.1
117	05	L 5	105	74	111	L 0.1
119	02	L 5	67	54	85	L 0.1
120	05	L 5	45	20	63	0.6
121	03	198	G2000	39	72	L 0.1
122	03	L 5	27	27	80	L 0.1
123	06	5	73	34	65	0.1
126	04	L 5	50	30	43	L 0.1
128	19	19	84	60	109	L 0.1

Table 8 - Elevated Bedrock Au, As and Zn Assays (cont'd)

Hole No.		Sample No.	Au (ppb)	As (ppm)	Cu (ppm)	Zn (ppm)	Ag (ppm)
CB- 89-	130	08	5	22	35	87	L 0.1
	134	09	17	34	57	32	0.2
	136	10	L 5	49	37	64	L 0.1
	137	25	L 5	28	68	98	L 0.1
	138	03	L 5	29	41	94	L 0.1
	139	21	L 5	51	28	27	L 0.1
	140	11	9	50	48	101	L 0.1
	144	07	7	36	38	69	0.1
	145	15	5	36	22	65	L 0.1
	146	05	5	52	36	87	0.1
	149	06	L 5	112	38	54	0.3
	155	17	L 5	32	41	60	L 0.1
	159	23	14	298	19	496	0.1
	160	06	L 5	26	53	81	L 0.1
	162	02	6	30	46	48	L 0.1
	163	19	L 5	41	26	66	L 0.1
	164	16	L 5	82	166	47	L 0.1
	168	10	L 5	48	38	114	L 0.1
	169	08	L 5	67	46	92	L 0.1
	170	03	L 5	27	37	88	L 0.1
	171	14	L 5	32	55	71	L 0.1
	172	02	L 5	26	34	52	L 0.1
	174	10	L 5	42	100	62	L 0.1
	176	03	6	22	83	76	L 0.1
	178	12	L 5	147	142	577	L 0.1
	180	16	L 5	41	23	66	0.5
	181	11	L 5	8	38	126	1.1
	188	12	L 5	24	54	94	L 0.1
	189	02	L 5	104	86	120	L 0.1
	191	06	71	G2000	71	44	L 0.1
	192	02	L 5	57	73	80	L 0.1
	194	07	L 5	102	45	51	L 0.1
	195	01	6	976	73	69	L 0.1
	196	02	5	145	66	93	L 0.1
	197	03	L 5	144	59	122	L 0.1

Table 8 - Elevated Bedrock Au, As and Zn Assays (cont'd)

Arsenic assays range from less than the 2 ppm lower detection limit to greater than the 2000 ppm upper resolution limit, with eighteen assays exceeding 100 ppm, seven exceeding 200 ppm including five of greater than 800 ppm, and many others falling in the 20 to 100 ppm range. As discussed in Section 4.2, arsenic alteration correlates very closely with Fe/Mg carbonatization and shearing (Plans 3, 4). The arsenic alteration is particularly strong in basalt near FC-1 between Holes 91 and 121, including the area of follow-up Holes 191 to 197 near Hole 91. Four of the five arsenic assays exceeding 800 ppm occur here (Hole 91 -- 1750 ppm As with 0.5 percent arsenopyrite observed; Hole 121 -- greater than 2000 ppm As with 3 percent arsenopyrite observed; Hole 191 -- greater than 2000 ppm As with 3 percent arsenopyrite observed; Hole 195 -- 976 ppm As with 0.5 percent arsenopyrite observed). The only other arsenic assay exceeding 800 ppm is 896 ppm As in quartz-veined mudstone with 0.2 percent arsenopyrite in Hole 74 near FC-4.

Gold assays range from less than the five ppb detection limit to 258 ppb (Hole 108) with only five samples assaying above 100 ppb. As with arsenic, gold shows a fairly good correlation with shearing and Fe/Mg carbonatization and thus also correlates fairly well, geographically, with arsenic. Anomalous gold does not, however, correlate directly with arsenic as it does along the Casa-Berardi Break, where ODM has observed a consistent 1:2000 gold:arsenic ratio. Thus, the highly anomalous arsenic in such Holes as 91, 121, and 191 is unfortunately not indicative of significant gold enrichment. The gold assays do not exceed results obtained in previous diamond drilling (Landry and Gauthier, 1988), and are in themselves of limited exploration significance.

5. OVERBURDEN GEOLOGY

5.1 Quaternary History and Stratigraphy of the Abitibi Region

The Quaternary geology of the Abitibi region, as determined by ODM from thousands of drill holes and scanty literature, is summarized in Figure 17 and Table 9. Tills from three major glaciations and sediments from two interglacial periods are present.

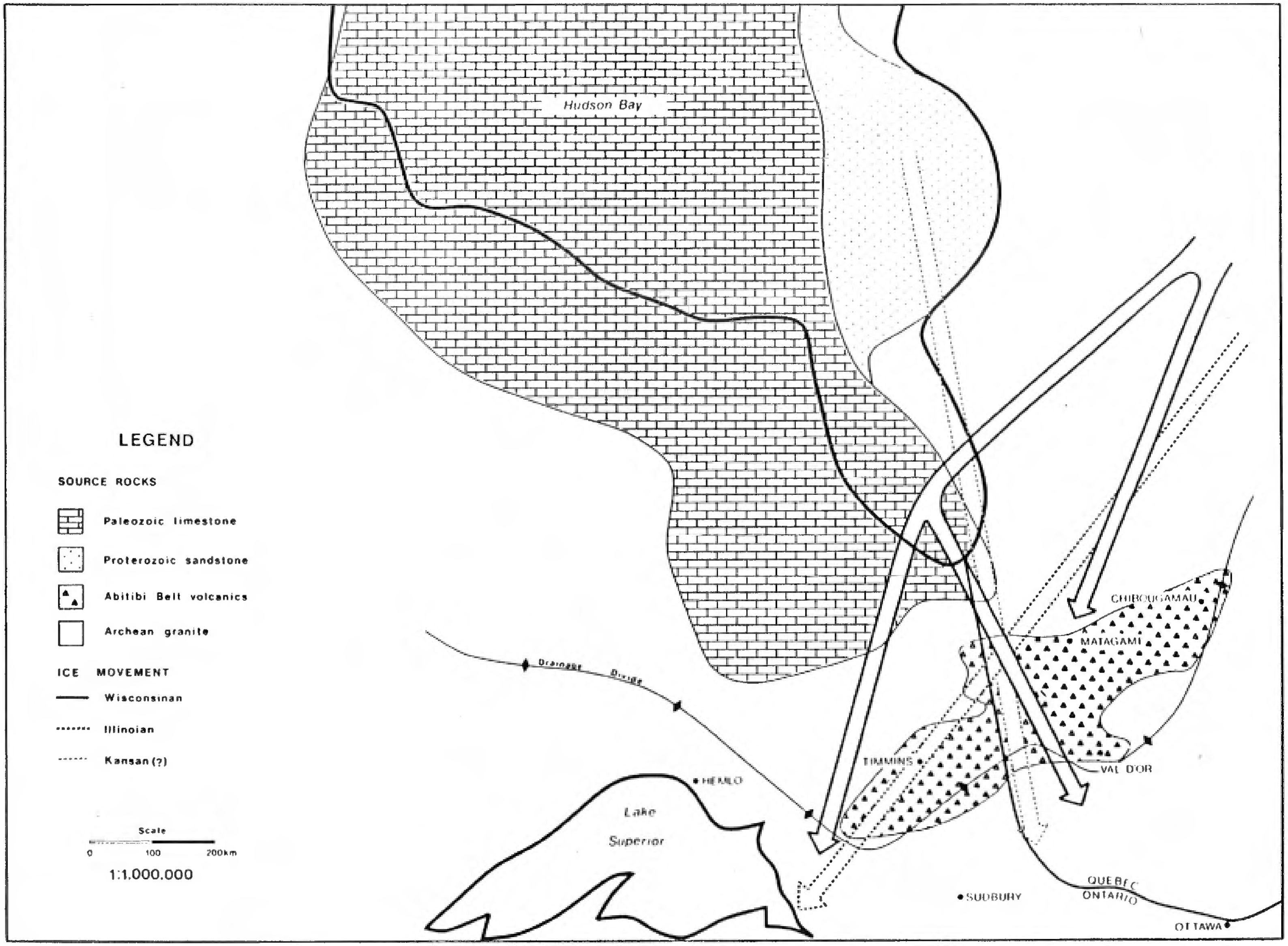


Figure 17 - Glacial History of the Abitibi Region

Present	**HOLOCENE**
	7 Holocene sediments 7c - forest-peat member 7b - lacustrine-clay member 7a - fluvial member
10,000 Years B.P.	**PLEISTOCENE**
	LATE WISCONSINAN
	6 Cochrane Till
	5 Ojibway II Sediments 5e - littoral and aeolian member 5d - Cochrane member 5c - glaciolacustrine clay member 5b - glaciolacustrine sand member 5a - glaciofluvial member
	4 Chibougamau/Matheson Till
100,000 Years B.P.	**EARLY WISCONSINAN AND SANGAMON**
	3 Missinaibi Formation 3c - Ojibway I member 3b - forest-peat member 3a - fluvial member
	ILLINOIAN
	2 Lower Till and Sediments
1,000,000 Years B.P.	**YARMOUTH AND KANSAN**
	1 Older Till and Sediments

Table 9 - Quaternary Formations of the Abitibi Region

The oldest till was deposited by ice moving southward from Hudson Bay -- possibly 1 million years ago in Kansan time -- and is enriched in clasts of Proterozoic sandstone and Paleozoic limestone. This till is so rarely preserved that it is of no significance in exploration. The next till (Lower Till) was deposited by ice moving southwestward from New Quebec in Illinoian time more than 125,000 years ago. It is preserved in many buried valleys and contains the dispersal trains from any mineralization in these valleys. The youngest till was deposited 10,000 years ago by Late Wisconsinan ice of the Laurentide sheet that originally moved southwestward from New Quebec (Veillette et al., in press) but during glacial recession split into a southeast-moving Hudson mass west of Longitude 78°W (Val d'Or and Joutel), where the Casa-Berardi property is located, and a southwest-moving New Quebec mass in the area east of this longitude. The esker-like Harricana Interlobate Moraine was deposited at the contact between the two ice masses. The till to the west is known as Matheson Till; that to the east has not been formally named but we call it Chibougamau Till.

In the Yarmouth and Sangamon interglacial periods immediately following the Kansan and Illinoian glaciations, respectively, the Kansan and Illinoian tills were reworked to form soils and northward-transported fluvial gravels. The gravels consist mostly of recycled till debris, are oxidized, and often contain wood fragments and significant concentrations of placer gold.

In Early Wisconsinan time 100,000 years ago and in Late Wisconsinan time 10,000 years ago, the region was flooded by glacial Lakes Ojibway I and II respectively, and varved clay, silt and fine sand sheets up to 30 metres thick were deposited. The Ojibway I sediments conformably overlie the Sangamon interglacial sediments and the complete Sangamon/Early Wisconsinan package is known as the Missinaibi Formation (Skinner, 1973). The Ojibway I sediments coarsen upward because they were deposited from a transgressive ice sheet that was pushing the lake southward. They were overridden by this 2 km thick Wisconsinan ice sheet and are overconsolidated, dry and platy whereas the Ojibway II sediments were deposited from regressive ice, fine upward and are soft. Glaciofluvial esker/delta sands and gravels were deposited by the meltwater rivers that fed both lakes.

The final glacial event in the Abitibi region was a minor southeastward re-advance of a thin lobe of ice from the Hudson mass into the north part of Lake Ojibway II, depositing Cochrane Till which consists mainly of clay recycled from the soft lake bed. When the Cochrane ice melted, Lake Ojibway II drained catastrophically northward, exposing the Late Wisconsinan esker ridges to considerable erosion by wave and wind action until they became stabilized by vegetation.

5.2 Quaternary Geology of the Casa-Berardi Property

Quaternary units intersected in the reverse circulation drilling include Illinoian-age Lower Till, the Sangamon- to Early Wisconsinan-age Missinaibi Formation, Wisconsinan-age Matheson Till and Ojibway II glaciofluvial and glaciolacustrine sediments, and Holocene-age peat. Deposits predating the Wisconsinan ice advance are preserved in two settings where they were sheltered from glacial erosion (Plan 5): 1) on the lee (south) side of east-west trending ridges in the competent basalt, especially on the northwest part of the property; and 2) in cross-ice (east-west trending) valleys in the incompetent turbidites, especially the 50 m deep valley between FC-3 and FC-4 in the southeast and the 30 m deep valley between FC-2 and FC-5 in the southwest. Elsewhere Matheson Till is generally in direct contact with bedrock. Ojibway II glaciofluvial sand and gravel locally supplant the till in a few holes along the Golden Pond Esker and overlie the till in some other holes. Lake Ojibway II glaciolacustrine sand occurs in a number of holes and the clay-silt horizon is ubiquitous and thick. Cochrane Till is rare and is restricted to combined bedrock/topographic highs. A veneer of Holocene peat or forest litter overlies the glaciolacustrine sediments and constitutes the surface horizon throughout the drill area.

The direction of ice movement for Illinoian-age Lower Till has been determined by ODM to be approximately 225 degrees across the Abitibi region flowing from a New Quebec centre (Averill, 1986); this has been substantiated by striae measurements associated with the till (Bird and Coker, 1987; Veillette, 1986; Veillette et al., in press). The ice flow direction for Late Wisconsinan-age Matheson Till is south-southeasterly in most of this region including the Casa-Berardi area (160 to 170 degrees) but through most of the Wisconsinan glaciation appears to have been to the southwest and was almost due west at Selbaie (Veillette, 1986; Veillette et al., in press). Although differentiation of Lower Till from Matheson Till is obviously critical when tracing mineral dispersal trains, Lower Till is generally indistinguishable from Matheson Till in character and composition; the two can be reliably differentiated only where the Sangamon to Early Wisconsinan Missinaibi Formation lies between them.

In addition to the problem of identifying the age of the till, a problem was sometimes experienced in distinguishing till from sand and gravel. Inconsistencies in the field logs were investigated by binocular microscope examinations of the character sample splits. Wherever this led to a revision of the field classification, a note has been added to the field log (Appendix A).

The intersected units are described in detail below and are shown in section in Figures 18 to 33. Lines of section are shown on Plan 6.

5.2.1 Lower Till (Abitibi Unit 2)

Identifiable Lower Till (i.e. overlain by Missinaibi Formation) was intersected in 28 of the 197 drill holes (Plan 6). Occurrences in the lee of ridges in the competent basalt are relatively continuous whereas those in valleys in the incompetent turbidites are spotty because these valleys, in the Sangamon interglacial period, were occupied by rivers that eroded the till and recycled it to form the basal gravel member of the Missinaibi Formation. All of the Lower Till occurrences lie directly on bedrock. The thickness of the till ranges from 0.3 to 9.9 m and averages 4.0 m. The till is generally clast-supported, with a grey to grey-beige, fine sand-silt rock flour matrix and cobble-sized clasts. Clast

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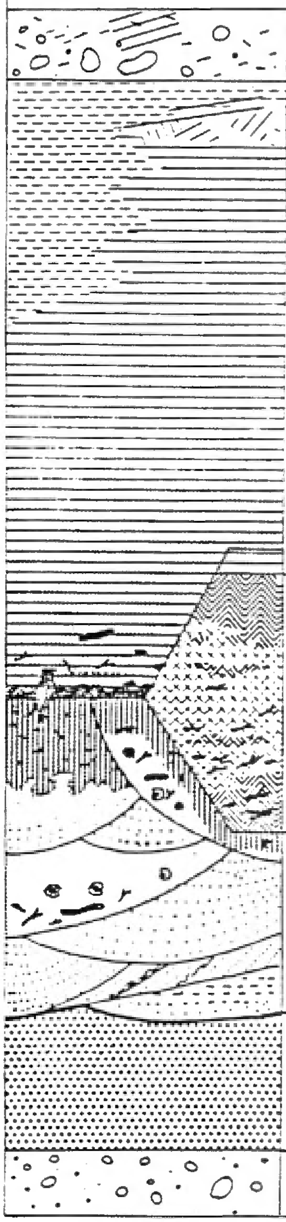
composition averages 80:20 volcanics and sediments versus granitoids but ranges from 55:45 to 98:2. In Holes 114 and 116 in the southwest, the till contains abundant gritty clay and minor concentrations of limestone clasts (2 to 4 percent) suggesting that remnants of the oldest known (Kansan?) Quaternary deposits (Abitibi Unit 1) occur nearby.

The position of the Lower Till on the bedrock surface, and the predominance of locally derived rock flour matrix and volcanic/sedimentary clasts, indicate that the till is an excellent geochemical sampling medium. Its distribution is poor in the turbidite-controlled valleys at FC-2/FC-5 and FC-3/FC-4 but is sufficient in the lee of basalt ridges near FC-1 that southwest trending/ribbon-type dispersal trains could be expected if significant mineralization is present.

5.2.2 Missinaibi Formation (Abitibi Unit 3)

The Missinaibi Formation was first documented by Skinner (1973) in the Moose River Basin of the James Bay Lowland and since has been shown to be both distinctive and extensive in the Abitibi region (Averill, 1986; DiLabio et al., 1988). The type section from the Moose River Basin is illustrated in Table 10 and includes, from oldest to youngest, a basal marine clay unit related to incursion of the Bell Sea, wood-bearing fluvial interglacial sands and gravels capped by or grading laterally to a weathered soil profile and forest litter, and a sequence of transgressive, upward coarsening glaciolacustrine sediments.

Missinaibi sediments within the Abitibi region do not include the basal marine member as the incursion of the Bell Sea was restricted to the James Bay area. The other members are rarely if ever all intersected in a single drill hole but have all been observed in the Casa-Berardi area as well as in the Timmins area, where they are called the Owl Creek beds (DiLabio et al., 1988).



SEDIMENTS	INTERPRETATION	ROCK STRATIGRAPHIC UNITS	
TILL	GLACIATION	ADAM TILL	
NON- TO SLIGHTLY ORGANIC, VERY CALCAREOUS SILT-CLAY RHYTHMITES COMMONLY SHEARED AND FOLDED VERY ORGANIC, LAMINATED TO MASSIVE SILT, SLIGHTLY OR NON-CALCAREOUS	GLACIAL OVERRIDING LITTLE OR NO REWORKING OF FOREST-PEAT-BED. GLACIER PROBABLY AN IMPORTANT SEDIMENT SOURCE REWORKING OF FOREST PEAT BED TRANSGRESSION OF PROGLACIAL LAKE	LACUSTRINE MEMBER	MISSINAIBI FORMATION
LAYER OF MOSS, STUMPS, STICKS, AND OTHER PLANT FRAGMENTS RARELY FIBROUS PEAT	PEAT AND FOREST GROWTH	FOREST-PEAT-BED MEMBER	
ZONE OF WEATHERING (VERTICAL LINES) AFFECTS LOWER UNITS AS WELL SAND SILT GRAVEL COMMONLY CROSS-STRATIFIED IN PLACES WITH LENSES OF FOSSILIFEROUS SEDIMENT	WEATHERING, SOIL FORMATION STREAM INCISION AND DEPOSITION	FLUVIAL MEMBER	
SAND SILT AND CLAY CONTAINS MARINE FOSSILS.	OFF-LAP OF BELL SEA MARINE INCURSION (BELL SEA) GLACIAL RETREAT	MARINE MEMBER	
TILL	GLACIATION	LOWER TILL	

Table 10 - The Missinaibi Formation of the Moose River Basin

(Source: Skinner, 1973)

Sediments of the Missinaibi Formation were intersected in a total of 56 of the 197 reverse circulation drill holes; they directly overlie Lower Till in 28 holes and rest on bedrock in the remaining 28 holes. Only the fluvial interglacial (Subunit 3a) and Ojibway I glaciolacustrine (Subunit 3c) members of the formation were intersected.

The fluvial member (Subunit 3a) was intersected in thirty-three drill holes (Plan 6). It occurs mainly in the turbidite-controlled valleys, especially the valley at FC-3/FC-4 where it appears to completely line an old river channel. Lower Till is preserved beneath the fluvial sediments in only eight holes; elsewhere these sediments directly overlie bedrock. The fluvial sediments consist of sand and gravel. Their thickness averages approximately 10 metres and attains a maximum of 27.8 metres in Hole 34. The sand beds consist of fine to coarse sand that is invariably beige or ochre in colour. They often continue uninterrupted for several metres. The gravel beds range from pebbly to cobbly, have a coarse beige or ochre sand matrix and are often clast supported. Clast composition is usually 60:40 volcanics and sediments versus granitoids and ranges from 45:55 to 80:20. However a significant proportion of clasts in most intersections are undifferentiable because of pervasive limonite staining. The predominance of locally derived clasts suggests that the fluvial member is a reasonably good geochemical sampling medium analoguous to present day stream sediments in areas of thin overburden. However, the paucity of very fine sand and silt diminishes the probability of intersecting visible gold anomalies indicative of nearby sources as the gold in most ore bodies, and in till-hosted dispersal trains associated with these ore bodies, is very fine grained.

The Ojibway I glaciolacustrine member (Subunit 3c) was intersected in thirty-six drill holes and is particularly common in the lee of the basalt ridges near FC-1. It directly overlies the fluvial member in eleven holes, Lower Till in twenty holes, and bedrock in five holes. It consists of clay with minor laminations of silt, sand, or granules. Its thickness averages approximately 6 m and attains a maximum of 16.1 m in Hole 118. The clay is distinctive because it is overconsolidated, usually dry, and hard to drill. It is commonly grey, but is grey-green or grey-beige in some intersections. Eight of the clay intersections, including seven in the lee of the basalt ridges near FC-1, contain thin seams of organic-rich brown clay that record the transition from the Sangamon interglacial environment to the Early Wisconsinan glaciolacustrine environment. Whereas the interglacial gravel occurs in deep valleys, the organic clays occur at shallow depth — sometimes within 10 metres of the present terrain surface. ODM has observed this pattern elsewhere in the Abitibi region, and interprets it as a reflection of the Sangamon geography — rugged terrain (i.e. pre clay belt) with large, turbulent rivers in the valleys and forests on the hills. Samples from some of the organic-rich intersections have been submitted to the G.S.C. for macrofossil and pollen analysis to determine the paleoenvironment. Age dating is not possible because the sediments are older than the 35,000 $\pm$ year limit for the C^{14} method.

5.2.3 Matheson Till (Abitibi Unit 4)

Matheson Till was intersected in 181 of the 197 holes, and thus is exceptionally well distributed in the drill area. Of twenty-three holes where the Matheson Till horizon either was not intersected or is less than 0.5 m thick, six are along the Golden Pond Esker (type Section M-M') and the others are typically shallow holes, including six holes around outcrops near the zone of arsenic enrichment on FC-1 (Sections H-H' and W-W'). The thickness of the Matheson Till intersections averages 10.3 m, and exceeds 40 m in a number of holes. The thickest till sections occur along the bedrock valley of FC-3/FC-4. Thickening of the till section is probably due in part to imbrication of debris within the ice mass throughout the Wisconsinan, but thickening during deposition also occurred as evidenced by numerous bedded sections within the till (type Sections H'-H" and P-P') that record repeated Late-Wisconsinan ice withdrawal and readvance.

The Matheson Till is typically matrix supported and cobbly. Variations in the till composition often reflect variations in the underlying strata. Typically the till matrix is grey-beige, fine sand-silt rock flour. However, in the lower section of the till the matrix is often enriched in clay where the till overlies the glaciolacustrine member of the Missinaibi Formation, and is often enriched in beige, medium sand where the till overlies the fluvial interglacial member. Clasts in the till range in size from pebbles to boulders, and in composition from 55:45 to 95:5 volcanics and sediments versus granitoids. The clast suite often changes down-section, becoming enriched in limonite stained pebbles or rip-up grey clay clasts over Missinaibi fluvial interglacial and glaciolacustrine sections, respectively, and enriched in Abitibi volcanic and sedimentary clasts over bedrock. The presence of beige medium-grained sand and limonite stained clasts in till overlying oxidized fluvial sediments often results in indistinct contacts between the two horizons. The responsiveness of the Matheson Till to the underlying strata, and the typical predominance of locally derived bedrock material in both the matrix and the clast fractions of the till, indicate that the till is an excellent geochemical sampling medium. In addition, the till rests directly on bedrock in 131 of the 181 holes in which it was intersected. Thus the exploration coverage provided by the Matheson Till, and/or by the Missinaibi Formation gravel and Lower Till that locally underlie the Matheson Till, is good to excellent throughout the drill area, compromised somewhat by the predominance of fine sand-silt deficient Missinaibi gravel in the bedrock valley along FC-3/FC-4.

5.2.4 Ojibway II Sediments (Abitibi Unit 5)

The following sediments were deposited while the Casa-Berardi property was flooded by glacial Lake Ojibway II.

Subunit 5a: Ice-contact glaciofluvial sand and gravel
Subunit 5b: Ice-proximal glaciolacustrine sand
Subunit 5c: Ice-distal glaciolacustrine silt and clay
Subunit 5d: Ice-proximal Cochrane glaciofluvial and glaciolacustrine sediments

Glaciofluvial sand and gravel (Subunit 5a) was intersected in 20 of the 197 drill holes. Thirteen of the intersections occur along the Golden Pond Esker in the west half of the property, four occur in adjacent holes in the southeast corner of the property (Nos. 86, 129, 131 and 133) and appear to define a small, buried moraine, and the other three are isolated and thin. The sand and gravel supplant Matheson Till in five of the Golden Pond Esker intersections -- overlying Missinaibi clay in one hole and bedrock in four holes -- and overlie Matheson Till in the other fifteen holes. The gravel beds are usually clast supported and consist of pebble and cobble-sized clasts similar in composition to the clasts in Matheson Till, with a medium to coarse beige sand matrix. The sand beds are fine to coarse grained and are a clean, washed beige colour.

Glaciolacustrine sand (Subunit 5b) was intersected in 43 of the 197 drill holes, primarily overlying or offlapping (flanking) the glaciofluvial intersections both along the Golden Pond Esker and elsewhere on the property. This sand is distinguished from the glaciofluvial sand by the incorporation of silt, which changes the colour from beige to grey-beige. The glaciolacustrine sand also tends to have a smooth surface topography whereas the glaciofluvial sand and gravel often display irregular surface topography (Section K-K', Fig. 26)..

Glaciolacustrine clay-silt (Subunit 5c) was intersected in all of the holes except Nos. 53 and 81. It ranges in thickness from less than 5 m to more than 30 m (in Holes 100 and 131) and has filled in depressions in the glacial lake bed to produce the subdued present-day surface topography. The great thickness and near-ubiquitous distribution of the clay-silt horizon attest to the depth (75 m; Vincent and Hardy, 1979) and duration (greater than 500 years; Veillette et al., in press) of submergence of the Casa-Berardi property by Lake Ojibway II. The clay-silt member is varved, and grades both downward and upward into ice-proximal gritty clay, silt and sand that record the retreat of the main Wisconsinan ice mass and the approach of Cochrane ice from the north, respectively.

Gritty clay of probable Cochrane age was observed near the top of many drill holes but was included with the other Ojibway II sediments except where the section: 1) contains limestone clasts indicative of a James Bay provenance; 2) overlies limestone clast-enriched sediments; or 3) overlies Cochrane Till (Unit 6).

Glaciofluvial gravel enriched in limestone clasts was intersected overlying Ojibway II glaciolacustrine clay-silt (Subunit 5c) in seven holes; four of these intersections (in Holes 39, 43, 123 and 192) occur around the outcrop cluster in the north-central part of the property; the other three (in Holes 22, 38 and 79) are located on the flanks of bedrock ridges in the central part of the property. The gravel is usually pebbly, with a medium to coarse sand matrix and invariably has over 20 percent limestone clasts (up to 60 percent). This gravel is of little value in exploration geochemistry due to its limited distribution and the distal provenance of most of the material.

Glaciolacustrine sediments of obvious Cochrane age, but containing no clasts and therefore no limestone, overlie the limestone-rich glaciofluvial gravel of Holes 22, 39, 43, 79, 123 and 192. Similar glaciolacustrine sediments overlie Cochrane Till in another four holes (Nos. 30, 38, 62 and 64). The Cochrane glaciolacustrine intersections are usually thin (2 to 5 m; 10 m in Hole 22) and consist of an upward fining sequence -- pebbly to pure grey-beige fine sand (in three holes) grading into beige (oxidized) or grey, gritty clay-silt (in all ten holes) grading into non-gritty clay-silt (in three holes). The thinness of this member indicates that the Cochrane re-advance occurred very late in the history of Lake Ojibway II, which is consistent with the prevailing interpretation (Vincent and Hardy, 1979; Veillette et al., in press).

5.2.5 Cochrane Till (Abitibi Unit 6)

The Pleistocene era ended in the Abitibi region with a re-advance of the Wisconsinan ice sheet southward from the Moose River Basin into the north part of Lake Ojibway II. This period is known as the Cochrane stage (Prest, 1964). The Cochrane ice must have been very thin, for it rarely contacted bedrock and overrode the Ojibway II sediments on the lake bottom without causing significant compaction.

Well-developed flutings on the surface of the Cochrane Till in the northern part of the Casa-Berardi region show that the azimuth of ice advance was 140 to 150 degrees. On the basis of the fluted topography, Remick (1960) mapped the Cochrane limit 17 km north of the Casa-Berardi property.

Cochrane Till was intersected in four holes (Nos. 30, 38, 62 and 64) flanking the basalt outcrops at the 280 m elevation (Plan 5) immediately north of Lac Gérin, and in Hole 51 two km to the northwest but at the same elevation. The till is less than 2 m thick in all intersections. Its restriction to topographic highs and its position well to the south of the Cochrane limit suggest that the till is comprised of debris from icebergs that separated from the Cochrane ice mass, floated southward in Lake Ojibway II, and became grounded on shoals in the lake. Alternatively, Veillette (personal communication) has suggested that a floating ice shelf extended southward from grounded ice at Remick's Cochrane limit. In either case, the till is obviously of no value as a geochemical sampling medium. Its matrix is primarily recycled Ojibway II clay-silt, with minor fine sand, and its clasts are usually pebble sized and are much less abundant than in Matheson Till -- normally comprising about 5 percent of the sample. Clast composition is also distinct from that of the Matheson Till, with limestone comprising from 10 to 50 percent of the suite. The till contacts bedrock in only one of the drill holes (No. 62), overlies Ojibway II glaciolacustrine clay in three holes, and overlies Golden Pond Esker sediments in one hole (No. 51).

5.2.6 Holocene Peat/Forest Litter (Abitibi Subunit 7b)

Holocene peat/forest litter is often not returned in the drill water due to sample blow-out that occurs when the drill holes are being collared, but is usually logged as comprising the depth of no sample return (typically 0.5 to 1.5 m). The forest litter horizon is actually only 0.2 m thick in most cases, but peat intersections on the Casa-Berardi property range from 2 to 4 m thick and occur in all of the holes drilled on bogs (five holes in the extreme northeast -- Sections A - A' and B - B', Fig. 18; and a few holes elsewhere).

6. OVERBURDEN GEOCHEMISTRY

6.1 Regional Gold and Base Metal Background and Anomaly Threshold Levels

The interpretation of the heavy mineral gold geochemistry of overburden samples is an involved process. In summary, the gold background of tills is caused mainly by grains of visible gold and these gold grains are so thinly scattered through the till and are of such a wide size range that it is impossible to obtain either a representative number of grains ("particle sparsity effect") or a representative gold assay ("nugget effect"; Table 5) from a sample of reasonable size. In contrast, gold dispersal trains down-ice from known ore bodies have a large concentration of gold grains of a narrow size range such that both representative gold grain counts and gold assays can be obtained. Through experience, we have established a dispersal train threshold of 10 grains of visible gold for the 8 kg samples that are normally collected on reverse circulation drills. Recognizing that not all gold grains are observed during processing and that gold can be occluded in sulphides or other heavy minerals rather than occurring as free gold grains, we also investigate any anomalies over a second, 1000 ppb threshold. The 1000 ppb value is based on the observation that heavy mineral concentrates from most gold dispersal trains have a gold content similar to that of the source mineralization; thus 1000 ppb in the till is suggestive of highly anomalous bedrock and values over 3,000 ppb are suggestive of ore-grade mineralization. Significant anomalies, in addition to being caused by more than 10 gold grains of a similar size or by occluded gold, also generally display vertical stratigraphic continuity within the host till horizon and may have an associated pathfinder metal, particularly arsenic or copper. Delicate or irregular gold grains are also significant as they normally indicate a proximal source (Fig. 9).

The base metal background of a heavy mineral concentrate, and particularly of our high-density methylene iodide concentrates, is higher than that of a raw till sample, ranging up to several hundred ppm, because base metals tend to substitute to a significant extent for other metal ions in the structures of heavy silicate and sulphide minerals such as pyroxene and pyrite. The established anomaly threshold level for Cu and Zn, indicating the presence of ore-type minerals such as chalcopyrite and sphalerite in potentially economic concentrations, is 800 ppm. Because till concentrates from dispersal train samples tend to grade the same as the bedrock source mineralization, massive sulphide deposits which typically grade 50,000 ppm (5 percent) combined Cu-Zn often produce anomalies over 10,000 ppm in each metal. The same deposits average 35 ppm (1 ounce/ton) silver, and the silver anomaly threshold corresponding to 800 ppm Cu or Zn is about 2 ppm. Arsenic does not have a well-defined anomaly threshold because arsenic deposits are not in themselves of economic interest. However, arsenic is a very important gold pathfinder. Arsenic values in excess of 800 ppm are normal in till concentrates obtained from dispersal trains down-ice from known gold deposits that contain arsenopyrite but lower values can be significant, especially if the sampling sites are too widely spaced to guarantee sampling of the higher grade core portions of the train. Similarly, Cu and Zn values lower than 800 ppm that would not be of interest in base metal exploration can be significant as indicators of gold mineralization.

Significant Cu, Zn, Ag and As anomalies, like significant gold anomalies, normally display vertical continuity in the host till and have a pathfinder association. In the case of copper and zinc, the presence of grains of banded massive pyrite-chalcopyrite-sphalerite mineralization in the concentrate is a favourable indicator whereas the presence of only coarse crystalline vein-type chalcopyrite or sphalerite is unfavourable unless gold is also present.

6.2 Casa-Berardi Overburden Geochemistry

6.2.1 Heavy Mineral Gold and Arsenic Anomalies

Of the 1521 Casa-Berardi heavy mineral concentrates, 22 exceeded our first anomaly thresheld of ten or more grains of visible gold, and 10 of these as well as 90 others exceeded our second anomaly threshold of a measured or calculated gold assay over 1000 ppb. Thus a total of 112 samples (7 percent of the samples collected) met or exceeded one or both of our anomaly thresholds. The 112 anomalies occur in 68 holes throughout the property (Plan 4). The anomalies occur in all of the sampled media; 6 occur in Lower Till, 8 occur in Missinaibi fluvial interglacial sediments, 95 occur in Matheson Till, and 3 occur in Ojibway II glaciofluvial sediments.

In the Abitibi region, on average, 10 percent of samples that contain only background levels of gold yield anomalous assays or visible gold grain counts due to:

1. The chance occurrence of one or two coarse gold grains in the sample (nugget effect), or
2. The chance clustering of 10 or more fine gold grains in the sample (particle sparsity effect).

The 10 percent Abitibi background noise is entirely attributable to the sampling procedure (i.e. samples are too small to give representative gold grain counts and gold assays). It increases to 15 to 50 percent in the south due to the cumulative effect of glaciating a vast expanse of volcanic terrane that contains a plethora of minor gold occurrences. The fact that only 7 percent of the Casa-Berardi samples are anomalous reflects the interruption of the volcanic terrane by non-auriferous Pontiac-type terrane just north of Golden Pond, but also indicates that the shear zones on or near the property have contributed very little gold to the overburden.

Heavy mineral arsenic, copper, zinc, and silver assays warrant consideration in the interpretation of heavy mineral gold anomalies. Arsenic in particular is a valuable gold pathfinder at Golden Pond (Pattison et al., 1986) and a persistent 2000:1 arsenic to gold ratio has been observed by ODM in heavy mineral gold dispersal trains from gold mineralization along the Casa-Berardi Fault. One hundred and six Casa-Berardi samples produced arsenic assays over 800 ppm (Table 11), and most of these anomalies display dispersal train characteristics and are from concentrates containing visible arsenopyrite (Appendix C). Gold assays for the arsenic-anomalous samples are generally low; thus the 2000:1 ratio is not applicable here. Nonetheless the arsenic dispersion is a useful indicator of zones of hydrothermal activity that could host gold mineralization.

On Plan 4, anomalous arsenic zones -- defined as areas where either the basal till sample or two or more vertically contiguous till or Missinaibi gravel samples assayed over 800 ppm arsenic -- are highlighted in relation to contoured bedrock arsenic. Not shown are isolated arsenic anomalies as these are often spurious. Most of the pockets of Lower Till (Plan 6) southwest of the main bedrock arsenic zone between Holes 91 and 121 along FC-1 are anomalous. This dispersal pattern is consistent with the established southwesterly Illinoian ice flow direction for the Abitibi region. The dispersal pattern in the Late Wisconsinan-age Matheson Till horizon is less obvious but this appears to be due mainly to the major till thickening -- and resulting arsenic dilution — that occurs in the southern bedrock valley along FC-3/FC-4. When the arsenic anomaly threshold is lowered to 200 ppm and all of the anomalous Matheson Till samples in each drill hole are summed and contoured (Plan 5), the expected southerly to south-southeasterly dispersal trend is revealed although the dispersion is now overstated in the thick till. In summary, both the Matheson Till and Lower Till appear to be geochemically responsive to the strong FC-1 arsenic zone. Weaker arsenic mineralization associated with the east-northeast trending faults through the ultramafic horizon is also well represented in the Matheson Till but weak mineralization in the northwest corner of the property is poorly represented.

Hole No.		Sample(s)	Quaternary Unit	Strat. Cont.	As (ppm)	Au (ppb)
CB-89-	13	01	4	Vertical	G 2,000	238
		02	4	Vertical Basal	G 2,000	201
	15	16	2	No	G 2,000	108
	22	03	4	Basal	1,072	327
	23	01	4	Basal	1,072	110
	27	02	2	Vertical	2,000	508
		03	2	Vertical Basal	2,000	372
	28	01	4	Basal	1,200	578
	30	08	4	Basal	G 2,000	158
	31	05	2	Vertical	G 2,000	265
		06	2	Vertical, Basal	G 2,000	365
	34	01	4	No	816	195
		12	4	No	800	87
	35	07	2	Basal	896	26,600
	36	01	4	Basal	G 2,000	58
	38	02	4	Vertical	G 2,000	384
		03	4	Vertical	G 2,000	240
		04	4	Vertical	G 2,000	152
	40	01	4	No	968	430
		05	4	No	1,288	197
	42	03*	4	No	824	587
	50	12	4	No	800	65
	57	01	4	No	856	92
		08	2	Basal	1,200	233
	61	02	4	Basal	904	140
	63	01	4	No	944	90
	66	02	4	No	1,240	179
	67	02	4	No	992	284
	68	01	4	Vertical	848	128
		02	4	Vertical	1,016	2,830
		03	4	Vertical	832	162
		04	4	Vertical	928	208
		06	4	Vertical	960	210
		07	4	Vertical	1,088	288
		08	4	Vertical	984	143
		10	4	No	952	102
		20	4	Basal	1,504	334
	70	03	4	No	800	1,191
	72	01	4	No	960	1,560
	73	01	4	No	1,184	276

*Potentially significant gold anomaly

Table 11 - Heavy Mineral Arsenic Anomalies

Hole No.	Sample(s)	Quaternary Unit	Strat. Cont.	As (ppm)	Au (ppb)
CB-89- 74	05	4	No	960	141
	26	2	No	824	180
	28	2	Vertical	1,024	236
	29	2	Vertical, Basal	G 2,000	802
76	01	4	No	1,328	113
	02	2	Vertical	1,316	714
	03	2	Vertical, Basal	1,304	90
78	01	4	No	856	144
	28	2	Basal	920	49
79	04	2	No	1,328	194
80	05	4	No	1,080	2,160
86	10	3a	No	904	118
87	02	4	Basal	844	930
88	04	4	Basal	1,032	52
90	04	4	No	896	88
91	04	4	Vertical	G 2,000	164
	05	4	Vertical, Basal	G 2,000	845
93	01	4	Vertical	G 2,000	108
	02	4	Vertical	1,040	180
97	01	4	Vertical	1,256	450
	02	4	Vertical	1,072	94
102	01	4	Vertical	1,240	476
	02	4	Vertical	1,040	222
	03	4	Vertical	1,496	156
	04	4	Vertical	928	169
	09	4	No	960	205
103	04	4	Basal	848	60
104	03	4	No	840	145
105	01	4	No	864	480
107	09	4	Basal	856	370
108	04*	4	Basal	1,932	1,584
109	03*	4	No	808	1,490
	05*	4	No	832	170
	12	4	Basal	1,032	595
117	04	3a	No	G 2,000	159
119	01	4	Basal	1,890	115
121	01	4	Vertical	G 2,000	420
	02*	4	Vertical, Basal	G 2,000	1,428
123	01	5d	No	G 2,000	92
	04	3a	No	1,048	90
	05	3a	No	1,048	217

*Potentially significant gold anomaly

Table 11 - Heavy Mineral Arsenic Anomalies (cont'd)

Hole No.	Sample(s)	Quaternary Unit	Strat. Cont.	As (ppm)	Au (ppb)
CB-89- 126	02*	4	Vertical	1,008	447
	03*	4	Vertical, Basal	1,184	420
127	33	3a	No	1,208	9,895
	34	3a	No	1,200	154
	35	3a	No	1,304	320
129	08	4	No	1,120	L 6
132	03	4	No	1,160	212
136	09	4	Basal	912	185
137	02	4	No	G 2,000	147
	23	2	Vertical	848	996
	24	2	Basal	1,096	114
139	30	4	Basal	1,208	84
140	05*	4	No	1,360	743
	10	4	Basal	856	272
152	01	3a	No	960	80
	02	3a	No	1,112	135
164	15	2	Basal	1,216	122
168	07	2	Vertical	1,932	168
	08	2	Vertical	1,694	228
	09	2	Vertical, Basal	1,729	256
169	07	2	Basal	896	14,817
171	12	2	Vertical	808	735
	13	2	Vertical, Basal	968	464
191	05	4	Basal	824	85
192	01	4	Basal	1,144	96
194	04	4	No	936	1,192

*Potentially significant gold anomaly

Table 11 - Heavy Mineral Arsenic Anomalies (cont'd)

The vertical distribution of arsenic in the Matheson Till is also of interest. Near the FC-1 source, the arsenic is concentrated at the base of the till (e.g. Section H - H', Fig. 24). Further south in the FC-3/FC-4 valley, the arsenic has risen to the top of the till. This is best illustrated in Hole 68 (Section P - P', Fig. 29) where the upper 10 samples of the 20 sample thick till section assayed 776 ppm As or greater and the lower 10 samples assayed 196 ppm As or less (with the exception of the bottom sample which assayed 1504 ppm As but is only slightly separated from anomalous bedrock that assayed 50 ppm As). The transition from non-anomalous to anomalous till may mark the shift from westerly to south-southeasterly ice flow that occurred during Late Wisconsinan ice recession (Veillette et al., in press).

Heavy mineral copper, zinc, and silver assays are less variable and anomalies are far less frequent, but copper or zinc values over 400 ppm and silver values over 1 ppm will be discussed wherever they are associated with heavy mineral gold anomalies.

A systematic, three-stage screening process has been applied to each of the 112 heavy mineral gold anomalies (Fig. 34, Table 12) with the objective of eliminating high background noise and isolating any dispersal train anomalies that may be present. In summary, the screening is used to determine the cause of each anomaly, and those anomalies that are caused by background noise are rejected.

The simplest stage in the screening -- and therefore the first one applied -- is to downgrade anomalies which have no vertical stratigraphic continuity; however, these anomalies are not completely eliminated until their cause is determined. An anomaly at the base of a till horizon or in a one-sample thick till horizon is automatically assumed to have vertical stratigraphic continuity even though it generally does not. A lack of vertical stratigraphic continuity is displayed by a single, isolated anomalous sample within or at the top of a multi-sample till horizon or at any level in a sand or gravel horizon. A gold anomaly with no vertical stratigraphic continuity is generally caused by either the nugget effect or the cluster (particle sparsity) effect. These nugget or cluster anomalies sometimes

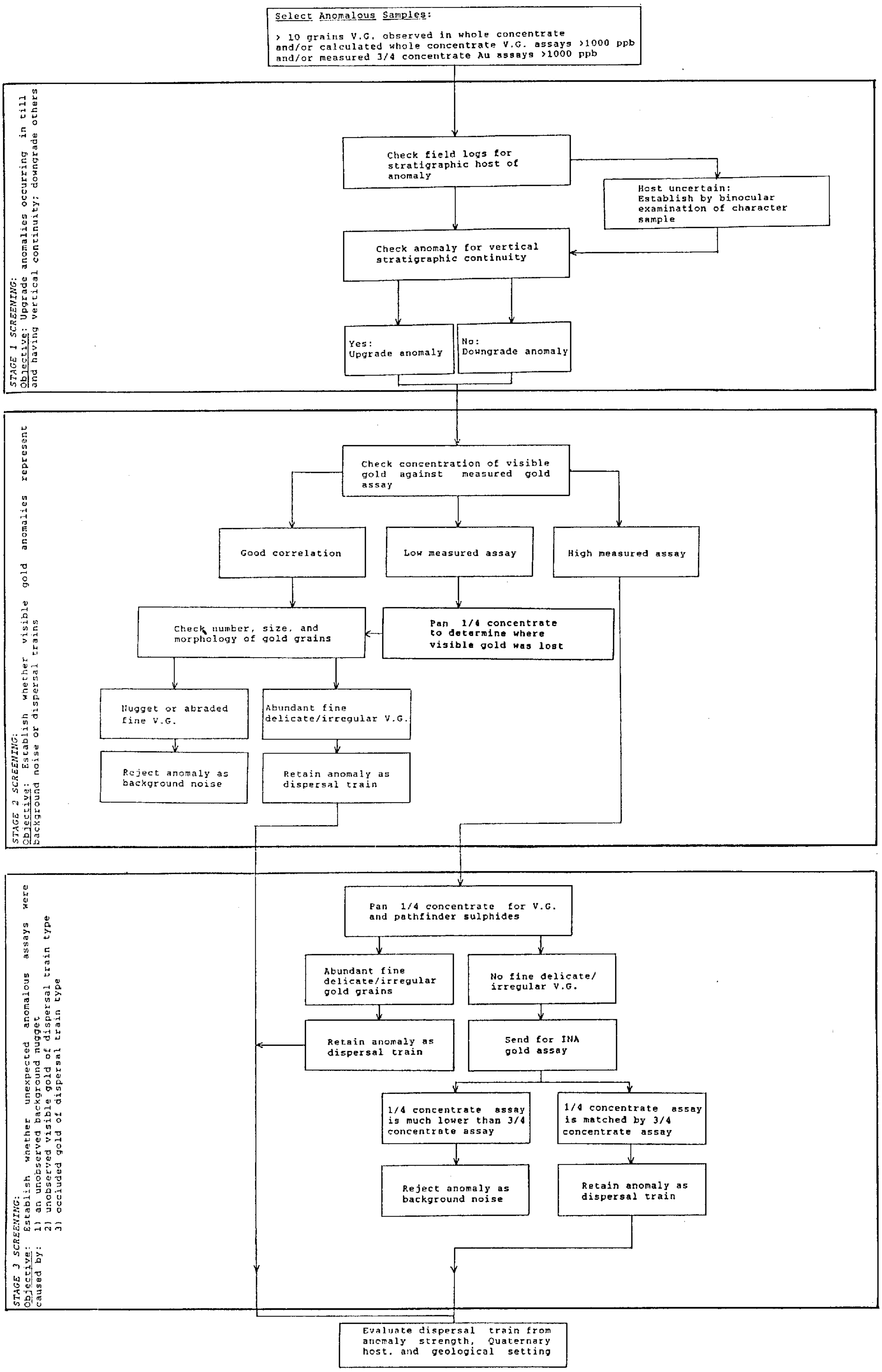


Figure 34 - Flow Chart for Three-Stage Screening of Heavy Mineral Gold Anomalies

Gold Anomalies				Grains V.G. (*Not Panned)	1st Stage Screening (Strat. Cont.)	2nd Stage Screening (Meas. Assay: Calc. Assay)	3rd Stage Screening (Nugget Effect)	Remarks	Anomaly Class
Hole No.	Sample No.	Au Assay (ppb) Meas.	Au Assay (ppb) Calc.						
CB-89- 11	02	1,270	18	1*	Basal (chance)	High	Inferred	Single initially observed gold grain abraded. Pathfinder As = 752 ppm. Sample interval 0.2 m. Check panned 1/4 conc., found no V.G., 0.5% pyrite, 50 grains arsenopyrite. 1/4 conc. INA assay = 63 ppb Au.	Nugget
15	04	1,329	17	1*	No	High	Inferred	Single initially observed gold grain abraded. Check panned 1/4 conc., found one abraded gold grain, 1% pyrite. 1/4 conc. calc. assay = 34 ppb; meas. INA assay = 130 ppb.	Nugget
20	11	1,620	85	4	No (Lower Till)	High	Inferred	One abraded, one irregular and two delicate gold grains initially observed. Check panned 1/4 conc., found 3 abraded gold grains, 1% pyrite. 1/4 conc. calc. assay = 222 ppb; meas. INA assay = 190 ppb.	Nugget
32	01	284	611	12	No	Low (slightly)	No	Eight abraded, two irregular and two delicate gold grains observed initially. Pathfinder As = 760 ppm.	Cluster
34	19	1,443	297	1*	No	High	Inferred	Single initially observed gold grain abraded. Check panned 1/4 conc., found one abraded gold grain, 1% pyrite. 1/4 conc. calc. assay = 178 ppb; meas. INA assay = 520 ppb.	Nugget
	26	390	1,439	4	No (Miss. gravel)	Low	Observed	Pulp and metallics assay, neither fraction anomalous. Four abraded gold grains observed initially. 86% of calc. assay contributed by one nugget. Check panned 1/4 conc., found initially observed nugget.	Nugget

Table 12 - Heavy Mineral Gold Anomaly Screening

Gold Anomalies				Grains V.G. (*Not Panned)	1st Stage Screening (Strat. Cont.)	2nd Stage Screening (Meas. Assay: Calc. Assay)	3rd Stage Screening (Nugget Effect)	Remarks	Anomaly Class
Hole No.	Sample No.	Au Assay (ppb) Meas.	Calc.						
CB-89- 35	07	26,600	45,639	2	Basal (chance, Lower Till)	Good	Observed	Sample interval = 0.4 m, partially bedrock cuttings. Pulp and metallics assay, mostly coarse gold detected. Two abraded gold grains observed initially. 99.9% of calc. assay contributed by one nugget. Pathfinder As = 896 ppm. Check panned 1/4 conc., found no V.G., 60% pyrite. 1/4 conc. INA assay = 310 ppb.	Nugget
38	10	1,110	710	2	No	Good	Observed	Two abraded gold grains initially observed. 97% of calc. assay contributed by one nugget.	Nugget
40	16	2,010	62	1*	No (Miss. sand)	High	Inferred	Single abraded gold grain observed initially. Check panned 1/4 conc., found no V.G., 0.25% pyrite. 1/4 conc. meas. assay = 20 ppb.	Nugget
	17	1,436	546	2	No (Miss. gravel)	High	Observed/ Inferred	Both initially observed gold grains abraded 94% of calc. assay contributed by one nugget. Check panned 1/4 conc., found no V.G., 5% pyrite. 1/4 conc. INA assay = 36 ppb.	Nugget
	18	1,260	1,251	7	No (Miss. gravel)	Good	Observed	Pulp and metallics assay, ... All initially observed gold grains abraded. 82% of calc. assay contributed by two nuggets.	Nugget
	20	1,420	1,321	11	No (Miss. gravel)	Good	Limited	Pulp and metallics assay, mostly coarse gold detected. Ten abraded and one irregular gold grains, 60% pyrite, 100 arsenopyrite crystals initially observed. Pathfinder As = 768 ppm. 74% of calc. assay contributed by two nuggets.	Placer

Table 12 - Heavy Mineral Gold Anomaly Screening (cont'd)

Gold Anomalies Hole No.	Sample No.	Au Assay (ppb) Meas.	Au Assay (ppb) Calc.	Grains V.G. (*Not Panned)	1st Stage Screening (Strat. Cont.)	2nd Stage Screening (Meas. Assay: Calc. Assay)	3rd Stage Screening (Nugget Effect)	Remarks	Anomaly Class
CB-89- 42	03	587	1,191	12	Vertical	Low (slightly)	Limited	Pulp and metallics assay not requested. Ten abraded and two irregular gold grains 70% pyrite, 100 arsenopyrite crystals initially observed. Pathfinder As = 824 ppm. 81% of calc. assay contributed by two nuggets. Check panned 1/4 conc., found no V.G., nuggets probably lost by overgrinding for regular assay.	Potentially Significant
	04	82	1,365	15	Vertical, Basal	Low	Limited	Pulp and metallics assay not requested. All abraded gold grains, 70% pyrite, 100 arsenopyrite crystals, initially observed. 88% of calc. assay contributed by three nuggets. Check panned 1/4 conc., found 5 grains including smallest of 3 nuggets. Other two nuggets probably lost by overgrinding for regular assay.	Potentially Significant
53	07	1,213	23	1*	Basal (chance)	High	Inferred	Single initially observed gold grain abraded. Check panned 1/4 conc., found no V.G., 1% pyrite, 1% marcasite. 1/4 conc. INA assay = 59 ppb.	Nugget
65	02	2,951	NA	0*	No	High	No	Pathfinder Ag = 10.2 ppm (spurious). Check panned 1/4 conc., found no V.G., 1% pyrite, 1/4 conc. INA assay = 2240 ppb. Minus 150 mesh 3/4 conc. pulp reject check = 3455 ppb (on 2.7 g).	Potentially Significant
66	31	325	3,076	3	No (gravel)	Low	Observed	All initially observed gold grains abraded. 44% of calc. assay contributed by one nugget. Check panned 1/4 conc., found initially observed nugget.	Nugget
	35	450	17,443	7	No (Miss. gravel)	Low	Observed	Pulp and metallics assay, coarse fraction weakly anomalous. All initially observed gold grains abraded. 97% of calc. assay contributed by one nugget. Check panned 1/4 conc., found intially observed nugget.	Nugget

Table 12 - Heavy Mineral Gold Anomaly Screening (cont'd)

Hole No.		Gold Anomalies Sample No.	Au Assay (ppb) Meas.	Au Assay (ppb) Calc.	Grains V.G. (*Not Panned)	1st Stage Screening (Strat. Cont.)	2nd Stage Screening (Meas. Assay: Calc. Assay)	3rd Stage Screening (Nugget Effect)	Remarks	Anomaly Class
CB-89-	67	03	1,440	431	2	No	High	Inferred	Both initially observed gold grains abraded. Check panned 1/4 conc., found no V.G., 1% pyrite. 1/4 conc. INA assay = 190 ppb.	Nugget
		08	1,385	NA	0*	Vertical (chance)	High	Inferred	Check panned 1/4 conc., found one abraded gold grain, 2% pyrite. 1/4 conc. calc. assay = 22 ppb; meas. INA assay = 92 ppb.	Nugget
		09	1,377	421	1*	Vertical (chance)	High	Inferred	Single initially observed gold grain abraded. Check panned 1/4 conc., found no V.G., 2% pyrite. 1/4 conc. INA assay = 38 ppb.	Nugget
	68	02	2,830	2,729	6	No	Good	Observed	Pulp and metallics assay, mostly coarse gold detected. Three abraded and three irregular gold grains observed initially. 90% of calc. assay contributed by one nugget.	Nugget
	69	01,02	1,177	377	6	No	High	Inferred	Samples inadvertently combined. All initially observed gold grains abraded. Check panned 1/4 conc., found no V.G., 3% pyrite. 1/4 conc. INA assay = 93 ppb.	Nugget
		10	4,830	NA	0	Basal (chance)	High	No	Panned initially for high sulphides (50%). Pathfinder As = 556 ppm, Ag = 1.9. Initial panning yielded approx. 100 delicate gold grains carried over on shaking table from preceding sample tabled for research purposes. All observed gold was removed prior to assay. Check panned 1/4 conc., found 19 gold grains producing calc. assay of 1620 ppb. Removed as many gold grains as possible (16) to check for occluded gold. 1/4 conc. calc. assay = 98 ppb; meas. INA assay = 490 ppb. Therefore no occluded gold.	Contamination
	70	03	1,191	123	5	No	High	Inferred	Four abraded and one irregular gold grains. 25% pyrite initially observed. Pathfinder As = 800 ppm. Check panned 1/4 conc., found no V.G., 25% pyrite, 50 grains arsenopyrite. 1/4 conc. INA assay = 679 ppb.	Nugget

Table 12 - Heavy Mineral Gold Anomaly Screening (cont'd)

Hole No.	Gold Anomalies: Sample No.	Au Assay (ppb) Meas.	Au Assay (ppb) Calc.	Grains V.G. (*Not Panned)	1st Stage Screening (Strat. Cont.)	2nd Stage Screening (Meas. Assay: Calc. Assay)	3rd Stage Screening (Nugget Effect)	Remarks	Anomaly Class
CB-89- 72	01	1,560	1,125	2	No	Good	Observed	Pulp and metallics assay not requested. Two abraded gold grains. 5% pyrite, 30 grains arsenopyrite observed initially. Pathfinder As = 960 ppm.	Nugget
	11	350	1,060	10	No	Low	Observed	Pulp and metallics assay, mostly coarse gold detected. All abraded gold grains initially observed. 79% of calc. assay contributed by 2 nuggets. Check panned 1/4 conc., found larger of 2 nuggets.	Nugget
74	12	1,556	663	1*	No	High (slightly)	Observed/ Inferred	Inadvertently not panned after brass leaching. Single abraded gold grain observed initially. Check panned 1/4 conc., found no V.G., 1% pyrite. 1/4 conc. INA assay = 25 ppb.	Nugget
76	06	1,530	134	7	No	High	Inferred	All initially observed gold grains abraded. Check panned 1/4 conc., found no V.G., 1% pyrite. 1/4 conc. INA assay = 55 ppb.	Nugget
	08	1,650	NA	0*	No	High	Inferred	Inadventently not panned after brass leaching. Pathfinder As = 528 ppm. Check panned 1/4 conc., found no V.G., 1% pyrite. 1/4 conc. INA assay = 120 ppb.	Nugget
78	08	2,724	1,298	1	No	High (slightly)	Observed/ Inferred	Pulp and metallics assay not requested. One abraded gold grain observed initially. Check panned 1/4 conc., found no V.G., 2% pyrite. 1/4 conc., INA assay = 22 ppb.	Nugget
80	05	2,160	614	4	No	High	Observed/ Inferred	Four abraded gold grains 5% pyrite, 20 grains arsenopyrite initially observed. Pathfinder AS = 1,080 ppm. 97% of calc. assay contributed by one nugget. Check panned 1/4 conc. found no V.G., 5% pyrite. 1/4 conc. INA assay = 81 ppb.	Nugget
	08	2,983	28	1	No	High	Inferred	One irregular gold grain, 2% pyrite, 10 grains arsenopyrite observed initially. Pathfinder As = 600 ppm. Check panned 1/4 conc., found no V.G., 5% pyrite, 10 grains arsenopyrite. 1/4 conc. INA assay = 47 ppb.	

Table 12 - Heavy Mineral Gold Anomaly Screening (cont'd)

Gold Anomalies: Hole No.	Sample No.	Au Assay (ppb): Meas.	Au Assay (ppb): Calc.	Grains V.G. (*Not Panned)	1st Stage Screening (Strat. Cont.)	2nd Stage Screening (Meas. Assay: Calc. Assay)	3rd Stage Screening (Nugget Effect)	Remarks	Anomaly Class
CB-89- 80	14	1,525	42	1	Basal (chance)	High	Inferred	One abraded gold grain observed initially. Check panned 1/4 conc., found no V.G., 0.5% pyrite. 1/4 conc. INA assay = 14 ppb.	Nugget
81	07	1,250	565	5	Basal (chance, Lower Till)	High (slightly)	Observed Inferred	Five abraded gold grains. 70% pyrite, 50 grains arsenopyrite observed initially. Pathfinder As = 656 ppm. 96% of calc. assay contributed by two nuggets. Check panned 1/4 conc., found no V.G., 60% pyrite. 1/4 conc. INA assay = 390 ppb.	Nugget
84	04	1,778	163	7	No	High	Inferred	Six abraded and one irregular gold grain initially observed. Pathfinder As = 648 ppm. Check panned 1/4 conc., found four abraded gold grains, 15% pyrite. 1/4 conc. calc. assay = 264 ppb; meas. INA assay = 1660 ppb. Minus 150 mesh 3/4 conc. pulp reject check assay = L 35 ppb (on 1.4 g).	Potentially Significant
	07	250	774	13	Vertical (chance)	Low (slightly)	No	Eight abraded and five irrregular gold grains initially observed.	Cluster
	08	1,155	356	7	Vertical (chance)	High (slightly)	Observed/ Inferred	Five abraded and two irregular gold grains initially observed. 92% of calc. assay contributed by one nugget. Check panned 1/4 conc., found two abraded gold grains, 5% pyrite. 1/4 conc. calc. assay = 131 ppb; meas. INA assay = 310 ppb.	Nugget
	09	1,434	1,388	10	Vertical (chance)	Good	Observed/ Limited	Pulp and metallics assay not requested. Five abraded and fire irregular gold grains initially observed. 72% of calc. assay contributed by two gold grains.	Nugget, Cluster
	15	1,247	125	4	No	High	Inferred	Four abraded gold grains initially observed. Check panned 1/4 conc., found one abraded gold grain, 2% pyrite. 1/4 conc. calc. assay = 94 ppb; meas. INA assay = 83 ppb.	Nugget
	19	2,471	163	2	No	High	Inferred	Two abraded gold grains initially observed. Check panned 1/4 conc., found two abraded gold grains, 5% pyrite. 1/4 conc. calc. assay = 643 ppb; meas. INA assay = 626 ppb.	Nugget

Table 12 - Heavy Mineral Gold Anomaly Screening (cont'd)

Gold Anomalies				Grains V.G. (*Not Panned)	Ist Stage Screening (Strat. Cont.)	2nd Stage Screening (Meas. Assay: Calc. Assay)	3rd Stage Screening (Nugget Effect)	Remarks	Anomaly Class
Hole No.	Sample No.	Au Assay (ppb) Meas.	Au Assay (ppb) Calc.						
CB-89- 84	21	1,020	NA	0	Vertical	High	Inferred	Check panned 1/4 conc., found no V.G., 10% pyrite. 1/4 conc. INA assay = 869 ppb.	Nugget
	22	150	2,759	5	Vertical	Low	Observed	Pulp and metallics assay not requested. Five abraded gold grains initially observed. 89% of calc. assay contributed by one nugget. Check panned 1/4 conc., found no V.G.; nugget lost in overgrinding for regular assay.	Nugget
85	04	7,390	1,047	1*	No	High	Observed/ Inferred	Pulp and metallics assay, mostly coarse gold detected. One abraded gold grain initially observed. Check panned 1/4 conc., found one abraded gold grain, 2% pyrite. 1/4 conc. calc. assay = 35 ppb; meas. INA assay = 110 ppb.	Nugget
87	02	930	1,107	7	Basal (chance)	Good	Observed	Pulp and metallics assay, mostly coarse gold detected. Five abraded and two irregular gold grains, 50% pyrite, 50 grains arsenopyrite initially observed. Pathfinder As = 884 ppm. 92% of calc. assay contributed by two nuggets.	Nugget
94	03	1,990	473	2	No	High	Inferred	Two abraded gold grains observed initially. Pathfinder As = 632 ppm. Check panned 1/4 conc., found no V.G., 5% pyrite. 1/4 conc. INA assay = 88 ppb.	Nugget
96	19	13,260	NA	0	No (Ojib. II gravel)	High	Inferred	0.1% pyrite initially observed. Pathfinder Zn = 963 ppm. Check panned 1/4 conc., found no V.G., 1% pyrite. 1/4 conc. INA assay = 24 ppb.	Nugget
101	08	2,240	1,282	7	No	Good	Observed	Pulp and metallics assay, mostly coarse gold detected. Seven abraded gold grains, 2% pyrite, 200 grains arsenopyrite initially observed. Pathfinder As = 656 ppm. 94% of calc. assay contributed by 1 nugget.	Nugget

Table 12 - Heavy Mineral Gold Anomaly Screening (cont'd)

Gold Anomalies				Grains	1st Stage	2nd Stage	3rd Stage		
Hole No.	Sample No.	Au Assay (ppb) Meas.	Au Assay (ppb) Calc.	V.G. (*Not Panned)	Screening (Strat. Cont.)	Screening (Meas. Assay: Calc. Assay)	Screening (Nugget Effect)	Remarks	Anomaly Class
CB-89- 102	06	16,570	7,774	2	No	High	Observed/ Inferred	Pulp and metallics assay not requested. One abraded and one irregular gold grain 0.5% pyrite, 10 grains arsenopyrite initially observed. Pathfinder As = 656 ppm. 99.9% of calc. assay contributed by one nugget. Check panned 1/4 conc., found one abraded gold grains, 0.5% pyrite. 1/4 conc. calc. assay = 1,612 ppb; meas. INA assay = 793 ppb.	Nugget
106	01	1,578	661	2	No	High	Observed/ Inferred	One abraded and one irregular gold grain initially observed. 97% of calc. assay contributed by one gold grain. Check panned 1/4 conc., found no V.G., 3% pyrite. 1/4 conc. INA assay = 150 ppb.	Nugget
	12	1,247	476	3	Vertical (chance)	High	Inferred	Three abraded gold grains initially observed. Check panned 1/4 conc., found no V.G., 1% pyrite. 1/4 conc. INA assay = 15 ppb.	Nugget
	13	1,211	30	1	Vertical (chance)	High	Inferred	One abraded gold grain initially observed. Check panned 1/4 conc., found no V.G., 0.5% pyrite. 1/4 conc. INA assay = 96 ppb.	Nugget
108	04	1,584	572	8	Basal	High (slightly)	Limited	Six abraded and two irregular gold grains initially observed. 61% of calc. assay contributed by one nugget. Pathfinder As = 1,932, Zn = 773. Check panned 1/4 conc., found one abraded gold grain, 70% pyrite. 1/4 conc. calc. assay = 42 ppb; meas. INA assay = 1,970 ppb. Minus 150 mesh 3/4 conc. pulp reject check assay = 2284 ppb (on 18.8 g). Underlying bedrock assay = 258 ppb Au.	Potentially Significant
109	02	276	86	15	Vertical	High	No	Eleven abraded, one irregular and three delicate gold grains 20% pyrite, 20 grains arsenopyrite and 20 grains galena initially observed.	Potentially Significant
	03	1,490	1,383	16	Vertical	Good	Limited	Pulp and metallics assay, mostly coarse gold detected. Six abraded and ten irregular gold grains, 5% pyrite, 20 grains arsenopyrite, 20 grains galena initially observed. 40% of calc. assay contributed by one gold grain. Pathfinder As = 808 ppm	Potentially Significant

Table 12 - Heavy Mineral Gold Anomaly Screening (cont'd)

Gold Anomalies				Grains V.G.	1st Stage Screening	2nd Stage Screening	3rd Stage Screening		
Hole No.	Sample No.	Au Assay (ppb) Meas.	Au Assay (ppb) Calc.	(*Not Panned)	(Strat. Cont.)	(Meas. Assay: Calc. Assay)	(Nugget Effect)	Remarks	Anomaly Class
CB-89- 109	05	170	116	15	No	Good	No	Twelve irregular and three delicate gold grains, 10% pyrite, 20 grains, arsenopyrite, 20 grains galena initiall observed. Pathfinder As = 832 ppm.	Potentially Significant
110	09	1,425	1,138	2	No	Good	Observed	Pulp and metallics assay not requested. Two abraded gold grains initially observed. 82% of calc. assay contributed by one nugget.	Nugget
112	04	77	2,487	7	Vertical (chance)	Low	Observed	Pulp and metallics assay not requested. Six abraded and one irregular gold grain initially observed. 90% of calc. assay contributed by one nugget. Check panned 1/4 conc., found 2 gold grains including initially observed nugget.	Nugget
	05	2,045	2,114	6	Vertical (chance)	Good	Observed	Pulp and metallics assay not requested. All abraded gold grains initially observed. 93% of calc. assay contributed by one nugget.	Nugget
114	04	1,230	1,103	1*	No	Good	Observed	Pulp and metallics assay, mostly coarse gold detected. One abraded gold grain initially observed.	Nugget
118	06	1,610	1,095	6	No (gravel)	Good	Observed	Pulp and metallics assay, mostly coarse gold detected. One abraded, three irregular and two delicate gold grains initially observed. 98% of calc. assay contributed by one nugget.	Nugget
121	02	1,428	1	1	Basal	High	No	One delicate gold grain, 80% pyrite, 2% arsenopyrite initially observed. Pathfinder As = 2000 ppm. Check panned 1/4 conc., found no V.G., 80% pyrite, 2% arsenopyrite. Pathfinder As - G2000 ppm, Cu = 452 ppm. 1/4 conc. INA assay = 1690 ppb. Minus 150 mesh 3/4 conc. pulp reject = 1485 ppb (on 3.3 g). Sample primarily cobble (bedrock?) cuttings, thus green sand and clay fractions. Underlying bedrock = 198 ppb Au, 2000 ppm As.	Potentially Significant
124	03	1,006	52	1*	No	High	Inferred	One abraded gold grain initially observed. Check panned 1/4 conc., found two abraded gold grains, 1% pyrite. 1/4 conc. calc. assay = 64 ppb; meas. INA assay = 200 ppb.	Nugget

Table 12 - Heavy Mineral Gold Anomaly Screening (cont'd)

Gold Anomalies Hole No.	Sample No.	Au Assay (ppb) Meas.	Au Assay (ppb) Calc.	Grains V.G. (*Not Panned)	1st Stage Screening (Strat. Cont.)	2nd Stage Screening (Meas. Assay: Calc. Assay)	3rd Stage Screening (Nugget Effect)	Remarks	Anomaly Class
CB-89- 126	01	1,510	1,556	2	Vertical (chance)	Good	Observed	Pulp and metallics assay, mostly coarse gold detected. Two abraded gold grains, 6% pyrite, 50 grains arsenopyrite initially observed. Pathfinder As = 752 ppm. 97% of calc. assay contributed by one nugget.	Nugget
	02	447	733	11	Vertical	Good	No	Seven abraded, three irregular and one delicate gold grain, 8% pyrite, 50 grains arsenopyrite, 10 grains galena initially observed. Pathfinder As = 1008 ppm.	Potentially Significant
	03	820	2,302	15	Vertical, Basal	Low	Limited	Pulp and metallics assay, mostly coarse gold detected. Nine abraded and six irregular gold grains, 3% pyrite, 50 grains arsenopyrite initially observed. Pathfinder As = 1,184 ppm. 78% of calc. assay contributed by three nuggets. Check panned 1/4 conc., found one of original nuggets.	Potentially Significant
127	12	2,589	3,233	4	No	Good	Observed	Pulp and metallics assay, mostly coarse gold detected. Four abraded gold grains initially observed. 97% of calc. assay contributed by two nuggets.	Nugget
	32	2,589	45	1*	Vertical (chance)	High	Inferred	One abraded grain observed initially. Pathfinder As = 680 ppm, Ag = 1.1 ppm. Check panned 1/4 conc., found one abraded gold grain, 15% pyrite, 50 grains marcasite. 1/4 conc. calc. assay = 3 ppb; meas. INA assay = 87 ppb.	Nugget
	33	9,895	11,247	5	Vertical (chance)	Good	Observed	Pulp and metallics assay not requested. Five abraded gold grains 20% pyrite, 50 grains arsenopyrite initially observed. Pathfinder As = 1,208 ppm, Ag = 1.4 ppm. 99.6% of calc. assay contributed by one nugget.	Nugget
128	01	2,824	NA	0*	No	High	Inferred	Check panned 1/4 conc., found no V.G., 0.5% pyrite. 1/4 conc. INA assay = 19 ppb.	Nugget

Table 12 - Heavy Mineral Gold Anomaly Screening (cont'd)

Gold Anomalies Hole No.	Sample No.	Au Assay (ppb) Meas.	Calc.	Grains V.G. (*Not Panned)	1st Stage Screening (Strat. Cont.)	2nd Stage Screening (Meas. Assay: Calc. Assay)	3rd Stage Screening (Nugget Effect)	Remarks	Anomaly Class
CB-89- 128	04	760	1,040	1*	No	Good	Observed	Pulp and metallics assay, mostly coarse gold detected. One abraded gold grain observed initially.	Nugget
	11	1,223	NA	0*	Vertical (chance)	High	Inferred	Pathfinder As = 648 ppm., Cu = 400 ppm. Check panned 1/4 conc., found no V.G., 3% pyrite. 1/4 conc. meas. INA assay = 68 ppb.	Nugget
	12	8,618	704	18	Vertical (chance)	High	No	Thirteen delicate, four irregular and one abraded gold grain, 5% pyrite, 10 grains galena initially observed. Pathfinder Ag = 1.3 ppm. Check panned 1/4 conc., found 1 abraded, 1 irregular and 2 delicate gold grains, 5% pyrite. 1/4 conc. calc. assay = 101 ppb; meas. INA assay = 3510 ppb. Minus 150 mesh 3/4 conc. pulp reject = 6294 ppb (on 10.3 g).	Potentially Significant
132	05	1,299	15	3	Basal (chance)	High	Inferred	Originally observed 2 abraded and 1 irregular gold grain, 70% pyrite, 10 grains arsenopyrite 60% pyrite. Elevated arsenic = 616 ppm. Check panned 1/4 conc., found no V.G. 1/4 conc. INA assay = 86 ppb.	Nugget
133	04	1,513	823	8	No	Good	Observed	7 abraded and 1 irregular gold grains observed initially. 64% of calc. assay contributed by one nugget.	Nugget
139	09	1,610	1,433	2	No	Good	Observed	Pulp and metallics assay, mostly coarse gold detected initially observed 2 irregular gold grains. 79% of calc. assay contributed one gold grain.	Nugget
	13	1,330	749	1*	No	Good	Observed	One abraded gold grain observed initially.	Nugget
140	03	1,272	573	1*	Vertical (chance)	High	Observed/ Inferred	Initially observed gold grain abraded. Check panned 1/4 conc., found no V.G., 1% pyrite. 1/4 conc. INA assay = 32 ppb.	Nugget
	04	255	701	13	Vertical	Low (slightly)	No	Initially observed 11 abraded and 2 irregular gold grains.	Potentially Significant

Table 12 - Heavy Mineral Gold Anomaly Screening (cont'd)

Gold Anomalies				Grains V.G. (*Not Panned)	1st Stage Screening (Strat. Cont.)	2nd Stage Screening (Meas. Assay: Calc. Assay)	3rd Stage Screening (Nugget Effect)	Remarks	Anomaly Class
Hole No.	Sample No.	Au Assay (ppb) Meas.	Au Assay (ppb) Calc.						
CB-89- 140	05	743	350	15	Vertical	High (slightly)	No	Initially observed 5 abraded, 3 irregular and 7 delicate gold grains. Arsenic = 1,360 ppm.	Potentially Significant
141	10	1,635	943	4	No	Good	Observed	Initially observed 1 abraded and 3 irregular gold grains. 83% of calc. assay contributed by 2 gold grains.	Nugget
143	01	17,557	9,141	1*	No	Good	Observed	Pulp and metallics assay not requested. Initially observed 1 abraded gold grain.	Nugget
	07	1,008	115	6	No	High	Inferred	Initially observed 5 abraded and 1 irregular gold grain. Check panned 1/4 conc., found no V.G., 1% pyrite. 1/4 conc. INA assay = 39 ppb.	Nugget
150	01	1,208	383	10	No	High	Inferred	Initially observed 8 abraded and 2 irregular gold grains. Check panned 1/4 conc., found 2 abraded gold grains, 2% pyrite. 1/4 conc. calc. assay = 268 ppb, meas. INA assay = 260 ppb.	Nugget/ Cluster
154	03	1,945	85	3	No	High	Inferred	Initially observed 3 abraded gold grains. Check panned 1/4 conc., found no V.G., 10% pyrite. 1/4 conc. INA assay = 100 ppb.	Nugget
	05	2,862	1,382	5	No	High (slightly)	Observed/ Inferred	Initially observed 5 abraded gold grains. Check panned 1/4 conc., found no V.G., 0.5% pyrite. 1/4 conc. INA assay = 60 ppb.	Nugget
155	07	1,183	149	11	No	High	Inferred	Initially observed 11 abraded gold grains. Check panned 1/4 conc., found 1 abraded gold grain, 2% pyrite, and 150 grains arsenopyrite. 1/4 conc. calc. assay = 5 ppb; meas. INA assays = 71 ppb.	Nugget/ Cluster

Table 12 - Heavy Mineral Gold Anomaly Screening (cont'd)

Gold Anomalies Hole No.	Sample No.	Au Assay (ppb) Meas.	Au Assay (ppb) Calc.	Grains V.G. (*Not Panned)	1st Stage Screening (Strat. Cont.)	2nd Stage Screening (Meas. Assay: Calc. Assay)	3rd Stage Screening (Nugget Effect)	Remarks	Anomaly Class
CB-89- 157	09	498	336	12	No	Good	No	Initially observed 7 abraded and 5 irregular gold grains.	Cluster
	16	9,460	6,993	4	Basal (chance)	Good	Observed	Pulp and metallics assay mostly coarse gold detected. Initially observed 4 abraded gold grains. 99.7% of calc. assay contributed by one nugget.	Nugget
159	02	1,280	559	5	Vertical (chance)	High (slightly)	Observed/ Inferred	Initially observed 5 abraded gold grains. 76% of calc. assay contributed by one nugget. Check panned 1/4 conc., found 1 abraded gold grain, 7% pyrite. 1/4 conc. calc. assay = 5 ppb, meas. INA assay = 200 ppb.	Nugget
	03	1,460	1,623	1*	Vertical (chance)	Good	Observed	Initially observed gold grain abraded. Pulp and metallics assay, mostly coarse gold detected.	Nugget
	19	4,080	2,330	5	No (Miss. Form.)	Good	Observed	Pulp and metallics assay, mostly coarse gold detected, although -150 also anomalous. Initially observed 5 abraded gold grains. 81% of calc. assay contributed by 1 nugget.	Nugget
161	01	2,348	138	1*	No	High	Inferred	Initially observed gold grain abraded. Check panned 1/4 conc., found no V.G., 3% pyrite. 1/4 conc. INA assay = 200 ppb.	Nugget
162	01	1,396	778	5	Basal (chance)	Good	Observed	Initially observed 3 abraded, 2 irregular gold grains. Pathfinder Ag = 1.1 ppm. 80% of calc. assay contributed by one nugget.	Nugget
163	02	135	472	13	No	Low (slightly)	No	Initially observed 7 abraded and 6 irregular gold grains. Sample 03 yielded 3 abraded and 5 irregular gold grains.	Cluster

Table 12 - Heavy Mineral Gold Anomaly Screening (cont'd)

Gold Anomalies				Grains V.G. (*Not Panned)	1st Stage Screening (Strat. Cont.)	2nd Stage Screening (Meas. Assay: Calc. Assay)	3rd Stage Screening (Nugget Effect)	Remarks	Anomaly Class
Hole No.	Sample No.	Au Assay (ppb) Meas.	Au Assay (ppb) Calc.						
CB-89- 163	08	1,740	3,268	5	No	Good	Observed	Pulp and metallics assay, mostly coarse gold detected. Initially observed 4 abraded and 1 irregular gold grains. 96% of calc. assay contributed by 1 gold grain.	Nugget
	16	1,640	1,154	1*	No (Lower Till)	Good	Observed	Pulp and metallics assay, mostly coarse gold detected. Initially observed 1 abraded gold grain.	Nugget
165	04	990	1,490	1*	No	Gold	Observed	Pulp and metallics assay, mostly coarse gold detected. Initially observed one abraded gold grain. Pathfinder Ag = 1.1 ppm.	Nugget
166	01	1,760	NA	0*	Basal (chance)	High	Inferred	Check panned 1/4 conc., found no V.G., 0.5% pyrite. 1/4 conc. INA assay = 57 ppb.	Nugget
167	10	1,320	252	5	No (Lower Till)	High	Inferred	Initially observed 5 abraded gold grains. Check panned 1/4 conc., found no V.G., 15% pyrite 1/4 conc. INA assay = L 5 ppb.	Nugget
168	05	1,027	10	1*	No	High	Inferred	Initially observed 1 abraded gold grain. Check panned 1/4 conc., found no V.G., 5% pyrite. 1/4 conc. INA assay = 190 ppb.	Nugget
169	07	14,817	NA	0*	Basal (chance, Lower Till)	High	Inferred	Pathfinder As = 896 ppm. Check panned 1/4 conc., found no V.G., 20% pyrite. 1/4 conc. INA assay = 95 ppb.	Nugget
171	04	459	752	12	No	Good	No	Initially observed 5 abraded, 5 irregular and 2 delicate gold grains. Flanking samples 03 and 05 yielded 9 and 8 gold grains respectively.	Cluster
174	05	930	1,036	5	No	Good	Observed	Pulp and metallics assay, mostly coarse gold detected. Initially observed 5 abraded gold grains. 57% of calc. assay contributed by one nugget.	Nugget

Table 12 - Heavy Mineral Gold Anomaly Screening (cont'd)

Gold Anomalies				Grains V.G. (*Not Panned)	1st Stage Screening (Strat. Cont.)	2nd Stage Screening (Meas. Assay: Calc. Assay)	3rd Stage Screening (Nugget Effect)	Remarks	Anomaly Class
Hole No.	Sample No.	Au Assay (ppb) Meas.	Au Assay (ppb) Calc.						
CB-89	174 07	8,210	1,313	4	No	High	Inferred/ Observed	Pulp and metallics assay, mostly coarse gold detected. Initially observed 4 abraded gold grains. 89% of calc. assay contributed by one nugget. Check panned 1/4 conc., found no V.G., 0.5% pyrite. 1/4 conc. INA assay = 7 ppb.	Nugget
	09	957	1,107	5	No (Miss. Form.)	Good	Observed	Initially observed 5 abraded gold grains. 61% of calc. assays contributed by one nugget.	Nugget
	177 01	1,770	130	5	No	High	Inferred	Initially observed 5 abraded gold grains. Check panned 1/4 conc., found no V.G., 10% pyrite. 1/4 conc. INA assay = 42 ppb.	Nugget
	178 02	1,135	63	1*	No	High	Inferred	Initially observed one abraded gold grain. Check panned 1/4 conc., found no V.G., 5% pyrite. 1/4 conc. INA assay = 61 ppb.	Nugget
	179 08	138	134	13	No	Good	No	Initially observed 12 abraded and 2 irregular gold grains.	Cluster
	185 02	224	302	10	No	Good	No	Initially observed 2 abraded, 6 irregular and 2 delicate gold grains.	Cluster
	186 02	60	1,846	1*	No	Low	Observed	Pulp and metallics assay, neither fraction anomalous. Initially observed 1 abraded gold grain. Check panned 1/4 conc., found no V.G., nugget lost in handling.	Nugget
	194 04	1,192	94	2	No	High	Inferred	Initially observed 2 abraded gold grains. Pathfinder As = 936 ppm. Check panned 1/4 conc., found 1 abraded gold grain, 7% pyrite. 1/4 conc. calc. assay = 78 ppb; meas. INA assay = 130 ppb.	Nugget

Table 12 - Heavy Mineral Gold Anomaly Screening

occur in consecutive samples in a drill hole and occasionally they are contiguous with a gold anomaly of another type; we refer to this as "chance" continuity and treat the anomalies as if they had no vertical continuity. To have true vertical continuity, contiguous anomalies must have in common at least one property of a dispersal train anomaly such as delicate gold grains, occluded gold or a pathfinder association. Of the 112 anomalies, 11 have no vertical stratigraphic continuity by definition because they occur in either Ojibway II or Missinaibi sediments and 60 till-hosted anomalies also have no vertical stratigraphic continuity. Of the remaining 41 till-hosted anomalies, 25 have vertical continuity and 16 have basal continuity. Whether the continuity of these anomalies occurs by chance or not will become apparent during the subsequent screening stages.

The second stage in the screening is used to evaluate anomalies occurring in samples where sufficient visible gold was observed to explain the measured (Bondar-Clegg) assays. In its simplest form, the calculated (predicted) visible gold assays are compared to the measured assays to eliminate those anomalies in which the 1,000 ppb threshold is no longer met after the contributions of one or two observed nuggets have been subtracted from the total assays. In a sample with observed nuggets and little or no fine visible gold, either a good correlation of the two assays or a low measured assay indicates that essentially all of the gold in the concentrate is in the nuggets and the anomaly is of no significance.

The correlation between a calculated and measured assay is "good" if the calculated assay is not more than twice as high as or 50 percent less than the measured assay; this allows for a doubling or halving of the normal thickness factor for flake gold particles used in the calculation. Of the 112 anomalous samples, 32 with measured and/or calculated assays over 1000 ppb show good assay correlation. One of these anomalies -- in Sample 109-03 -- is potentially significant because it is caused by a high concentration of fine visible gold of irregular morphology. This anomaly will be discussed in detail in Section 6.2.1.1. The remaining thirty-one anomalies typically are from samples that yielded between one and eight gold grains, of which up to three are irregular and none are delicate. Two of the thirty-one anomalies do not follow this pattern but are as insignificant as the other twenty-nine. These are: 1) the Sample 40-20 anomaly, which is caused by 11 gold grains and represents a placer gold anomaly hosted in Missinaibi interglacial gravels; and 2) the Sample 118-06 anomaly, which is caused by 2 delicate and 3 irregular gold grains and is probably an artificial anomaly created by drilling through a slighly auriferous clast as it occurs mid-section in a thick Golden Pond Esker glaciofluvial interval. Each of the thirty-one anomalies is from a concentrate that would assay less than 1000 ppb if the contribution of one or two observed nuggets was subtracted from the measured assay. Nine of the anomalies -- including the placer anomaly -- have a coincidental pathfinder association. Twenty-two of the anomalies have no vertical stratigraphic continuity and thus were downgraded by first-stage screening. The other nine have chance continuity -- five vertical and four basal. None of these thirty-one anomalies are significant.

A low measured assay for a concentrate with observed gold nuggets and a calculated assay over 1000 ppb indicates either nugget loss in handling or nugget retention in any of three places: 1) the ODM 1/4 library split; 2) the Bondar-Clegg base metal analytical split of the pulped 3/4 concentrate (normally 1 to 3 grams); 3) the Bondar-Clegg library split of the pulped 3/4 concentrate (also 1 to 3 grams). If little or no other gold is present in the concentrate, the measured assay for the 3/4 concentrate will be below the 1000 ppb anomaly threshold. Ten of the 112 anomalies gave low measured assays. Three of these -- in Samples 42-03 and 04, and 126-03 -- yielded considerable fine visible gold in addition to coarser nuggets. These anomalies are potentially significant and will be discussed in Section 6.2.1.1. In the other seven anomalous samples, one to ten gold grains were observed and in those samples with more than one gold grain, 79 to 99 percent of the calculated assay is caused by one or two nuggets. The 1/4 concentrates of the seven samples were panned and five contained the nuggets observed in initial processing while two did not. The missing nuggets were probably lost in handling during the pulping stage of sample preparation at Bondar-Clegg. None of the seven anomalies have a pathfinder association. Five of the anomalies lack stratigraphic continuity and thus were downgraded by first stage screening; the other two by chance have vertical continuity. None of these seven anomalies are significant.

A variation of the second stage of screening pertains to anomalies possessing ten or more gold grains but lacking a calculated or measured assay over 1,000 ppb. The objective here is to eliminate anomalies caused solely by the erratic clustering of fine background gold grains in the till. Unless the multi-grain anomalies possess other properties of dispersal trains, they are generally not significant. This is especially true if the gold grains are abraded, as we have never succeeded in tracing abraded gold to a bedrock source. If, however, the gold grains are of delicate or irregular morphology and occur in stratigraphically contiguous samples, the subanomalous heavy mineral assays could simply indicate that the source has a low grade or narrow subcrop or that the samples were obtained from the margins of a dispersal train.

Of the 112 anomalies, twelve are of the above weak, multi-grain type and five of these -- in Samples 109-02 and 05, 126-03, and 140-04 and 05 -- possess other properties of dispersal train anomalies and will be discussed in detail in section 6.2.1.1. The other seven anomalies are caused by between ten and thirteen very fine gold grains. Between two and eight of the gold grains in these seven samples are delicate and/or irregular, which is atypical of background cluster anomalies and may indicate englacial liberation of gold grains from mineralized clasts during transport. One of these seven anomalies -- in Sample 32-01 -- has a spurious arsenic association and the other six have no pathfinder association. Six of the seven anomalies have no stratigraphic continuity and thus were downgraded by first-stage screening, and one has chance vertical continuity with a nugget anomaly. None of these seven anomalies are significant.

The second-stage screening is very reliable because it is based on direct observation of the gold grains. This screening has effectively eliminated 45 of the 112 gold anomalies at the 100 percent confidence level and identified 9 others as potentially significant. Thirty-three of the eliminated anomalies also have no stratigraphic continuity and thus were downgraded by the first-stage screening.

The third stage in the screening is used to determine the cause of anomalies occurring in samples for which the measured assays are over 1000 ppb and are too high to be accounted for by the gold grains, if any, observed during processing. High measured assays can be caused by any one of the following:

1. A nugget that was recovered but not sighted during processing;

2. A sighted nugget for which the actual thickness is greater than the assumed thickness (0.1-0.2 X diameter) used in the assay calculation;

3. The difference in weight between the total concentrate on which the calculation is based and the portion of 3/4 concentrate that is assayed (applies only to samples in which a nugget is present, as fine gold would be evenly distributed through the sample);

4. A large number of missed fine gold grains;

5. Gold chemically of physically held (occluded) in arsenopyrite or another heavy mineral.

Unsighted nuggets normally account for about 80 percent of unexpectedly high assays, the thickness and weight factors for 10 to 20 percent, and fine gold and occluded gold for less than 10 percent. Only the fine gold and occluded gold anomalies are significant.

The third-stage screening involves a mineralogical investigation of the archived 1/4 concentrate, principally by panning, to determine the probable cause of the high assay in the 3/4 concentrate. The 3/4 concentrate itself cannot be panned as it is pulped (ground in a shatter-box) and largely consumed (by acid digestion) during analysis unless the analysis is by the non-destructive instrumental neutron activation (INA) method.

An absence or minimal amount of fine visible gold in the 1/4 concentrate precludes the occurrence of fine gold in anomalous concentrations in the 3/4 analytical split, and such anomalies can be assumed to have been caused by a missed or unusually thick nugget or by occluded gold. We have encountered occluded gold only in samples that contain arsenopyrite; however there is a significant potential for occluded gold in samples that contain other pathfinder minerals or more than 10 percent pyrite. To determine whether occluded gold is actually present, the 1/4 concentrate is analyzed by the non-destructive INA method. Only if the 1/4 split assay duplicates the 3/4 split assay is the presence of occluded gold suggested. The third-stage screening is an indirect method as all checks are made on the 1/4 concentrate rather than on the 3/4 concentrate that was analyzed originally, but is essentially 100 percent reliable.

The 58 anomalies that could not be eliminated or enhanced by the second stage screening all had measured assays greater than 1000 ppb and more than twice as high as the corresponding calculated assays. These anomalies are thus amenable to third stage screening.

One of these anomalies -- in Sample 128-12 -- was initially recognized as a dispersal train type anomaly simply on the basis of its gold grain count and the morphology of the grains. It was nonetheless subjected to third stage screening to check for an occluded gold component to the high measured assay. This anomaly will be discussed in detail in section 6.2.1.1.

The remaining fifty-seven anomalies come from samples that yielded between zero and eleven gold grains during initial processing. Twenty of the anomalies are in samples that were not panned initially. Calculated whole concentrate gold assays for samples with observed gold grains range from 1 to 7,774 ppb and more than half are less than 500 ppb (34 cases). Measured 3/4 concentrate gold assays range from 1,006 ppb to 16,570 ppb. Check panning of the 1/4 concentrates of fifty-six of the fifty-seven samples that produced these anomalies yielded between zero and four abraded gold grains (Appendix G); thus the 3/4 concentrate anomalies were not caused by dispersal train-type visible gold.

The other 1/4 concentrate -- of Sample 69-10 -- yielded abundant delicate gold but this gold was accidentally introduced during processing at ODM's laboratory from a preceding sample collected and processed for research purposes. Most of the visible gold contamination was removed from the 1/4 concentrate to permit determination by INA analysis whether abundant pyrite in the sample (i.e. not contamination) contains occluded gold.

The INA assays (Appendix G) of fifty-three of the fifty-seven 1/4 concentrates are below 1000 ppb (maximum 869 ppb, average around 300 ppb, thirty-one below 100 ppb) and usually show good correlation with the 1/4 concentrate calculated visible gold assays (Table 12). By inference, the high 3/4 concentrate measured assays in most of these fifty-three cases must have been caused by unsighted nuggets, or by observed nuggets that were thicker than usual, or by analytical problems. The only exception is the Sample 69-10 anomaly, which was caused by laboratory contamination. Thirteen of these fifty-three anomalies have pathfinder associations (eleven of arsenic and two of arsenic and silver) that are coincidental. Thirty-five of the fifty-three have no vertical stratigraphic continuity and thus were downgraded by first stage screening. By chance, ten have vertical continuity and eight have basal continuity. None of these fifty-three anomalies are significant.

The 1/4 concentrate assays for the other four of the fifty-seven anomalous samples -- Nos. 65-02, 84-04, 108-04 and 121-02 -- duplicated the 3/4 concentrate assays, indicating that occluded gold is present, and these anomalies will be discussed in detail in Section 6.2.1.1. To triple check the favourable results in these four cases -- and the high 1/4 concentrate assay from the potentially significant visible gold anomaly of Sample 128-12 -- the corresponding 3/4 concentrate pulp rejects were screened to minus 150 mesh to remove any pulped nugget fragments that may have been present and were analyzed by FA/AA (Appendix G). In four of the five cases the rejects reconfirmed the high assays. In the fifth case -- in Sample 84-04 -- the reject assayed below the detection limit, diminishing the likelihood that occluded gold is present, but this anomaly will be discussed further.

Sample No.	Gold Assay (ppb) Calc. Whole	Meas. 3/4	Calc. 1/4	Meas. 1/4
CB-89				
11- 02	18	1,270	NA	63
15- 04	17	1,329	34	130
20- 11	85	1,620	222	190
34- 19	297	1,443	178	520
40- 16	62	2,010	NA	20
17	546	1,436	NA	36
53- 07	23	1,213	NA	59
65- 02	NA	2,951	NA	2,240
67- 03	431	1,440	NA	190
08	NA	1,385	22	92
09	421	1,377	NA	38
69- 01,02	377	1,177	NA	93
10	NA	4,830	98	490
70- 03	123	1,191	NA	679
74- 12	668	1,556	NA	25
76- 06	134	1,530	NA	55
08	NA	1,650	NA	120
78- 08	1,298	2,724	NA	22
80- 05	614	2,160	NA	81
- 08	28	2,983	NA	47
14	42	1,525	NA	14
81- 07	565	1,250	NA	390
84- 04	163	1,778	264	1,660
08	356	1,155	131	310
15	125	1,247	94	83
19	163	2,471	643	626
21	NA	1,020	NA	869
85- 04	1,047	7,390	35	110
94- 03	473	1,990	NA	88

Sample No.	Gold Assay (ppb) Calc. Whole	Meas. 3/4	Calc. 1/4	Meas. 1/4
CB-89				
96- 19	NA	13,260	NA	24
102- 06	7,774	16,570	1,621	793
106- 01	661	1,578	NA	150
12	476	1,247	NA	15
13	30	1,211	NA	96
108- 04	572	1,584	42	1,970
121- 02	1	1,428	NA	1,690
124- 03	52	1,006	64	200
127- 32	45	2,589	3	87
128- 01	NA	2,824	NA	19
11	NA	1,223	NA	68
12	704	8,618	101	3,510
132- 05	15	1,299	NA	86
140- 03	573	1,272	NA	32
143- 07	115	1,008	NA	39
150- 01	333	1,208	268	260
154- 03	85	1,945	NA	100
05	1,382	2,862	NA	60
155- 07	149	1,183	5	71
159- 02	559	1,280	5	200
161- 01	138	2,348	NA	200
166- 01	NA	1,760	NA	57
167- 10	252	1,320	NA	L 5
168- 05	10	1,027	NA	190
169- 07	NA	14,817	NA	95
174- 07	1,313	8,210	NA	7
177- 01	130	1,770	NA	42
178- 02	63	1,135	NA	61
194- 04	94	1,192	78	130

Table 13 - Comparison of Calculated and Measured Gold Assays for Anomalies Requiring Third Stage Screening

In summary the second and third stage screening, both of which are essentially 100 percent reliable, have eliminated 45 and 53 of the 112 heavy mineral gold anomalies, respectively. First-stage screening had previously downgraded 68 of the 98 eliminated anomalies. The remaining 14 potentially significant anomalies either survived the screening or were identified and enhanced by the screening. These 14 anomalies occur in 9 holes highlighted on Plan 4 and will be discussed in detail in the following sections.

6.2.1.1 Potentially Significant Gold Anomalies

6.2.1.1.1 Hole 42 Anomaly

Samples 03 and 04 from Hole 42 immediately north of Lac Gérin near the intersection of FC-2 with FC-3 yielded 12 and 15 gold grains during initial processing, respectively. All of the gold grains are abraded except for two irregular gold grains in Sample 42-03. Most of the gold grains are very fine but nuggets were observed in both samples raising the calculated visible gold assays over 1000 ppb. However, the nuggets were either lost in handling or retained in the 1/4 concentrate, such that the measured assays are 587 ppb (Sample 42-03) and 82 ppb (Sample 42-04). The samples are contiguous, consist of Matheson Till, and directly overlie bedrock; thus the anomaly possesses good stratigraphic continuity. Arsenic is anomalous in Sample 42-04 (824 ppm) but only slightly elevated in the lower sample (334 ppm), which also assayed 396 ppm copper. In summary, the anomaly has four favourable dispersal train characteristics, but is not strong either visually or analytically and is caused by predominantly abraded gold diagnostic of major glacial transport. Moreover, the pathfinder arsenic is probably coincidental as the underlying bedrock is weakly anomalous (45 ppm) in arsenic. Thus the anomaly does not appear to be significant.

6.2.1.1.2 Sample 65-02 Anomaly

Sample 65-02 did not yield visible gold initially (not panned) or in the 1/4 concentrate, but assayed 2951 ppb gold in the 3/4 concentrate, 2240 ppb gold in the 1/4 concentrate, and 3455 ppb in the minus 150 mesh fraction of the 3/4 pulp reject. Thus the anomaly is entirely due to occluded gold. Despite the consistency and good strength of the analyses, the anomaly does not have vertical continuity or any of the other essential characteristics of a dispersal train anomaly; it occurs in the middle of a four sample thick Matheson Till section and is flanked by samples with low gold assays. The anomaly lacks the arsenic association typical of occluded gold anomalies and occurs in a concentrate that contains very little pyrite (1 percent in the 1/4 concentrate). It does, however, have a strong (10.2 ppm) silver association. The anomaly is 150 m down-ice from FC-1 and could indicate that spotty, subeconomic Au-Ag mineralization is locally present along this structure.

6.2.1.1.3 Sample 84-04 Anomaly

Of eight heavy mineral gold anomalies produced by the twenty-three sample thick Matheson Till intersection in Hole 84 near FC-4, only the Sample 84-04 anomaly survived the screening procedure. Nuggets were entirely responsible for five of the other anomalies, and partially responsible for a sixth in a concentrate that also contained 10 fine gold grains. The seventh insignificant anomaly was caused by a cluster of 13 gold grains.

The potentially significant anomaly in Sample 84-04 appears erratic like the others, but is more difficult to dismiss as a cluster or nugget anomaly. Preliminary third stage screening identified it as a predominantly occluded gold anomaly (whole concentrate -- seven abraded gold grains, calculated visible gold assay of 163 ppb; 3/4 concentrate -- initial assay of 1778 ppb; 1/4 concentrate -- four abraded gold grains, calculated visible gold assay of 264 ppb and INA assay of 1660 ppb), but the 3/4 concentrate reject minus 150 mesh assayed less than 35 ppb in 1.4 g. Excluding the high assays and other attributed characteristic of occluded gold -- elevated arsenic (648 ppm) and a high sulphide content (15 percent) -- the anomaly lacks two important dispersal train characteristics -- delicate/irregular gold grains and stratigraphic continuity. Thus, as the low pulp reject assay suggests, the Sample 84-04 anomaly probably does not represent a true occluded gold dispersal train, and may have been caused by unobserved nuggets in both the 3/4 and 1/4 splits of the concentrate.

6.2.1.1.4 Sample 108-04 Anomaly

Sample 108-04 was collected from the base of a Matheson Till section resting on bedrock southwest of Lac Gerin. The sample was panned during initial processing and yielded six abraded and two irregular gold grains for a calculated assay of 572 ppb. The 3/4 concentrate assayed a high 1584 ppb gold (confirmed in the minus 150 mesh fraction of the pulp reject -- 2,284 ppb) as well as 1,932 ppm arsenic and 773 ppm zinc. The 1/4 concentrate gave similar assays (calculated 42 ppb, measured 1,970 ppb), and contains 70 percent pyrite.

This is a typical case of occluded gold, and the obvious source is the underlying bedrock which hosts pyrite-bearing quartz-carbonate veins and is anomalous in gold (258 ppb) and arsenic (36 ppm). Thus the overburden anomaly probably either represents bedrock contamination or simply overstates the grade of the source because the anomalous till and bedrock mineralization are in direct contact.

6.2.1.1.5 Hole 109 Anomaly

Samples 109-02, 03 and 05 represent a dispersal train anomaly in Matheson Till near the zone of arsenic enrichment on FC-1 that was recognized during initial processing, briefly described at that time (letter from S. Averill of ODM to M.-F. Bugnon of Cambior, dated February 09, 1989), and investigated by follow-up reverse circulation drilling (Holes 191 to 197). The three anomalous samples yielded either 15 or 16 gold grains, with delicate/irregular morphologies comprising less than 50 percent of the observed gold grains in Sample 02, more than 50 percent of the observed grains in Sample 03, and all of the observed grains in Sample 05. Assays are subanomalous to weakly anomalous (170 to 1490 ppb) because the gold is very fine grained. The anomaly also has an arsenic (ranging from 388 to 832 ppm) and galena (Pb not analyzed) association. A few irregular/delicate gold grains are present in most of the other nine Matheson Till samples from Hole 109 --including Sample 109-04 which interrupts the anomaly.

The thickness of the dispersion, the gold grain morphology (predominantly irregular), the bedrock topographic/overburden stratigraphic setting (a relatively deep hole intersecting a thick Matheson Till wedge down-ice from an outcropping basalt ridge), and the bedrock structural setting (500 m down-ice from FC-1) indicate that the dispersion originates along FC-1 as was discussed in the letter of February 09. The follow-up holes were positioned to trace the dispersion up-ice to source and also to test for possible additional dispersion along strike to the west of Hole 109 on the north side of the bedrock ridge (Plan 6). Till in the follow-up holes is generally poorly developed (two of the holes up ice from Hole 109 intersected no till) and uniformly non-anomalous (excluding one nugget anomaly). Although the Hole 109 dispersal train eluded further definition, the initial interpretation remains the most reasonable. The follow-up drilling eliminated the possibility of an along-strike extension of the source to the west (north of the outcrop area). It also showed that the gold could be derived from a source between Hole 109 and FC-1 as the bedrock intersections in this area are virtually all anomalous in arsenic (except Hole 193), and are locally anomalous in gold (Hole 191 -- 71 ppb Au; Plan 4). In summary, the Hole 109 gold is derived from proximal bedrock mineralization but, in the subcrop at least, this mineralization is subeconomic.

6.2.1.1.6 Sample 121-02 Anomaly

The Sample 121-02 gold anomaly also occurs in Matheson Till along the FC-1 arsenic zone. It has several properties in common with the Sample 108-04 anomaly including predominantly occluded gold, an arsenic association, and pyrite enrichment (Table 11), and also has the same type of source (i.e. underlying gold/arsenic-anomalous bedrock). Thus the anomaly either represents bedrock contamination or overstates the significance of the bedrock source.

6.2.1.1.7 Holes 126 and 140 Anomaly

Holes 126 and 140 in the northwest corner of the drill area intersected dispersal train-type visible gold anomalies with similar characteristics. Intervening Hole 144 yielded similar but subanomalous gold concentrations. The Holes 140 and 144 overburden gold data were briefly described immediately after processing (letter from S. Averill to M.-F. Bugnon dated February 15) on the last day of reverse circulation field operations, and the Hole 126 samples were processed the following week (on February 23). The gold for anomalous Samples 126-02 and 03 and 140-04 and 05 and for two flanking subanomalous samples (Nos. 140-06 and 07) as well as Samples 144-04 and 05 are summarized in Table 13. All eight of these samples consist of Matheson Till. The four anomalous samples have from 11 to 15 gold grains, and each of the four subanomalous samples has 8 gold grains. The majority of the gold grains in all eight samples are abraded (except in Sample 140-05), but significant numbers of irregular gold grains and some delicate gold grains also occur in seven of the samples. The anomaly is analytically weak; only one calculated assay exceeds 1000 ppb (due to a nugget) and none of the measured assays do. An arsenic association that is erratic in Hole 140 but persistent in Hole 126 appears to overprint the gold anomaly coincidentally. Hole 126 is located within 50 m of 1982 reverse circulation drill Hole 82-30 which intersected bedrock assaying 1100 ppm arsenic; followup diamond drill Hole 83-1 intersected no gold mineralization.

The February 15 letter proposed that the intermixing of gold grains of abraded, irregular and delicate morphologies could indicate:

"a) A source oriented parallel to ice movement, with the closest part being within 500 m (i.e. on Cambior property); or

Sample No.		Visible Gold				Assays	
		No. of Grains			Calc. Assay (ppb)	Au (ppb)	As (ppm)
		Del.	Ir.	Ab.			
CB-89							
126-	02	1	3	7	733	447	1,008
	03		6	9	2,302*	820	1,184
140-	04		2	11	701	255	280
	05	7	3	5	350	743	1,360
	06		3	5	119	246	328
	07			8	144	228	278
144-	04	2	1	5	255	542	123
	05	1	2	5	241	360	43

*Nugget contribution

Table 13 - Gold Data for the Holes 126 and 140 Gold Anomaly and Selected Adjacent Samples

b) A distal source (i.e. off the property) hosted by very friable (carbonatized or weathered) rock, the plucked clasts of which would tend to be crushed during glacial transport adding delicate gold to the abraded population that was liberated at source by glacial grinding."

The subsequent extension of the anomaly to Hole 126 -- with essentially the same intermixed gold grain morphologies -- and the identification of a bedrock structure (Plan 3) striking roughly through Holes 126, 140 and 144 (and parallel to final ice movement) do not serve to eliminate either of the two proposed sources. However, the lengthening of the dispersal train zone to 700 m to encompass Hole 126 indicates that any subcropping mineralization along the train is subeconomic because economic mineralization having this orientation would give a much stronger train (masking of the subcrop by the Missinaibi Formation -- as intersected in Hole 144 -- is assumed to be minimal). The second possibility -- a distal source of significant grade -- is very likely as Lower Till-hosted gold dispersion from Golden Pond could have been reworked into the Matheson Till on this part of the property.

6.2.1.1.8 Sample 128-12 Anomaly

The Sample 128-12 anomaly lies immediately east of the Holes 126/140/144 anomaly and occurs in the middle of a 24 m thick Matheson Till section. At first glance, the anomaly appears to have all of the characteristics of a dispersal train anomaly -- eighteen predominantly delicate gold grains valued at 704 ppb, high measured gold assay (8618 ppb confirmed in the 1/4 concentrate with 3510 ppb and in the minus 150 mesh 3/4 concentrate pulp reject with 6294 ppb) indicative of a substantial amount of occluded gold, stratigraphic continuity, and an elevated pathfinder metal (1.3 ppm Ag) and mineral (galena; Pb not analyzed) association. However, the continuity occurs by chance (with a nugget anomaly eliminated by third stage screening) and consequently the gold anomaly is spurious (as is its galena association) and unsympathetic to the silver assays which continue to be elevated down section. The drill log (Appendix A) records the intersection of a 0.2 m thick altered volcanic boulder in the Sample 12 interval, and this boulder may be the source of the anomalous gold concentration.

6.2.2 Heavy Mineral Copper, Zinc and Silver Anomalies

In base metal massive sulphide exploration, the heavy mineral anomaly threshold for copper and zinc is 800 ppm and for silver is 2 ppm. Of the 1521 samples processed, twenty-three produced anomalies in these metals -- four in copper, two in zinc, fifteen in silver and two in both zinc and silver (Table 14). All of the anomalies are weak. Gold values in the anomalous samples are uniformly low (most under 500 ppb) except for one nugget anomaly and the previously discussed potentially significant Sample 65-02 gold-silver anomaly. The Cu, Zn and Ag anomalies have been investigated by 1/4 concentrate examinations (Appendix G) except where the 1/4 concentrate was sent for INA gold analysis (Samples 65-02 and 96-19).

The four copper anomalies are all of marginal strength (871 to 944 ppm). One is caused by brass contamination, two are caused by crystalline, epigenetic-type chalcopyrite and one presumably by copper held in pyrite (pyrite comprises 50 percent of the concentrate). The two anomalies caused by chalcopyrite both lack stratigraphic continuity and were probably generated by drill bit milling of sulphide bearing clasts (as noted in one of the drill logs; Sample 141-03). The pyrite-hosted copper anomaly possesses basal continuity and may also have been generated by clast or bedrock contamination as most of the pyrite occurs attached to lithic grains. None of the copper anomalies are significant.

One of the two zinc anomalies occurs with a nugget gold anomaly (963 ppm Zn and 13,260 ppb Au in Sample 96-19) and the other occurs with an arsenic anomaly (820 ppm Zn and 1032 ppm As in Sample 88-04). The gold-associated anomaly cannot be investigated by 1/4 concentrate examination until the INA radiation dissipates, but occurs in a gravel sample and is therefore assumed to be spurious. The arsenic-associated anomaly occurs along the FC-4 trend and has basal continuity in Matheson Till. The 1/4 concentrate yielded sufficient cobaltite to explain the arsenic anomaly, and some chalcopyrite (Cu = 285 ppm) but no zinc minerals and only 7 percent pyrite. The occurrence of cobaltite in this sample is unusual, as the Casa-Berardi arsenic anomalies are typically accounted for by arsenopyrite (as observed during initial processing; Appendix C). The source of

Sample No.	Cu (ppm)	Zn (ppm)	Ag (ppm)	As (ppm)	Au (ppb)
CB-89- 19- 05	877	164	1.7	696	116
22- 01	248	423	4.4	75	56
02	206	427	3.9	73	36
03	388	122	4.4	G2,000	372
39- 01	235	374	3.6	103	190
43- 01	183	349	3.8	66	12
65- 02*	65	34	10.2	156	2,951
67- 11	871	72	0.3	120	57
68- 20	393	692	4.1	1,504	334
75- 03	105	128	2.1	302	50
84- 02	55	44	4.1	180	90
88- 04	285	820	1.6	1,032	52
96- 19	138	963	0.4	23	13,260
107- 04	139	356	5.1	114	146
114- 01	83	64	3.4	318	140
129- 03	887	27	1.2	28	25
140- 10	236	333	2.0	856	272
141- 03	944	33	L 0.1	67	327
148- 01	120	137	2.7	230	930
152- 01	269	1,405	2.3	960	80
02	289	943	2.1	1,112	135
159- 04	82	38	4.9	326	330
171- 13	426	550	2.0	968	464

*Potentially significant gold anomaly

Table 14 - Heavy Mineral Copper, Zinc and Silver Anomalies

both the cobaltite and unidentified Zn mineral is assumed to be low grade epigenetic mineralization along FC-4.

Four of the fifteen silver anomalies occur in Cochrane member glaciofluvial gravel (Subunit 5d) and come from samples containing abundant detrital minerals (notably rounded garnets with frosted surfaces) and between 2 and 4 percent oolitic marcasite (pellets) which are both derived from the Cretaceous sands of the Moose River Basin. The silver assays for the four anomalous samples are between 3.6 and 4.4 ppm. The other three samples of Cochrane gravel obtained from the drill program assayed from 0.2 ppm to 0.4 ppm Ag and the six Cochrane Till samples assayed from 0.1 ppm to 1.0 ppm (average 0.6 ppm), whereas most of the pre-Cochrane overburden assays are less than the lower detection limit of 0.1 ppm. Thus Cochrane Till and gravel are enriched in silver. This enrichment is not sympathetic to limestone content (which ranges from 5 to 70 percent), and its increase to anomalous concentrations in the glaciofluvial samples suggests that the silver minerals (none observed) occur in the medium-coarse sand range as opposed to the fine sand-silt range that dominates the till. These four silver anomalies are intriguing and unusual, but obviously of no significance in terms of property exploration as the silver undoubtedly is of distal provenance.

The other eleven silver anomalies are all hosted in till samples (nine of Matheson Till and two of Lower Till). Three of the Matheson Till-hosted anomalies and both of the Lower Till-hosted anomalies possess basal continuity; the remaining six Matheson Till-hosted anomalies lack stratigraphic continuity and are all spurious and insignificant. As with the Cochrane-related anomalies, no silver minerals were observed in the 1/4 concentrate examinations, but of the five basal anomalies three have an abundance of pyritic lithic grains which is diagnostic of clast/bedrock contamination of the till matrix (pyrite comprising 60 to 75 percent of each of the concentrates). Of the two other anomalies possessing basal continuity, one is enriched in free pyrite (60 percent) whereas the other -- in Sample 159-04 which overlies Missinaibi Formation clay rather than bedrock -- is not (1 percent). The extent to which the four pyrite-associated anomalies occurring directly above bedrock are caused by bedrock contamination cannot be ascertained; the bedrock samples all assayed below the AA detection limit (0.1 ppm) but the anomaly threshold:detection threshold ratio is only 20 to 1 whereas the concentration factor of the heavy mineral concentrates is typically 200 to 1. In any case, the sources of the silver anomalies cannot be significant because the silver values are very weak and are not accompanied by anomalous concentrations of gold or base metals.

The two zinc-silver anomalies occur in contiguous Missinaibi fluvial interglacial gravel samples (Nos. 152-01 and 02) in the valley of FC-2/FC-5. The gravel is cobbly, with no natural matrix, and its clasts are 98 percent black metasediments (Appendix A). The 1/4 concentrates yielded sufficient sphalerite to explain the zinc anomalies, sufficient cobaltite in Sample 01 and arsenopyrite in Sample 02 to explain associated arsenic anomalies, and 60 percent pyritic lithics, but no silver minerals. Obviously the anomaly overstates the grade of subeconomic mineralization that was milled from the metasedimentary clasts by the drill bit.

In summary, only a few of the copper, zinc and silver anomalies represent actual dispersion, and these anomalies are all related to minor occurrences of epigenetic mineralization with no gold association. Most of the other anomalies are caused by drill-induced clast/bedrock contamination of the till or gravel matrix.

7. CONCLUSIONS AND RECOMMENDATIONS

The objectives of the reverse circulation drilling program were to locate glacially dispersed mineralization indicative of significant gold deposits in the bedrock subcrop and to identify shear zones that could host mineralization below the subcrop or along strike from the drill holes.

The bedrock geology of the Casa-Berardi property is basically as previously indicated (Landry and Gauthier, 1988) although the shear zones appear to simply follow rather than create the major volcanic/sedimentary contacts. The turbidite package crossing the north of the property appears to conformably underlie the north-facing Golden Pond Sequence and to be repeated on the western and southern parts of the property, highlighting the strategic location of the property. In total more than 25 km of structural targets, including bedding-parallel shear zones and previously unrecognized east-northeast trending oblique faults, occur on the property. These targets are generally manifested by brittle shear deformation accompanied by Fe/Mg carbonatization and arsenic enrichment, especially along the segment of FC-1 between Holes 91 and 121, but gold values tend to be weak and very localized. Tuff horizons that were previously indicated along the shear zones are actually sheared and altered turbidites and basalt; thus the property has no potential for volcanogenic massive sulphide deposits. Geophysically the bedding-parallel shear zones are manifested by strong conductivity as they generally follow graphitic/pyritic sedimentary horizons. The FC-2/FC-5 and FC-3/FC-4 trends are also manifested in the bedrock topography, but this may be controlled lithologically as much as structurally.

The heavy mineral gold geochemistry of the Matheson Till and/or of the Lower Till and Missinaibi Formation gravel should be representative of the gold potential of the underlying bedrock because these horizons are enriched in locally derived bedrock material and their arsenic geochemistry closely matches the bedrock arsenic geochemistry. The generally low gold background of the overburden indicates that the shear zones have contributed very little gold. Most of the observed heavy mineral gold anomalies are visible gold nugget or cluster anomalies representing background noise, or are occluded gold anomalies representing drill-induced clast or bedrock contamination. These anomalies are not significant. Dispersal train type visible gold anomalies are present in Holes 42, 109, 126 and 140 but these anomalies are of low tenor and appear to be related to low grade and/or distal sources. The broad gold dispersal trains reported from the 1981/1982 reverse circulation drilling programs were not intersected in the present program, probably because the favourable 1981/1982 results constitute a misinterpretation of nugget anomalies resulting from an over-reliance on analytical data.

In view of the conclusive but generally disappointing results of the heavy mineral geochemical sampling, the potential for undiscovered, subcropping, significant (i.e. ore grade over mineable widths) gold mineralization is low despite the attractive structural/stratigraphic setting and strategic location of the property. This conclusion is supported by negative results obtained from an extensive diamond drilling program that was performed concurrently with the reverse circulation drilling (M.-F. Bugnon; personal communication). It is recommended that further work be directed towards testing the known arsenic zones -- especially the one on FC-1 -- for possible improvement in the gold : arsenic ratio at depth. Vertical gold-arsenic zoning has been described elsewhere (Kuryliw, 1988), and the predominantly brittle shearing observed in the reverse circulation drill holes suggests that the present erosional surface on the property may be above the ductile/brittle shear transition zone that favours gold deposition (Colvine et al., 1988).

* * * * * * * * * *

8. CERTIFICATE - KENZIE A. MACNEIL

I, Kenzie A. MacNeil, residing at 2164 Blossom Drive, Ottawa, Ontario hereby certify as follows:

That I attended St. Francis Xavier University at Antigonish, Nova Scotia and graduated with a B.Sc. in Geology in 1978.

That I have worked continuously in the field of exploration geology since 1979.

That I am a consulting geologist employed by Overburden Drilling Management Limited, 107-15 Capella Court, Nepean, Ontario.

That this technical report is based on data gathered on the subject property and interpreted by myself and other employees of Overburden Drilling Management Limited.

That I have no direct or indirect interest in Cambior Inc.

Kenzie A. MacNeil

Kenzie A. MacNeil, B.Sc.

Dated at Ottawa this 5th day of June, 1989.

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APPENDIX A

REVERSE CIRCULATION DRILL HOLE LOGS

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan. 5 1989

SHIFT HOURS
_____ TO _____

TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO CB-89-01 LOCATION L54E; 25+00N Elev. 296
GEOLOGIST [illegible] DRILLER J. Howe BIT NO. CB70055 BIT FOOTAGE 0 - 7.0
MOVE TO HOLE 7:15 - 9:15
DRILL 12:00 - 1:45
MECHANICAL DOWN TIME _____
DRILLING PROBLEMS _____
OTHER 6:45-7:15 Unload supplies from truck ; 9:15-12:00 Start-up [illegible] put up [illegible]
MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1				0 - 1.3 No Return
				1.3 - 3.2 <u>Ojibway II Sediments</u>
2				1.3-2.9 Clay, beige, gritty.
3				2.9 - 3.2 Granitic Boulder
4			01	3.2-5.5 <u>Matheson Till</u>
5			02	3.2-4.0 Beige fine sand/silt matrix.
6			03	Small cobble clasts of composition
7				60% volcanics and sediments
8				40% granitoid
9				4.0 - 5.5, as above with
10				grey-beige matrix
11				5.5 - 7.0 <u>Bedrock</u>
12				- medium green
13				- fine grained
14				- massive to poorly foliated, with rare
15				calcite - infilled slip planes.
16				- 1% calcite (white) veinlets
17				- generally non-calcareous
18				Intermediate → Mafic
19				Volcanics
20				7.0 E.O.H.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 4 19 89

SHIFT HOURS
_____ TO _____

TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO CB-89-02 LOCATION L 48+25E, 23+75N ELEVATION 294m
GEOLOGIST K. MacNeil DRILLER G. Houg BIT NO. CB 70216 BIT FOOTAGE 0-13.5
MOVE TO HOLE
DRILL 3:30 - 4:45
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER 4:45 - 5:00 Drain up for mtl
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–1.5				0-1.5 No Return - cobbles at surface.
1.5–1.8				1.5-1.8 Ojibway II Sediments clay - beige; gritty
1.8–12.4			01, 02, 03, 04, 05, 06, 07	1.8 - 12.4 Matheson Till beige (lightly oxidized) to 3.0m; grey (unoxidized) fine sand and silt matrix below 3.0; rare clay cutans on pebbles; clast composition - 55% volcanics and sediments 45% granitoids - may be a slight increase in percentage of volcanic/sedimentary clasts downhole 6.0-6.2 boulder - granodiorite 8.5-8.9 zone of unsorted sand, gritty, soft clay and pebbles
12.4–13.5			08	12.4- 13.5 Bedrock :- mafic volcanic :- dark green; fine grained; poor to moderate foliation; moderately calcareous (calcite); 1-2% white calcite veinlets/stringers
				13.5m (45') EOH

Depth scale: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan. 5 1989

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-03 LOCATION 52Ej 26+00N Elev. 296

GEOLOGIST K.MacNeil DRILLER J. Howg BIT NO. SB70053 BIT FOOTAGE 7.0-23.

MOVE TO HOLE 1:45 - 2:00

DRILL 2:00 - 3:45

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–1				0 - 1.4 Poor Recovery (Organics at surface)
2–5				1.4 - 5.9 Ojibway II Sediments gritty, grey clay, with sand/silt laminations
5				5.9 - 13.7 Matheson Till
6–7			01	5.9 - 9.0 grey-beige fine sand/silt matrix. pebbles and rare cobble clasts of composition
8–9			02	60% volcanics and sediments
10			03	40% granitoids (8.1-8.6 granodiorite boulder)
12			04	9.0 - 13.8 As above with cobbly clasts.
13			05	13.7 - 16.0 Bedrock
14–16			06	- medium grey - very fine grained - moderately well foliated to sheared - extensively Fe/Mg carbonatised. - appears micro-fractured, with alteration along fractures - local fine cubic pyrite, <1%. Altered Mafic(?) Volcanic
20				16.0 E.O.H.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 5 1989

SHIFT HOURS

____ TO ____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-04 LOCATION 50E 23N ELEVATION 295

GEOLOGIST P. Collins DRILLER G. Howg BIT NO. CB70216 BIT FOOTAGE ~~0.0~~-13.5 to 20.5

MOVE TO HOLE 4:45 - 5:00 Jan 3rd

DRILL 7:00 - 8:45 Am

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER Travel 6:45 - 7:00

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0.0 - 0.5 Organics
1				0.5 - 2.3 Ojibway II Sediments
2				beige grey, pure, soft clay
3			01	2.3 - 4.9 Matheson Till
4			01	grey beige fine sand/silt matrix. Pebble clasts of composition: 60% Volcanics and sediments; 40% Granitoids. 3.0 - 3.5 Boulder - granitoid.
5			02	
6			03	4.9 - 7.0 Bedrock
7				- greyish green - fine grained - weak to moderate foliation - carbonatized ~2% occasional quartz/carbonate veinlet - ≤1% disseminated sulphides below 6.0m - tuffaceous texture in places. Intermediate Volcanic
8				
9				
10				
11				
12				
13				7.0 End of Hole
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan. 5 1989

SHIFT HOURS
____ TO ____

TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO CB-89-05 LOCATION L50E; 26+50N Elev. 297

GEOLOGIST K. MacNeil DRILLER J. Howg BIT NO. CB70053 BIT FOOTAGE 23.0-30.

MOVE TO HOLE ____

DRILL 3:45 - 4:45

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–1.3				0-1.3 No Return (Organics at surface)
1.3–3.6				1.3-3.6 Ojibway II Sediments 1.3-2.0 beige, soft gritty clay 2.0-3.6 as above but grey
3.6–6.5			01 02	3.6-6.5 Matheson Till grey-beige, fine sand/silt matrix, with pebble-sized clasts of composition 65% volcanics + sediments 35% granitoids (6.3-6.5 carbonatized volcanic boulder)
6.5–7.5			03	6.5-7.5 Bedrock - darkgreen → black - fine grained - massive to poorly foliated - weakly developed disseminated Fe/Mg carbonatization Mafic Volcanic
				7.5 m. E.O.M.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 5 19 89

SHIFT HOURS
_____ TO _____

TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO CB-89-06 LOCATION 52E 22+25N ELEVATION 296
GEOLOGIST P. Collins DRILLER G. Howg BIT NO. CB70216 BIT FOOTAGE 20.5-29.5
MOVE TO HOLE 7:45-8:00
DRILL 8:00-9:00
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0.0-0.5 Organics
1				0.5-4.0 Ojibway II Sediments
2				- beige, pure, soft clay (oxidized)
3				below 3.0 there are silt/very fine sand interbeds
4				
5			01	4.0-7.0 Matheson Till
6			02	beige grey fine sand/silt matrix Pebble and small cobble clasts of composition: 60% Volcanics & Sediments; 40% Granitoids
7				
8			03	
9				7.0-9.0 Bedrock
10				- dark green; initially ochre weathered surface
11				- fine grained
12				- weak foliation
13				- below 7.4 upto 15% quartz/carbonate veinlets
14				- < 1% sulphides
15				- chloritized
16				Mafic Volcanic
17				9.0 E.O.H.
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 6 1989

SHIFT HOURS ____ TO ____

TOTAL HOURS ____

CONTRACT HOURS ____

HOLE NO CB-89-07 LOCATION L 44E ; 16+25N Elev. 290

GEOLOGIST K MacNeil DRILLER J Houg BIT NO. CB 70053 BIT FOOTAGE 30-5-51

MOVE TO HOLE 7:30 - 8:30

DRILL 8:30 - 10:00

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER 6:45 - 7:15 Wait for geologist to spot holes ; 7:15 - 7:30 To drill

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–18				0 - ~5.0 No Return - no resistance to penetration - assumed to be Ojibway II lacustrine clay
				~5.0 - 18.6 Ojibway II Sediments: clay - grey ; non-gritty
				18.6 - 19.0 Matheson Till: grey-beige, fine sand and silt matrix ; cobbles ; clast composition - 55-60% volcanics and sediments, 40% granitoids
				19.0 - 20.5 Bedrock :- mafic volcanic :- medium to dark green ; moderately well foliated ; calcareous - calcite as disseminations and stringers
				20.5 m (68') EOH
19			01	
20			02	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 5 1989

HOLE NO CB-89-08 LOCATION 54+75E ; 21N Elev. 296

GEOLOGIST P. Collins DRILLER G. Hoag BIT NO. SB70216 BIT FOOTAGE 29.5-37

SHIFT HOURS

______ TO ______

MOVE TO HOLE 9:00 - 9:15

DRILL 9:15 - 10:00

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0.0 - 0.5 Organics
1				0.5 - 3.0 Ojibway II Sediments
2				beige (oxidized) pure, soft clay slightly gritty downsection.
3				
4			01	3.0 - 4.4 Matheson Till
5			02A	beige (oxidized) fine sand minor silt matrix. Pebble and small cobble clasts of composition:
6			02B	60% Volcanics and Sediments; 40% Granitoids.
7				
8				4.4 - 7.5 Bedrock
9				(4.4 - 6.0) - ochre in colour (highly weathered)
10				- well foliation; sheared
11				- abundant FeO stain
12				- occasional ~~grey~~ magnetite ~~bearing~~ bands
13				- soft to drill.
14				(6.0 - 7.5) - green Fe Formation
15				- fine grained
16				- tuffaceous texture
17				- occasional thin oxidized bands
18				- carbonatized (vein and disseminated 3-5%
19				Int.- Volcanic. Mafic
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 6 1989

SHIFT HOURS
_____ TO _____

TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO CB-89-09 LOCATION L 42E ; 13 N ELEVATION 292
GEOLOGIST K MacNeil DRILLER J. Howy BIT NO. CB70053 BIT FOOTAGE 51-53.5
MOVE TO HOLE 10:00-10:15
DRILL 10:15-11:15
MECHANICAL DOWN TIME _____
DRILLING PROBLEMS _____
OTHER _____
MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
				0-0.5 No Return						
				0.5-1.3 Ojibway II Sediments						
			01	clay - brown (oxidized); minor grit						
				1.3-2.5m Bedrock :- altered intermediate - mafic volcanic; light greyish green with minor brown oxidized zones; fine grained; moderate to strong development of moderately reactive Fe/Mg carbonate; faint speckling of beige sericite or leucoxene -- very fine grained						
				2.2 - lose circulation - water forced up outside of drill stem						
				2.5m EOH (8')						

Depth scale: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 5 19 89

HOLE NO CB-89-10 LOCATION 57+75E ; 20N Elev. 295

GEOLOGIST P. Collins DRILLER G. Houy BIT NO. CB70216 BIT FOOTAGE 37.0-46.0

SHIFT HOURS ____ TO ____

MOVE TO HOLE 10:00 - 10:15

DRILL 10:15 - 11:15

TOTAL HOURS ____

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS ____

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–0.5				0.0 - 0.5 Organics
0.5–6.0				0.5 - 6.0 Ojibway II Sediments (0.5 - 3.8) beige (oxidized) slightly gritty soft clay (3.8 - 4.2) thin pebble / very fine sand bed (4.2 - 6.0) beige grey, pure to slightly gritty soft clay.
6.0–7.0			01	6.0 - 7.0 Matheson Till beige fine sand/silt matrix. Pebble clasts of composition: 65% Volcanics and Sediments; 35% Granitoids
7.0–9.0			02	7.0 - 9.0 Bedrock - ochre & light green - fine grained - foliated ; sheared - FeO stain more or less prevalent throughout sample - 1% sulphides - carbonatized 3-5% Intermediate Volcanic.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 6 1989

SHIFT HOURS

_____ TO _____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-11 LOCATION L 38+75 E; 14+50N ELEVATION 287

GEOLOGIST K MacNeil DRILLER J Houg BIT NO. CB 70054 BIT FOOTAGE 0-10.5

MOVE TO HOLE 11:15 - 11:45

DRILL 11:45 - 12:45

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

* New Bit

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–1.3				0 - 1.3 Little return - organics at surface
1.3–2.0				1.3 - ~2.0 Peat
2.0–7.7				2.0 - 7.7 Ojibway II Sediments clay - grey; slight grit; clay becomes very soft and soupy below 6.0 7.0-7.7 - fine sand becomes more common
7.7–9.2			01, 02	7.7 - 9.2 Matheson Till grey-beige, fine sand and silt matrix; pebbly with scattered cobble sized clasts; clast composition - 65% intermediate - mafic volcanics and sediments 30% granitoids 9.0 - 9.2 - 99% black ultramafic volcanic chips with minor matrix sand. probably bedrock with cave-in from overlying till section
9.2–10.5			03	9.2 - 10.5 Bedrock :- ultramafic volcanic :- dark green to black; fine to medium grained (~0.5mm); appears massive but may be poorly foliated; appears to be minor talc or serpentine present. moderate Fe/Mg carbonate development (5-7%); strongly magnetic (5% disseminated magnetite)

10.5m (35') EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 5 1989

HOLE NO CB-89-12 LOCATION 60E 22N Elev. 288

GEOLOGIST P. Collins DRILLER G. Howg BIT NO. CB BIT FOOTAGE 46.0-68.5

SHIFT HOURS

_____ TO _____

MOVE TO HOLE 11:15-11:45

DRILL 11:45-2:00

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER

MOVE TO NEXT HOLE

New Bit:

Pg. 1 of 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–1				0.0 - 0.5 Organics
1				0.5 - 10.6 Ojibway II Sediments
2–3				(0.5 - 5.8) beige, pure to slightly gritty clay.
3–5				(5.8 - 8.0) alternating thin beds of: pure, soft clay; granules & pebbles; fine sand. ~~bed~~
5–7			01	(8.0 - 10.6) predominantly grey ~~beige~~, pure, soft clay with occasional thin fine sand (sorted).
7–8				10.6 - 22.5 Matheson Till
8–11			02	beige grey fine sand/silt matrix. Pebble clasts with occasional small cobbles: 60% volcanics and sediments; 40% Granitoids
11–12			03	
13			04	
14			05	
15–16			06	
17			07	
18–19			08	
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 5 19 89

HOLE NO CB-89-12 LOCATION 60E 22N

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
			09	20.8 - 21.8 Boulder - Mafic Volcanic						
21										
22			10	pull rods 21.8 - 22.5 similar to 10.6 - 20.8						
23										
24				22.5 E.O.H.						
25				note: drilling problems occurred below 22.0. when pulled rods discovered 2 broken / lost in hole. It appears that the rods hit bedrock at 20.8 & perhaps penetrated fracture on angle. ∴ moved drill 2 m south & redrilled hole.						
26										
27										
28										
29										
30										
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 5 19 89

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-12A LOCATION L60E 21+98 N Elev. 288
GEOLOGIST P. Collin DRILLER G. Houng BIT NO. CB70217 BIT FOOTAGE 0.0 - 21.5
MOVE TO HOLE ______
DRILL 2:50 - 3:15
MECHANICAL DOWN TIME ______
DRILLING PROBLEMS ______
OTHER ______
MOVE TO NEXT HOLE ______

New bit
New Sub

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20				0.0 - 0.5 organics
				0.5 - 10.5 Ojibway II Sediments
				- see log for hole 12
				10.5 - 20.0 Matheson Till
				- see log for hole 12
11			01	
13			02	20.0 - 21.5 Bedrock
15			03	- dark green
16			04	- fine grained
18			05	- weak foliation
20			06	- calcareous 5 %
21			07.	= carbonate/quartz veinlets
				- < 1% sulphides
				Mafic Volcanics
				21.5 E.O.H.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 6 1989

SHIFT HOURS

____ TO ____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-13 LOCATION L36E ; 16N ELEVATION 288

GEOLOGIST K MacNeil DRILLER J Howg BIT NO. CB70054 BIT FOOTAGE 10.5-33

MOVE TO HOLE 12:45-1:00

DRILL 1:00-1:45

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–3				0 - ~3.0 Peat
3–18.5				3.0 - 18.5 Ojibway II Sediments clay - grey; soft; very minor grit - little return below 7.5m but no resistance to penetration, therefore section is glaciolacustrine clay and/or silt ~17.5 - 18.5 fine silty sand and pebbles interbedded with clay
18.5–20			01, 02	18.5 - 20.6 Matheson Till grey-beige, fine sand and silt matrix; pebbly; clast composition - 55% intermediate-mafic volcanics and sediments 45% granitoids

Depth scale: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 6 1989

HOLE NO CB-89-13 LOCATION L 36E ; 16N ELEVATION

GEOLOGIST DRILLER BIT NO. BIT FOOTAGE

SHIFT HOURS
TO

MOVE TO HOLE

DRILL

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			02	
21				20.6 - 22.5 Bedrock
			03	ultramafic volcanic - dark green to black; massive to poorly foliated; some talc and serpentine visible; weakly to moderately magnetic; 5-8% (?) dissaminated Fe/Mg carbonate
22				
23				
24				
25				
26				@ 21.8m, minor calcite veinlets
27				
28				22.5m (75') EOH
29				
30				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 5 19 89

SHIFT HOURS
____ TO ____

TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO CB-89-14 LOCATION L62E ; 21+25N Elev. 288.
GEOLOGIST P. Collins DRILLER G. Haug BIT NO. CB70217 BIT FOOTAGE 21.5-44.5
MOVE TO HOLE 3:15 - 3:30
DRILL 3:30 - 5:00
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER
MOVE TO NEXT HOLE

Pg. 1 of 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20			01	0.0-1.0 Organics 1.0-22.5 Ojibway II Sediments predominantly beige grey pure soft clay with occasional thin very fine grained sand beds; also occasional granule / small pebble clasts. Clay is slightly gritty in places. 7.5-10.0 Predominantly, pure, soft beige, grey clay. 10.0-17.0 very fine sand and silt with occasional wood chips. 17.0-19.5 sorted very fine to fine beige gray sand; minor granule inter beds. 19.5-22.5 inter beds of fine, medium sand with pebbly gravel beds of clast composition: 60% Volcanics and sediments; 40% Granitoids 22.5-24.5 Matheson Till gradational contact into beige into beige grey fine sand / minor silt matrix. Pebble clasts of composition: 65% Volcanics and Sediments; 35% Granitoids

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 5 19 89

HOLE NO CB-89-14 LOCATION L62E : 21+25N Elev. 238

GEOLOGIST ____ DRILLER ____ BIT NO. ____ BIT FOOTAGE ____

SHIFT HOURS
____ TO ____

MOVE TO HOLE ____

DRILL ____

TOTAL HOURS ____

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

CONTRACT HOURS ____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21			01	← bit plugged
22			02	24.5 - 25.5 Bedrock
23				- medium to dark green (initially ochre weathered surface).
24			03	- fine grained
25			04	- moderate foliation
26				- calcareous ~5% disseminated carbonate; occasional qtz/carbonate veinlet
27				- chloritized
28				- < 1% sulphides
29				Int. to Mafic Volcanic
30				25.5 E.O.H.
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 6 1989

HOLE NO CB-89-15 LOCATION L 34E ; 20+50 N ELEVATION 289

GEOLOGIST K MacNeil DRILLER J Howg BIT NO. CB 70054 BIT FOOTAGE 33-71

SHIFT HOURS ______ TO ______

MOVE TO HOLE 1:45 - 2:00

DRILL 2:00 - 5:30

TOTAL HOURS ______

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS ______

OTHER 5:30 - 6:15 Travel to truck ; 6:15 - 6:30 To Camp

MOVE TO NEXT HOLE

Page 1 of 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–5				0 - 1.0 No Return 1.0 - 4.7 Ojibway II Sediments clay - beige (oxidized) ; slightly gritty @ 2.0 m - small volcanic cobble - clay changes to a grey unoxidized color below 2.0 - below 3.5 m , clay becomes very soft and is not gritty
6			01	
7			02	4.7 - 12.1 Matheson Till grey-beige, fine sand and silt matrix ; cobble sized clasts ; clast composition - 50-55% intermediate - mafic volcanics and sediments 40-45% granitoids 11.0 - 12.1 gritty clay becomes prominent in matrix
8			03	
10			04	
11			05	
12–13			06 (small sample)	
15			07	12.1 - 16.1 Missinaibi Sediments 12.1-12.5 fine grey sand, pebbles and a few clay seams 12.5-13.3 - clay / silt - grey , compact and difficult to penetrate 13.3 - 14.6 sand - grey, fine grained with minor pebbles, granules and clay partings 14.6 - 15.1 pebbly sand - poorly sorted sand and pebbles 15.1 - 15.4 clay - grey, compact 15.4 - 16.1 sand - fine grained, grey beige
17			08	
19			09	
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 6 19 89

HOLE NO CB-89-75 LOCATION L34E; 20+50N ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

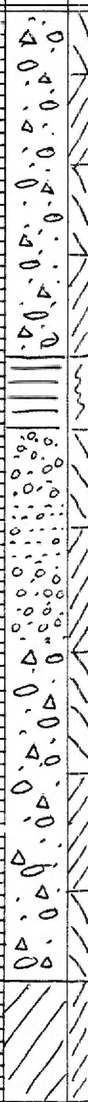
DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21			10	– Missinaibi Sediments from 12.1–16.1 may represent rip-up clast within Matheson Till
22			11	
23			12	16.1 – 25.7 Matheson Till grey-beige, fine sand and silt matrix; cobbly; clast composition – 70% intermediate-mafic volcanics and sediments 30% granitoids
24				
25			13	
26			N.S.	17.1–17.3 boulder – amphibolite
27				
28			14	25.7 – 30.4 Missinaibi Sediments 25.7–26.9 clay – grey, compact 26.9 – 28 – pebbly sand – till like appearance with grey-beige fine sand matrix and pebbles
29				
30			15	
31				28–29.1 sand – grey-beige; rare pebbles
32			16	29.1 – 30.4 gravel – abundant coarse sand and granules – fine sand common as well
33				
34			17	30.4 – 36 Lower Till grey-beige, fine sand and silt matrix; cobbly; clast composition 85% volcanics and sediments 15% granitoids
35			18	33.6 – 33.9 mostly matrix sand 35.9 – minor beige gritty clay
36				
37			19	36 – 38 Bedrock :- regolith return of predominantly beige (oxidized) gritty clay indicating drill bit milling of soft, probably altered and sheared bedrock; clay contains a few volcanic appearing chips and pyrite cubes
38				36.6 – competent chips are slightly more common – appear to be dark green to beige-brown (oxidized) mafic volcanic – 38m (127') EOH.
39				
40				



OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

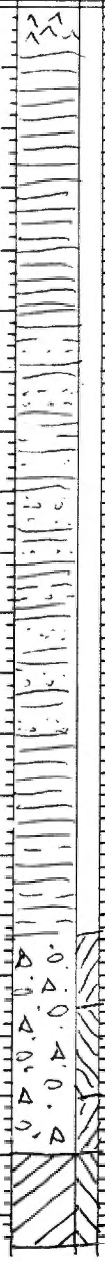
DATE Jan 6 19 89

SHIFT HOURS
____ TO ____

TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO CB-89-16 LOCATION 65+25E 20N ELEVATION 284
GEOLOGIST P. Collins DRILLER G. Houg BIT NO. CB70217 BIT FOOTAGE 47.0
MOVE TO HOLE 7:00 ~ 7:45
DRILL 7:45
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
1–20			01, 02, 03, 04	0.0 - 0.5 Organics 0.5 - 15.3 Ojibway II Sediments 0.5 - 5.0 beige (oxidized) pure soft clay (initially slightly gritty). 5.0 - 12.0 interbeds of: pure clay; fine to medium sand; occasional thin granule bed. 12.0 - 15.3 predominantly beige, pure soft clay with very fine sand / silt interbeds 15.3 - 19.0 Matheson Till sandy (clast poor) fine sand silt deficient matrix (beige in colour. small pebble clasts of composition: 75% Volcanics and sediments; 25% Granitoids 19.0 - 20.5 Bedrock - grey, fine grained; weak foliation; calcareous 2-3% disseminated & stringer carbonate - occ. greyish mica flakes (chlorite) - <1% diss sulphides Meta Sediment? Altered Volcanic 2 . E.O.H.						

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 7 1989

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-17 LOCATION L54E ; 16+50N ELEVATION 291
GEOLOGIST K MacNeil DRILLER J Hawg BIT NO. CB-70054 BIT FOOTAGE 71-80
MOVE TO HOLE 6:45-7:30
DRILL 7:30-8:45
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER 6:30-6:45 Travel to drill
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0-1.0 No Return - organics at surface
				1.0-2.9 Ojibway II Sediments
			01	clay - grey, moderately compact with rare pebbles and granules - gritty. till-like (Cochrane?) appearance
			02	2.8-2.9 boulder - granodiorite
				2.9-6.1 Matheson Till
			03	grey-beige, fine sand and silt matrix; cobbly; clast composition -
			04	50% intermediate to mafic volcanics and sediments
				50% granitoids
				3.3-3.5 boulder - granodiorite
				6.1-9.0 Bedrock :- siltstone
				black; very fine grained; strongly schistose to sheared; weakly graphitic(?); local pyrite rich bands to semi-massive pyrite -- up to 3-5% locally but overall pyrite content of <1%
				7.2 - 10-12 cm. quartz vein
				9.0 - 2 cm quartz vein
				9.0 m (30') EOH

Depth scale: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 6 19 89
SHIFT HOURS
____ TO ____
TOTAL HOURS
____
CONTRACT HOURS
____

HOLE NO CB-89-18 LOCATION 62E; 26N ELEVATION 283
GEOLOGIST P. Collins DRILLER G. Hong BIT NO. CB70217 BIT FOOTAGE 67.5-
MOVE TO HOLE 9:15-10:00
DRILL 10:00 -
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–1				0.0 - 1.0 Organics
1–7				1.0 - 7.0 Ojibway II Sediments
				(1.0 - 5.0) beige slightly gritty soft clay
				(5.0 - 7.0) as in 1.0 - 5.0 with occasional thin fine sand bed and pebble clast
7–8			01	7.0 - 8.2 Matheson Till
				beige grey fine sand matrix (silt deficient) pebble clasts of composition: 65% Volcanics and Sediments; 35% Granitoids
				(7.6 - 7.8) small boulder-granitoid
				7.8 - 8.2 similar to 7.0 - 7.6
9			02	
10				8.2 - 10.0 Bedrock
				- dark green
				- fine grained
				- weak to moderate foliation
				- chloritized
				- calcareous 2-3% diss & veinlet carbonate
				- ≤ 1% sulphides
				Mafic Volcanic

Depth scale: 1–20 m

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 7 1989

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO CB-89-19 LOCATION BL 14+50E ELEVATION 288

GEOLOGIST K MacNeil DRILLER J Houg BIT NO. CB 70054 BIT FOOTAGE 80-109.5

MOVE TO HOLE 8:45-10:45

DRILL 10:45-1:15

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

Page 1 of 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 – 0.6 No Return
1				0.6 – 26.9 Ojibway II Sediments
2				0.6-4.3 clay – beige (oxidized) to ~3.2 and grey (unoxidized) below 3.2; clay is gritty with a few granules and rare pebbles, a few of which are limestone; superficially resembles Cochrane Till
3				
4				
5				
6				4.3-5.9 sand – fine grained; grey-beige; minor gritty clay partings; a few fuchsite rich pebbles from 4.5-5.0m; sand is probably glaciolacustrine
7				
8			01	
9				5.9-26.5 sand – beige in color, well sorted – clean; probably of glaciofluvial origin;
10				
11				5.9 - ~11 sand – very fine to fine grained
12				~11-12 sand – very fine grained; grey-beige color
13				12-13 sand – fine grained
14			02	13-15.5 sand – fine to medium grained
15				15.5-26.5 – fine grained sand with minor local medium grained sand; minor pebbles below 26m
16				
17				26.5-26.9 gravel – fine to medium grained sorted sand and pebbles
18			03	
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 7 19 89

HOLE NO CB-89-19 LOCATION BL 14+50E ELEVATION ____

GEOLOGIST ____ DRILLER ____ BIT NO. ____ BIT FOOTAGE ____

SHIFT HOURS ____ TO ____

MOVE TO HOLE ____

DRILL ____

TOTAL HOURS ____

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

CONTRACT HOURS ____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21			03	26.9 - 28 Matheson Till grey-beige fine sand and silt matrix; very cobbly; clast composition - 85% intermediate-mafic volcanics and sediments (50% grey to black sediments - siltstone, greywacke) 15% granitoids
22				
23				
24				
25			04	
26				- section appears matrix deficient and could possibly be gravel but is very rich in local clasts
27			05	
28				28 - 29.5 Bedrock :- siltstone/slate dark grey; very fine grained; good planar fabric to fissile. sub-conchoidal fracture; scattered pyrite cubes
29			06	
30				
11				
12				29.0 - 29.5 minor oxidation - probably associated with a few percent quartz-calcite stringers
13				
14				29.5 m (98') EOH
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 6 19 89

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-20 LOCATION L64E 23N ELEVATION 280

GEOLOGIST P. Collins DRILLER G-Hong BIT NO. CB70217 BIT FOOTAGE 77.5-

MOVE TO HOLE 11:00 - 11:15

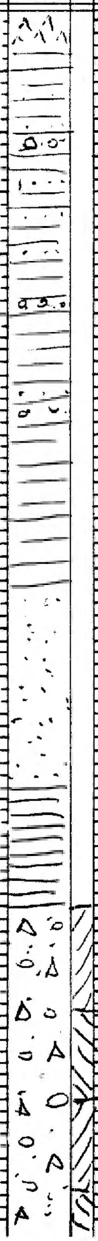
DRILL 11:15 -

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–20			01 (15–16), 02 (16–18), 03 (18–20)	

0.0 - 0.5 Organics

0.5 - 14.8 Ojibway II Sediments

(0.5 - 9.5) beige (oxidized) slightly gritty soft clay with occasional thin fine grained sand bed and pebble clast

(9.5 - 12.5) beige grey very fine to fine grained sand

(12.5 - 14.8) beige grey pure soft clay with silt interbeds

14.8 - 23.7 Matheson Till

initially clast poor slightly sorted beige grey fine sand matrix (silt deficient) Small pebble clasts of composition:

75% Volcanics and Sediments

25% Granitoids

(20.0 - 23.7) grey-beige gritty clay lumps in matrix (increase in % downsection) Also clasts are cobbly of composition

60% Volcanics and Sediments

40% Granitoids

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 6 1989

HOLE NO CB-89-20 LOCATION L646 25N ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21–40			04, 05, 06, 07, 08, 09, 10, 11, 12, 13	

23.7 – 28.2 Missinaibi Sediments

(23.7 – 24.2) beige, compact, hard, pure clay

(24.2 – 28.2) interbedded sand and gravel.
medium and fine sand beds, beige in colour with occasional very hard compact clay partings
pebble/granule beds of composition 60% Volcanics and Sediments; 40% Granitoids

28.2 – 35.0 Lower Till

slightly sorted beige fine sand matrix (silt deficient) occasional sorted thin medium sand beds. Pebble and cobble clasts are present of composition: 70% Volcanics and sediments; 30% Granitoids
(34.0 – 35.0) minor gritty clay lumps in matrix.

35.0 – 37.5 BEDROCK

- green grey & ochre; fine grained
- sheared; soft to drill; pred. non calcareous; No visible sulphides

Altered Int. Volcanic.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 7 1989

HOLE NO CB-89-21 LOCATION L 0 ; 8+25N ELEVATION 292

GEOLOGIST K MacNeil DRILLER J Houg BIT NO. CB 70054 BIT FOOTAGE 109.5-126.5

SHIFT HOURS ____ TO ____

MOVE TO HOLE 1:15-2:15

DRILL 2:15-3:15

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0-1.0 No Return
				1.0-14.6 Ojibway II Sediments
				clay - beige (oxidized); gritty; clay changes to a grey (unoxidized) color at 2.8m
				- below 4.0m, clay lacks grit and is very soft and soupy
				~12-14.6 sand - fine grained; grey-beige; minor clay partings
				14.6-15.2 Matheson Till
				grey-beige, fine sand and silt matrix; cobbly; clast composition -
				80% intermediate-mafic volcanics and sediments
				20% granitoids
				- abundant rusty volcanic chips -
				- Sample 01 obtained by initial penetration and washing of hole so probably contains some overlying sand
15			01	15.2-17 Bedrock :- altered volcanic or sediment (??) - light to medium grey; fine grained; schistose to sheared; shot through with indistinct quartz-Fe/Mg carbonate veinlets and stringers from 15.2-15.7; below 15.7 the sample contains moderately reactive, disseminated Fe/Mg carbonate or calcite;
				16.3-16.6 as from 15.2-15.7 but speckled with 1-2% pyrite cubes
				17m (57') EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 6 19 89

SHIFT HOURS

____ TO ____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-22 LOCATION L66E ; 24150N ELEVATION 277

GEOLOGIST P. Collins DRILLER G. Hong BIT NO. CB70218 BIT FOOTAGE 0.0 - 25.5

MOVE TO HOLE 1:45 - 2:00

DRILL 2:00 - 3:45

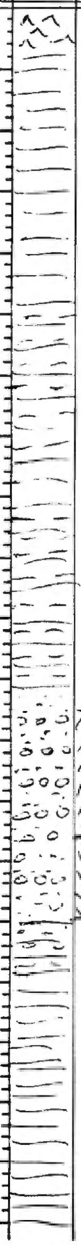
MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER 3:45 - 5:00 move part way to next hole

MOVE TO NEXT HOLE

New Bit Page 1 of 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
				0.0 - 0.5 Organics 0.5 - 22.0 Ojibway II Sediments (0.5 - 5.0) beige (oxidized) slightly gritty, soft clay (5.0 - 11.0) predominantly silt with occasional thin clay bed 11.0 - 15.0 gradational contact into inter beds of sand & gravel fine, medium and coarse sand beds. Pebbly gravel of composition 60% Volcanics and Sediments; 5% Limestone 35% Granitoids. 15 - 16.0 predominantly beige grey slightly gritty clay c very fine sand interbeds & occasional pebble clast. 16.0 - 22.0 beige grey, pure, soft clay c occasional v.f. sand interbeds	Note: The presence of limestone clast determines that the 11. - 15. m interval is Cochrane member gravel.					
			01							
			02							

Depth scale: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 6 19 89

SHIFT HOURS

______ TO ______

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-22 LOCATION 266E 24+50N ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

MOVE TO HOLE ______

DRILL ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21				22.0 – 23.5 Matheson Till
22				slightly sorted beige grey fine sand / silt matrix
23			03	Pebble clasts of composition: 60% Volcanics and Sediments
24			04	40% Granitoids
25				
26				23.5 – 25.5 Bedrock
27				- dark grey
28				- fine grained - weak foliation
29				- 2-3% carbonate; diss & stringers
30				- Tr FeO
31				- below 24.8 occasional
32				light grey-green bands
33				- < 1% sulphides Meta Sediment?
34				25.5 E.O.H.
35				
36				
37				
38				
39				
40				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 7 1989

SHIFT HOURS ____ TO ____

TOTAL HOURS ____

CONTRACT HOURS ____

HOLE NO CB-89-23 LOCATION L2E ; 12+75N ELEVATION 297

GEOLOGIST K MacNeil DRILLER J Houg BIT NO. CB 70054 BIT FOOTAGE 126.5-136.5

MOVE TO HOLE 3:15-3:45

DRILL 3:45-5:15

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER 5:15-6:00 Travel to Truck with GT ; 6:00-6:15 Travel to Camp

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–1				0-1.0 No Return - gritty, oxidized clay at surface
1–8.5				1.0 - 8.5 <u>Ojibway II Sediments</u> clay - beige (oxidized) initially but gradually becomes grey (unoxidized) by 3.0m; clay is gritty with scattered pebbles some of which are limestone. clay becomes very soft and soupy below 4.0 - gritty. ~6.5-7.1 pebbly sandy seams in clay. 7.1-8.5 clay/silt - slightly less grit
8.5–9.0			01 (wash hole to obtain large sample)	8.5 - 9.0 <u>Matheson Till</u> - initial 0.2 m may be pebbly gravel or washed till; till has a grey-beige fine sand and silt matrix and pebble size clasts; clast composition - 65% intermediate-mafic volcanics and sediments, 35% granitoid
9.0–10.0			02	9.0 - 10.0 <u>Bedrock</u> :- intermediate-mafic volcanic - medium grey; fine to very fine grained; no apparent fabric; texture ~~not~~ discernible; calcareous - disseminated calcite which may impart grey color to the sample

10m (33') EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 7 19 89

HOLE NO CB-89-24 LOCATION L47E 27+50N ELEVATION 291

GEOLOGIST P. Collins DRILLER G. Howg BIT NO. CB70218 BIT FOOTAGE 25.6-41.0

SHIFT HOURS

_______ TO _______

MOVE TO HOLE ~~6:45~~ - 7:20

DRILL 7:20 - 9:00

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER Travel 6:30 - 6:45

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20			01, 02, 03, 04, 05, 06	

0.0 - 0.5 Organics

0.5 - 2.5 Ojibway II Sediments

beige (oxidized), gritty soft clay c occasional thin granule bed

2.5 - Matheson Till

abrupt contact with overlying unit. beige grey fine sand/silt matrix. Pebble clasts of composition: 75% Volcanics and sediments; 25% Granitoids

Cobble sized clasts occur below 4.5 m of similar composition to 2.5-4.5.

8.4 - 8.9 Boulder - Felsic Volc.

8.9 - 13.5 Till similar to 2.5 - 4.5 ; approx. 15% grey gritty clay in matrix below 11.5 m

* Sample 05 taken over longer interval due to poor sample return (clay rich till.)

13.5 - 15.5 Bedrock

- grey
- finegrained
- poor foliation
- noncalcareous
- porphyritic texture in places
- .5% diss. sulphides

Altered Volcanic

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 8 19 89

SHIFT HOURS

____ TO ____

TOTAL HOURS

____

CONTRACT HOURS

____

HOLE NO CB-89-25 LOCATION L6E ; 15+50N ELEVATION 291

GEOLOGIST K MacNeil DRILLER J Houg BIT NO. CB 70055 BIT FOOTAGE 0-10.5

MOVE TO HOLE 7:30-8:00

DRILL 8:00-9:30

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER 6:30-7:30 Travel

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0-1.2 No Return
1				1.2-6.9 Ojibway II Sediments clay - beige (oxidized) to ~2.5m and grey (unoxidized) below 2.5m; clay is gritty, moderately compact and contains scattered pebbles most of which are granitic -- a few limestone pebbles are present; clay section superficially resembles Cochrane Till 6.6-6.9 - boulder - grey, carbonatized volcanic
8			01	6.9-8.5 Matheson Till grey, gritty clay matrix to 7.5m -- fine sand and silt matrix below 7.5m; clay rich till contain only pebbles while cobbles are present in sandy/silty till; clast composition - 75% intermediate - mafic volcanics and sediments 25% intrusives
10			02	8.5-10.5 Bedrock :- altered volcanic :- grey-beige; fine grained; massive to sheared - shears are usually oxidized; sample is highly calcareous with >15% reactive calcite; 9.5-10.1 - most of sample in this interval is oxidized and schistose to sheared
20				10.5m (35') EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 6 1989

SHIFT HOURS
_____ TO _____

TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO CB-89-26 LOCATION 42E 22N ELEVATION 288
GEOLOGIST R. Collins DRILLER G. Hroug BIT NO. CB70218 BIT FOOTAGE 41.0 - 53.0
MOVE TO HOLE 9:00 - 9:45
DRILL 9:45 - 10:30
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20			01 02	0.0 - 1.0 Organics 1.0 - 9.0 Ojibway II Sediments beige, gritty, soft clay with occasional thin granule bed. 7.8 - 9.0 silt c occ. thin clay bed 9.0 - 10.2 Matheson Till grey beige fine sand/silt matrix. Pebble clasts of composition: 65% Volcanics and Sediments; 35% Granitoids 10.2 - 12.0 Bedrock - dark green - fine grained - weak to moderate foliation - ~2% disseminated and stringer/veinlet FeMg carbonate - ≤ 1% diss sulphides; slight increase in % age downsection - tuffaceous texture in places Mafic Volcanic 12.0 E.O.H.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 9 19 89

SHIFT HOURS ____ TO ____

TOTAL HOURS ____

CONTRACT HOURS ____

HOLE NO CB-89-27 LOCATION L8E; 15N ELEVATION 288

GEOLOGIST K MacNeil DRILLER J Houg BIT NO. CB70055 BIT FOOTAGE 10-5-27-5

MOVE TO HOLE 9:30-9:45

DRILL 9:45-11:45

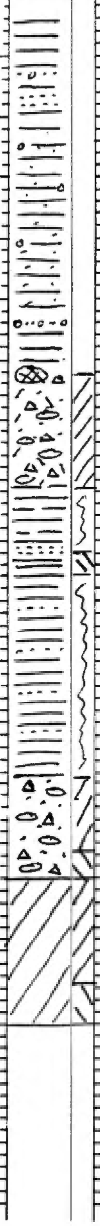
MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



Depth (m): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

Sample No.: 01; N.S.; Character Sample; N.S.; 02; 03; 04; 05

0-0.4 No Return

0.4-6.4 Ojibway II Sediments

clay - beige-brown (oxidized) gritty clay

1.2-1.9 fine sand predominant, lesser proportions of gritty clay

1.9-6.4 clay - gritty; becomes grey (unoxidized) below 3.0m; scattered granules and pebbles; clay becomes softer downhole and contains less grit below 4.0

5.4- thin sandy, pebbly seam

6.1-6.4 boulder - mafic volcanic

6.4-8.1 Matheson Till:-

grey gritty clay and fine sand matrix to 7.0m and fine sand and silt matrix below 7.0m; cobble size clasts; clast composition - 70% volcanics and sediments 30% granitoids

7.4-8.1 grey, gritty clay matrix

8.1-12.9 Missinaibi Sediments

8.1-9.0 silt and clay - grey; very compact

9.0-9.2 sand - fine grained; minor pebbles

9.2-9.6 clay - brown, organic rich (sample taken)

9.6-12.9 clay - grey; very compact; very fine sand and silt ~~present~~, possibly as varves

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 9 1989

HOLE NO CB-89-27 LOCATION L8E ; 15N ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20				

12.9 - 14.6 Lower Till

grey-beige, fine sand and silt ~~matrix~~ although till section appears slightly matrix deficient; very cobbly; clast composition -

90-95% intermediate-mafic volcanics and sediments

5% granitoids

14.6 - 17 Bedrock :- altered volcanic :-

grey-beige; fine grained; generally massive; highly calcareous - pervasive Fe/Mg carbonate - probably introduced along microfractures; @ 15.3 m intersect a 2 cm. pyrite rich shear;

15.7 - 16.8 much of sample ground to grey white clay

17 m (57') EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan. 7, 1989

SHIFT HOURS

____ TO ____

TOTAL HOURS

____

CONTRACT HOURS

____

HOLE NO CB-89-28 LOCATION L40E ; 22+50N ELEVATION 288

GEOLOGIST B. Rudnicki DRILLER G. Howg BIT NO. CB70218 BIT FOOTAGE 53-67

MOVE TO HOLE 10:30 - 10:45

DRILL 10:45 - 11:45

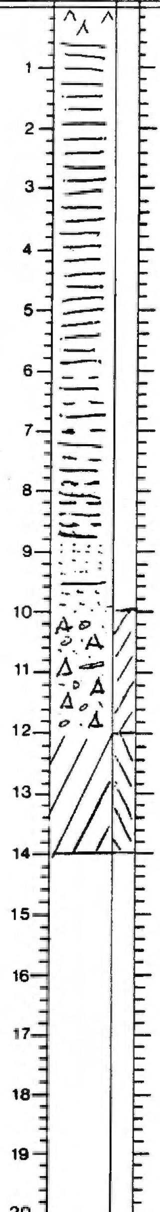
MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



0.0 - 0.5 Organics

0.5 - 10.0 Ojibway sediments

0.5 - 6.0 grey, beige, pure soft clay.

6.0 - 8.8 clay with silt interbeds

8.8 - 10.0 very fine grey, beige sand with clay interbeds

10.0 - 12.0 Matheson till

Grey, beige fine sand, silt matrix. Pebble and small cobble clasts of composition 75% volc/seds - -25% granitoids.

12.0 - 14.0 Bedrock

- dark green
- fine to medium grained
- poor foliation
- 10% carbonitized
- 1% disseminated sulphides

Mafic volcanic

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 10 19 89

HOLE NO CB-89-29 LOCATION L 10E ; 14+25N ELEVATION 291

GEOLOGIST K MacNeil DRILLER J Houg BIT NO. CB 70055 BIT FOOTAGE 27.5 - 35

SHIFT HOURS

____ TO ____

MOVE TO HOLE

DRILL 7:45 - 9:15

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER 6:30-7:00 Load truck / Skidoo for trip to drill ; 7:00-7:45 - Travel

~~MOVE TO NEXT HOLE~~ to end of truck road ; Skidoo to drill (two trips)

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 - 0.9 No Return
1				0.9 - 5.3 Ojibway II Sediments
2				0.9-2.4 clay - grey; gritty; minor pebbles
3				2.4-2.6 sand - fine grained; grey
4				2.6-5.3 clay - grey; soft; gritty; minor pebbles
5				5.3 - 7.5 Bedrock :- greywacke:-
6			01	dark grey (slightly greenish); fine to medium grained (0.1-0.5mm); poorly foliated; calcareous -
7				2-4% disseminated and stringer calcite; minor beige (oxidized) carbonate stringers below 6.8m
8				
9				
10				
11				7.5m (25') EOH
12				
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jun 6 1989

SHIFT HOURS
____ TO ____

TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO CB-89-30 LOCATION L38E 0+25N ELEVATION 286

GEOLOGIST P. Collins DRILLER G. Harvey BIT NO. CB70218 BIT FOOTAGE 67.0-90.0

MOVE TO HOLE 11:45 - 1:30

DRILL 1:30 - 3:30

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–4				0.0 - 0.5 Organics 0.5 - 4.0 Sediments (Cochrane) beige (oxidized), slightly gritty soft clay
5			01	4.0 - 6.2 Till (Cochrane) beige grey fine sand and grey gritty clay matrix. Pebble clasts of composition: 65% Volcanics and sediments; 10% limestone; 25% Granitoids
7			02	
9–13				6.2 - 7.0 beige sorted fine grained sand; 7.0 to 9.0 medium grained sand with occasional thin pebble/granule bed. Ojibway II Sediments 9.0 - 13.2 beige grey, pure soft clay with silt interbeds clay is grey downsection
14			03	13.2 - 21.5 Matheson Till grey beige fine sand/silt matrix. Pebble and small cobble clasts of composition: 80% Volcanics and sediments; 20% Granitoids.
15			04	
17			05	
19			06	
20			07	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 7 19 89

HOLE NO CB-89-30 LOCATION ______ ELEVATION 284

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS

______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS

______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS

______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			07	21.5 - 23.0 BEDROCK
21			08	- grey
22			09	- fine to medium grained
23				- poor foliation
24				- carbonatized 7-10% disseminated & veinlets
25				- FeO stain throughout esp. along fracture; also appears sericitized
26				- ≤ 1% disseminated sulphide
27				Altered Volcanic.
28				23.0 E.O.H.
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 10 1989

HOLE NO CB-89-31 LOCATION 12+75 E ; 13 N ELEVATION 289

GEOLOGIST S. GRAHAM DRILLER J. HOWG BIT NO CB-70055 BIT FOOTAGE 35[illegible]

SHIFT HOURS ______ TO ______

MOVE TO HOLE 9:15 to 9:45

DRILL 9:45 to 12:45

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

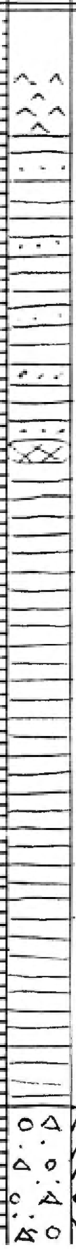
DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

p. 1 of 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–20		18.0–20	01, 02	0 – 1.0 No Return 1.0-2.0 Organics 2.0-18.0 Ojibway II Sediments 2.0-7.0 pure gray, soft clay, with rare thin beds of fine sand. 7.0-7.4 granitoid boulder 7.4-18.0 pure grey clay, very soft. 18.0-24.3 Matheson Till grey-beige v. fine sand-silt matrix; pebble clasts of composition 80% volcanics/sediments 20% granitoid

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 10 19 89
HOLE NO CB-89-31 LOCATION ______ ELEVATION ______
GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______
SHIFT HOURS ______ TO ______
MOVE TO HOLE ______
DRILL ______
TOTAL HOURS ______
MECHANICAL DOWN TIME ______
DRILLING PROBLEMS ______
CONTRACT HOURS ______
OTHER ______
MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			02	24.3 to 29.0 Missinaibi Formation
21				gray, pure, compact clay,
			03	fissile
22				thin, fine sand inter-
23			04	bed at 25.2.
24				
				29.0 to 31.7 Lower Till
25				grey-beige, v. fine
26				sand-silt matrix;
27				cobble-sized clasts
28				of composition — 90% volcanics/sed's
29				10% granitoids
				scattered limestone
30			05	pebs, abundant
				grey-beige carbonate
31			06	volcanic clasts.
				31.7 - 33.0 Bedrock
32			07	- pale gray-beige (slightly
33				greenish).
				- fine grained
34				- generally massive
				- completely altered
35				- scattered rounded
				glassy (?) spots - maybe relict amygdules.
36				~1% calcite veinlets &
37				abundant disseminated carbonate.
				Altered Volcanic
38				
39				E.O.H. 33.0 m (110')
40				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 7,8 19 89

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-32 LOCATION 42E 0+75N ELEVATION 283

GEOLOGIST P. Collins DRILLER G. Hong BIT NO. CB70218 BIT FOOTAGE ______

MOVE TO HOLE 3:30 - 3:45 Jan 7

DRILL 3:45 - 5:15 (Jan 7)

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0.0 - 0.5 Organics
1				0.5 - 16.0 Ojibway II Sediments
2				beige (oxidized), slightly gritty soft clay.
3				
4				6.0 - 12.8 silt with occasional: thin clay bed; very fine grained sand beds with granules.
5				
6				12.8 - 16.0 grey, pure, soft clay
7				16.0 - Matheson Till
8				beige grey fine sand / silt matrix - pebble and small cobble clasts of composition: 80% Volcanics and sediments; 20% Granitoid.
9				
10				
11				
12				minor grey gritty clay in matrix below 19.0 m.
13				
14				
15				
16				
17			01	
18				
19			02	
20			03	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 7,8 19 89

HOLE NO CB-89-32 LOCATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			03	20.8 - 21.0 small boulder - meta sediment
21			04	21.0 - 21.8 similar to above till
22				21.8 - 23.2 beige sorted fine to medium grained sand with occasional pebble clasts
23			05	
24			06	23.2 - 28.0 similar to 16.0 - 20.8 only matrix is slightly sorted (silt deficient) Increase in Granitoid clast component to 30%
25				
26			07	
27				
28			08	24.0 - 28.0 minor compact pure and gritty clay partings.
29			09	28.0 - 28.2 Boulder - granitoid
30			10	28.2 - 30.5 similar to 23.2 - 28.0
31				30.5 - 31.0 Boulder - gabbro
32			10	31.0 - 33.8 similar to 23.2 - 28.0
33				33.8 - 36.5 grey gritty clay in matrix which increases in percentage downsection (up to 60% of matrix) Fewer clasts (pebbles) of similar composition to 23.2 - 28.0
34			11	
35				
36			12	
37				36.5 - 38.0 slightly gritty to pure grey compact, hard clay with few pebble clasts. Appears to be very clay-rich till and not Missinaibi Sediments.
38			13	
39				
40			14	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 7,8 1989

HOLE NO CB-89-32 LOCATION

GEOLOGIST DRILLER BIT NO. BIT FOOTAGE

SHIFT HOURS

TO

MOVE TO HOLE

DRILL

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			14, 15, 16, 17, 18, 19	

38.0 - 45.7 grey beige fine sand/silt and grey gritty clay matrix (~5%) increase in amount of clasts; Pebbles and cobbles of composition: 90% Volcanics & Sediments; 10% granitoids. some of which are ochre

45.7 - 48.0 Bedrock

- grey (ochre initially)
- fine grained
- foliated
- carbonatized (Fe/Mg) 15% disseminated and stringer
- FeO stain (2-3%)
- sericitized

Altered Volcanic

48.0 E.O.H.

41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan. 10 1989

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-33 LOCATION L11E; 17+75N ELEVATION 288

GEOLOGIST K. GRAHAM DRILLER J. Howe BIT NO. SD70056 BIT FOOTAGE 0-25.5

MOVE TO HOLE 12:45 - 1:30 pick up fuel at GT.

DRILL 1:30 - 3:15

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

p. 1 of 2 *New Bit

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 - 1.0 No Return
1				1.0 - 1.5 Organics
				1.5 - 21.0 <u>Ojibway II Sediments</u>
2				1.5 - 21.0 pure grey clay with minor fine sand interbeds.
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 10 19 89 | HOLE NO CB-89-33 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

p. 2 of 2.

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21			01	21.0 to 24.0 Matheson Till grey-beige, v. fine sand-silt matrix, pebble sized clasts to 22.5, cobbles below 22.5.
22				Composition - 70 volc./seds. - 30 granitoid
23			02	Boulders · 23.0 - 23.2
24			03	Below 23.2, composition is 80% volc./seds. 20% granitoids. Some sections of poorly sorted med. sand.
25				24.0 - 25.5 Bedrock
26				- dark grey
27				- fine grained
8				- strongly foliated (schistose at 25.2)
9				- pervasive carbonate, some calcite patches (~1%).
10				- trace vein pyrite.
11				- faint granular appearance (sediments?).
12				- possible trace of graphite.
13				- dissem pyrite <1% total
14				Altered Graywacke?
15				
16				
17				
18				E.O.H. 25 m. (85')
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 8 19 89

SHIFT HOURS

____ TO ____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-34 LOCATION L46E 0+00 BL ELEVATION ____

GEOLOGIST P. Collins DRILLER G. Howg BIT NO. CB70218 BIT FOOTAGE 19.3 -

MOVE TO HOLE 10:00 - 10:15

DRILL 10:15 -

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
0–20				0.0 - 0.5 organics 0.5 - 20.6 Ojibway II Sediments beige grey, slightly gritty soft clay with minor granule beds & v.f. sand. 14.0 - 19.8 predominantly grey, pure, soft clay						

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 8 19 89

HOLE NO CB-89-34 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

SHIFT HOURS

________ TO ________

MOVE TO HOLE ________

DRILL ________

TOTAL HOURS

____

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

CONTRACT HOURS

____

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
21			01	19.8 - 20.6 beige fine grained sand						
22				20.6 - 59.0 Mathesen Till						
23			02	slightly sorted beige to beige grey finesand matrix (silt deficient) Pebble clasts of						
24										
25			03	composition 70% Volcanics and sediments ; 30% Granitoids						
26										
27			04	- till is cobbly below 22.0m with occasional thin sorted						
28			05	medium grained sand bed						
29				29.0 - 35.5m grey gritty clay						
30			06	in matrix (~5%)						
31				35.5 - 53.0 till is sandy						
32			07	Similar to 20.6 to 29.0 m						
33				(abundant return on matrix)						
34			08	although there are sections within interval with up to 5%						
35			09	grey gritty clay lumps						
36				Clast composition remains						
37			10	the same as above.						
38			11							
39										
40			12							

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 8 19 89
HOLE NO CB-89-32 LOCATION ______ ELEVATION ______
GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______
SHIFT HOURS ______ TO ______
MOVE TO HOLE ______
DRILL ______
TOTAL HOURS ______
MECHANICAL DOWN TIME ______
DRILLING PROBLEMS ______
CONTRACT HOURS ______
OTHER ______
MOVE TO NEXT HOLE ______

DEPTH IN METRES	SAMPLE NO.
	12
41	13
42	
43	14
44	15
45	
46	16
47	17
48	
49	18
50	19
51	
52	20
53	21
54	
55	22
56	23
57	
58	24
59	25
60	

DESCRIPTIVE LOG

- between 44.0 – 53.0 meters there are occasional beige sorted medium-grained sand bed (coarse biased matrix in sections)

55.0 m – 59.0 m approximately 15% grey gritty clay in matrix

59.0 – 86.8 m Missinaibi Sediments

Subtle-gradational contact between sediments and overlying till within sample #25.

(59.0 – 62.0) interbeds of beige to ochre coloured fine, medium and coarse grained sand. Also occasional pebbly / granule beds (weathered clasts are common)

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 8 1989

SHIFT HOURS ____ TO ____

TOTAL HOURS ____

CONTRACT HOURS ____

HOLE NO CB-89-34 LOCATION ____ ELEVATION ____

GEOLOGIST ____ DRILLER ____ BIT NO. ____ BIT FOOTAGE ____

MOVE TO HOLE ____

DRILL ____

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
61			26	62.0-63.5 predominantly sorted very fine and fine grained sand beige-ochre in colour with thin granule beds.
62				
63			27	
64				63.5-66.4 Interbeds of sand and gravel. Well rounded pebble clasts of composition: 75% Volcanics and Sediments; 25% Granitoids many of which are oxidized. -sorted medium to coarse sand interbeds.
65				
66			28	
67				
68				
69			29	66.4-67.0 Sorted beige-ochre very fine to fine grained sand
70				
71				67.0-68.5 Similar to 63.5-66.4
72			30	68.5-74.8 predominantly beige fine grained sand grading to very fine sand downsection (grey beige in colour)
73				
74				
75			31	74.8-75.8 similar to 63.5-66.4
76			32	75.8-86.8 Interbeds of sand and gravel. Beige grey fine, medium and coarse sand beds throughout interval.
77				
78			33	
79				Pebble and cobble gravel beds of
80			34	composition: 80% Volcanics & Sediments; 20% Granitoids.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 8 19 89

HOLE NO CB-89-34 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
81			34	86.8 - 90.0 Bedrock
82				- black clay lumps
83				- very few chips are visible in sample; fine grained; very soft.
84			35	
85				- graphitic; also cubic pyrite crystals ~ 2%
86			36	Meta Sediment.
87				
88			37A	90.0 E.O.H.
89			37B	
90				
91				
92				
93				
94				
95				
96				
97				
98				
99				
100				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 10 1989

SHIFT HOURS

____ TO ____

TOTAL HOURS

____

CONTRACT HOURS

____

HOLE NO CB-89-35 LOCATION L13+25E; 20+75N ELEVATION 287

GEOLOGIST K MacNeil DRILLER J Howg BIT NO. CB70056 BIT FOOTAGE 25.5-54.5

MOVE TO HOLE 3:15 - 3:45

DRILL 3:45 - 5:45

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER 5:45-6:30 Travel (Skidoo to truck - 2 trips); Truck to camp

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–3				0 - 3.0 Organics
3–15.8				3.0 - 15.8 Ojibway II Sediments clay - grey; soft; minor grit and rare pebbles; very little or no grit below 10.5
15.8–20			01, 02	15.8 - 25.8 Matheson Till gritty clay and fine sand matrix to 16.3 - pebbly with up to 10% limestone; sand/silt matrix below 16.3 with pebble sized clasts to 20m and scattered cobbles below 20m; clast composition - 60% intermediate - mafic volcanics and sediments 40% granitoids 2 % limestone 25.6 - 25.8 - grey, gritty clay matrix

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 10 1989

HOLE NO CB-89-35 LOCATION L13+25E ; 20+75N ELEVATION 287

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS

______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS

______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS

______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			03	
21				25.8 - 27.9 <u>Missinaibi Sediments</u>
22			04	clay - grey; very compact and difficult to penetrate
23			05	
24				27.9 - 28.3 <u>Lower Till</u>
25			06	grey-beige, fine sand and silt matrix; very cobbly; clast composition -
26				98% intermediate-mafic volcanics and sediments
27			N.S.	2% granitoids
28			07	28.3 - 29.0 <u>Bedrock</u> :- siltstone:-
			08	grey, very fine grained; schistose to fissile; sample contains minor to moderate amounts of poorly reacting Fe/Mg carbonate
29				
30				
11				
12				
13				29m (97') EOH
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 9 1989
SHIFT HOURS
____ TO ____
TOTAL HOURS
____
CONTRACT HOURS
____

HOLE NO CB-89-36 LOCATION L34+25 ; 0+25N ELEVATION 288
GEOLOGIST P. Collins DRILLER G. Hoag BIT NO. CB70220 BIT FOOTAGE 0.0-7.5
MOVE TO HOLE 7:45-8:30
DRILL 8:30-9:45
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER Pull rods out of hole #34 (7:00-7:45) Travel 6:30-7:00
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–1				0.0 - 1.0 Organics
1–3.9				Ojibway II Sediments 1.0 - 3.9 grey, slightly gritty (initially) to pure soft clay
3.9–6.0			01	3.9 - 6.0 Matheson Till beige grey fine sand/silt matrix. Pebble clasts of approximate composition: 60% Volcanics and Sediments 40% Granitoids
6.0–7.5			02	6.0 - 7.5 Bedrock - grey ; beige ochre in places - fine grained - weak foliation - 1-2 % Fe/Mg Carbonate disseminated & stringer - 3 % quartz ± minor carbonate veinlets - 5 % weathered chips FeO stain (sheared) - sericitized - ≤1 % diss sulphide Altered Volcanic

Depth scale: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 11 1989
SHIFT HOURS
____ TO ____
TOTAL HOURS
____
CONTRACT HOURS
____

HOLE NO CB-89-37 LOCATION L15+75E ; 19+75N ELEVATION 288
GEOLOGIST K MacNeil DRILLER J Howg BIT NO. CB70056 BIT FOOTAGE 54.5-77.(
MOVE TO HOLE 8:15 - 9:00 Move 2 Fuel-up drill
DRILL 9:00 - 11:15
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER 6:30 - 7:00 Start Skidoo / load fuel 2 parts for CT-1000 ;
~~MOVE TO NEXT HOLE~~ 7:00 - 8:15 Travel to drill - Crew 2 Fuel (Two trips with Skidoo)

Page 1 of 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–1				0-1.2 Little return - mostly organics
1–18				1.2 - 18.5 Ojibway II Sediments clay:- grey; slightly gritty with some granules and pebbles, some of which are limestone; below 3.0m there is less grit and fewer pebbles and below 5.0m the clay becomes very soft and contains essentially no grit or pebbles
18.5–20				18.5 - 20.4 Matheson Till grey-beige, fine sand and silt matrix predominant but gritty clay is present from 18.5 - 19.0m; till is cobbly; clast composition - 60% intermediate to mafic volcanics and sediments 35% granitoids 1-2% limestone
19			-01	
20			-02	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 11 1989

HOLE NO CB-89-37 LOCATION L15+75E; 19+75N ELEVATION 280

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

Page 2 of 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
	40		02 (cont.)	
21			03	
22				20.4-22.5 Bedrock: altered volcanic - beige, very fine grained; fractured to brecciated with qz-Fe/Mg carbonate veinlets marking fracture planes; poorly foliated (pre fracturing/brecciation); beige color of host suggests veining results in alteration of host
23				
24				
25				
26				
27				
28				22.5m (75') EOH
29				
30				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan. 9 1988

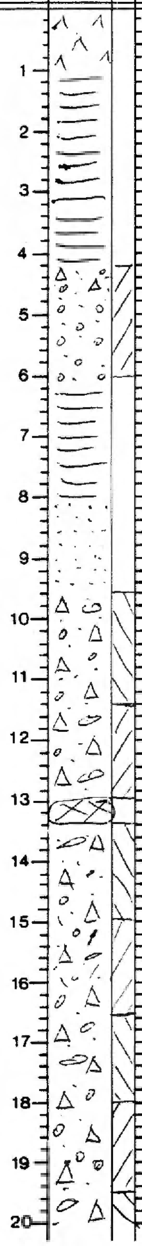
SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-38 LOCATION ______ ELEVATION ______
GEOLOGIST B. Rudnicki DRILLER G. Howg BIT NO. CB 70220 BIT FOOTAGE 7.5 - 38.5
MOVE TO HOLE 9:45 - 10:00
DRILL 10:00 - 12:45
MECHANICAL DOWN TIME ______
DRILLING PROBLEMS ______
OTHER ______
MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



SAMPLE NO.: 01, 02, 03, 04, 05, 06, 07, 08

0.0 - 1.0 Organics

1.0 - 4.2 Cochrane sediment

1.0 - 3.4 Grey, pure, soft clay
3.4 - 4.2 Very fine grey beige sand

4.2 - 4.6 Cochrane till: beige gritty clay and fine sand, silt matrix. Small pebble clasts of composition 60% volc/sed, 20% limestone, 20% granitoid. Not enough to sample separately.

4.6 - 6.0 Cochrane sediment
Gravel: medium to coarse sand matrix. Pebble clasts of composition 50% volcanics/sediments, 20% limestones, 30% granitoids.

6.0 - 9.6 Ojibway sediments

6.0 - 8.2 Grey, pure, soft clay
8.2 - 9.6 Very fine, grey beige sand

9.6 - 29.0 Matheson till: fine grey, beige sand, silt matrix. Pebble and small cobble clasts of composition 70% volcanics/sediments, 30% granitoids.

13.0 - 13.4 Boulder

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan. 9 1989

HOLE NO CB-89-38 LOCATION 30+25E; 3+00S ELEVATION 288

GEOLOGIST B Rudnick DRILLER G. Houg BIT NO. ____ BIT FOOTAGE ____

SHIFT HOURS ____ TO ____

MOVE TO HOLE ____

DRILL ____

TOTAL HOURS ____

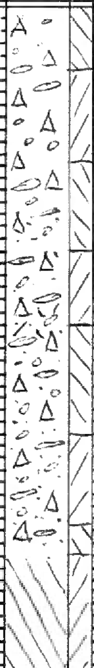
MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

CONTRACT HOURS ____

OTHER ____

MOVE TO NEXT HOLE ____



DEPTH IN METRES	SAMPLE NO.	DESCRIPTIVE LOG
	08	15.0 - 16.2 Gritty clay lumps in matrix. Poor sample return
21		Volcanics/sediments increase to 80%/90%. Occasional gritty
22	09	clay lumps in matrix.
23		Clasts more cobbly downsection
24	10	
25	11	
26	12	
27		29.0 - 31.0 Bedrock
28	13	- grey-blue
29	14	- fine grained
30	15	- massive
31		- 3% disseminated sulphides
12		Meta sediment
13		
14		
15		
16		
17		
18		
19		
20		

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 11, 12 1989

SHIFT HOURS ____ TO ____

TOTAL HOURS ____

CONTRACT HOURS ____

HOLE NO CB-89-39 LOCATION L19+95E ; 22+40N ELEVATION 284

GEOLOGIST K MacNeil DRILLER J Howg BIT NO. CB 70056 BIT FOOTAGE 77 - 90.5

MOVE TO HOLE Jan 11 - 11:15-12:15 take down sock to cross power line;

DRILL

MECHANICAL DOWN TIME Jan 11 - 12:15 - end of day - repairing GT-1000 - no

~~DRILLING PROBLEMS~~ water to drill; when repaired use GT-1000 to haul

~~OTHER~~ water for camp

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
				0-0.7 No return - organics and sediments	Jan 12					
1				0.7 - 11.6 Ojibway II Sediments	6:30-8:00 Walk GT-1000 from camp to drill hole site					
2				0.7-4.7 clay - beige (oxidized) to ~2.0m and grey (unoxidized) below 2.0m; clay is gritty with scattered pebbles - most pebbles are granitoid with some limestone	8:00 - 9:30 Drill (0 - 13.5m)					
3					9:30-10:30 Attempt to pull GT- from creek					
5			01	4.7-6.4 gravel - medium to coarse sand matrix; pebbly; clast composition - 60% granitoids 20-30% limestone 10-15% volcanics/sediments						
9			N.S.	6.4-11.6 clay - grey; soft; non-gritty; section appears to become silt rich below 10.6						
12			02	11.6 - 13.5 Matheson Till grey-beige, fine sand and silt matrix; clast composition 60% intermediate-mafic volcanics and sediments 35-40% granitoids 1% limestone till is very loose and sandy and pebbly to 12.5; cobbles present below 12.5						
19				13.5m - bit plugged; pull rods 2 unclog; GT-1000 stuck in creek, attempt to pull out						

Depth scale: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 12 1989

SHIFT HOURS

___ TO ___

TOTAL HOURS

___

CONTRACT HOURS

___

HOLE NO CB-89-39A LOCATION ~L 19+80E ; 22+40N ELEVATION 284

GEOLOGIST K MacNeil DRILLER J Howey BIT NO. CB 7005 BIT FOOTAGE 90.5-115.5

MOVE TO HOLE

DRILL 10:30 - 12:45

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG							
1				redrill of Hole 39 - begin logging and sampling @ 13.5m							
2											
3											
4											
5											
6				13.5m - 23.3m Matheson Till							
7				grey-beige, fine sand and silt matrix; pebbly with scattered cobbles to 20m; below 20m till is cobbly							
8											
9				clast composition -							
10				60% intermediate - mafic volcanics and sediments							
11				35-40% granitoids							
12				1% limestone							
13				22.0 - 22.2 boulder - diabase							
14			01								
15											
16			02								
17			03								
18											
19			04								
20											

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 12 1989

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO CB-89-39A LOCATION ~L19+80E ; 22+40N ELEVATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			05	
21			06	23.3 – 25 Bedrock :- altered sediment :- grey-beige; fine grained; faintly granular to sugary texture; moderate to weak Fe/Mg carbonate -- may also be silicified to some degree; poor foliation
22				
23			07	
24			08	
25				
26				
27				25m (83') EOH
28				
29				
30				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 10, 11 1989

SHIFT HOURS
_____ TO _____

TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO CB-89-40 LOCATION 26 E ; 4+25 S ELEVATION 285

GEOLOGIST P. Collins DRILLER G. Hong BIT NO. CB70221 / CB70220 BIT FOOTAGE 0.0 - 11.6 / 38.5 - 80.9

MOVE TO HOLE 12:45 - 1:00 (Jan 9) partway 3:30 - 4:00 (Jan 10)

DRILL 4:00 - 5:15 (Jan 10) 6:45 - Jan 11

MECHANICAL DOWN TIME 1:00 - 5:00 Jan 9 7:00 - 3:30 (Jan 10) split bearing during move

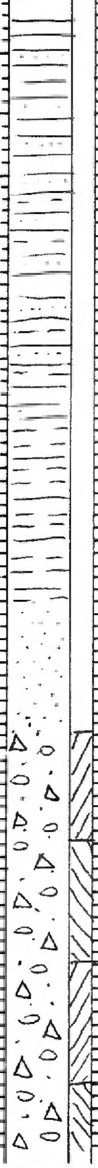
DRILLING PROBLEMS

OTHER Travel 5:15 - 5:30 June 10 6:30 - 6:45 June 11

MOVE TO NEXT HOLE

New bit

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



Depth (metres): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

Sample No.: 01 (14), 02 (16), 03 (18), ← E.O.H Jan 10 (19), 04 (19.7)

0.0 - 1.5 No Return

1.5 - 13.2 Ojibway II Sediments

(1.5 - 8.0) grey beige slightly gritty clay with interbeds of very fine grained sand

(8.0 - 11.0) predominantly grey silt with occasional thin grey clay bed

(11.0 - 13.2) grey very fine to fine grained sand

13.2 - 40.8 Matheson Till

(13.2 - 21.0) grey beige fine sand matrix. Slightly sorted (silt deficient). Pebble clasts of approximate composition: 65% Volcanics and sediments; 35% Granitoids

Note: check logged character splits from 01 to 20 April/89 by P. Collins. Found that hole is correct as logged in the field excepting samples 17 to 20. Samples were re-logged as sediments - pebbly sands with typical description as follows. Matrix appears slightly unsorted yet coarse biased with up to 60% medium grained sand (250µ to 600µ) & 40% fine grained sand and minor silt (<50µ to 250µ) Colour of matrix is beige to beige ochre. Pebble and cobble clasts (subrounded) 20% of which are oxidized. I conclude that the interval 40.8 to 50.6 is Missinaibi Sediments; subunit 3a. Thus Lower Till was not intersected in this hole.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE June 11 19 89

SHIFT HOURS ______ TO ______

TOTAL HOURS ______

CONTRACT HOURS ______

HOLE NO CR-89-40 LOCATION 26E ; 4+25S ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

MOVE TO HOLE ______

DRILL ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21–40			04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15	see below

21.0-22.0 little return on +10 clasts ; yet there are -10 mesh cuttings in matrix

22.0 - 24.5 cobbly clasts of composition : 60% Volcanics and Sediments ; 40% Granitoids

(24.5 - 24.7) Boulder - granitoid

- below 27.0 there is ≤5% grey gritty clay in matrix

28.0 - 35.6 Sediments

(28.0 - 29.0) sorted medium to coarse grained sand.

(29.0 - 31.0) Gravel : sorted fine and medium sand matrix. Abundant pebble / cobble clasts of composition 60% Volcanics & Sediments ; 40% Granitoids.

- occasional thin coarse sand bed

(31.0 - 33.5) Sorted ~~beige~~ fine and medium grained sand minor hard compact pure clay partings. Pebble gravel interbeds below 32.5

(33.5 - 35.6) predominantly very fine to Fine grained sand with occasional pebble bed.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE June 11 1989

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO SB-89-46 LOCATION 26E ; 4+25S ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

MOVE TO HOLE ______

DRILL ______

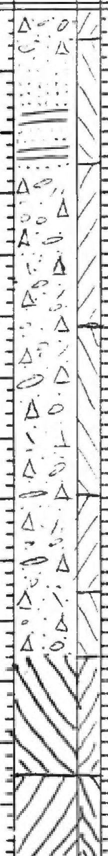
MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.
			15
41			16
42			
43			
44			17
45			
46			
47			18
48			
49			19
50			20
51			
52			21
53			22
54			
55			
56			
57			
58			
59			
60			



DESCRIPTIVE LOG

35.6 – 40.8 Matheson Till ?

beige grey fine sand matrix minor grey gritty clay also very compact, hard, pure clay partings in places.

40.8 – 42.6 Missinaibi Sediments

beige to slightly ochre fine grained sand with beige, pure, compact clay interbeds

42.6 – 50.6 Lower Till

beige grey fine sand / silt and minor grey gritty clay matrix. Pebble and Cobble clasts of approximate composition 75% Volcanics and sediments; 25% Granitoids.

(46.0 – 50.6) thin sorted fine to medium grained sand within till. little to no gritty clay in matrix

50.6 – 54.0 Bedrock

- dark grey to black
- abundant rock / powder clay lumps
- very fine to fine grained
- foliated ; sheared
- graphitic
- 2-3% of chips have quartz stringers
- ≤ 1% sulphides
- between 52.1 & 52.3 band of sulphides (>15%)

Siltstone - some OB. contamination in sample 22

54.0 E.O.H.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 13 1989
SHIFT HOURS
____ TO ____
TOTAL HOURS
____
CONTRACT HOURS
____

HOLE NO CB-89-41 LOCATION L17+85E : 15+50N ELEVATION 287
GEOLOGIST K MacNeil DRILLER J Haug BIT NO. CB78057 BIT FOOTAGE 0 - 8.5
MOVE TO HOLE 7:30 - 7:45
DRILL 7:45 - 9:45
MECHANICAL DOWN TIME ____
DRILLING PROBLEMS ____
OTHER 6:30 - 7:30 Travel
MOVE TO NEXT HOLE ____

New Bit

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0-1.3 Little return - organics & clay
				1.3-6.6 Ojibway II Sediments clay - grey; gritty; minor pebbles - mostly granitoids and limestone
7			01 (wash hole once to obtain sample)	6.6 - 7.1 Matheson Till grey-beige, fine sand and silt matrix; pebbly; clast composition - 70% intermediate - mafic volcanics and ~~sediment~~ 30% granitoids
8			02	7.1 - 8.5 Bedrock: - mafic volcanic (basalt): - dark green; fine to medium grained; poor foliation; highly calcareous - 10%(+) % disseminated calcite; 2-3% calcite veinlets and stringers
				8.5m (28') EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 11 1989
SHIFT HOURS
____ TO ____
TOTAL HOURS
____
CONTRACT HOURS
____

HOLE NO CB-89-42 LOCATION 22E 4+50 S ELEVATION 284
GEOLOGIST P Collins DRILLER G. Hong BIT NO. C070221 BIT FOOTAGE 11.6-50.6
MOVE TO HOLE 1:00 - 1:30
DRILL 1:30 - 3:00
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20				0.0 - 1.5 Organics 1.5 - 33.0 Ojibway II Sediments (1.5-12.5) grey-beige slightly gritty soft clay. Very soupy below 6.0 m with silty interbeds (12.5 - 17.0) grey very fine grained sand (17.0 - 26.0) grey beige fine grained sand with occasional thin soft grey clay bed

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 11 1989

SHIFT HOURS

____ TO ____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-42 LOCATION 22E 4+50S ELEVATION ____

GEOLOGIST ____ DRILLER ____ BIT NO. ____ BIT FOOTAGE ____

MOVE TO HOLE ____

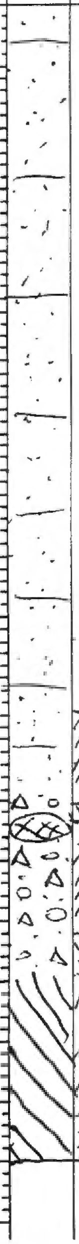
DRILL ____

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21–40			01, 02, 03, 04, 05	

- at 26.0 & 27.0 thin pebble bed otherwise similar to 17.0–26.0

31.0 – 33.0 beige sorted fine grained sand with minor thin grey compact clay partings (lenses.

33.0 – 35.9 Matheson Till

beige to ochre slightly sorted (silt deficient) fine sand matrix Pebble and small cobble clasts of approximate composition: 70% volcanics and sediments; 30% Granitoids. Many of which are oxidized imparting beige ochre tone to matrix

35.9 – 39.0 Bedrock

- grey, grey white and ochre
- fine grained; initially poorly foliated; some chips display shearing downsection.
- 5% Fe Mg Carbonate (slow reacts to acid)

36.3 - 36.6 highly oxidized zone soft ochre rock powder lumps

36.6 – 37.0 gray white rock powder lumps with minor chips mostly quartz veinlets

37.0 – 39.0 similar to 36.3 - 36.6

Altered Felsic Volcanic

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 13 19 89

HOLE NO CB-89-43 LOCATION L16E; 23+25N ELEVATION 286

GEOLOGIST K MacNeil DRILLER J Houg BIT NO. CB70057 BIT FOOTAGE 8-5-26-0

SHIFT HOURS ______ TO ______

MOVE TO HOLE 9:45-10:15

DRILL 10:15 - 11:45

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

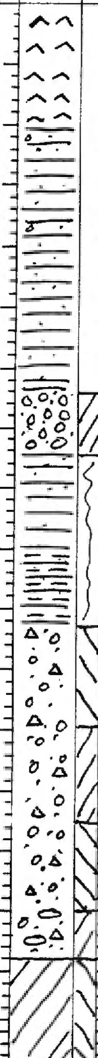
DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–2				0 - ~2.0 Organics
				2.0 - 10.3 Ojibway II Sediments
2–6				2.0 - 6.4 clay:- grey; slightly gritty with rare pebbles
				6.4-7.4 gravel:- medium to coarse sand matrix; granules and pebbles; clast composition - 25% volcanics and sediments; 45% granitoids; 30% limestone
7			01	
				7.4 - 10.3 clay:- grey, slightly gritty initially but becomes pure and non-gritty below 8.5m; by 9.0m, silt becomes increasingly abundant
9			N.S.	
				10.3-15.8 Matheson Till:- grey-beige, fine sand and silt matrix; pebbly; clast composition - 55% intermediate-mafic volcanics and sediments; 40% granitoids; 1-2% limestone; - till becomes cobbly at about 15m
11			02	
13			03	
14			04	
15			05	
				15.8 - 17.5 Bedrock:- altered volcanic:- grey; slightly greenish; generally ~~massive~~; altered--hard; may be brecciated or fractured with subsequent silicification + Fe/Mg carbonatization (minor); 1-2% finely disseminated pyrite @ 15.5 and 17.3 brown, oxidized shear fractures
16–17			06	



17.5m (58') EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 11 19 89

SHIFT HOURS
_____ TO _____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-44 LOCATION L22E 0+25N ELEVATION 294

GEOLOGIST P. Collins DRILLER G. Howg BIT NO. CB70221 BIT FOOTAGE 50.6-59.9

MOVE TO HOLE 3:00-3:30

DRILL 3:30-5:00

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER travel: to camp 5:00-5:20

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0.0 - 0.3 Organics
1				0.3 - 5.5 Ojibway II Sediments
2				beige slightly gritty, compact, clay (oxidized)
3, 4				(3.0 - 4.5) beige very fine sand/silt interbeds.
5				(4.5 - 5.5) beige sorted fine grained sand
6			01	5.5 - 7.5 Matheson Till
7			01	slightly sorted beige fine sand matrix (silt deficient). Pebble
8, 9			02	clasts of approximate composition: 70% volcanics and sediments; 30% Granitoids
10-13				Many of clasts are ochre (oxidized - weathered localized bedrock source) imparting a beige to slightly ochre coloured matrix.
14				6.5-6.9 Boulder - Volcanic
15				6.9 - 7.5 similar to 5.5 to 6.5
16				7.5 - 9.3 Bedrock
17-20				- greyish green - fine grained - massive - carbonatized (3-5%) disseminated & stringer/veinlet calcite & Fe/Mg carbonate - ≤1% sulphides

Altered Mafic Volcanic

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 13 1989

HOLE NO CB-89-45 LOCATION L10E; 21+75N ELEVATION 287

GEOLOGIST K MacNeil DRILLER J Howe BIT NO. CB70057 BIT FOOTAGE 26·50.5

SHIFT HOURS
_____ TO _____

MOVE TO HOLE 11:45-12:30

DRILL 12:30-2:08

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER 2:00 - stuck in swamp; get Cat D-6 to pull out Nodwell

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–15				0 - 3.5 Organics 3.5 - 15.9 Ojibway II Sediments 3.5 - ~6.5 clay - grey; gritty; minor limestone and granitoid pebbles and rare volcanic/sediment pebbles ~6.5 - 15.9 clay - grey; non-gritty; clay grades into predominantly silt below 14 and very fine grained grey sand at 15.7 15.9 - 22.5 Matheson Till grey-beige, fine sand and silt matrix predominant with zones of gritty clay matrix at 19.1-19.4, 20.2-20.4, 20.6, 21.3-21.4 and 21.9-22.4; clasts are of pebble size to ~21m and of cobble size below 21m; clast composition - 60% intermediate-mafic volcanics and sediments 35-40% granitoids 1% limestone
17			01	
19			02	
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 13 1989
SHIFT HOURS
____ TO ____
TOTAL HOURS
____
CONTRACT HOURS
____

HOLE NO CB-89-45 LOCATION L10E; 21+75N ELEVATION ____
GEOLOGIST ____ DRILLER ____ BIT NO. ____ BIT FOOTAGE ____
MOVE TO HOLE ____
DRILL ____
MECHANICAL DOWN TIME ____
DRILLING PROBLEMS ____
OTHER ____
MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21			03	
22			04	
23			05	22.5 - 24.5 Bedrock :- greywacke (possibly an intermediate tuff) :- medium greenish grey; fine grained (0.1-0.3mm); faintly granular/sedimentary appearance; poor foliation; weak development of carbonate - may be Fe/Mg variety; a few cherty bands (grey); a few quartz stringers
24				
25				24.5m (81') EOH
26				
27				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 12 1989

SHIFT HOURS
____ TO ____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-46 LOCATION L14E ; 7+50S ELEVATION 282
GEOLOGIST P. Collins DRILLER G. Hovey BIT NO. CB7022 BIT FOOTAGE 58.9-
MOVE TO HOLE 7:00-8:00
DRILL 8:00
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER
MOVE TO NEXT HOLE

Pg 1 of 2

DEPTH IN METRES	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			0.0 - 1.0 Organics
1			1.0 - 18.0 Ojibway II Sediments
2–4			(1.0-5.0) beige grey, slightly gritty soft clay
4–6			(5.0-8.0) grey soft clay with grey very fine sand interbeds (soupy)
7–9			(8.0-14.9) grey beige very fine to fine grained sand with occ. thin compact grey clay lenses
10–14			(14.9-17.0) interbeds of sand and gravel: beige sorted fine sand. Pebble clasts well rounded ; composition: 60% Volcanics & Sediments ; 40% Granitoids
14–15			(17.0-17.2) beige sorted coarse sand bed.
16		01	(17.2-18.0) similar to 14.9-17.0
17			18.0 - 25.0 Matheson Till
18		02	gradational contact with overlying sediments. Grey beige
19		03	fine sand/silt and grey
20		04	gritty clay matrix.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 12 1989

SHIFT HOURS ______ TO ______

TOTAL HOURS ______

CONTRACT HOURS ______

HOLE NO CB-89-46 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

MOVE TO HOLE ______

DRILL ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21			04	- increase in clay content downsection; becomes compact & slightly gritty. Less return on +10 mesh clasts between ~~be~~ 17.0 - 22.0
22			05	
23			06	
24			07	-22.0 to 25.0 small cobble clasts of composition: 60% volcanics and sediments; 40% Granitoids. less gritty clay in matrix
25			08	
26				
27				
28				
29				25.0 - 26.5 Bedrock
30				- dark grey to black
31				- very fine and fine grained
32				- foliated
33				- 3% quartz/carbonate veinlets
34				- 1-2% coarse grained pyrite xstals scattered
35				Meta sediment : Siltstone/ Greywacke
36				
37				
38				
39				
40				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 16 1989

SHIFT HOURS

_____ TO _____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-47 LOCATION TL 20N; 5E ELEVATION 288

GEOLOGIST K MacNeil DRILLER J Hoeg BIT NO. CB 70057 BIT FOOTAGE 50-75.5

MOVE TO HOLE 12:30-1:00

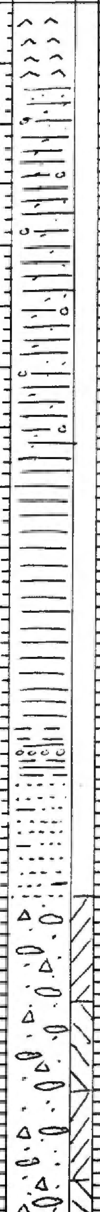
DRILL 1:00-2:45

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER 11:45-12:30 Pick up water

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20			01, 02, 03, 04	0-1.3 Little return - mostly organics 1.3 - 14.8 Ojibway II Sediments 1.3-12.9 clay - grey; gritty with rare limestone and granitoid pebbles; below 5.5 metres the clay becomes softer and contains less grit and fewer pebbles 7.5 - ~12 clay is pure with no grit or pebbles ~12 - 12.9 gradual change to predominantly silt with minor clay partings; pebble bed at 12.4 12.9 - 14.8 sand - very fine grained to silty sand; grey in color 14.8 - 21.4 Matheson Till grey-beige, fine sand and silt matrix; cobbly; clast composition - 55-60% intermediate-mafic volcanics and sediments 40-45% granitoids - gritty clay matrix present below 20m and predominant below 20.8m

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 16 1989

SHIFT HOURS
_____ TO _____

TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO CB-89-47 LOCATION TL 20N; 5E ELEVATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

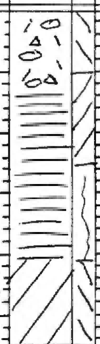
MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

Page 2 of 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			04 (cont.)	
21				21.4 - 24.1 <u>Missinaibi Sediments</u>
22			05	clay - grey; pure - no grit; very compact and difficult to penetrate
23			N.S.	
24				21.6 - 21.7 thin seam of brown, gritty, organic rich clay - SAMPLE TAKEN
25			06	
26				
27				24.1 - 25.5 <u>Bedrock</u> :- greywacke (biotite schist ??) -
28				24.1 - 24.4 :- rubbly - minor clay & foreign pebbles
29				24.4 - 25.5 :- bedrock is grey in color and strongly schistose to sheared; very fine grained (<0.1mm) with 12-15% black euhedral biotite crystals (may be hornblende); rock appears recrystallized; 0-5% disseminated pyrite
30				
11				
12				
13				
14				25.5 - (85') EOH
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 12 1989

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO CB-89-48 LOCATION 18E 7+00S ELEVATION 284

GEOLOGIST P. Collins DRILLER G. Hovey BIT NO. CB70 221 CB70 BIT FOOTAGE 86.4-137.0

MOVE TO HOLE 9:45-10:00

DRILL 10:00 - 4:00 p.m.

MECHANICAL DOWN TIME

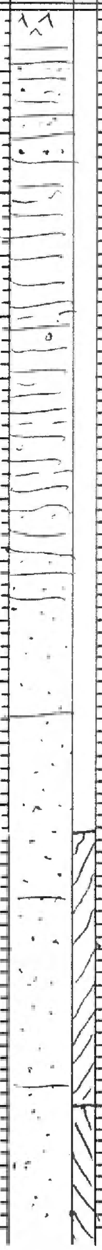
DRILLING PROBLEMS Lost 9 rods down hole when pulling out; broken thread

OTHER no chance for recovery.

MOVE TO NEXT HOLE

New bit.

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG							
				0.0 - 0.5 Organics							
1											
2				0.5 - 33.0 Ojibway II Sediments							
3				(0.5 - 5.0) beige (oxidized) slightly gritty clay; grey beige in colour below 2.0 m							
4											
5				(5.0 - 9.6) pure, grey clay with very fine sand/silt interbeds (soupy); occasional small pebble clast.							
6											
7											
8				(9.6 - 20.0) beige very fine to fine grained sand with occasional thin clay lens							
9											
10											
11				at 15.0 wood chips (very few							
12											
13											
14											
15											
16			01								
17											
18											
19			02								
20											



OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 12 19 89

HOLE NO CB-89-48 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

SHIFT HOURS ________ TO ________

MOVE TO HOLE ________

DRILL ________

TOTAL HOURS ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

CONTRACT HOURS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	SAMPLE NO.
21	02
23	03
27	04
29	05
31	06
34	07
35	08
36	09
38	10
40	11

DESCRIPTIVE LOG

20.0 - 26.5 beige fine grading to medium grained sand

26.2 pure, grey, soft clay bed

26.5 - 30.7 predominantly sorted medium and coarse grained sand with rounded pebble / granule interbeds

30.7 - 33.0 beige very fine to fine sand interbeds otherwise similar to 26.5 to 30.7

33.0 - 44.5 Matheson Till
gradational contact into slightly sorted (silt deficient) beige grey fine sand matrix with minor grey gritty clay in places
Pebble and small cobble clasts of composition: 65% Volcanics and Sediments; 35% Granitoids

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 12 1989

HOLE NO CB-89-48 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
41–44			11, 12, 13	(41.0 – 44.5) grey, very compact gritty clay lumps in matrix. Cobble clasts of composition: 75% volcanics and sediments, 25% Granitoids
44–51			14, 15, 16, 17	44.5 – 51.0 Missinaibi Sediments: gradational contact to beige ochre, sorted fine grained sand with occasional hard, grey, compact clay partings and thin pebbly beds (well rounded). 46.0 – 48.0 very fine and fine grained ochre sand with occasional medium grained sand beds. 48.0 – 51.0 similar to 44.5 – 46.0 with an increase in +10 clasts – well rounded pebble of composition: 70% Volcanics and sediments; 30% Granitoids, Many of which are oxidized.
51–54			18	51.0 – 51.6 Lower Till? slightly sorted (silt deficient) beige fine sand matrix. Pebble clasts of composition: 70% volcanics and sediments; 30% Granitoids. 51.6 – 54.2 BEDROCK
55–60				

- dark grey
- fine grained
- weak Foliation
- 5% quartz veinlets
- Tr. Carbonate & FeO
- ≤ 1% diss sulphides.

54.2 E.O.H.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 16 19 89

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO CB-89-49 LOCATION L 8E ; 19N ELEVATION 288

GEOLOGIST K MacNeil DRILLER J Howg BIT NO. CB70057 BIT FOOTAGE 75-5-111-C

MOVE TO HOLE 2:45 - 3:00

DRILL 3:00 - 5:15

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER 5:15 - 6:30 Travel

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–18				0 - 2.0 Organics 2.0 - 18.3 Ojibway II Sediments 2.0 - 12.0 clay - grey, gritty, scattered limestone, granitoid and volcanic pebbles; below ~5.0m clay becomes softer with less apparent grit and fewer pebbles 12.0 - 12.1 granitoid cobble 12.1 - 13.6 clay - as from 2.0 - 12.0m 13.6 - 17.9 clay - grey, non-gritty 17.9 - 18.3 sand/silt - very fine grained, grey silty sand 18.3 - 34.4 Matheson Till grey-beige, fine sand and silt matrix; cobbly; clast composition - 50% intermediate - mafic volcanics and sediments 45% granitoids <1% limestone 23.5 - 23.8 - predominantly fine matrix sand @ 31.1 intersect several pure grey clay partings 33.9 - 34.2 - grey gritty clay matrix
19			01	
20			02	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 16 1989

HOLE NO CB-89-49 LOCATION L8E ; 19N ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

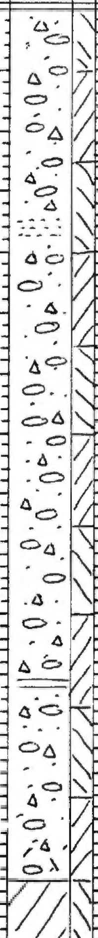
MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______



DEPTH IN METRES	SAMPLE NO.	DESCRIPTIVE LOG
	02 (cont.)	
21		
22	03	34.4 - 35.5 Bedrock:- greywacke - light grey; schistose; bleached; grain size <0.1mm - texture not readily discernible; rare black mudstone partings suggesting bedrock sequence is entirely sedimentary.
23	04	
24		
25	05	
26	06	
27		35.0 - 35.1 - 50:50 greywacke versus mudstone
28	07	35.2 - 35.4 - 5-10% white quartz-carbonate veinlets
29	08	
30		35.5m (118') EOH
31	09	
32	10	
33		
34	11	
35	12	
36		
37		
38		
39		
40		

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 12/13 19 89

SHIFT HOURS
_____ TO _____

TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO CR-89-50 LOCATION L23+50E 12S ELEVATION 281

GEOLOGIST P. Collins DRILLER G. Houg BIT NO. C8+0193 BIT FOOTAGE 0.0 - 50.0

MOVE TO HOLE 4:00 - 4:30 (Jan 12)

DRILL 4:30 - 5:00 (12th) 7:00 - 10:40 (13th)

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER Travel 5:00 - 5:30 (12th) 6:30 - 7:00 (13th) AM

MOVE TO NEXT HOLE

New bit, New sub.

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0.0 - 0.5 Organics
1				0.5 - 37.2 Ojibway II Sediments
2				beige (oxidized) slightly gritty clay
3				below 3.0 pure, soft, grey beige in colour with silt interbeds
5				15.0 - 20.0 grey beige very fine to beige fine grained sand down-section.
7				- pebble bed at 17.6 m
9				20.0 - 21.0 predominantly sorted medium grained sand.
19			01	
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 12, 13 19 89

SHIFT HOURS

_____ TO _____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-50 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

MOVE TO HOLE ______

DRILL ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	SAMPLE NO.	DESCRIPTIVE LOG
21	01	21.0 - 22.5 sorted coarse grained sand with granule and small pebble interbeds
24	02	22.5 - 28.0 predominantly sorted fine and medium grained sand with occasional coarse sand interbeds
		28.0 - 30.5 similar to 21.0 - 22.5
27	03	30.5 - 35.7 beige sorted fine and medium grained sand with occasional thin grey pure compact clay beds and occasional granule bed.
30	04	35.7 - 36.0 pebble gravel bed (rounded clasts)
		36.0 - 37.2 similar to 30.5 - 35.7
33	05	37.2 - 48.3 Matheson Till gradational contact into till; initially slightly sorted (silt deficient) matrix. Grades to grey beige fine sand / silt minor grey gritty clay matrix. Pebble and small cobble clasts of approximate composition: 55% Volcanics and sediments; 45% Granitoids.
36	06	
38	07	
40	08	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 12,13 19 89

HOLE NO CB-89-50 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

SHIFT HOURS ____ TO ____

MOVE TO HOLE ________

DRILL ________

TOTAL HOURS ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

CONTRACT HOURS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			03	40.4 - 40.6 grey, pure, compact clay partings
41			09	40.6 - 42.5 less return on +10mesh clasts yet unsorted matrix has -10 mesh cuttings.
42				
43			10	
44			11	42.5 - 44.2 abundant return on +10 mesh clasts. Pebbles and cobbles of composition: 75% Volcanics and sediments; 25% Granitoids. Matrix is slightly sorted (silt deficient).
45			12	44.2 - 44.5 small boulder - Volcanic
46				44.5 - 46.4. Very cobbly (stony) clast supported till of similar composition to 42.5-44.2. Abundant -10 mesh rock cuttings in matrix; however, unsorted grey beige fine sand/silt matrix still visible.
47			13	46.4 - 46.6 rounded pebble gravel bed.
48			14	46.6 - 47.5 similar to 44.5-46.4
49			15	47.5 - 47.8 boulder - granitoid
50				47.8 - 48.3 similar to 44.5 - 46.4
51				48.3 - 50.0 Bedrock
52				- grey white - medium grained - massive - hard to drill silicified - ≤ 5% mafic minerals (biotite &/or hornblende) - 1% disseminated sulphides - trace carbonate - trace FeO below 49.0
53				
54				
55				
56				
57				
58				
59				
60				

Granitoid - intrusive

50.0 E.O.H.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 17 1989

SHIFT HOURS

_____ TO _____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-51 LOCATION L9E; 20+60 N ELEVATION 288

GEOLOGIST K MacNeil DRILLER J Howy BIT NO. CB70058 BIT FOOTAGE 0-15

MOVE TO HOLE 8:45-9:45

DRILL 9:45-11:00

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER 7:15-8:45 Travel; load fuel

MOVE TO NEXT HOLE

New Bit

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–2			01	0-0.6 No Return 0.6 - ~2.7 Cochrane Till brown (oxidized) gritty clay matrix; about 10% pebbles; clast composition - 50% limestone 25% volcanics/sediments 25% granitoids - a few sand rich zones are present in the Cochrane Till
6			02	~2.7 - 13 Ojibway II Sediments 2.7 - 7.6 sand - beige (oxidized) to 4.0m -- below 4.0m the sand is unoxidized; sand is mostly medium grained with scattered pebbles - limestone is rare or absent
9			03	7.6-10.2 sand - coarse to granular pebbly sand
11–12			04	10.2 - 12 gravel - matrix supported with a coarse to granular sand matrix and pebble size clasts 10.5-11.0m - 5% of clasts are 8cm quartz clast composition of gravel :- 30% volcanics/sediments 70% granitoids no limestone
14			05	12 - 13 gravel - similar to gravel from 10.2-12 but clasts are of cobble size

* entire section from 2.7-13m is of glaciofluvial origin
* possibly a very thin (<0.1m) till directly overlying bedrock

13 - 15 Bedrock:- mud/siltstone:- black; graphitic; very fine grain size (<<0.1mm); strongly schistose

15m (50') EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 13/89 19 89

SHIFT HOURS 10:45 TO 1:15

TOTAL HOURS 2.5

CONTRACT HOURS 2.5

HOLE NO CB-89-52 LOCATION 20+50E 13+50S ELEVATION 280 m

GEOLOGIST S. Averill DRILLER G. Howg BIT NO. CB 30198 BIT FOOTAGE 50.0-84.0

MOVE TO HOLE 10:45 - 11:00

DRILL 11:00 - 1:15

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
0–20				0-0.2 Organics (forest litter) 0.2-24.2 Ojibway II Sediments 0.2-4.0 Clay. Pale grey to slightly beige. Gritty throughout 4.0-11.5 Silt. No significant sample return except few sand & clay laminae. 11.5-14.0 Clay. Soft pale gray w. few beige silt varves (silt probably as abundant as clay but lost in wash). No grit. 14.0-24.2 Sand. Very fine silty gray lacustrine variety w. subordinate clay laminae. Common trace organics. Rare pebble laminae below 17.5						

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

Page 2

DATE Jan 18 1989

HOLE NO CB-89-82 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

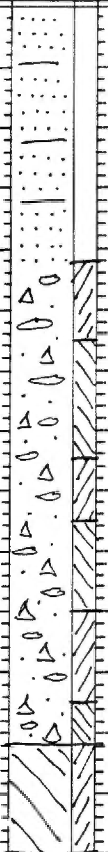
DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21				
2				
3				
4				24.2-32.2 Matheson Till
5			01	Gray-beige fine sd/st matrix (very routine variety). Cobbly throughout but matrix supported. 50% volc/sed, 50% granitoid, 1% ls. No significant downward increase in volc/sed downhole.
6			02	
7				
8			03	
9			04	
30				
11			05	
12			06	32.2-34.0 Bedrock
13			07 BR	Basalt. Dark green-black. Estimate 0.3 mm grain size. Diabasic text. locally visible. 50% dk gn. chl. or possibly amphibole. Unaltered, massive, no mineralization.
14				
15				
16				
17				
18				
19				
20				



[signature]

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 17 19 89

SHIFT HOURS

____ TO ____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-53 LOCATION 4+50E; 21+25N ELEVATION 284

GEOLOGIST K MacNeil DRILLER J Howg BIT NO. CB70058 BIT FOOTAGE 15-37.5

MOVE TO HOLE 11:00 - 11:30

DRILL 11:30 - 1:00

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

Page 1/2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–1				0 - ~1.0 Organics
1–10				~1.0 - 10.2 Ojibway II Sediments
				1.0 - ~6.5 clay - grey; slightly gritty with scattered pebbles, many of which are limestone; below 3.0m the proportions of grit and pebbles decrease
				~6.5 - 9.2 fine grey silty sand with rare clay partings
				9.2 - 10.2 sand - grey; very fine grained lacustrine sand
10				10.2 - 20.5 Matheson Till
11			01	grey-beige, fine sand and silt matrix; cobble size clasts; clast composition - 50-60% intermediate-mafic volcanics and sediments 40-50% granitoids rare limestone pebbles
12–13			02	13.2 - 13.5 boulder - granodiorite
14			03	13.5 - 14.1 very cobbly - 70% black siltstone
15–16			04	14.2 - 15.1 - grey gritty clay matrix
17			05	17.5 - 18.5 coarse granular sand from 17.5 to 18 and fine sand below 18m - a few pebbles are present as well
19			06	
20			07	- below ~15m, clast composition changes to ~65% volcanics/sediments, 30-35% granitoids, and 1-2% vein quartz

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 17 1989

HOLE NO CB-89-53 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS

______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS

______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS

______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			07 (cont.)	
21			08	20.5 – 22.5 <u>Bedrock</u>:- siltstone:- light to medium grey (bleached); finely schistose to sub-fissile; portions of sample ground to grey-white clay and fine sand -- probably indicating shear deformation; a few % quartz ± carbonate veinlets are present paralleling the rock fabric
22				22.0 - 22.5 - 5% white quartz veinlets
23				
24				
25				
26				
27				
28				
29				22.5m (75') EOH
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 13 1989

SHIFT HOURS 1:45 TO 5:15

TOTAL HOURS 3.5

CONTRACT HOURS 3.5

HOLE NO CB-89-54 LOCATION Line 10400 E, 8400 S ELEVATION 280 m

GEOLOGIST S. Averill DRILLER G. Houry BIT NO. CB-70196 BIT FOOTAGE 84.0 - 118.5 discarded (2 bearings worn out)

MOVE TO HOLE 1:45 - 2:30

DRILL 2:30 - 5:00

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE 5:00 - 5:15

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–1				0 - 0.5 Organics
1				0.5 - 8.3 Ojibway II Sediments
2–3				0.5 - 6.5 Pale gray gritty clay w. rare, small ls. and gran. gneiss pebbles.
4–5				6.5 - 8.3 Fine gray lacustrine sand w. few clay beds.
7				Note: Ridging of till suggests drumlin.
8				8.3 - 32.5 Matheson Till
9				Pebbly to 8.8, cobbly 8.8 - 32.5
9–12			01, 02	8.8 - 16.0 Matrix supported; fine gray-beige sand/silt matrix. Initially 70% volc. sed, 30% gran., tr. ls., then surprisingly v/s drop to 50% by 13.0. Volc. schist common above 13.0
13–14			03, 04	16.0 Brief appearance of abundant gritty gray clay lumps.
15–16			05	16.1 - 16.3 - 6-inch bleached basalt boulder accompanied by change to clast-supported till to 18.9, 50:50 v/s versus gran.
17–18			06, 07	18.9 - 21.8 change back to matrix-supported w. some gritty gray clay lumps; 90% clay matrix 20.5 - 20.8
19–20			08	21.8 - 24.9 - as previous section except beige very sandy (fine) matrix

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

Page 2

DATE Jan 13 1989

SHIFT HOURS
_____ TO _____

TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO CB-89-54 LOCATION _____ ELEVATION _____
GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____
MOVE TO HOLE _____
DRILL _____
MECHANICAL DOWN TIME _____
DRILLING PROBLEMS _____
OTHER _____
MOVE TO NEXT HOLE _____

DEPTH IN METRES	SAMPLE NO.
	08 cont'd
21	
2	09
3	10
4	
5	11
6	12
7	
8	13
9	
30	14
11	15
12	16
13	
14	17 Bedrock
15	
16	
17	
18	
19	
20	

DESCRIPTIVE LOG

24.9 Brief return to clay lump matrix (gray)

24.9-32.5 Fine gray-beige silt/sand matrix -- good rock flour in clean drill water. Conspicuous feature is ubiquitous ochre weath. cobbles rising to 50% by 28.0 but dropping to 10% above bedrock 32-32.8. Conspicuous calcite concretions + cement on pebbles.

Note: Even granite clasts are weath.; this indicates clasts are recycled from Missinaibi gravel, not weathered bedrock. Note also that the Missinaibi stratigraphy appears in order in the till: ie clay matrix followed by ox. clasts. Special sample #56-14 (+10) collected to show weath. clasts + concretions.

32.5-34.5 Bedrock

Interbedded gray greywacke with siltstone at top. Visible bedding contacts + sandy wacke texture in chips. Slightly schistose + local crenulations due metamorphism but unaltered + unmineralized + no carb. alt.

S. Averill

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 17 1989
SHIFT HOURS
____ TO ____
TOTAL HOURS
____
CONTRACT HOURS
____

HOLE NO CB-89-55 LOCATION L15E ; 16+50N ELEVATION 291
GEOLOGIST K MacNeil DRILLER J Houg BIT NO. CB70058 BIT FOOTAGE 37.5-42
MOVE TO HOLE 1:00-2:15
DRILL 2:15-3:15
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
				0 - 1.3 No Return						
1				1.3 - 2.9 Ojibway II Sediments clay - beige-brown (oxidized); gritty throughout; scattered pebbles -- limestone, granitoids and volcanics in decreasing order of abundance						
2										
3										
4			01							
5				2.9 - 4.5 Bedrock:- mafic volcanic (basalt) - medium green; fine grained (0.1mm, or less); moderately well foliated - moderate to strong development of disseminated calcite (>5%); 5% calcite veinlets below 4.0m						
6										
7										
8										
9										
10										
11				4.5m (15') EOH						
12										
13										
14										
15										
16										
17										
18										
19										
20										

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 14 19 89

SHIFT HOURS 6:30 TO 3:00

TOTAL HOURS ________

CONTRACT HOURS ________

HOLE NO CB-89-56 LOCATION 6+00 E 8+25 S ELEVATION 281 m

GEOLOGIST TURNER DRILLER HOWG BIT NO. CB70199 BIT FOOTAGE 0-32

MOVE TO HOLE ________

DRILL ________

MECHANICAL DOWN TIME ________

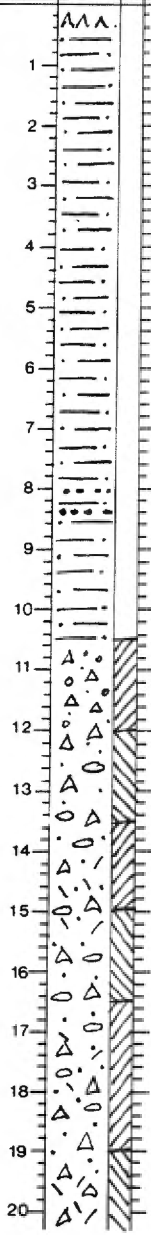
DRILLING PROBLEMS ________

OTHER TRAVEL 6:30-6:45 ; 6:45-12:00 PULL RIG 2 FROM SWAMP

MOVE TO NEXT HOLE ________

NEW BIT

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



0-0.5 ORGANICS

0.5-10.5 OJIBWAY II SEDIMENTS

0.5-2.5 Pale beige-gray gritty clay; < 2% pebbles including limestone. Possibly Cochrane Till

2.5-8.0 Pale beige-gray gritty clay; pebbles rare. Softer than above.

8.0-8.5 Brief appearance of pebbly gravel interbedded with clay.

8.5-10.5 Return to pale beige-gray gritty clay.

10.5-30.4 MATHESON TILL

01 — 10.5-12.3 pebbly ; 12.3-30.4 cobbly

10.5-12.3 Matrix supported, light gray-beige silt-fine sand matrix. Pebbles 60% volcanic 40% granitic.

02

03 — 12.3-18.5 Till becomes cobbly. It is still matrix supported with light gray-beige, silt-find sand matrix. clay (gritty) balls are observed on screen. The 60-40 ratio of

04

volcanic-granitic clasts is still maintained. (Basalt cobbles).

05

18.5-19.5 Matrix becomes fine sand gritty clay is absent from screen.

19.5-20.0 Matrix becomes increasinly gritty clay. (Basalt cobble).

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-56 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

MOVE TO HOLE ________

DRILL ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	SAMPLE NO.	DESCRIPTIVE LOG
20–21	06	20.0 – 21.0 Grey gritty clay, very pebbly.
21–22	07	21.0 – 27.2 Matrix supported, gray beige clay silt matrix. Clay balls appear on screen. The 60-40 ratio of volcanics (dk green + bleached basalts) and granitics (both pink and white) is maintained.
23–24	08	
24–25	09	
26–27	10	27.2 – 30.0 Matrix silt - fine sand. The proportion of Abitibi volcanics has increased relative to granitics.
27–28	11	30.0 - 30.4 Clasts are almost entirely Abitibi volcanics.
29–30	12	
30.4–32	13	30.4 – 32 BEDROCK fine grain black Siltstone bedded with fine to med grained grewacke.
32		32.0 END OF HOLE

R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 17 1989

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO CB-89-57 LOCATION L 15+50E ; 11N ELEVATION 288

GEOLOGIST K MacNeil DRILLER T Houg BIT NO. CB 70058 BIT FOOTAGE 42-68.5

MOVE TO HOLE 3:15-3:30

DRILL 3:30 - 5:45

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER 5:45 - 6:30 Travel

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
0–1.3				0-1.3 Organics - little return						
1.3–8.8				1.3 - 8.8 Ojibway II Sediments clay - grey in color; clay is gritty with scattered limestone, granitoid and volcanic pebbles; below ~4.0m, grit and pebbles are less common						
8.8–19.7			01 02 03 04 05 06 07	8.8 - 19.7 Matheson Till grey-beige, fine sand and silt matrix; cobble size clasts; clast composition - 60% intermediate-mafic volcanics and ~~sediments~~ 35-40% granitoids 1%, or less, limestone 17.0-17.2 boulder - granodiorite 17.2-17.4 boulder - mafic volcanic 18.6-19.0 minor grey gritty clay as till matrix						
19.7–24.9				19.7 - 24.9 Missinaibi Sediments clay - grey; compact, non-gritty; difficult to penetrate						

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 17 1989

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-57 LOCATION L15+50E; 11N ELEVATION ______
GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______
MOVE TO HOLE ______
DRILL ______
MECHANICAL DOWN TIME ______
DRILLING PROBLEMS ______
OTHER ______
MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
22			N.S.	24.9 - 25.3 boulder - carbonatized volcanic
24				25.3 - 25.7 <u>Lower Till</u> grey-beige, fine sand and silt matrix; cobbly - clast supported; clast composition - 95% intermediate to mafic volcanics and sediments 5% granitoids
25	40'		08	
26			09	
29				25.7 - 26.5 <u>Bedrock</u>: - altered volcanic :- light grey color; aphanitic; massive; hard - siliceous or silicified; 0.5% disseminated pyrite cubes
13				26.5m (88') EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 14 19 89

SHIFT HOURS 3:00 TO 6:00

TOTAL HOURS ______

CONTRACT HOURS ______

HOLE NO CB-89-58 LOCATION LINE 24E 7+75N ELEVATION 290 m

GEOLOGIST TURNER DRILLER HOWG BIT NO. CB70199 BIT FOOTAGE 32 - 41

MOVE TO HOLE 3:00 - 4:00

DRILL 4:00 - 5:00

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER TRAVEL 5:30 - 6:00

MOVE TO NEXT HOLE 5:00 - 5:30

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–20			01 (at 8.6–8.7) 02 (at 8.7–10.5)	see below

0 - 0.5 ORGANICS

0.5 - 8.6 OJIBWAY II SEDIMENTS

0.5 - 1.5 Beige-brown clay (gritty) possibly oxidized?

1.5 - 8.6 Gray-beige silty-clay. A 0.5 metre fine sand bed was observed between 2 3 metres.

8.6 - 8.7 MATHESON TILL VENEER

Beige, silt-fine to med. sand matrix. granitic cobble was observed, however most pebbles are mafic volcanics

8.7 - 10.5 BEDROCK

med greenish gray, fine grained volcanic. BASALT. Bedrock chips did not effervesce in HCl.

Note: Sample 01 is undersized an attempt to obtain more sample by washing at 8.6 was utilized. About 1/3 more sample was collected.

R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 18 1989

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-59 LOCATION L18E ; 10N* ELEVATION 285
GEOLOGIST K MacNeil DRILLER J Howg BIT NO. CB70058 BIT FOOTAGE 68.5-91.5
MOVE TO HOLE 8:30-9:30 (also take down/put up socks to cross hydro line
DRILL 10:15-1:00
MECHANICAL DOWN TIME 7:00-8:00 - Broken Axle on CT-1000 (down all d
DRILLING PROBLEMS ______
OTHER 6:30-7:00 Travel ; 8:00-8:30 Drive drill to road for
~~MOVE TO NEXT HOLE~~ water (not chargeable) ; 9:30-10:15 Driller to camp
for instructions from ship and office (Kirkland Lake)

Page 1/2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
1–20			01	0 - ~3.0 Organics 3.0 - 19.4 Ojibway II Sediments 3.0-17.6 clay :- grey ; slightly gritty with limestone pebbles and some granitoid and volcanic pebbles; poor return below 6.0m - little available return suggests clay becomes pure (no grit or pebbles) downhole 17.6-19.1 sand :- grey ; very fine grained to silty ; slightly coarser downhole with minor clay partings and pebbles 19.1-19.4 boulder - diabase/gabbro 19.4-23 Matheson Till grey-beige, fine sand and silt matrix ; cobbly - matrix supported ; clast supported - 55% intermediate - mafic volcanics and sediments 42-45 % granitoids no visible limestone	* move hole 50m south along line 18E to avoid swamp					

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jc-18 1989

HOLE NO CB-89-59 LOCATION L18E ; 10N ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG							
			01(cont.)								
21											
22			02	23-24 Bedrock:- altered mafic(?) volcanic - grey-beige; fine grained (< 0.1mm) with relict equigranular/interlocking volcanic texture; colour due to carbonate development - >7% disseminated calcite - may be minor Fe/Mg carbonate as well							
23			03								
			04								
24											
25											
26											
27											
28											
29				24m (80') EOH							
30											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 15 1989

HOLE NO CB-89-60 LOCATION L26E 6+50N ELEVATION 290 M

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70199 BIT FOOTAGE 41 - 50.5

SHIFT HOURS

____ TO ____

MOVE TO HOLE

DRILL 7:00 - 7:45

TOTAL HOURS

MECHANICAL DOWN TIME

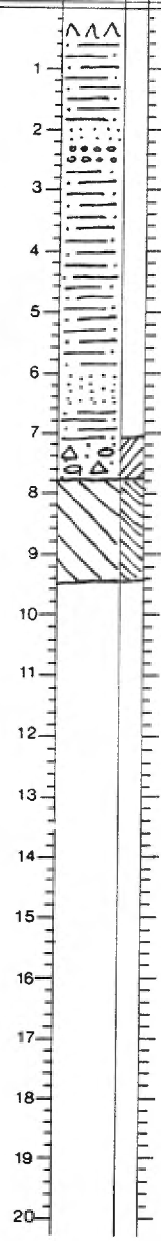
DRILLING PROBLEMS

CONTRACT HOURS

OTHER TRAVEL 6:30 - 7:00 ; S. AVERILL ON DRILL

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 - 0.5 ORGANICS
				0.5 - 7.1 OJIBWAY II SEDIMENTS
				0.5 - 4.5 light gray - beige, gritty clay. with fine sand - silt beds followed by pebbly bed between 2 and 2.5 metres.
				4.5 - 7.1 light gray clay, no grit. followed by fine silt - sand between 6.0 and 6.5 metres.
				7.1 - 7.8 MATHESON TILL
			01	Matrix supported cobbly till. The matrix is silt - fine sand, light beige - gray in color. Clast chips include 60% basaltic, 40% granitic and less than 2% limestone observed.
			02	7.8 - 9.5 BEDROCK
				Basalt – med green - gray. Pyroxene altered to chlorite. Reaction with HCl indicates 5-10% disseminated calcite. Rare sulphides observed.
				9.5 END OF HOLE
				R. Turner



OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 18 19 89
SHIFT HOURS
_____ TO _____
TOTAL HOURS
_____
CONTRACT HOURS
_____

HOLE NO CB-89-61 LOCATION L 20+75E ; 9+25N* ELEVATION 285
GEOLOGIST K MacNeil DRILLER I Howg BIT NO. CB70240 BIT FOOTAGE 0-24
MOVE TO HOLE 1:00 - 1:15
DRILL 1:15 - 3:00
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER
MOVE TO NEXT HOLE

Page 1 of 2 New Bit

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG							
1–20				0-1.8 Organics 1.8 - 22.1 Ojibway II Sediments 1.8-19.9 Clay :- grey; slightly gritty with rare pebbles; sand seams are common to ~8.5m; - below 10.5m, sporadic return of pure, non-gritty clay 19.9m - pebbly sand 20.5-20.9 pebbly sand - till like appearance 20.9 - 22.1 sand :- grey; very fine grained to silty 22.1 - 22.3 Matheson Till grey-beige, fine sand and silt matrix; pebble size clasts; clast composition - 65% intermediate - mafic volcanic and sediments 45% granitoids	* hole sited at 20+75E ; 9+25N and not L 21E ; 9+25N						

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 18 1989

HOLE NO CB-89-61 LOCATION L20+75E; 9+25N ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

SHIFT HOURS ______ TO ______

MOVE TO HOLE ________

DRILL ________

TOTAL HOURS ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

CONTRACT HOURS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
21			01* (small sample)	22.3 – 24 Bedrock:-						
22			-02	mafic volcanic (bleached): medium greyish green; fine grained – ~0.1mm; moderately well foliated; moderately calcareous – disseminated and stringer calcite in excess of 5%; trace disseminated pyrite. local oxidation along veinlets or shears;						
23			03	23.2 – 23.3 white vein quartz						
24				23.5 grey white, aphanitic rock chips – calcareous; may be selvage material						
25										
26										
27										
28										
29										
30										
11				24m (80') EOH						
12										
13										
14										
15										
16										
17										
18										
19										
20										

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 15 19 89

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO CB-89-62 LOCATION L29E 5+50 N ELEVATION 290 m

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. SB70199 BIT FOOTAGE 50.5 - 58.7

MOVE TO HOLE 7:45 - 8:00

DRILL 8:00 - 8:45

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER S. AVERILL on DRILL

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 - 2.5 ORGANICS
				2.5 - 5.0 OJIBWAY II SEDIMENTS
				2.5 - 4.5 clay, light - med. gray, varved, not gritty.
				4.5 - 5.0 clay becomes gritty.
				5.0 - 6.7 COCHRANE TILL
			01	5.0 - 6.5 mainly silty matrix (some fine sand), light beige color. The silty-fine sand matrix occurs because the Cochrane Till overlies bedrock and not OJIBWAY II SEDIMENTS. Clasts are mainly limestone 60-70% and cobbles of limestone and basalt were encountered.
			02	6.5 - 6.7 The percentage of limestone clasts is reduced to ~ 30% and the proportion of volcanic clasts increased. Reflecting the local bedrock.
				6.7 - 8.2 BEDROCK
				BASALT - similar to hole CB-89-60 Med green-gray with both vein and disseminated calcite.
				7.3 - 7.4 The drill cut into dark green basalt with diabase texture. No disseminated calcite observed.
				7.4 - 7.5 Back into med green-gray basalt with disseminated calcite.
				8.2 END OF HOLE

Depth scale: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 19 1989

HOLE NO CB-89-63 LOCATION L44E ; 28+50N ELEVATION 295

GEOLOGIST K MacNeil DRILLER J Houg BIT NO. CB70240 BIT FOOTAGE 24-44

SHIFT HOURS ____ TO ____

MOVE TO HOLE 6:45-7:00

DRILL 7:00-9:30

TOTAL HOURS ____

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

CONTRACT HOURS ____

OTHER 6:30-6:45 Travel to drill

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–20			01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11	see below

0-1.2 No Return

1.2-4.4 Ojibway II Sediments

clay :- beige (oxidized) initially but grading to a grey (unoxidized) color by 2.5 m; clay is gritty with sparse pebbles; pebbles comprise granitoids, volcanics and less commonly, limestone

4.1-4.4 boulder - gabbro

4.4-18.7 Matheson Till

grey-beige, fine sand and silt matrix; clast supported to 5.5 and matrix supported below 5.5 m; cobble size clasts; clast composition - 60% intermediate-mafic volcanics and sediments 40% granitoids

6.6-6.9 - boulder - biotite schist

- below 11.5 m - minor gritty matrix clay

- from 11.9-12.5 few clasts intersected

12.6-12.8 boulder - granodiorite

@ 13.4 - 20% vein quartz clasts

18.7-20.0 Bedrock :- siltstone (possibly mafic volcanic); dark grey green; strongly foliated to schistose (to sub-fissile); grain size of <0.1 mm; scattered pyrite cubes (<0.2%); weak calcite alteration (1-2%)

20 m (77') EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 15 19 89

SHIFT HOURS

_____ TO _____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-64 LOCATION L31+25E 4 N ELEVATION 290 m

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70199 BIT FOOTAGE 58.7-

MOVE TO HOLE 8:45 - 9:00

DRILL 9:00 - 10:15

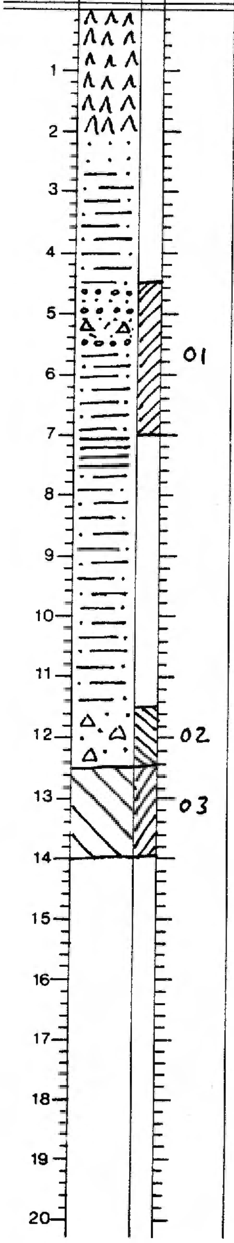
MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER S. AVERILL ON DRILL

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



0 - 2.0 ORGANICS

2.0 - 4.5 OJIBWAY II SEDIMENTS

2.0 - 2.5 silt, very little return.

2.5 - 4.5 light beige silty clay.

4.5 - 5.2 sand and pea size pebble interbeds. The sand is light gray-beige color and ~30% limestone pebbles observed. This is thought to be Cochrane age and is included in the sample interval.

5.2 - 5.4 Cochrane Till

light beige, silty matrix supported till, limestone clasts observed.

5.4 - 5.5 gravelly interbed

5.5 - 7.0 light beige gray, varved, gritty clay, mixed with fine sand and containing few limestone clasts.

7.0 - 7.5 non-gritty clay.

7.5 - 11.5 gray-beige, varved clay.

11.5 - 12.5 MATHESON TILL

light gray-beige, silt-fine sand, matrix supported till with volcanic and granitic clasts - no limestone observed.

12.5 - 14.0 BEDROCK

Similar to hole CB-89-60 & 62 Basalt, med green-gray containing disseminated calcite.

Note: Sample 02 was undersized and a larger sample was obtained by washing from 11.5 - 12.5.

14.0 END OF HOLE

R. Turner.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 19 1989

SHIFT HOURS
_______ TO _______

TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO CB-89-65 LOCATION L46E; 24+50N ELEVATION 293

GEOLOGIST K MacNeil DRILLER I Houg BIT NO. CB70240 BIT FOOTAGE 44-54.5

MOVE TO HOLE 10:30-10:45

DRILL 10:45-12:00

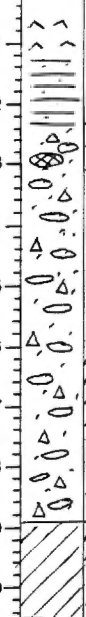
MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER 9:30-10:30 Drive drill to sump to fill tanks with water

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–1				0-0.6 No Return
1				0.6 - ~1.2 Organics
2				~1.2 - 2.3 Ojibway II Sediments clay - brown (oxidized); gritty
3			01	2.3 - 8.9 Matheson Till
4				beige (oxidized), fine sand and silt matrix to 2.5m -- matrix unoxidized below 2.5m
5			02	
6				2.8 - 3.0 boulder - biotite schist
7			03	cobble size clasts; clast composition - 65% intermediate-mafic volcanics and sediments 35% granitoids
8			04	@ 8.8m, quartz cobble
9				
10			05	
11				8.9 - 10.5 Bedrock :- mafic volcanic (basalt) - dark green; grain size of 0.1-0.2 mm, well foliated to schistose. 3 to 5% quartz-carbonate veinlets from 10.3-10.4m
12–15				
16				10.5 m (35') EOH
17–20				



OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 15, 16 1989

SHIFT HOURS
10:15 TO 5:15 Jan 15
6:30 to 10:00 Jan 16

TOTAL HOURS
7 Jan 15
3.5 Jan 16

CONTRACT HOURS
7 Jan 15
3.5 Jan 16

HOLE NO CB-89-66 LOCATION 50+00 E, 1+00 N ELEVATION 280 m

GEOLOGIST AVERILL DRILLER A. Hourg BIT NO. 70199 / 70200 BIT FOOTAGE 73 to 133 / 0 to 13.5

MOVE TO HOLE 10:15 - 11:00

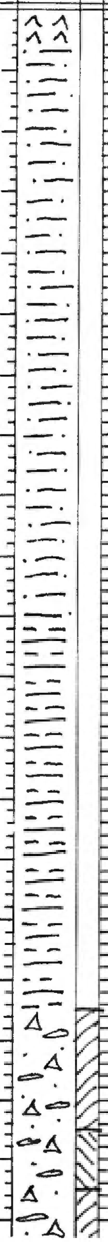
DRILL 11:00 to 5:15 Jan 15; 7:00 - 10:00 Jan 16

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER 2:45 - 4:00 Pull rods from 60 m, change bit & re-enter;

MOVE TO NEXT HOLE Travel Jan 16 - 6:30-7:00

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 - 0.5 Organics
1				0.5 - 16.5 Ojibway II Sediments
2				0.5 - 10.0 Clay. Ox. brown to 2.5 then gray. Slightly gritty becoming very gritty by 2.0 No pebbles therefore no limestone
5				10.0 - 16.5 Clay. Pale gray, varved with beige silt. Only trace grit.
16				16.5 (exactly) - 60.0 (exactly) Matheson Till
17			01	Remarkably homogeneous over long intervals.
18				Cobbly but matrix supported throughout. Beveled, striated subang. pebbles observable throughout.
19			02	
20			03	16.5 - 24.3 Gray to beige-gray fine sand/silt matrix : 50% v/s, 50% granitoid, trace limestone

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

Page 2

DATE Jan 15 19 89

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-66 LOCATION ______ ELEVATION ______
GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______
MOVE TO HOLE ______
DRILL ______
MECHANICAL DOWN TIME ______
DRILLING PROBLEMS ______
OTHER ______
MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			03 cont'd	
21				
			04	
2				
3			05	
4				24.3-24.6 Boulder. Basalt. Massive, dk. gn. Grain size 0.3 mm. Sub-diabasic text. 50% chl. Unalt., unmin., tr. cal.
			06	
5				
6			07	24.6-48.5 Matrix is more nearly beige due addition of some med. sand + subtraction of silt.
7				
8			08	
9			09	35.0 Volc. sed content now slightly higher but not over 60%.
30				
11			10	35.6-35.8 Boulder, unaltered hard dk. gn. basalt.
12			11	
13				
14			12	
15			13	
16				
17			14	
18			15	
19				
40			16	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

Page 3

DATE Jan 15 19 89 | HOLE NO CB-89-66 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______ | MOVE TO HOLE ______

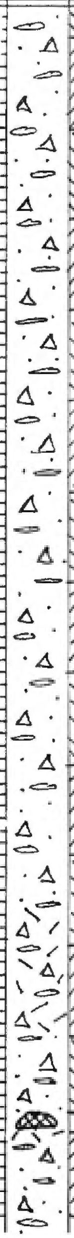
DRILL ______

TOTAL HOURS ______ | MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______ | OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			16 cont'd	
1			17	
2				
3			18	At 43.0 -- calcite-cemented till matrix nucleated on fossiliferous limestone pebble. Occasional small pebble sized concretions of same comp. thereafter to 55.0
4			19	
5			20	
6				
7			21	48.5 - 55.0 Return to more silty beige-gray matrix
8				
9			22	55.0 - 57.0 Intermittent, sparse gritty gray clay lumps in matrix, accompanied by appearance of 5% weathered volc. clasts, otherwise still 60:40 v/s versus granitoid, tr. ls.
50 10			23	
11				
12			24	57.0 Return to beige-gray fine sand/silt matrix
13			25	Mineralized pyritic breccia vein pebble or small cobble at 58.1
14				
15			26	58.3 - 58.6 Boulder, bleached basalt
16			27	58.6 - 60.0 80% volcanics overall incl. 20% ochre weathered ones recycled from Missinaibi Fm. Gritty gray clay lumps briefly at 58.6
17				
18			28	
19			29	60.0 Large pebbles of 3-4 cm indicate bit worn out. Pull rods, are core almost off. Screen large pebbles in lab & save as example of Missinaibi clasts (library). One pebble of brecciated gray qtz carb vein noted.
60 20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

Page 4

DATE Jan 15 +16 19 89

HOLE NO CR-89-66 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	
61			30	**60.0-63.6 MISSINAIBI FORMATION** Pebbly gravel w. granular matrix + thin interbeds of coarse sand. 70% volcanics, zero limestone, 30% granite conspicuous 2% quartz -- not present in till + indicates concentration of mechanically resistant lithols; 0% granite probably also concentrated relative to its glacial parent. Pebbles noticeably rounded relative to till pebbles but not well rounded. Obvious ochre weathering of both sand + pebble fractions.	
2			31		
3			32		
5			33		
6			34		
8			35		
9			36		
70				**63.6-67.6 MATHESON TILL**	
11			37	Not Lower Till as it still contains 20% weath. clasts recycled from Missinaibi Fm. Cobbly. Beige-gray fine sand-silt matrix + 60:40 v/s : gran. (i.e. identical to till overlying gravel zone). Below 65.5 matrix contains so much recycled weath. sand it has a pale ochre colour	Note: Jan 15/89 at 67.5 m pulled up 3 rods of bottom due pressure plugging of bit + left overnight at 58.5 m.
12			38 BR (mainly -10 mesh)		
		72.3			
13			39 BR (Separate +10 mesh -10 mesh bags)		
16				**67.6-71.1 MISSINAIBI FORMATION**	
17				67.6-68.0 As section 60.0-63.6	Note: Occurrence of graphitic mudstone clasts through 3 m section of gravel above mudstone bedrock indicates Missinaibi reflects bedrock in same manner as till and should be sampled over short sections in same manner as till
18				68.0-71.1 Extremely cobbly, clast supported. A little natural coarse sand matrix plus some fine drill bit grindings of clasts. Weathered as previous section but not as obvious because many cuttings are from unweathered cores of cobbles. Volc/sed : gran = 70:30 at top grading to 90-10 at bottom. Occasional graphitic mudstone cobble gives slate gray clay and gray drill water when ground by bit.	
19				68.6-68.8 Boulder of hard, fresh basalt.	
20					

Continued on Page 5

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 16 19 89

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO CB-89-66 LOCATION CB-89-66 ELEVATION P.S

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20				71.1-73.5 BEDROCK Mudstone. Black, aphanitic, fissile but not schistose. Graphite scum on drill water. Few syngenetic pyrite laminations. No qtz-carb. veins. Sample 38 mostly ground to clay by drill bit, so sample mainly -10 mesh. For sample 39, cuttings are numerous, +10 mesh and -10 mesh bagged separately. D. Averill

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 19 1989
SHIFT HOURS ____ TO ____
TOTAL HOURS ____
CONTRACT HOURS ____

HOLE NO CB-89-67 LOCATION L44E ; 25+25N ELEVATION 293
GEOLOGIST K MacNeil DRILLER I Houg BIT NO. CB70240 BIT FOOTAGE 54.5-76.0
MOVE TO HOLE 12:00 - 12:15
DRILL 12:15 - 2:15
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER
MOVE TO NEXT HOLE

DEPTH IN METRES	SAMPLE NO.	DESCRIPTIVE LOG
0		0-1.5 No Return
1.5		1.5-2.5 Ojibway II Sediments clay :- beige-brown (oxidized); gritty; minor granules
2.5	01 (~3.5), 02 (~5), 03 (~6.5), 04 (~8), 05 (~9.5), 06 (~11), 07 (~12.5), 08 (~14), 09 (~15.5), 10 (~17), 11 (~18.5), 12 (~19.7)	2.5-19.9 Matheson Till grey-beige, fine sand and silt matrix; cobbly - matrix supported; clast composition - 60% intermediate-mafic volcanics and sediments 40% granitoids @ 3.1m hit a quartz cobble 4.7-4.9 boulder - very fine grained, epidotized volcanic with 90% vein quartz @ 10.7m - common quartz vein material 14.3-15.0 grey gritty clay matrix 19.3-19.5 minor gritty matrix clay
19.9	13	19.9-21.5 Bedrock :- altered/sheared volcanic :- much of sample ground to a fine sand and clay above 20.5m; below 20.5m, rock is pale grey green, bleached with minor (1-3%(?)) Fe/Mg carbonate; rock is schistose to sheared, aphanitic; trace amounts of disseminated pyrite; a few percent foliation parallel quartz-carbonate veinlets are present from 20.5-21-

21.5 (72') EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 16 19 89

SHIFT HOURS ______ TO ______

TOTAL HOURS ______

CONTRACT HOURS ______

HOLE NO CB-89-68 LOCATION L50+50E ; 2+75 S ELEVATION 282 m

GEOLOGIST M Crawford DRILLER G. Houg BIT NO. 70200 BIT FOOTAGE 13.5 to 54.0

MOVE TO HOLE 10:00 to 10:15

DRILL 10:15 - 1:45

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE 1:45 - 2:00

DEPTH IN METRES	SAMPLE NO.
9–10	01
11–12	02
12–13	03
14–15	04
15–16	05
17–18	06
18–19	07
20	08

DESCRIPTIVE LOG

0 - 1.2 Organics

1.2 - 8.2 Ojibway II Sediments

- gray beige gritty clay with occasional limestone and granite pebbles

8.2 - 39.0 Matheson Till

- beige fine sand and silt matrix supported
- clast composition
  50% Volcanic / Sediments
  50% Granitiods
- trace limestone
- till initially pebbly but predominantly cobbly clasts below 12.0 m.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 16 19 89

HOLE NO CB-89-68 LOCATION L50+50E ; 2+75 S ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

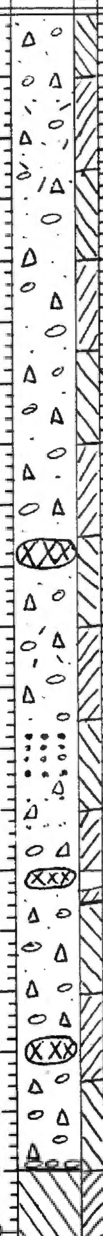
MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______



DEPTH IN METRES	SAMPLE NO.	DESCRIPTIVE LOG
	08	- sparse grey gritty clay lumps from 21.5 to 23.0 m.
21, 22	09	23.0 - 39.0 till becomes clast supported with some fine to medium grained beige sand + silt ~~&~~.
23, 24	10	- increase in Volcanic/Sediment cobbles to 70%
25	11	28.6 - 29.0 Boulder (Granitic)
26, 27	12	30.5 gritty grey clay lumps in matrix
28	13	31.8 - 32.4 medium grained beige Sand lense
29	14	- occasional medium to course grained beige sand beds down to 33.4 m.
30	15	34 - 34.3 Boulder - Mafic Volcanic
31		36.8 - 37.2 Boulder - Diabase
32	16	38.2 - 38.6 till contians approx. 5% grey gritty clay lumps in matrix
33, 34	17	38.6 - 39.0 dark green "property type" volcanic cobbles
35	18	39.0 - 40.5 Bedrock
36, 37	19	Probably gray wacke, possibly intermediate tuff. Pale gray colour. Schistose & lineated. 10% visible qtz. grains, few visible aphanitic volc. lithic fragments
38	20	Also 1% black acicular grains -- either tourmaline or lineated mudstone lithics. 1% dissem. euhic py.
39, 40	21 bedrock	1% brecciated gray qtz. veins. No carb.

Note: S. Averill present, assisted with logging.

Mike Crawford

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 19, 20 1989

HOLE NO CB-89-69 LOCATION L42E;26N ELEVATION 293

GEOLOGIST K MacNeil DRILLER I Houg BIT NO. CB70241 BIT FOOTAGE 0 –

SHIFT HOURS ______ TO ______

MOVE TO HOLE Jan 19 – 3:15 – 3:30

DRILL Jan 19 – 3:30 – 5:15

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER Jan 19 – 2:15 – 3:15 Drove drill to sump for water; 5:15 – 5:30 Travel

~~MOVE TO NEXT HOLE~~

Page 1 of 3

Jan 19 – New Bit

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 – 1.3 No Return
1				1.3 – 7.5 Ojibway II Sediments
2				clay – beige (oxidized) to 2.5m and grading to grey (unoxidized) below 2.5m; clay is gritty with scattered granitic and limestone pebbles and granules
7.5				7.5 – 21.5 Matheson Till
8			01	grey-beige, fine sand and silt matrix. cobble size clasts; clast composition – 65% intermediate-mafic volcanics and sediments 34% granitoids < 10% limestone
10			02	
11			03	16.4 – 19.0 sporadic return of gritty matrix clay
13			04	– below 19.0m, clast composition changes to 90% volcanics and sediments (abundant black siltstone) and 10% granitoids
14			05	– below 20.3 – grey gritty clay matrix
16			06	20.5 – 20.7 boulder – bleached sheared volcanic
17			07	21 – 21.5 boulder – siltstone – black, fissile
19			08	
20			09	

Jan 20

6:30 – 7:00 Travel

7:00 – 9:45 Drill (22.5 – 38.2m)

9:45 – 10:30 Pull rods + change bit – redrill to 38.2m

– New Bit – 70242

– New Sub

10:30 – 11:30 Drill (38.2 – 40.5)

11:30 – 12:00 Replace water swivel

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan. 19, 20 1989

SHIFT HOURS ______ TO ______

TOTAL HOURS ______

CONTRACT HOURS ______

HOLE NO CB-89-69 LOCATION L42E; 26N ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

MOVE TO HOLE ______

DRILL ______

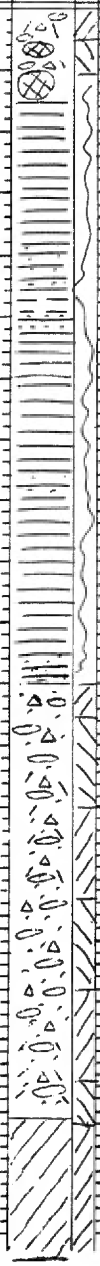
MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



Depth in metres: 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40

Sample No.: 09 (cont.), 10, N.S., 11, 12, 13, 14, 15, 16, 17

21.5 - 31 Missinaibi Sediments

clay - grey; pure; very compact

23.9-24.6 brown, gritty, organic rich clay - a few thin grey clay partings are also present — Character sample taken

24.6-24.9 silt appears to be predominant

@ 24.4 - grey-beige, slightly organic rich clay

25-25.3 thin sand laminations present

27.5-28m, and 30.5-31m the clay becomes slightly gritty

31 - 38.1 Lower Till

grey-beige, unsorted fine sand and silt matrix. cobbly - clast supported. clast composition -
90% intermediate - mafic volcanics and sediments
10% granitoids

- although the till has a similar volcanic/sediment component to the lower parts of the Matheson Till, there is much less silts like evident in the Lower Till

32.5 - 33.5 grey gritty clay matrix: fewer clasts than ~~fid~~ 31-32.5 - matrix supported

- below 33.5m - grey gritty clay and fine sand/silt matrix
- below 34.2 - sand/silt matrix
- below 34.5 - clast composition of 60:40 volcanics/sediments versus granitoids, and scattered limestone

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 19, 20 1989

HOLE NO CB-89-69 LOCATION L42E; 26N ELEVATION

GEOLOGIST DRILLER BIT NO. BIT FOOTAGE

SHIFT HOURS

TO

MOVE TO HOLE

DRILL

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1				@ 36.9 grey gritty clay matrix
2				37.2 - 37.4 grey gritty clay matrix
3–4				37.7 - 37.9 zone of brown, oxidized gritty clay with cobble/boulder cuttings
5				37.9 - 38.1 - 80% of clasts are volcanics/sediments
6				38.1 - 40.5 Bedrock:-
7				Siltstone:-
8–9				38.1 - 38.6 greenish-beige, slightly gritty clay, with minor black siltstone chips
10–11				38.6 - 39 beige-brown (oxidized) clay with <5% black, to oxidized brown siltstone chips
11–15				39 - 39.5 - grey beige to oxidized brown gritty clay; some grey clay is very similar in appearance to Missinaibi lacustrine clay and may explain grey matrix clay in overlying till
16–20				39.5 - 40.5 more abundant competent chips: medium grey color; very fine grained (<0.1mm); fissile; trace disseminated pyrite; non-calcareous; banded on the order of 1mm or less

40.5 m (135') EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan. 16 1989

SHIFT HOURS

____ TO ____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-70 LOCATION 54E 0+00 ELEVATION 282.0 m

GEOLOGIST R. Rudnicki DRILLER G. Howg BIT NO. CB70201 BIT FOOTAGE 0.0 - 41.5

MOVE TO HOLE 1:45 - 2:00

DRILL 2:00 - 4:30

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–13				0.0 – 0.5 Organics
				0.5 – 13.4 Ojibway II sediment: pale beige to grey, soft, gritty clay.
				13.4 – 27.0 Matheson till: Fine beige sand, silt matrix. Cobble clasts of aproximate composition 50% volcanics/sediments, 50% granitoids. Matrix supported till. Below 19.0 spars gritty clay lumps
14			01	
16			02	
17			03	
19			04	
20			05	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan. 16 1989

HOLE NO CB-89-70 LOCATION ____ ELEVATION ____

GEOLOGIST ____ DRILLER ____ BIT NO. ____ BIT FOOTAGE ____

SHIFT HOURS ____ TO ____

MOVE TO HOLE ____

DRILL ____

TOTAL HOURS ____

MECHANICAL DOWN TIME ____

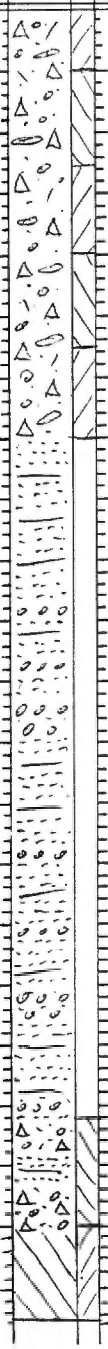
DRILLING PROBLEMS ____

CONTRACT HOURS ____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.
21			05
22			06
23			07
24			08
25			
26			09
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			10
40			
41			11



DESCRIPTIVE LOG

27.0 - 38.2 Ojibway II sediment: very fine grey beige sand with clay interbeds. Occasional pebble beds. Clay is soft, contains sand. SA.

38.2 - 38.8 Matheson till: cobbly, matrix supported, abundant gritty clay lumps.

38.8 - 39.3 Ojibway II sediment: sand and clay, similar to 27.0-38.2

39.3 - 40.0 Matheson till: Same as 38.2 - 38.8

40.0 - 41.5 Bedrock

Andesite. Medium green, massive, unaltered. 15% visible chlorite, irregularly distributed, and also visible plag. phenos. Grain size approx. 0.1 mm! Estimate 3% calcite!! No sulphides except local fracture py.

Note: S. Averill was present and assisted with logging.

Bohdan Rudnicki

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 20 19 89

HOLE NO CB-89-71 LOCATION L 39+50E 27N ELEVATION 291 m

GEOLOGIST TURNER, McNeil DRILLER J. Howg BIT NO. CB70242 BIT FOOTAGE 0 - 28.5

SHIFT HOURS ____ TO ____

MOVE TO HOLE 12:00 - 12:30

DRILL 12:45 - 4:30

TOTAL HOURS ____

MECHANICAL DOWN TIME ____

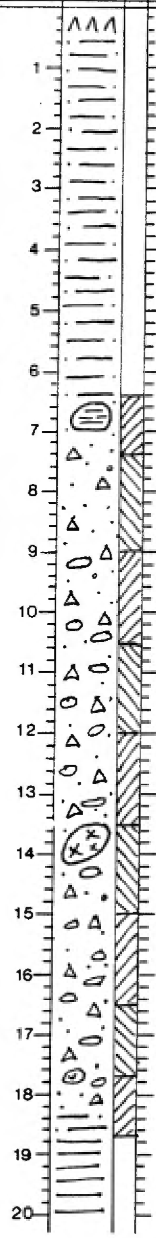
DRILLING PROBLEMS ____

CONTRACT HOURS ____

OTHER 12:30 - 12:45 Replace water swivel

MOVE TO NEXT HOLE 4:30 - 4:45 , travel 4:45 - 5:00

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



Sample Nos.: 01, 02, 03, 04, 05, 06, 07, 08, 09

0 - 0.5 ORGANICS

0.5 - 6.4 OJIBWAY II SEDIMENTS

0.5 - 1.5 Beige-brown gritty clay
1.5 - 3.5 Clay grades into gray gritty clay. between 3.5 - 6.4 clay has less grit.
6.4 - 7.0 Schist boulder.

7.0 - 18.4 MATHESON TILL

7.0 - 9.2 matrix supported, 9.2 - 18.4 Cobbly.

7.0 - 9.2 light beige silt-fine sand, minor silt-clay. Clasts dominantly Schist, basalts and granite. Limestone < 1%.
9.2 schist cobble (black)
10.5 schist cobble (dark green)

9.2 - 18.4 Clast supported till, matrix is light beige silt-fine sand. The clast content is almost entirely cobble cuttings (schist, granite, black siltstone).
13.5 - 14.2 gneiss boulder, basalt cobble.

18.4 - 23.4 MISSINABI SEDIMENTS

Medium gray clay, very little grit.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS ______ TO ______

TOTAL HOURS ______

CONTRACT HOURS ______

HOLE NO CB-89-71 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

MOVE TO HOLE ________

DRILL ________

MECHANICAL DOWN TIME ________

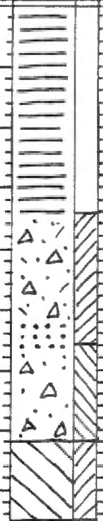
DRILLING PROBLEMS ________

OTHER ________

MOVE TO NEXT HOLE ________

Page 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21				23.4 - 25.2 CLAY TILL
22				gray silt-clay matrix, matrix supported. clasts are dominantly black siltstone and schist (~85%), granite & basalt (15%).
23				
24			10	25.2 - 25.6 well sorted fine-medium sand and gravel. interbedded in till.
25				
26			11	25.6 - 27.2 TILL, silt-fine sand matrix, matrix supported. Clasts >90% black siltstone, schist and vein quartz. Pyrite observed in siltstone clasts.
27				
28			12	
29				27.2 - 28.5 BEDROCK
10				fine grained black siltstone (vein quartz at surface) pyrite < 1% hosted in siltstone.
11				
12				28.5 END of HOLE
13				R. Turner
14				
15				
16				
17				
18				
19				
20				



OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 17 19 81

SHIFT HOURS ______ TO ______

TOTAL HOURS ______

CONTRACT HOURS ______

HOLE NO CB-81-72 LOCATION L54E 4+25S ELEVATION 283

GEOLOGIST [illegible] DRILLER [illegible] BIT NO. [illegible] BIT FOOTAGE 41.5 - 90.5

MOVE TO HOLE 4:30 - 5:00 (Jan 16 PM)

DRILL 7:00 - 10:45

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER Travel 6:30 - 7:00

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20			01, 02, 03, 04, 05, 06	0.0 - 0.5 Organics 0.5 - 12.0 Ojibway II Sediments slightly gritty to non gritty (dense silt) grey beige clay with occasional thin very fine sand beds. Occasional small pebble, clast below 8.0m 12.0 - 34.8 Matheson Till non gradational contact into grey beige fine sand/silt matrix (matrix supported) Cobble clasts of composition: 55% Volcanics and Sediments; 45% Granitoid (18.5 - 20.5) 1-2% grey gritty clay in matrix

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

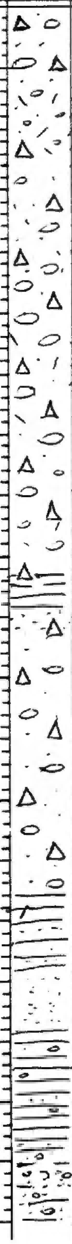
DATE Jan 17 1989

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-72 LOCATION ______ ELEVATION ______
GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______
MOVE TO HOLE ______
DRILL ______
MECHANICAL DOWN TIME ______
DRILLING PROBLEMS ______
OTHER ______
MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40			06, 07, 08, 09, 10, 11, 12, 13, 14, 15	

(20.5 – 21.8) less return on t/c clasts & on matrix Predominantly grey slightly gritty clay with very fine grained sand.

(21.8 – 26.6) Till similar to 18.5 to 20.5

(26.6 – 29.2) similar to 21.8 – 26.6

(29.2 – 29.8) grey compact non gritty clay (not hard)

(29.8 – 30.2) predominantly sorted beige fine grained sand.

(30.2 – 33.5) similar to 18.5 to 20.5; however, clast composition changes to 65% Volcanics and sediments; 35% Granitoids.

(33.5 to 34.8) as above with 5-7% grey beige gritty clay in matrix.

34.8 – 47.0 <u>Missinaibi Sediments</u>

(34.8 – 36.0) grey non gritty compact clay (not very hard) with v.f. sand interbeds.

(36.0 – 36.8) predominantly sorted grey beige fine grained sand

(36.8 – 38.8) hard compact, slightly gritty to non gritty clay. (bit plugging easily)

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jun 17 1989

HOLE NO CB-89-72 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
41			16	(38.8 - 41.0) 90% of sample is hard compact gritty clay beige grey in colour. Also occasional very fine sand / silt. Very few pebble / cobble clasts of composition 55% Volcanic & sediments ; 45% Granitoids some of which are oxidyzed note/ till like in appearance in places.
42				
43				
44				
45				
46				
47				(41.0 - 43.0) - similar to 36.8 to 38.8 ; bit plugs easily
48			17	
49				(43.0 - 43.5) fine sand bed beige c̄ few pebbles.
50				(43.5 - 47.0) nongritty, hard, grey beige compact clay.
51				
52				47.0 - 49.0 <u>Bedrock</u>
53				- medium green - fine grained
54				- weakly foliated
55				- chloritized - 1-2% carbonate
56				- <1% sulphides
57				Intermediate to Mafic Volcanic
58				49.0 E.O.H.
59				
60				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 22 1989

SHIFT HOURS ____ TO ____

TOTAL HOURS ____

CONTRACT HOURS ____

HOLE NO CB-89-73 LOCATION L 36E ; 28+50N ELEVATION 290

GEOLOGIST K MacNeil / DRILLER J Haug BIT NO. CB-70242 BIT FOOTAGE 28.5 - 44.5

MOVE TO HOLE

DRILL 8:45-10:45

MECHANICAL DOWN TIME 11:15 - end of day :- Fix CT-1000 (fuel problems) & change

~~DRILLING PROBLEMS~~ rear end gear oil in Nodwell

OTHER 8:00-8:45 Travel ;

MOVE TO NEXT HOLE 10:45-11:15

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–1				0-1.0 No Return - organics at surface
1–5				1.0 - 5.0 Ojibway II Sediments 1.0 - 3.8 clay :- grey, slightly gritty with scattered pebbles and granules. 3.3-3.5 boulder - granitoid 3.8 - 5.0 clay :- grey; non-gritty; pure
6			01	5.0 - 13.8 Matheson Till grey-beige, unsorted, fine sand and silt ~~matrix~~; cobble size clasts; clast composition - 55% intermediate-mafic volcanics and sediments 44% granitoids <1% limestone
8			02	7.2-7.5 minor gritty matrix clay 7.9-8.7 " " " "
10			03	@ 9.9 " " " "
11			04	10.3-11 grey gritty clay matrix
13			05	11.8-12.9 " " " "
13.8			06	13.2-13.8 " " " "
15			07	13.8 - 16 Bedrock: mafic volcanic (basalt) :- medium to dark green; grain size of 0.1-0.2 mm; moderately well developed foliation; predominant mafic mineral appears to be pyroxene variably altered to chlorite; <0.5% disseminated pyrite; 1-2% calcite amygdules. 15.1-15.4 - fracture zone - rock is slightly oxidized and friable; common sand/silt (till matrix) contamination

16m (53') EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 17/18 19 89

SHIFT HOURS

____ TO ____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-74 LOCATION L58E Orogon ELEVATION 283

GEOLOGIST P. Collins DRILLER G. Howey BIT NO. TB70202 BIT FOOTAGE 0.0 -

MOVE TO HOLE B. Rudnick, R. Turner. 10:45 - 11:00 Jan 17

DRILL 11:00 17th - 10:30 18th to 12:30

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	
0–6				0.0 – 0.2 organics 0.2 – 6.0 Ojibway II Sediments beige grey slightly gritty soft clay 6.0 – 40.5 Matheson Till Matrix supported beige grey fine sand and silt. Cobble clasts of composition: 60% Volcanics and sediments; 40% Granitoid below 14.0 m 1-2% grey gritty clay in matrix 17.6 – 20.6 Till is cobbly (clast supported) of similar composition to 6.0 to 17.6	Note: check logged character Split March/89 by P. Collins Concentrated a samples 23 to 29 to determine whether Lower Till was intersected or not. Samples 23, 24, 25, 29 are classified as till with a slightly sorted (silt to fine sand matrix (50µ to 250µ). Samples contain pebble and cobble sized clasts which are non-oxidized. Also colour of matrix is beige grey. Samples 26, 27, 28 appear to be sorted and coarse biased. Sample 27 has 60% medium to coarse grained sand with size range between (250µ & 900µ) It appears that the interval 42.4 to 52.2 is Lower Till; the clast composition favours Volcanics & sediments to granitoids and there does not appear to be any reworking of Missinaibi sediments (subunit 3a) in the Till or sorted interval.
6–7			01		
7–8			02		
9–10			03		
11–12			04		
12–13			05		
14–15			06		
15–16			07		
17			08		
18–19			09		
19–20			10		

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 17/18 19 89

HOLE NO CR-89-74 LOCATION L58E BL 0+00 ELEVATION

GEOLOGIST DRILLER BIT NO. BIT FOOTAGE

SHIFT HOURS

TO

MOVE TO HOLE

DRILL

TOTAL HOURS

MECHANICAL DOWN TIME

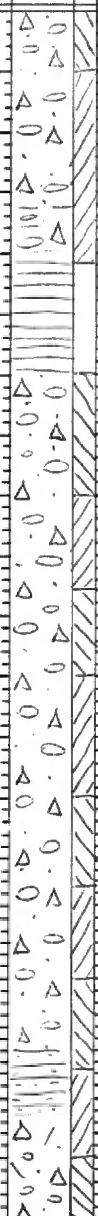
DRILLING PROBLEMS

CONTRACT HOURS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.
			10
21			
22			
			11
23			
24			
25			
26			
27			12
28			
			13
29			
30			14
31			
32			15
33			
			16,18
34			
35			17,19
36			
			20
37			
38			21
39			
			22
40			



DESCRIPTIVE LOG

20.6 - 24.0 non gritty clay lumps in matrix (not rock powder) less return on sample otherwise similar to 17.6 - 20.6

24.0 - 26.0 grey, non gritty, pure compact, hard clay (bit plugs easily in this interval).

26.0 - 37.0 Cobble clast supported till similar 17.6 - 20.6. Increase in matrix content downsection; otherwise till is homogenous

at 34.5 pull rods twice (problem with sample return and bit plugging - pressure check rods; 2 o-rings damaged).

at 37.5 bit plugged

* note resampled interval 33.0 to 36.0 (samples 18, 19).

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 19

HOLE NO CB-89-74 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

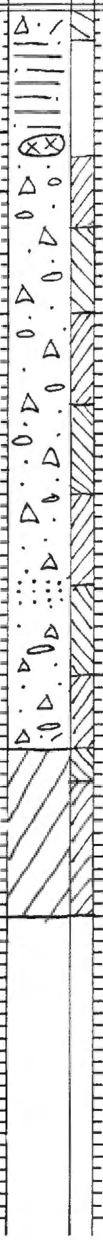
DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.
41			
42			
43			23
44			24
45			
46			25
47			26
48			
49			27
50			28
51			
52			29
53			30
54			31
55			
56			
57			
58			
59			
60			



DESCRIPTIVE LOG

37.0-38.0 Compact gritty beige-brown clay

38.0-40.5 Clay rich till; 90% compact greybeige gritty clay and fine sand matrix - Cobble clasts of composition: 70% Volcanics and sediments; 30% Granitoids

40.5-42.0 Possibly Missinaibi sedim.

Clay: grey, slightly gritty, pure downsection. Dry and compact

42.0-42.4 Boulder

42.4-52.2 Lower till?

Fine, beige sand, silt matrix. cobbly clasts of aproximate comp. 60% volc/sed - 40% granitoids. Matrix supported till.

49.4-49.8 Medium to coarse sand bed.

49.8-52.2 Till similar to 42.4-52.2

52.2-55.5 BEDROCK

52.2-52.7 pale green, porphyritic texture (with quartz eyelets) and fine groundmass. Calcite was observed as vein material but is not disseminated. Bleached Basalt.

52.7-55.5 The bedrock changes abruptly into massive quartz vein (90%) with black siltstone (10%) present. No sulphide were observed in the quartz vein material, however black siltstones (and fine cuttings from the siltstone) were enriched in sulphides (10-15%) mostly pyrite. Graphite was also observed in trace amounts < 2%.

note: prior to bedrock, black siltstone clasts were encountered mineralized with coarse, sand size, pyrite

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 23 1989

SHIFT HOURS ______ TO ______

TOTAL HOURS ______

CONTRACT HOURS ______

HOLE NO CB-89-75 LOCATION L38E; 2+50N ELEVATION 289

GEOLOGIST K MacNeil DRILLER J Howg BIT NO. CB70242 BIT FOOTAGE 44.5-67

MOVE TO HOLE 6:45-7:15

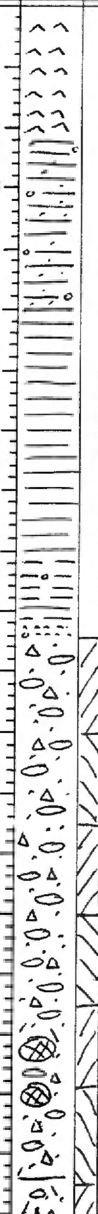
DRILL 7:15-9:30

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER 6:30 - 6:45 Travel (by truck)

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20			01, 02, 03, 04, 05, 06, 07	see below

0 - ~2.0 Organics

~2.0 - 10.4 Ojibway II Sediments

2.0-5.0 clay:- grey; slight grit and rare limestone and volcanic pebbles

5.0-6.0 gradational change to grey, non-gritty clay

6.0-9.0 clay:- grey; non-gritty

9.0-10.2 silt appears to be predominant; also minor pebbles and clay partings

10.2-10.4 sand:- fine grained; contains minor pebbles

10.4 - 20.6 Matheson Till

grey-beige, unsorted, fine sand and silt matrix -- minor gritty clay in initial 0.2m cobble size clasts; clast composition - 55% volcanics/sediments 45% granitoids scattered limestone and quartz vein clasts

- till is very homogeneous -

16.8-17.1 grey gritty clay matrix

17.1-17.5 boulder - granodiorite

17.9-18.2 boulder - granodiorite

19.3-20 gritty matrix clay; pure grey clay partings @ 19.4

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 23 1989

SHIFT HOURS
_____ TO _____

TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO CB-89-75 LOCATION L38E; 23+50N ELEVATION _____
GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____
MOVE TO HOLE _____
DRILL _____
MECHANICAL DOWN TIME _____
DRILLING PROBLEMS _____
OTHER _____
MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			07 (cont.)	
21			08	20.6 - 22.5 Bedrock:- mafic volcanic (basalt) - dark green; grain size of approximately 0.1 mm; well foliated to sheared - - chloritic; ~5% disseminated calcite and 1-2% calcite veinlets; weakly magnetic; <1% coarse grained disseminated pyrite; 20.6-20.8 - much of sample ground to a fine sand and ~~green~~ clay
22				
23				
24				
25				
26				
27				
28				
29				22.5m (75') EOH
30				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 18 19 89

SHIFT HOURS

____ TO ____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-76 LOCATION Line 58 E 4+50 S ELEVATION 280 m

GEOLOGIST TURNER, COLLINS DRILLER G. HOWG BIT NO. CB70203 BIT FOOTAGE

MOVE TO HOLE

DRILL 2: 0 - 5:00

MECHANICAL DOWN TIME 2:00 - 2:30 fix hydraulics

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
				0 - 0.5 ORGANICS						
1				0.5 - 14.5 OJIBWAY II SEDIMENTS						
2				0.5 - 1.5 light beige-brown gritty clay 3.0 - 5.5 light grey gritty clay						
3				5.5 - 13.5 light beige fine sand and silt interbedded with grey gritty clay.						
4				13.5 - 14.5 grey clay, very little grit.						
5				14.5 - 61.2 MATHESON TILL						
6										
7				14.5 - 30.0 Matrix supported till; matrix is light beige-grey silt and fine sand. Clasts include 60% Abitibi volcanic, 40% granitic, <1% limestone. At 25.5 till becomes cobbly.						
8										
9										
10										
11										
12										
13										
14										
15			01							
16										
17			02							
18										
19			03							
20			04							

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS ______ TO ______

TOTAL HOURS ______

CONTRACT HOURS ______

HOLE NO CB-89-76 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

MOVE TO HOLE ________

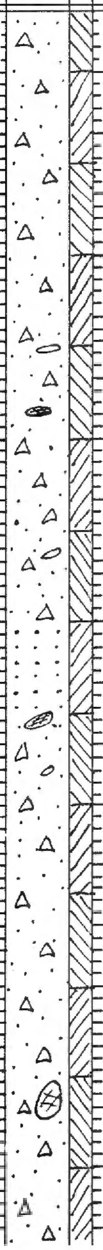
DRILL ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21			04, 05	26.5 (volcanic cobble)
22				30.0 - 31.4 SAND and GRAVEL fine - medium sand, well sorted, interbedded with pea size, pebbly gravel. Limonitic weathering is present on some clasts < 5%.
23			06	
24				
25			07	31.4 - 53.7 Till; light beige-gray, silt fine sand matrix. matrix supported and cobbly. Clasts include 70% Abitibi metavolcanics and 30% granitic. No limestone was observed.
26			08	
27				
28			09	
29			10	37.5-38.2 basalt boulder.
30				
31			11	
32			12	
33				
34			13	
35			14	
36				
37			15	
38			16	
39				
40			17	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 18 19 89

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-76 LOCATION LINE 58E 4+50S ELEVATION 280M

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

MOVE TO HOLE ______

DRILL ______

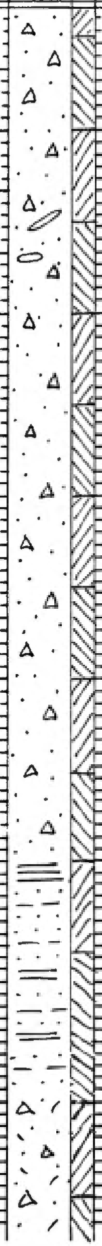
MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
41			18	53.7 - 61.2 matrix light grey-beige silt-fine sand with grey silt-clay. Matrix supported till. clasts 70% Abitibi volcanics, 30% granitic.
42			19	
43			20	54-57.8 grey clay interbedded with sorted fine sand-silt.
44			21	57.8-61.2 grey silty-clay matrix 75% Abitibi metavolcanics, 23% granitics, 1% quartz vein.
45			22	
46			23	
47			24	
48			25	
49			26	
50			27	
51			28	
52			29	
53				
54				
55				
56				
57				
58				
59				
60				



OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

HOLE NO CB-89-76 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

SHIFT HOURS ________ TO ________

MOVE TO HOLE ________

DRILL ________

TOTAL HOURS ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

CONTRACT HOURS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
			30	61.2 - 65.8 SAND AND GRAVEL						
61				fine to medium sand mixed with pea size pebbly gravel.						
62			31							
63				64. gravel becomes cobbly						
64			32							
				65.8 - 68.0 BEDROCK						
65			33	medium grained, pyroxene altered to chlorite - resulting color is mottled pale-med green and creamy white. No sulphides; minor quartz vein <1"; no calcite.						
66										
67			34	DIORITE						
68										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 23 1989

HOLE NO CB-89-77 LOCATION L36E; 24N ELEVATION 287

GEOLOGIST Collins, MacNeil DRILLER I Houy BIT NO. CB70243 BIT FOOTAGE 0-24.5

SHIFT HOURS ____ TO ____

MOVE TO HOLE 9:30-9:45

DRILL 9:45-11:15

TOTAL HOURS ____

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS ____

OTHER

MOVE TO NEXT HOLE

Page 1 of 2 New Bit

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0.0 - 0.5 Organics
				0.5 - 18.5 Ojibway II Sediments
				0.5-5.6 clay:- beige grey, slightly gritty to non-gritty soft clay; occasional small pebble size clasts and silt to very fine grained sand interbeds
				5.6-18.5 silt - silt appears predominant with occasional very fine grained sand ~~and~~ clay partings
				18.5 - 19.2 Matheson Till
				grey-beige, unsorted, fine sand and silt matrix. pebble size clasts; clast composition - 55% intermediate-mafic volcanics and sediments 45% granitoids
				@19.0 thin hard clay parting
				19.0 - 19.2 gradational change to underlying Missinaibi Sediments
				19.2 - 20.8 Missinaibi Sediments
				clay:- grey; non-gritty; very compact and difficult to penetrate
19			01	
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 23 1989

HOLE NO CB-89-77 LOCATION L36E; 24N ELEVATION

GEOLOGIST DRILLER BIT NO. BIT FOOTAGE

SHIFT HOURS

TO

MOVE TO HOLE

DRILL

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21				20.8 - 21 boulder - granitoid
22			02	21 - 22.7 Lower Till(?) Missinaibi clay overlying "Lower Till" may be a rip-up clast suggesting Lower Till may actually be Matheson Till
23			03	- till has a grey-beige, fine sand and silt matrix; cobble size clasts - clast supported; clast composition -
24			04	80% intermediate-mafic volcanics and sediments; 20% granitoids; - rare limestone pebbles
25				
26				
27				
28				
29				
30				22.7 - 24.5 Bedrock:- altered mafic volcanic:- grey-beige; grain size of <0.1mm; well foliated; highly altered with 10%(+) very slowly reactive Fe/Mg carbonate; no relict mafic mineral observed; 2-4% quartz stringers -- with local semi-massive pyrite at vein margins (1-2% overall);
11				
12				
13				
14				
15				
16				
17				23.2 - 23.4 white quartz vein + minor Fe/Mg carbonate
18				23.4 - 24.5 as from 22.7 - 23.2 but bedrock contains ~5% quartz + carbonate veinlets
19				
20				

24.5m (82') EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 18 1989

SHIFT HOURS
_____ TO _____

TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO CB-89-78 LOCATION 62E 4N ELEVATION 282

GEOLOGIST P. Gillies DRILLER G. Hovey BIT NO. CB70223 BIT FOOTAGE 0.0-65.5

MOVE TO HOLE 9:30 - 10:00

DRILL 10:00 - 4:30

MECHANICAL DOWN TIME

DRILLING PROBLEMS

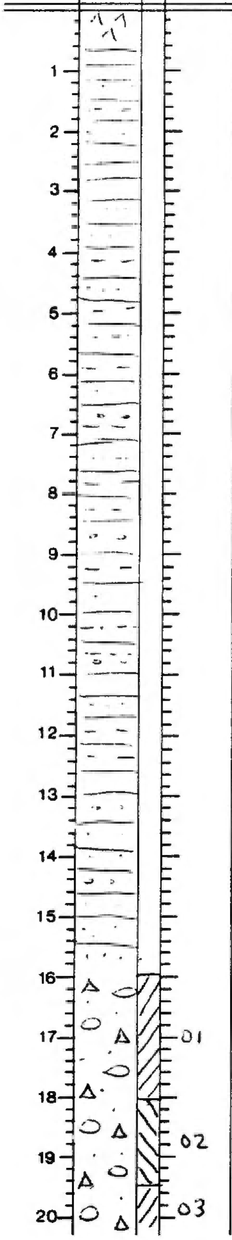
OTHER ~~4:3~~ Travel 5:00 - 5:15

MOVE TO NEXT HOLE 4:30 - 5:00

New Bit

Pg 1 of 4

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



0.0 - 0.5 Organics

0.5 - 15.8 Ojibway II Sediment

(0.5 - 4.0) beige (oxidized) slightly gritty soft clay

(4.0 - 15.3) beige very fine to fine sand interbeds with occasional pebble clasts

15.8 - 50.0 Matheson Till

greybeige fine sand / silt matrix supported. Cobble clasts of composition: 55% Volcanics and Sediments; 45% Granitoids.

(19.0 - 20.5) there is an increase in percentage of volcanics and sediments to 65%. Otherwise similar above.

Note check logged by Kenzie McNeil March /89.

Hole is correct as logged in the Field.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 18 1989

HOLE NO CB-89-78 LOCATION 62E 4N ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS

______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS

______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

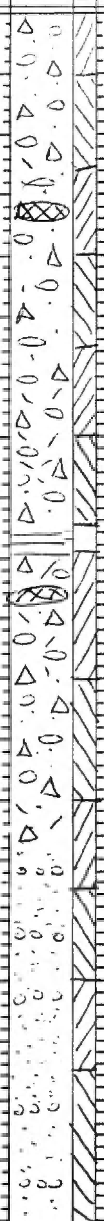
CONTRACT HOURS

______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES: 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40



SAMPLE NO.	DESCRIPTIVE LOG
03	23.2 - 23.5 small boulder - granite
04	23.9 - 26.8 Till becomes clast supported with 1-2% grey gritty clay in matrix; otherwise it is similar to 15.8 to 19.0
05	
06	26.8 - 27.8 there is an increase in grey gritty clay in matrix till becomes very clay rich at 27.6
07	27.8 - 28.2 similar to 23.9 to 26.8
	28.2 - 28.7 similar to 26.8 - 27.8
08	28.7 - 29.0 compact hard brownish organic clay bed slightly gritty to non gritty.
09	29.0 - 29.6 clay rich till similar to 26.8 to 27.8
	29.6 - 29.8 small boulder - gabbro
10	29.8 - 31.0 similar to 26.8 - 27.8
	31.0 - 33.2 similar to 23.9 - 26.8
	33.2 - 34.0 clay rich till similar to 26.8 to 27.8
11	34.0 - 41.5 Sediments
12	predominantly sorted beige to beige grey medium to coarse grained sand. Below 34.5 there are
13	beige fine sand interbeds. Also pebble gravel interbeds; 60%
14	Volcanics & sediments; 40% Granitoids. (non oxidized)

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 19 1989
HOLE NO CB-89-78 LOCATION 62E 4N ELEVATION
GEOLOGIST DRILLER BIT NO. BIT FOOTAGE
SHIFT HOURS
TO
MOVE TO HOLE
DRILL
TOTAL HOURS
MECHANICAL DOWN TIME
DRILLING PROBLEMS
CONTRACT HOURS
OTHER
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
41			14, 15	41.5 - 44.0 gradational contact into grey beige fine sand/silt matrix. Cobble clasts of composition 55% Volcanics and sediments; 45% Granitoids.
42, 43			16	
44			17	44.0 - 44.7 clay rich till; otherwise similar to 41.5 - 44.0
45, 46			18	44.7 - 45.0 matrix becomes slightly sorted (silt deficient)
47, 48			19	45.0 - 50.0 similar to 44.0 - 44.7 only less clay rich downsection.
49, 50, 51			20	50.0 - 57.6 Missinaibi Sediments colour change to sample; becomes beige-ochre in colour. Contact is gradational.
52, 53, 54			21, 22	beige ochre sorted medium to coarse sand with very fine to fine grained sand interbeds downsection with thin pebble/granule beds.
55, 56, 57			23, 24	(53.0 - 57.6) matrix supported gravel medium to coarse sand matrix (sorted). Cobble/Pebble clasts of composition: 60% Volcanics and sediments; 40% Granitoid.
58, 59, 60			25, 26	Many of clasts are oxidized.

Note: When transferring rough notes to good copy I neglec (through human error) to inclu description of interval 57.6 to 60.8. Rough log description is as bel

57.6 - 65.5 Lower Till

beige grey fine sand matrix slightly sorted (matrix support Cobble clasts of composition 70% Volcanics and sediment 30% Granitoids.

R. Collins

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 19 1989

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-78 LOCATION ______ ELEVATION ______
GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______
MOVE TO HOLE ______
DRILL ______
MECHANICAL DOWN TIME ______
DRILLING PROBLEMS ______
OTHER ______
MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			26	60.8 - 61.6 sorted beige fine grained sand
61				
62			27	61.6 - 63.5 similar to 57.6 - 60.8
63			28	63.5 - 65.5 Bedrock
64				- medium green (bleached)
65			29	- fine grained
66				- foliated (not distinctive)
67				- chloritized
68				- carbonatized ~~35%~~ Fe/Mg
69				- FeO in places
70				- ≤ 1% sulphides occasional cubic pyrite xstals
71				- 2-3 % quartz/carbonate veinlets.
72				Altered Volcanic - Mafic
73				
74				Peter Collins
75				
76				
77				
78				
79				
80				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 23 1989

SHIFT HOURS

____ TO ____

TOTAL HOURS

____

CONTRACT HOURS

____

HOLE NO CB-89-79 LOCATION L33E; 25N ELEVATION 285

GEOLOGIST K MacNeil DRILLER J Howg BIT NO. CB70242 BIT FOOTAGE 24.5-66.

MOVE TO HOLE 11:15-11:30

DRILL 11:30-4:30

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER 4:15-5:30 GT to road and pick up water; 5:30-6:00 Trav.

MOVE TO NEXT HOLE 4:30-4:45

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0-0.5 Organics
1				0.5-18.0 Ojibway II Sediments
2			01	0.5-~1.2 clay - brown, oxidized, gritty
3				~1.2-3.0 pebbly sand (Cochrane related) - oxidized fine to medium grained sand with abundant pebbles and granules; clast composition - 60% limestone, 25-30% granitoids, <10% volcanics - a few oxidized clay partings
4				
5				
6				
7				
8				3.0-10.5 clay - grey (unoxidized); slight grit and rare pebbles; silt becomes common below 5.0m; clay contains negligible grit below about 8.5m
9				
10				
11				
12				10.5-18.0 silt predominant
13				18.0-19.9 Matheson Till
14				grey-beige, unsorted fine sand and silt matrix (grey gritty matrix clay from 18.4-18.7); cobble size clasts; clast composition - 55% intermediate-mafic volcanics and sediment, 45% granitoids
15				
16				
17				
18				
19			02	19.5-19.8 boulder:- diabase
20			03	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 23 1989

HOLE NO CB-89-79 LOCATION L33E; 25N ELEVATION 285

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21–34				19.9 – 34.4 Missinaibi Formation 19.9 – 23 clay - grey; compact. difficult to penetrate; non-gritty 23 – 23.6 clay - brown; organic rich - CHARACTER SAMPLE TAKEN 23.6 – 24.1 fine grained sand predominant with common gritty clay partings and a few pebbles 24.1 – ~33 clay - light grey; compact; pure with local gritty zones; 24.5 – 24.8 - gritty pebbly clay similar to gritty Ojibway II sediments ~33 – 34.4 very fine sand/silt with common clay partings
35			04	34.4 – 40.4 Lower Till grey-beige, poorly sorted fine to medium grained sand matrix; abundant pebbles and scattered cobbles; abundant return of sub-rounded pebbles, many of which display striations; clast composition: 85% intermediate-mafic volcanics and sediments 15% granitoids
37			05	
38			06	
40			07	40.2 – 40.4 grey gritty matrix clay

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 23 1989

HOLE NO CB-89-79 LOCATION L 33E; 25N ELEVATION

GEOLOGIST DRILLER BIT NO. BIT FOOTAGE

SHIFT HOURS

TO

MOVE TO HOLE

DRILL

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			07 (continued)	
41			08	
42				40.4 – 42 Bedrock: altered volcanic (possibly an intermediate tuff) light greenish beige; grain size of 0.1 – 0.2 mm; well foliated; appears to possess a slightly granular / sugary texture; sample is bleached but not carbonatized -- may be silicified; 3-5% clear to black veinlets and stringers of quartz ± tourmaline(?); scattered pyrite cubes (< 0.3%) are associated with the veinlets
43				
44				
45				
46				
47				
48				
49				
50				
11				41.3 – 41.5 shear zone with a 4 cm white quartz vein
12				
13				42 m (140') EOH
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 20 1989
SHIFT HOURS
____ TO ____
TOTAL HOURS
CONTRACT HOURS

HOLE NO CB-88-80 LOCATION 626 0+00 ELEVATION 282
GEOLOGIST P. Collins DRILLER G. Houg BIT NO. CB70228 CB70229 BIT FOOTAGE 65.5-98.5 0.0-19.5
MOVE TO HOLE 4:30-5:00 Jan 19
DRILL 7:00-12:45
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER
MOVE TO NEXT HOLE
New bit

Pg 1

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	
0–10				0.0 - 0.5 organics 0.5 - 10.0 Ojibway II Sediments (0.5-7.0) grey slightly gritty soft clay (7.0-10.0) clay with fine sand interbeds.	Note: Check logged entire hole April 89 / by P. Collins. All samples are correct as logged in the field. Unit designations are as follows. The interval 10.0 - 46.3 = Matheson Till unit 4. The clay interval 32.0 - 37.2 appears to be a rip up clast from Missinaibi Sediments subunit 3c. The interval 46.3 - 50.2 belong to Missinaibi Sediments subunit 3a.
10–20			01, 02, 03, 04, 05, 06, 07	10.0 - 46.0 Matheson Till grey beige fine sand / silt and grey gritty clay matrix (1-2%) (matrix supported) Cobble clasts of composition: 55% Volcanics and sediments; 45% Granitoids Till becomes cobblier downsect. almost clast supported	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 20 19 89

HOLE NO CB-89-80 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21			07	26.3 - 27.0 Till is clay rich (15 - 20%) grey gritty clay otherwise similar to 10.0 - 26.3
22			08	
23			09	27.0 - 32.0 similar to 10.0 to 26.3 (homogenous till)
24				
25			10	32.0 - 37.2 Missinaibi Sediments (ripup ~~clast~~)
26				32.0 - 33.5 compact, tough slightly gritty beige-grey clay. Becomes very compact / hard / nongritty below 32.2 (bit easily plugs)
27			11	
28			12	33.5 - 34.8 brownish (organic) gritty clay with thin fine sand interbeds.
29			13	
30				34.8 - 35.2 similar to 33.5 - 34.8 with organics / wood chips and occasional pebble clast (Ochre in colour)
31			14	
32			15	35.2 - 36.8 returns to nongritty very compact, hard clay with occasional pebble clast. Gritty between 36.0 - 36.8
33				
34				
35				36.8 - 37.2 non gritty, hard compact grey brown clay
36				
37			16	37.2 - 46.3 Till
38			17	gradational contact into matrix supported till grey beige fine sand silt matrix. Cobble clasts of approximate composition: 60% Volcanics and sediments; 40% Granitoids. Occasional thin fine sand bed.
39				
40			18	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 20 1989

HOLE NO CB-89-80 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

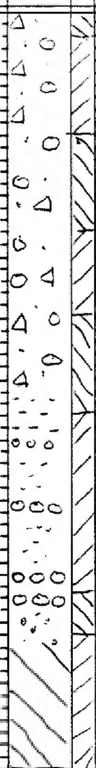
DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



Depth in metres: 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60

Sample No.: 18, 19, 20, 21, 22, 23, 24, 25

42.8 - 43.5 1-2 % grey ginth clay in matrix

43.5 - 46.3 similar to 37.2 - 42.8

46.3 - 49.3 beige sorted fine and medium grained sand with occasional pebble beds

49.3 - 50.2 matrix supported gravel - Medium sand matrix Cobble clasts of composition 65% Volcanics and Sediments 35% Granitoids

50.2 - 52.5 Bedrock

dark grey to black; very fine grained; well developed foliation; soft - abundant rock powder/clay lumps; below 51.6 quartz carbonate veinlets (calcite); ≤1% sulphides

Meta sediments - siltstone

52.5 E.O.H.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 24 1989

SHIFT HOURS
_____ TO _____

TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO CB-89-81 LOCATION L 30E; 26 N ELEVATION 285 m

GEOLOGIST K MacNeil DRILLER I Howg BIT NO. CB70243 BIT FOOTAGE 66.5 - 95.5

MOVE TO HOLE _____

DRILL 7:15 - 10:45

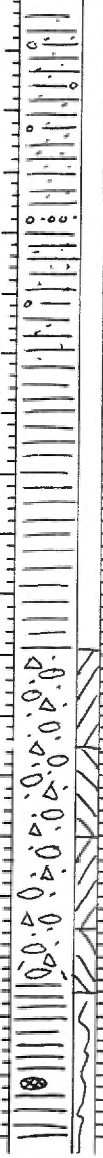
MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER 6:30 - 6:45 To drill road; 6:45 - 7:15 Load Fuel / GT to drill

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



Depth scale: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

Sample No.: 01, 02, 03, 04

Organics at surface - little return to 1.4

1.4 - 11.9 Ojibway II Sediments

clay - grey; slightly gritty; scattered limestone, granitoid and volcanic pebbles

4.8 - thin pebbly band

- gradational change downhole (by 7.5m) to pure non-gritty clay

11.9 - 17.5 Matheson Till

grey-beige, unsorted, fine sand and silt matrix; cobbly; clast composition -

50:50 intermediate to mafic volcanics and sediments versus granitoid clasts

- scattered limestone pebbles

- till is very homogeneous in composition, texture

17.0 - 17.5 gritty clay matrix appears at 17m and becomes less gritty to 17.5m - transitional from Matheson Till to Missinaibi Sediments

17.5 - 26.2 Missinaibi Sediments

clay :- grey; pure - non gritty; compact and difficult to penetrate; very slight local grit

@ 19.1m - small basalt boulder

20.4 - 20.5 sand/pebble seam

20.9 - 21.1 gritty clay and fine sand bed

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 24 1989

SHIFT HOURS

____ TO ____

TOTAL HOURS ____

CONTRACT HOURS ____

HOLE NO CB-89-81 LOCATION L30E; 26N ELEVATION 285 m

GEOLOGIST ____ DRILLER ____ BIT NO. ____ BIT FOOTAGE ____

MOVE TO HOLE ____

DRILL ____

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21			05	21.1-21.4 sand - grey, fine grained; minor volcanic pebbles and gritty clay
22				21.4-21.8 clay - greenish-grey; compact; slightly gritty
23				21.8-21.9 clay - brown; organic rich; gritty; CHARACTER SAMPLE TAKEN
24				
25				21.9-22.1 sand - fine grained with thin clay partings
26			06	22.1-26.2 clay - grey; non gritty; compact
27			07	
28			08	26.2-27.4 Lower Till grey-beige, unsorted fine sand and silt matrix; cobble size clasts; clast composition - 90% intermediate-mafic volcanics and sediments 10% granitoids
29				
30				
11				
12				
13				27.4-29m Bedrock:- mafic volcanic (basalt):- medium grey-green; 0.1 mm grain size; rock composed of an intergrowth of plagioclase and chloritized pyroxene. sample is well to moderately foliated; 0.5% disseminated pyrite cubes
14				
15				
16				
17				
18				
19				29m (98') EOH
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 20 19 89

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-82 LOCATION L66E 3N ELEVATION 281

GEOLOGIST P. Collins DRILLER G. Hong BIT NO. CB70230 BIT FOOTAGE 0.0

MOVE TO HOLE 12:45 - 1:30

DRILL 1:30 - 5:00

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0.0 - 0.5 Organics
1				0.5 - 7.2 Ojibway II Sediments
2				grey beige soft slightly gritty clay with occasional fine sand interbed.
4				(4.4 - 5.0) Possibly Cochrane till. beige fine grained sand; small pebble clasts; 50% Volcanics & sediments; 45% Granitoids 5% limestone. (very few clasts; unable to obtain sufficient sample).
9			01	(5.0 - 7.2) soft, grey, non gritty clay
10				7.2 - 47.8 Matheson Till
11			02	beige slightly sorted (silt deficient) fine sand matrix
13			03	Cobble clasts of approximate composition: 50% Volcanics and Sediments; 50% Granitoids some of which are oxidized
15			04	(reworked from Missinaibi Sediments).
17			05	- matrix becomes less sorted in appearance downsection; however, there is an occasional
18			06	sorted fine to medium grained sand bed
19				15.0 - 20.0 Till is cobbly; borders
20			07	on being clast supported.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 20/21 19 89

SHIFT HOURS

____ TO ____

TOTAL HOURS

____

CONTRACT HOURS

____

HOLE NO CB-89-82 LOCATION ____ ELEVATION ____

GEOLOGIST ____ DRILLER ____ BIT NO. ____ BIT FOOTAGE ____

MOVE TO HOLE ____

DRILL ____

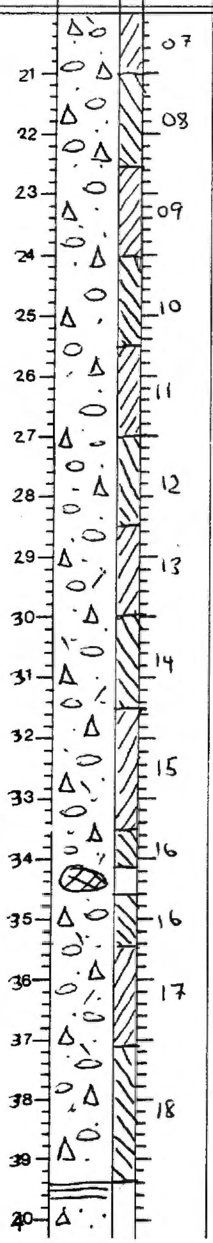
MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER ____

MOVE TO NEXT HOLE ____

Pg 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21–40			07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 16, 17, 18	- below 23.5m there is an increase in percentage of volcanics & sediments to 60%.

- below 23.5m there is an increase in percentage of volcanics & sediments to 60%.

29.0 - 31.0m 2-3% grey gritty clay in matrix

31.0 - 34.0 Till matrix becomes clay rich (up to 60%) resulting in less return on sample. Small cobble clasts : 65% Volcanics and sediments ; 35% Granitoid

34.0 - 34.5 Boulder - Volcanic

34.5 - 39.5 Similar to 31.0 - 34.0

39.5 - 39.7 grey, compact pure clay

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 22 1989

HOLE NO CB-89-82 LOCATION Line 66E 3+00 N ELEVATION 280 m

GEOLOGIST TURNER DRILLER G. Hwg BIT NO. CB70230 BIT FOOTAGE

SHIFT HOURS

TO

MOVE TO HOLE

DRILL 7:00 - 8:45

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER

MOVE TO NEXT HOLE

p.3

DEPTH IN METRES	SAMPLE NO.	DESCRIPTIVE LOG
41	19	40.5 - 47.8 light grey-beige, silt-fine sand matrix with minor clay. Matrix supported with only few cobbles. clasts 60% Abitibi metavolcanics and metasediments and 40% granitic.
42–43	20	
44	21	
45–46	22	47.4 clasts 95% grey-black siltstone and schist < 5%, and trace pyrite < .5%.
47	23	47.8 - 49.5 BEDROCK
48–49	24	fine grained, black siltstone with trace of pyrite < 1%.
50		49.5 END OF HOLE

R. Turner.

11 12 13 14 15 16 17 18 19 20

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 24 1989

SHIFT HOURS ____ TO ____

TOTAL HOURS ____

CONTRACT HOURS ____

HOLE NO CB-89-83 LOCATION L55E; 28+50N ELEVATION 289 m

GEOLOGIST K MacNeil DRILLER J Howg BIT NO. CB70244 BIT FOOTAGE 0-20

MOVE TO HOLE 10:45 - 12:15

DRILL 12:15 - 2:36

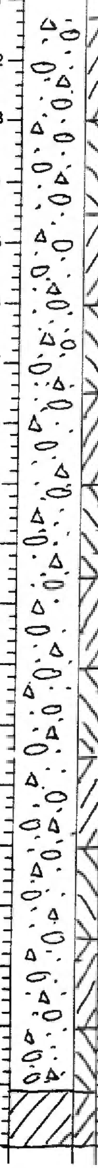
MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER ____

MOVE TO NEXT HOLE ____

New Bit

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1				0-1.3 Little Return - minor organics; a little clay below 1.0m
2			01	1.3 - 19.1 Matheson Till
3				grey-beige, unsorted fine sand and silt matrix. cobbly; clast composition
4			02	60-65 % intermediate-mafic volcanic and sediments
5			03	35% granitoids
6				trace amounts of limestone
7			04	- till is clast supported above 4.0m and matrix supported below 4.0m
8			05	- minor grey gritty matrix clay @ 5.1 and 6.0m
9				
10			06	18.7-19.1 abundant rock chips similar to bedrock but also abundant matrix sand and granules - may be contamination of bedrock by overlying till
11			07	
12				
13			08	19.1 - 20 Bedrock:- greywacke:- dark grey; grain size of <0.1mm; poor foliation; weakly calcareous (2-3 % disseminated calcite); rare siltstone partings
14			09	
15				
16			10	
17			11	20 m (68') EOH
18				
19			12	
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 21 19 89

HOLE NO CB-89-84 LOCATION L70E - 1+25N ELEVATION 280 M

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70231 BIT FOOTAGE

SHIFT HOURS ____ TO ____

MOVE TO HOLE 9:30 - 10:00

DRILL 10:00 - 3:45

TOTAL HOURS

MECHANICAL DOWN TIME

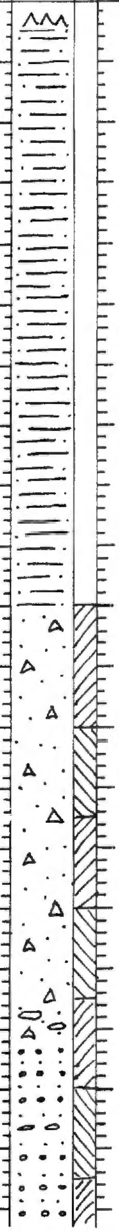
DRILLING PROBLEMS

CONTRACT HOURS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



Depth (m): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

Sample No.: 01, 02, 03, 04, 05, 06, 07

0-0.5 ORGANICS

0.5-10.0 OJIBWAY II SEDIMENTS

0.5-1.5 Beige-brown gritty clay, grading into light gray clay at 1.5m.

10.0-17.2 MATHESON TILL

matrix silt-fine sand, light beige gray, matrix supported. Clasts include ~40% mafic volcanics, 40% black siltstone and schist and 20% granitic; <1% limestone. Very homogeneous.

16.8 till becomes cobbly

17.2 - 71.5 Interbedded sands and gravel and minor clay.

17.2-22.8 fine - medium beige, well sorted sand interbedded with cobbly gravel. Clasts include: 40-50% black siltstone, schist and (<5%) quartz, 30-40% volcanics and <20% granitic.

Note: check logged character splits March /89 by R Collins.

The interval 10.0 to 17.2 is Matheson Till as logged. Samples 05 to 23 are also till and not sand and gravel as logged. They consist primarily of unsorted grey beige fine sand silt matrix size range of grains (<50µ to 250µ) Pebble and cobble clasts (+10 mesh) which are angular and subangular. There is an occasional sorted interval as in sample#17 which has up to 40% sorted medium grained sand (250µ to 450µ) typical of thick Matheson Till units.

Sample #23 has 2 population present 70% of sample is grey beige unsorted fine sand/silt (<50µ to 250µ). 30% of matrix is sorted fine grained sand (150µ to 250µ). No visible +10 mesh clasts yet there are -10 mesh cuttings. Beyond sample 23 the samples consist of Sand and gravel. Beige and beige grey medium and coarse sands of size ranges (250µ to 500µ) and (500µ to 1000µ) Also fine grained sand beds (150µ to 250µ). Gravel interbeds consist of rounded & subrounded granule & pebble sized clasts (10% of which are oxidized)

Conclusion: The contact between Matheson Till & underlying Missinaibi Sediments is approximately 46.0m (within sample 22)

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 21 19 89

HOLE NO CB-89-84 LOCATION L 70 E 1+25 N ELEVATION 280 m

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS
______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS
______

MECHANICAL DOWN TIME ______

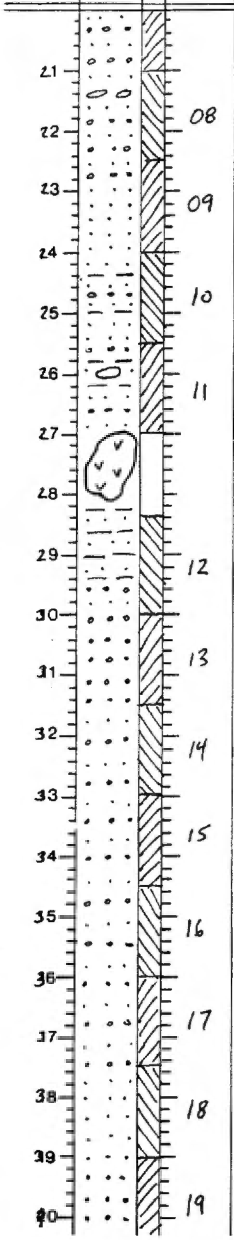
DRILLING PROBLEMS ______

CONTRACT HOURS
______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



22.8 - 24.2 fine - medium, well sorted sand no gravel.

24.2 - 29.6 fine - medium sand with light gray clay beds and < 10% pebbles.

27.1 - 28.2 bleached basalt boulder.

29.6 - 44.7 Well sorted sand and pea size gravel beds. clasts 40-50% black siltstone and schist, volcanic 30-40%, granitics 10%, quartz <5%

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 21 19 89

HOLE NO CB-89-84 LOCATION L 70 E 1+25 N ELEVATION 280 m

GEOLOGIST ____ DRILLER ____ BIT NO. ____ BIT FOOTAGE ____

SHIFT HOURS ____ TO ____

MOVE TO HOLE ____

DRILL ____

TOTAL HOURS ____

MECHANICAL DOWN TIME ____

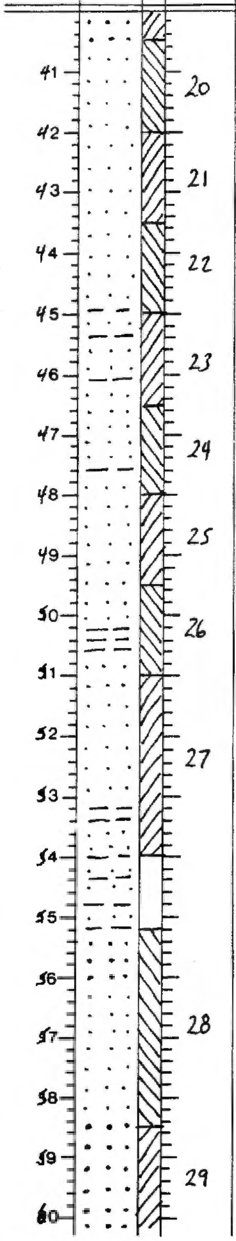
DRILLING PROBLEMS ____

CONTRACT HOURS ____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



44.7 - 55.2 Well sorted light grey fine sand and silt containing < 5% medium grey gritty clay.

55.2 - 70.5 Alternating beds of fine to medium sand and coarse gravel. Clast include 40-50% black siltstone, schist; 30-40% mafic volcanic ; < 20% granitic; < 5% quartz.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 21 1989

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-84 LOCATION L 70 E 1+25 N ELEVATION 280 m

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

MOVE TO HOLE ______

DRILL ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	SAMPLE NO.	DESCRIPTIVE LOG
61	29	
62		64.5 clast in gravel are almost entirely black siltstone, schist, (70-80%); quartz <10%; volcanics <10%.
63	30	
64		
65		70.0 - 70.5 clast are entirely siltstones hosting quartz veins (<15%) and massive pyrite mineralization 5-10%. Graphitic (oily) film was observed on water.
66	31	
67		
68		
69	32	70.5 - 72.0 this interval was sampled as gravel. clasts are 100% black siltstone, reflecting the underlying bedrock. It is possible the sample interval is weathered bedrock.
70		
71	33	
72		
73	34	72.0 - 74.0 BEDROCK black, fine-grained, graphitic siltstone hosting quartz veins (10-20%) and sulphides (pyrite 5-10%).
74		
75		
76		
77		74.0 END OF HOLE
78		R. Turner
79		
80		

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 24 1989

SHIFT HOURS
_______ TO _______

TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO CB-89-85 LOCATION L52E; 29N ELEVATION 293
GEOLOGIST K MacNeil DRILLER I Howg BIT NO. CB70244 BIT FOOTAGE 20-42.5
MOVE TO HOLE 2:30-2:45
DRILL 2:45-5:15
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER 6:00-6:30 Travel
MOVE TO NEXT HOLE 5:15-6:00

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
				0 - 1.3 No Return						
1				1.3 - 7.1 Ojibway II Sediments						
2				1.3 - ~6.0 clay - grey; minor beige (oxidized) clay initially; clay is gritty with rare pebbles						
5				~6.0 - 7.1 clay :- pure; non-gritty; no pebbles						
6				7.1 - 22.7 Matheson Till						
7				grey-beige, fine sand and silt matrix; cobbly - matrix supported; clast composition -						
8			01	55% intermediate-mafic volcanics and sediments						
10			02	45% granitoids						
11			03	< 1% limestone and quartz vein material						
12				11.4 - 11.6 boulder - intermediate volcanic						
13			04							
14			05	22.6 - 22.7 small granodiorite boulder						
16			06							
17			07							
19			08							
20										

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 24 1989

HOLE NO CB-89-85 LOCATION L52E ; 29N ELEVATION ____

GEOLOGIST ____ DRILLER ____ BIT NO. ____ BIT FOOTAGE ____

SHIFT HOURS
____ TO ____

MOVE TO HOLE ____

DRILL ____

TOTAL HOURS
____

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

CONTRACT HOURS
____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
			09							
21										
22			10	22.7 – 23.5 <u>Bedrock</u> :- greywacke(?) - possibly a massive andesite :- medium grey, fine grained (< 0.1mm); mineralogy not distinct; generally massive; appears finely banded (on the order of less than 1mm); 0.2% disseminated pyrite						
23			11							
24										
25										
6										
7				23.5m (78') EOH						
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 21 1989

SHIFT HOURS

____ TO ____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-86 LOCATION L 74E 1+75 N ELEVATION 276 m

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70231 BIT FOOTAGE

MOVE TO HOLE 3:45 - 4:30

DRILL 4:30 - 5:00

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
	^^			0 - 0.5 ORGANICS
1				0.5 - 35.8 OJIBWAY II SEDIMENTS
2				0.5 - 1.0 light beige-brown gritty clay, grades into light gray gritty clay by 1.5 m.
4				1.5 - 21.0 light gray gritty clay
5				21.0 - 35.8 light gray, soft clay, smooth very little gritt.
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 22 19 89

SHIFT HOURS

____ TO ____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-86 LOCATION L 74 E 1+75 N ELEVATION 276 m

GEOLOGIST ____ DRILLER ____ BIT NO. ____ BIT FOOTAGE ____

MOVE TO HOLE ____

DRILL 7:00 - 8:45

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER ____

MOVE TO NEXT HOLE 8:45 - 9:45

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21				35.8 - 57.0 Interbedded fine sand, silt and pea size gravel. Well sorted. Minor grey silty-clay beds < 5%.
22				
23				
24				36.0-37.0 Coarse pebbly gravel. clast composition ~ 40% basalt, 41% sediments, 20% granitic, < 1% quartz.
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				36.0 - 37.2 gravel clasts include 40% basalt, 30-40% siltstone & schist, < 20% granite, quartz < 1%.
37			01	
38			02	
39				37.2 - 39.5 silt - fine sand, beige very little return
40			03	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 22 19 89

HOLE NO CB - 89 - 86 LOCATION L 74 E 1+75 N ELEVATION 276 m

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
41			03	39.5 - 46.8 Gravel, pebbly. clast composition as above.
42				
43			04	46.8 - 55.5 silt with minor gray silt and clay beds (very little return), and less than 5% pebbles.
44			05	
45				
46			06	
47				
48			07	
49				
50				
51			08	
52				
53				
54			09	
55				55.5 - 57 pebbly gravel clasts include 40-50% siltstone and schist, 40% volcanic, < 10% granitic. Pyrite was observed in black siltstones < 1%.
16			10	
17				
18			11	
19				57.0 - 58.5 BEDROCK black fine grained siltstone interbedded with grey quartzite. quartz veining < 5%.
20				

R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 25 1989

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-87 LOCATION L24+25E; 24N ELEVATION 285
GEOLOGIST K MacNeil DRILLER J Houg BIT NO. CB70244 BIT FOOTAGE 42.5-57
MOVE TO HOLE 6:45-8:15
DRILL 8:15 - 9:45
MECHANICAL DOWN TIME ______
DRILLING PROBLEMS ______
OTHER 6:30 - 6:45 To drill
MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–1.3				0-1.3 No Return
1.3–10.2				1.3 - 10.2 Ojibway II Sediments
				1.3 - 2.7 bedded fine beige (oxidized) sand and beige (oxidized) gritty clay; section becomes grey (unoxidized) below ~2.0m; section contains a few thin pebbly sand sections rich in limestone
				2.7 - 10.2 clay:- grey; gritty with scattered pebbles of limestone, granitoids and volcanics/sediments
				- poor return of sample from 3.0-10.2 m
10.2–12.6			01, 02	10.2-12.6 Matheson Till
				grey-beige, unsorted, fine sand and silt matrix; minor gritty clay matrix at 10.2 and 12.1m; till is cobbly but matrix supported; clast composition - 75% volcanics/sediments 25% granitoids negligible limestone
12.6–14.5			03	12-6 - 14.5 Bedrock :- siltstone:- dark grey to black; very fine grained (<< 0.1mm); sub-fissile; pyrite occurs as very fine disseminations and local concentrations but the overall percentage is about 0.5%; sample contains rare black mudstone partings and a few percent foliation parallel quartz stringers below 13.3m

14.5m (48') EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 22 19 89

SHIFT HOURS

TO

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-88 LOCATION L 50 E 6+75 S ELEVATION 282 m

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70231 BIT FOOTAGE

MOVE TO HOLE 8:45 - 9:45

DRILL 9:45 - 11:15

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 - 1.5 ORGANICS
1				1.5 - 20.0 OJIBWAY II SEDIMENTS
2				1.5 - 4.0 light grey gritty clay.
3				4.0 - 13.5 light beige silt-fine sand with minor grey silt-clay beds (<5%)
4				13.5 - 16.5 silt
5				16.5 - 17.0 silt-clay
				17.0 - 20.0 silt
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 22 19 89

HOLE NO CB-89-88 LOCATION L 50E 6+75 S ELEVATION 282 m

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS
______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

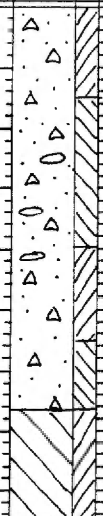
DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21			01	20.0 – 26.6 MATHESON TILL
22				light beige-gray fine sand-silt matrix supported till. Clasts include 40-50% mafic volcanics, 30-40% black siltstone, 20% granitic.
23			02	
24				25.7 Schist cobble
25			03	
26			04	26.6 - 28.5 BEDROCK
27				fine grained black siltstone, no quartz veining or sulphides observed.
28			05	
29				28.5 END of HOLE
30				R. Turner
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				



OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 25 1989
SHIFT HOURS
____ TO ____
TOTAL HOURS
____
CONTRACT HOURS
____

HOLE NO CB-89-89 LOCATION L27E; 23+25N ELEVATION 288
GEOLOGIST K MacNeil DRILLER J Howg BIT NO CB70244 BIT FOOTAGE 57-75.5
MOVE TO HOLE 9:45-10:00
DRILL 10:00-12:00
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	
				0-1.2 No Return	* Sample 01 - long sample interval but mostly material from above 4.7m
1				1.2-4.4 Ojibway II Sediments	
2				clay :- brown (oxidized) - some organic rich clay initially; clay is gritty with scattered limestone and granitoid pebbles; clay changes (gradationally) to a grey color below ~3.0m	
5				4.4-4.7 Matheson Till	
6			01*	grey-beige, unsorted fine sand and silt matrix; pebbly; clast composition of 50:50 intermediate volcanics and sediments versus granitoids	
8				4.7-16.9 Missinaibi Sediments	
9				4.7-14.5 clay - grey, non-gritty, compact	
10				@14.5 intersect a thin brown organic rich gritty clay followed by fine grey sand and grey clay partings	
12				15.0-15.1 - brown, organic rich clay	
13				@15.1 intersect a volcanic cobble	
14				15.2-15.5 brown, organic rich gritty clay with minor pebbles and grey clay partings	CHARACTER SAMPLE TAKEN OF BROWN ORGANIC RICH CLAY PRESENT FROM 14.5-16.0m
15				15.5-15.9 grey gritty clay with occasional volcanic pebbles	
16				@15.9 thin brown organic rich clay seam	
17			02	16.0-16.7 clay - grey, non gritty, compact	
18				16.7-16.9 grey gritty clay and a few pebbles	
19				16.9-18.5 Bedrock:- altered (mafic ?) volcanic :- grey-beige, grain size of <0.1mm; well foliated to schistose; bleached and altered - contains some very poorly reactive Fe/Mg carbonate but percentage is not evident; grey, chloritic/sericitic slip planes from 18.0-18.2 and a few quartz-carbonate veinlets	18.5m (62') EOH
20					

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 22 19 89

SHIFT HOURS

______ TO ______

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-90 LOCATION L 46+50E 4+00 S ELEVATION 282

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70232 BIT FOOTAGE 0-

MOVE TO HOLE 11:15 - 12:00

DRILL 12:00 - 2:15

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

NEW BIT

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 - 0.5 ORGANICS
1				0.5 - 14.4 OJIBWAY II SEDIMENTS
2				0.5 - 8.8 light beige-gray gritty clay
				8.8 - 14.4 silt
3				
4				14.4 - 30.9 MATHESON TILL
5				light beige-gray silt fine sand matrix supported till. Clasts include 40-50% volcanics, siltstone and schists 40%, granitic <20%, and limestone <5%.
7				18.5 Basalt cobble, (till become cobbly)
8				
9				
10				
11				
12				
13				
14				
15			01	
16				
17			02	
18				
19			03	
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 22 19 89

HOLE NO CB-89-90 LOCATION L 46+50 E 4+00 S ELEVATION 282

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

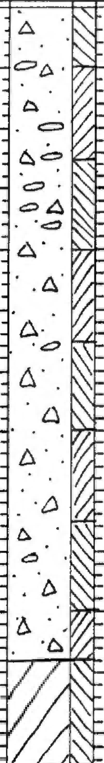
MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______



DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21			04	21.0 basalt cobble
22			05	22.0 granite cobble 22.5 bleached basalt cobble
23			06	25.5-30.9 increase in volcanic clasts 60-70% basalts. Till is still matrix supported cobbly till, < 20% granite, < 20% schist, < 1% limestone
24–25			07	
26			08	30.9 - 32.5 BEDROCK fine grained grey black siltstone no quartz vein or sulphides observed
27–28			09	
29			10	
30			11	
31–32			12	
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 25 1989

SHIFT HOURS ____ TO ____

TOTAL HOURS ____

CONTRACT HOURS ____

HOLE NO CB-89-91 LOCATION L30E; 22+25N ELEVATION 288

GEOLOGIST K MacNeil DRILLER J Houg BIT NO. CB70245 BIT FOOTAGE 0-17

MOVE TO HOLE 12:00-12:15

DRILL 12:15-2:00

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

New Bit

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0-1.0 No Return - mostly organics
1				1.0-8.4 Ojibway II Sediments
2–4				1.0-~4.5 clay:- grey; gritty; minor pebbles; clay becomes softer and soupier downhole
4–6				~4.5-8.4 clay:- very soft; essentially contains no grit; very soupy
6				8.4-14.9 Matheson Till
7–8				grey-beige; unsorted, fine sand and silt matrix; cobble size clasts; clast composition -
9			01	55% intermediate-mafic volcanics and sediments
10			02	45% granitoids <1% limestone
11				@13.3 -5% vein quartz chips
12			03	@13.5 till is clast supported with 70% of clasts being volcanics and
13			04	sediments; by 14m, 90% of the clasts are volcanics and sediments
14			05	14.9-17 Bedrock :- ultramafic volcanic :- much of sample ground to a grey white
15–16			06	calcareous clay; competent chips are dark grey, sheared with a silky/soapy sheen
17–20				along foliation planes - probably talc; clay and competent chips contain 2-3 % pyrite; local brown oxidized shears(?);

16.2-16.3 more competent grey/black chips - strongly sheared

16.3-16.4 sample becomes grey white and is strongly sheared; competent chips contain 5% pyrite as disseminations and crystalline concentrations

17m (57') EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 22 1989

SHIFT HOURS ____ TO ____

TOTAL HOURS ____

CONTRACT HOURS ____

HOLE NO CB-89-92 LOCATION Line 14+25E 7+00S ELEVATION 281 m

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70232 BIT FOOTAGE ____

MOVE TO HOLE 2:15 - 2:45

DRILL 2:45 - 4:45

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER travel 5:15 - 5:30

MOVE TO NEXT HOLE 4:45 - 5:15 (to Road)

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0				0 - 0.5 ORGANICS
1				0.5 - 18.7 OJIBWAY II SEDIMENTS
2				0.5 - 1.5 light beige - brown gritty clay. 1.5 - 18.7 light gray gritty clay.
3–18				18.7 - 31.6 MATHESON TILL light grey - beige, silt - fine sand matrix; matrix supported. Clasts include: 70-80% Abitibi Belt metavolcanics (40%) and metasediments (30%), granitic (20-25%) and limestone <5%.
19				
20			01	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 22 19 89

HOLE NO CB-89-92 LOCATION Line 14+25E 7+00S ELEVATION 281 m

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS

______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS

______

MECHANICAL DOWN TIME ______

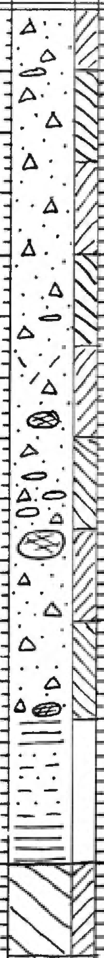
DRILLING PROBLEMS ______

CONTRACT HOURS

______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			01	
21				- Fill becomes cobbly. It is matrix supported with a light gray-beige fine sand - silt matrix. Limestone clasts are absent and volcanic clasts have increased to ~50%; metasediments 30%, granite 20%.
22			02	
23			03	
24				
25			04	Bleached basalt boulders with minor calcite and quartz veining were observed between 26.6 - 31.4 metres.
26			05	
27				
28			06	31.6 - 34.0 MISSINABI SEDIMENTS Silt - fine sand interbedded in gray, soft, gritty clay.
29			07	
30				34.0 - 35.5 BEDROCK fine grained, light-med gray, silicified, trace pyrite <.5" Basalt.
31			08	
32				
33				
34				
35			09	
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 25 1989

HOLE NO CB-89-93 LOCATION L32E ; 21+50N ELEVATION 289

GEOLOGIST K MacNeil DRILLER J Howg BIT NO. CB70245 BIT FOOTAGE 17-26

SHIFT HOURS

____ TO ____

MOVE TO HOLE 2:00-2:15

DRILL 2:15-3:30

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER 4:30-5:00 Clean Mud tanks and fill with water; 5:00-5:30 Travel

MOVE TO NEXT HOLE 3:30-4:30

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
				0 - 1.5 No Return						
1				1.5 - 4.1 Ojibway II Sediments						
2				1.5 - 3.0 clay:- brown (oxidized); minor grit and pebbles; gradational change to a grey color by 2.5m						
3										
4			01	3.0 - 4.1 clay:- pure; non-gritty but some sand partings are present						
5			02							
6										
7			03	4.1 - 7.1 Matheson Till						
8			04	grey beige, unsorted fine sand and silt matrix, cobbly, matrix supported; clast composition - 60% intermediate-mafic volcanics and sediments; 39% granitoids; 1% limestone						
9										
10										
11										
12				7.1 - 9.0 Bedrock:- mafic volcanic (basalt):- dark green; well foliated to schistose; 50% vein calcite + quartz in initial 0.2m; sample is fine grained (0.1mm); sample is chloritic; disseminated calcite in excess of 5%; below 7.3m ~2% calcite ± quartz veinlets and stringers; sample may contain minor (<1%) tiny (<1mm) amygdules						
13										
14										
15										
16										
17										
18										
19										
20				9m (30') EOH						

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 23 19 89

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-94 LOCATION Line 42+25E 3+25S ELEVATION 282 M

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70232 BIT FOOTAGE ______

MOVE TO HOLE 6:30 - 7:00

DRILL 7:00 - 5:00

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20				0 - 1.0 ORGANICS 1.0 - 22.3 OJIBWAY II SEDIMENTS 1.0 - 1.5 light beige gritty clay. 1.5 - 22.3 light gray gritty clay.

<u>Note</u>: check logged character splits March /89 by. P. Collins

The interval 22.3 to 31.8 is till as logged. However, 31.8 to 61.0 which was logged as interbedded sand & gravel is in fact Matheson Till unit 4. There are occasional sorted sand beds with in this unit but overall the matrix is grey beige slightly sorted (silt deficient) to unsorted fine sand/silt of grain size range (<50μ to 300μ). Lab logs indicate normal till weights of +10 mesh clasts throughout interval that include pebble & cobble clasts. For example sample # 15 which was logged as sorted fine sand & silt with no clasts is an unsorted till matrix with prevalent -10 mesh cuttings and 0.3 kg. of +10 clasts (average) #26 is correct as logged (till)

Samples #27 to 33 are comprised to pd sorted fine and medium sand (150μ to 6 with interbeds of gravel: pebble clasts - subrounded and cobble cuttings. Matrix is beige in colour not ochre and there is very slight oxidation of clasts. In sample #31 there are non gritty, pure, clay partings typical of sediments.

Based on ~~above~~ observations the interval 22.3 m to 63 m is Matheson Till and the underlying sediments 63.0 to 73.2 belong to Missinaibi Sediments subunit 3a.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 23 19 89

HOLE NO CB-89-94 LOCATION Line 42+25E 3+25S ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

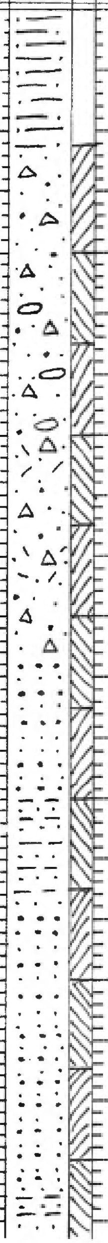
DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES | GRAPHIC LOG | INTERVAL | SAMPLE NO. | DESCRIPTIVE LOG



DEPTH IN METRES	SAMPLE NO.
21	
22	
23	01
24	
25	02
26	03
27	
28	04
29	05
30	
31	06
32	07
33	
34	08
35	09
36	
37	10
38	11
39	
40	12

22.3 - 31.8 MATHESON TILL

light beige, silt - fine sand matrix. Matrix supported, pebbly till. Clasts include Abitibi Belt metavolcanics (40%), meta sediments (30%), granitics (30%), limestone < 5%.

25.1 till becomes cobbly.

27.6 - 31.8 matrix contains grey silt - clay (10-20%); light greyish beige silt - fine sand. Clasts include 70% Abitibi Belt, 30% granitic, <1% limestone.

31.8 - 61.0 Interbedded Sand & Gravel

beige fine - medium sand and pebbly gravel. clasts include 30-40% black siltstone and schist, 30% metavolcanics, 30% granitic, <2% quartz, <1% limestone.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-94 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

MOVE TO HOLE ______

DRILL ______

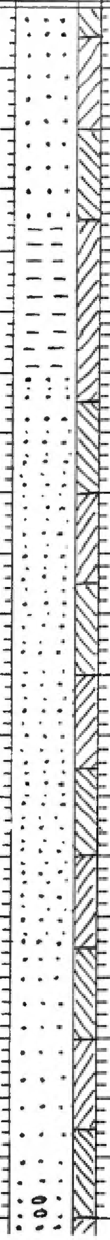
MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
41			13	43.6 - 45.8 Silt - fine sand, little return, no clasts.
42				
43			14	49 - 55.5 SAND and Gravel, no change in clast composition. Carbonate cemented sand nodules (< 5'') are present.
44				
45			15	55.5 - 61.0 Basaltic and granitic cobbles are present in gravel.
46				
47			16	
48				
49			17	
50			18	
51				
52			19	
53			20	
54				
55			21	
56			22	
57				
58			23	
59			24	
60				



OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-94 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

MOVE TO HOLE ______

DRILL ______

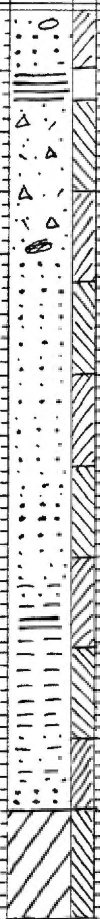
MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	SAMPLE NO.	DESCRIPTIVE LOG
61	25	61.0 - 61.5 MISSINABI grey, hard clay
62–64	26, 27	61.5 - 64.2 Till, matrix 70% silt-fine sand and 30% grey silt-clay. Clasts include 60% Abitibi Belt metavolcanics and metasediments, 40% granitic. 64.0 Basalt boulder
65–69	28, 29, 30	64.2 - 69.0 Well sorted fine sand and pea size pebbly gravel. Clast composition includes 70% Abitibi Belt, 30% granitic. Limonitic staining is present on ~20% of clasts.
69–72	31, 32	69.0 - 72.6 beige silt-fine sand with interbedded with grey, hard, compact clay (< 5%). Clasts (pebbles) occur between 72.8-73.2, ~90% siltstone.
73–75	33, 34	73.2 - 75 BEDROCK black, fine grained siltstone



Depth scale: 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80 (printed 20)

R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 25 1989

HOLE NO CB-89-95 LOCATION L47E-14+50 N ELEVATION 290

GEOLOGIST K MacNeil DRILLER J Houg BIT NO. CB 70245 BIT FOOTAGE 26-29

SHIFT HOURS ____ TO ____

MOVE TO HOLE

DRILL 6:45-9:00

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER 6:30-6:45 Travel

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0-0.4 No Return
1			01	0.4-1.3 Ojibway II Sediments clay:- beige-brown (oxidized); clay is gritty with scattered granules and rare pebbles
2			02	1.3-1.5 Matheson Till beige (oxidized), unsorted fine sand and silt matrix. Sample interval too short to obtain accurate clast composition
3				1.5-3.0 Bedrock:- mafic volcanic (basalt): dark green; grain size of 0.1 mm; poorly to moderately well foliated; equigranular, interlocking volcanic texture - sample composed of plagioclase and 35% (+) chlorite; Sample is weakly calcareous -- calcite as disseminations and 1% calcite stringers
				3m (10') EOH
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 24 19 89

SHIFT HOURS

____ TO ____

TOTAL HOURS

____

CONTRACT HOURS

____

HOLE NO CB-89-96 LOCATION Line 38+50 E 3+75 S ELEVATION 282 M

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70232 BIT FOOTAGE ____

MOVE TO HOLE 9:15 - 9:45

DRILL 9:45 - 4:30

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER ____

MOVE TO NEXT HOLE 4:30 - 5:00

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG

Depth scale: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

Sample No.: 01 (≈14–15 m), 02 (≈15–16 m), 03 (≈16–17.5 m), 04 (≈18–19.5 m)

0 - 1.5 ORGANICS

1.5 - 13.2 OJIBWAY II SEDIMENTS

beige-gray gritty clay

13.2 - 18.6 MATHESON TILL

light beige-grey, silt-fine sand matrix, matrix supported clast rich till. Clasts include: Abitibi Belt metavolcanics & metasediments - 60% (bleached basalt & schist), 40% granitic, <2% limestone.

18.6 - 21.5 SAND

well sorted, fine-medium grained, beige sand, few pebbles < 10%.

<u>Note</u>: Check logged character splits of samples 01 to 39. March/April 1989 by P. Collins.

Based on binocular logging of samples the following revisions have been made to the field log.

1) The interval 13.5 to 35.0 m is Matheson Till with occasional sorted sand section within till. indicative of readvancing of ice

2) The interval 35.0 m to 60.0 m is a thick section of interbeds of sand and pebbly gravel. Matrix is often coarse biased yet non-oxidized and belongs to Ojibway II glaciofluvial member.

3) The interval 60.0 to 65.2 m is Matheson Till similar to samples 01 to 03.

4) at 65.2 there is a contact between Matheson Till and underlying Missinaibi glaciolacustrine sediments.

5) a further contact exists at 66.0 between Missinaibi sediments and underlying Lower Till.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 ___

SHIFT HOURS
________ TO ________

TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO CB-89-96 LOCATION ________ ELEVATION ________
GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________
MOVE TO HOLE ________
DRILL ________
MECHANICAL DOWN TIME ________
DRILLING PROBLEMS ________
OTHER ________
MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			05	21.5 - 38.0 TILL
21				matrix is light grey beige, silt-fine sand. Clasts include 60% Abitibi Belt volcanics & metasediments, 40% granitic, limestone <2%. Till becomes cobbly at 24.5m (bleached basalt cobbles).
22			06	
23			07	
24				
25			08	At 32.8 - 38.0 10-15% grey silt-clay occurs in light grey silt-fine sand matrix. Clasts mainly Abitibi volcanic (>80%), granitic (<20%).
26			09	
27				
28			10	38.0 - 41.6 SAND & GRAVEL
29			11	Medium grey, well sorted fine-medium sand becoming dark grey at 39.0m. Limonitic staining is present on <5% of clasts and small wood fragments were observed (<2%).
30				
31			12	
32			13	
33				
34			14	
35			15	
36				
37			16	
38			17	
39				
40			18	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

HOLE NO CB-89-96 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

SHIFT HOURS ________ TO ________

MOVE TO HOLE ________

DRILL ________

TOTAL HOURS ________

MECHANICAL DOWN TIME ________

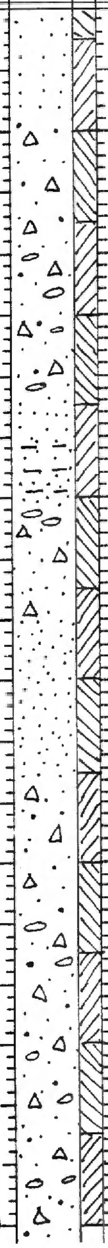
DRILLING PROBLEMS ________

CONTRACT HOURS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



Depths (m): 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60

Sample Nos.: 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31

41.6 - 52.7 TILL

matrix is light grey-beige, silt-fine sand. Matrix supported cobbly till. Clasts include Abitibi Belt metavolcanics and meta sediments 70%, granitic 30%, limestone <1%.

46.5 - 48.0 beige, fine sand, <5% clasts
50.0 - 52.7 beige, silt-fine sand, <5% clasts

52.7 - 65.2 TILL

matrix is light grey beige, silt-fine sand; matrix supported. No change in clast composition, becoming cobbly at 59.5m.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS ______ TO ______

TOTAL HOURS ______

CONTRACT HOURS ______

HOLE NO CB-89-96 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. CB70222 BIT FOOTAGE 0-2 m

MOVE TO HOLE ________

DRILL ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

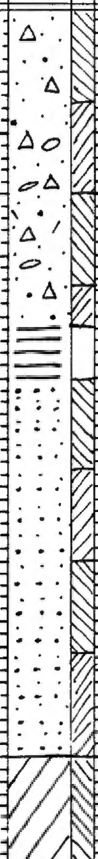
OTHER ________

MOVE TO NEXT HOLE ________

New Bit Page 4 of 4

DEPTH IN METRES	SAMPLE NO.
61	32
62	33
63	
64	34
65	35
66	
67	36
68	37
69	
70	38
71	39
72	
73	40
74	
75	
16	
17	
18	
19	
20	

GRAPHIC LOG



INTERVAL

DESCRIPTIVE LOG

65.2 - 66.0 MISSINABI CLAY
medium grey, compact clay, no grit.

66.0 - 72.2 SAND & GRAVEL
light beige fine-medium sand interbedded with pea size gravel. Clasts include 70-80% Abitibi Belt meta sediments & metavolcanics, 20% granitic.

69.8-72.2 pyrite mineralization <2% is hosted in black siltstone. It occurs as cubes and massive bands.

72.2 - 74.0 BEDROCK
massive, fine grained, black basalt hosting calcite veining <1% and disseminated pyrite <.5%. Grey chert present.

74.0 EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 26 19 89

HOLE NO CB-89-97 LOCATION L50E ; 17+50N ELEVATION 289

GEOLOGIST K MacNeil DRILLER J Houg BIT NO. CB70245 BIT FOOTAGE 29-40.5

SHIFT HOURS ____ TO ____

MOVE TO HOLE 9:00 - 9:15

DRILL 9:15 - 10:00

TOTAL HOURS ____

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS ____

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
0–1				0 - ~1.0 Organics						
1–6.3				~1.0 - 6.3 Ojibway II Sediments						
				~1.0 - 3.5 clay :- grey ; gritty with common limestone, granitic and volcanic cobbles						
				3.5 - 3.9 sand :- fine grained ; beige ; scattered limestone and granitic granules						
				3.9 - 6.3 clay :- grey ; slightly gritty to about 4.5m but below 4.5m the clay is non-gritty						
7			01							
8			02	6.3 - 9.6 Matheson Till						
				unsorted grey-beige, fine sand and silt matrix, cobble size clasts; clast composition - 50:50 intermediate-mafic volcanics and sediments versus granitoids						
9.5			03							
10.5			04							
				9.6 - 11.5 Bedrock :- ultramafic volcanic :- dark green to black ; grain size of 0.2-0.3 mm ; rock composed of pyroxene and serpentine/talc ; non-calcareous and essentially non-magnetic						
				11.5m (38') EOH						

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 25 1989

SHIFT HOURS

____ TO ____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-98 LOCATION 34+50 E 3+75 S ELEVATION 287

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70222 BIT FOOTAGE 2-12

MOVE TO HOLE 7:00 - 7:30

DRILL 7:30 - 8:00

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–1				0 - 1.0 ORGANICS
1–9.6				1.0 - 9.6 OJIBWAY II SEDIMENTS light grey gritty clay interbedded with silt and fine sand.
9.6–10.2			01	9.6 - 10.2 MATHESON TILL light beige, silt-fine-sand matrix supported till. clasts > 90% Abitibi Belt metavolcanic and metasediments, < 10% granitic.
10.2–12.0			02	10.2 - 12.0 BEDROCK Medium grey basalt, hosting fine pyrite dissemination (< 3%) and calcite veins. (< 5%).
				12.0 EOH

R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 26 1989

HOLE NO CB-89-99 LOCATION L 50E; 13N ELEVATION 285

GEOLOGIST K MacNeil DRILLER J Houg BIT NO. CB 70245 BIT FOOTAGE 40.5-51

SHIFT HOURS

____ TO ____

MOVE TO HOLE 10:00 - 10:30

DRILL 10:30 - 11:45

TOTAL HOURS

MECHANICAL DOWN TIME

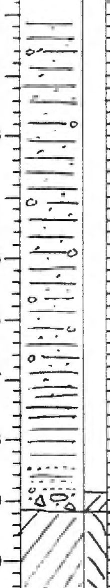
DRILLING PROBLEMS

CONTRACT HOURS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						



Sample nos.: 01* (at ~9 m), 02 (at ~10 m)

0-1.1 No Return

1.1-8.9 Ojibway II Sediments

clay - beige in color to ~2.0m and grey below 2.0; clay is slightly gritty with minor scattered pebbles and granules (limestone, granitoids, and volcanics); clay becomes very soft below 3.0; poor return below 4.5m; below 7.5m, sample return improves and clay contains no grit

~8.5-8.9 - fine sand and pebbles with clay partings

8.9-9.1 Matheson Till

unsorted, grey-beige, fine sand and silt matrix; cobbles; clast composition - 50:50 intermediate - mafic volcanics and sediments versus granitoids

9.1-10.5 Bedrock:- mafic volcanic:- dark grey. fine grained - generally <0.1 mm; poorly foliated; dark grey color suggests the sample is a siltstone but the sample lacks the fissility of siltstone; moderate amounts of Fe/Mg carbonate (5%) as disseminations - the carbonate may account for color of the rock; very vague crystalline/volcanic texture

10.5m (35') EOH

* Sample 01 - wash hole several times to obtain sample

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 25 19 89

HOLE NO CB-89-100 LOCATION 30+00 E 11+00 S ELEVATION 285 m

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70222 BIT FOOTAGE 12 - 51.5

SHIFT HOURS
_____ TO _____

MOVE TO HOLE

DRILL

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	
				0 - 0.5 ORGANICS	Note: Check logged character splits #01 to 11 March /89 P. Coll…
1				0.5 - 31.1 OJIBWAY II SEDIMENTS	Found that samples 09, 10, 11 are beige and ochre coloured sands with thin gravel interbeds whose clasts are oxidized. Sands are both fine and medium grained (100µ to 250µ & 250µ to 600µ) respec.
2				0.5 - 14.6 light grey gritty clay	Sample #09 has pure, non gritty beige grey clay partings.
3				14.6 - 31.1 light beige silt - fine sand with < 10% grey gritty clay. small wood fragment (twigs) between 24.0 - 31.0 m (< 1%).	Therefore, the interval 49.2 to 50.2 is Missinaibi; sand and gravel subunit 3a.
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

HOLE NO CB-89-100 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

SHIFT HOURS ________ TO ________

MOVE TO HOLE ________

DRILL ________

TOTAL HOURS ________

MECHANICAL DOWN TIME ________

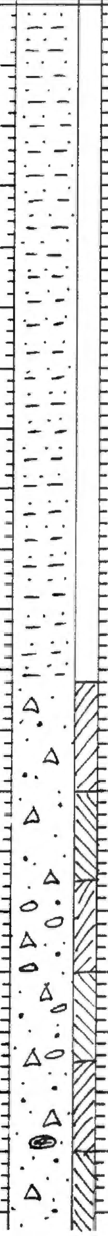
DRILLING PROBLEMS ________

CONTRACT HOURS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21				31.1 - 43.9 MATHESON TILL
22				beige, silt-fine sand matrix. Matrix supported till. Clasts include 60% Abitibi Belt and 40% granitic, <1% limestone.
25				Till becomes clast supported between 34.4 - 38.2. Basalt and granitic cobbles.
27				38.2 - 39.0 less cobbles, clast composition 80% volcanics and sediments, 20% granitic.
32			01	
34			02	
35			03	
37			04	
38			05	
40			06	



OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

HOLE NO CB-89-100 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

SHIFT HOURS

________ TO ________

MOVE TO HOLE ________

DRILL ________

TOTAL HOURS

____

MECHANICAL DOWN TIME ________

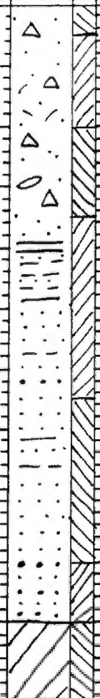
DRILLING PROBLEMS ________

CONTRACT HOURS

____

OTHER ________

MOVE TO NEXT HOLE ________



DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
41			07	39.0 - 43.9 grey silt sand (< 5%) occurs in matrix, light beige silt - fine sand.
42–43			08	43.9 - 49.2 Beige silt - fine sand mixed with light grey clay (no grit) < 20%.
44–45			09	
45–50			10	49.2 - 50.2 SAND & GRAVEL beige sand interbedded with pea size gravel consisting of 100% Abitibi metavolcanics and black siltstones. - pebbles of massive pyrite < 1% - disseminated pyrite 2-5% in black siltstones. - quartz < 2%
50			11	
50–51.5				50.2 - 51.5 BEDROCK Black, fine grained siltstone, graphitic, hosting ~ 2% massive pyrite. No quartz, no disseminated calcite. Note: Similar to hole 84 (less sulphides and less graphite).
				51.5 EOH
				R. Turner

Depth scale: 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 14, 15, 16, 17, 18, 19, 20

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 26 1989

SHIFT HOURS
____ TO ____

TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO CB-89-101 LOCATION L54E ; 5+50N ELEVATION 280
GEOLOGIST K MacNeil DRILLER I Howy BIT NO. CB 70245 BIT FOOTAGE 51-86
MOVE TO HOLE 11:45 - 12:15
DRILL 12:15 - 3:00
MECHANICAL DOWN TIME ____
DRILLING PROBLEMS ____
OTHER ____
MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20			01 (at ~18.5–19)	0-1.3 No Return 1.3 - 17.7 Ojibway II Sediments clay - beige (oxidized) initially but grades quickly downhole to a grey color; clay is slightly gritty with infrequent pebbles and granules; poor return in clay from 5.5-13.5 m; below 13.5 m clay is thick and soupy (water saturated) and contains little or no grit 17.7 - 33.5 Matheson Till unsorted, grey-beige fine sand and silt matrix. cobble size clasts; till is matrix supported; clast composition - 50:50 intermediate-mafic volcanics and sediments versus granitoids @19.9 basalt cobble with 5% coarse cubic pyrite @23.8 trace amounts of fuchsite in a cherty pebble @24.8 abundant coarsely crystalline carbonate cuttings 25.9 - 27.1 grey gritty clay matrix - slight local variations in proportion of grit in the clay 27.1 - 28.4 unsorted, fine sand and silt matrix 28.4 - 29.4 gritty brown clay matrix (oxidized) - common oxidized clast cuttings as well

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 26 19 89

HOLE NO CB-89-10 LOCATION L 54E ; 5+50N ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

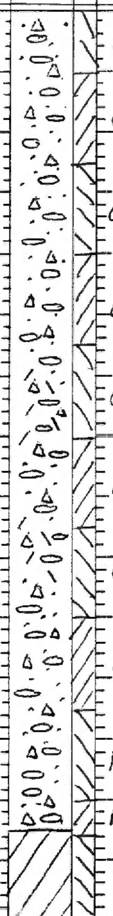
DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

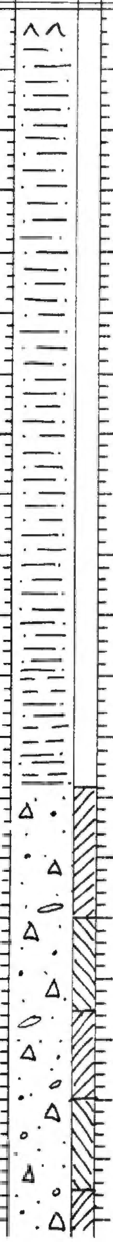
DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			02	29.4-29.6 gritty grey clay matrix
21				29.6 - 33.5 grey-beige, fine sand and silt matrix
22			03	
23			04	- below approximately 28m, clast composition of 70:30 volcanics/sediments versus granitoids
24				
25			05	32.4 - 33.5 - 25% of clasts are heavily oxidized
26			06	33.5 - 35m **Bedrock:-** feldspar porphyry or porphyritic andesite :- greenish beige; appears to have an aphanitic greenish matrix with ~40% small (<0.2mm), sub- to anhedral, white, cloudy plagioclase phenocrysts. Sample is well foliated and contains 3-4% disseminated calcite
27				
28			07	
29			08	
30				
31			09	
32				
33			10	
			11	35m (117') EOH
34			12	
35				
16				
17				
18				
19				
20				



OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 25 19 89
SHIFT HOURS
_____ TO _____
TOTAL HOURS
_____
CONTRACT HOURS
_____

HOLE NO CB-89-102 LOCATION 34+00 E 9+75 S ELEVATION 282
GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70222 BIT FOOTAGE 51.5 - 80 m
MOVE TO HOLE 12:00 - 12:45
DRILL 12:45 - 4:00
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	
				0 - 0.5 ORGANICS 0.5 - 12.8 OJIBWAY II SEDIMENTS 0.5 - 1.5 light beige brown gritty clay 1.5 - 12.8 light grey gritty clay 11.0 - 12.6 silt mixed with clay 12.8 - 40.5 MATHESON TILL Matrix supported cobbly till Matrix light beige silt - fine sand clasts include cobbles & pebbles consisting of 60% Abitibi Belt metavolcanic (40%) metasediments (20%) 35% granitic, and 5-10% limestone	Note: check logged character splits #04 to 09. March/89 by P. Collins. Found hole to be correct as logged in field.
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14			01		
15					
16			02		
17			03		
18					
19			04		
20					

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-102 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. CB70223 BIT FOOTAGE 0 - 13 m

MOVE TO HOLE ______

DRILL ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

New Bit

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			05	
21				21.6 - 27.6 well sorted, fine beige sand few clasts (< 5%).
22				
			06	
23				27.6 - 40.5 Till similar to matheson till above fine sand bed.
24				light beige fine sand-silt matrix clasts include 60% Abitibi, 30% granitic, ~5% limestone.
25			07	
26				limestone clasts are reduced to < 1% by 36.0 m
27				
			08	
28				
29			09	
30				
31			10	
32			11	
33				
			12	
34				
35			13	
36				
37			14	
38			15	
39				
40			16	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

HOLE NO CB-89-102 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

SHIFT HOURS ________ TO ________

MOVE TO HOLE ________

DRILL ________

TOTAL HOURS ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

CONTRACT HOURS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
41				40.5 - 42.5 BEDROCK
				40.5 - 41.0 fine grained, black siltstone with ~ 5% graphitic clay lumps
42				
43				41.0 - 42.5 medium gray, foliated volcanic,
44				
45				42.5 EOH
6				R. Turner
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 25 1989

SHIFT HOURS ______ TO ______

TOTAL HOURS ______

CONTRACT HOURS ______

HOLE NO CB-89-103 LOCATION L 51E ; 8+25N ELEVATION 280

GEOLOGIST K MacNeil DRILLER J Howg BIT NO. CB70245 BIT FOOTAGE 86-114

MOVE TO HOLE 3:00 - 3:15

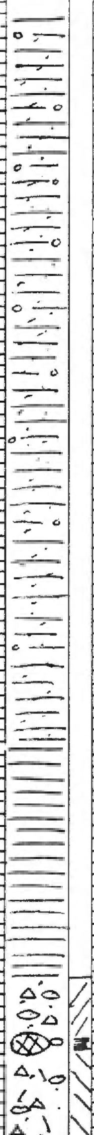
DRILL 3:15 - 5:30

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER 5:30 - 6:00 GT to truck; 6:00 - 6:30 To Camp; unload parts & load fuel

MOVE TO NEXT HOLE 5:15 - 5:30

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20			01 (≈18), 02 (≈19.3)	0 - 1.5 No Return 1.5 - 17.3 <u>Ojibway II Sediments</u> clay:- grey; slightly gritty with scattered pebbles - poor return from ~6.0 to 13.5m; below 13.5m, clay is non-gritty and pure 17.3 - 23.8 <u>Matheson Till</u> consolidated, grey-beige, fine sand and silt matrix; matrix supported; cobble size clasts; clast composition - 60% intermediate-mafic volcanics and sediments 35-40% granitoids 18.3 - 18.6 boulder - siltstone 18.8 - 20.6 combination of grey gritty matrix clay, and fine sand and silt matrix 20.6 - 23.5 grey gritty clay matrix predominant - locally sand/silt forms a large proportion of the matrix - Till becomes much more sand rich below 23.5 - below ~20m, oxidized clasts are common

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 25 1989

HOLE NO CB-89-103 LOCATION L 51E ; 8+25N ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21			03	23.8 - 26.9 Missinaibi Sediments
22				23.8 - 25 gravel - beige (oxidized) medium to coarse sand matrix; matrix supported; cobble size clasts; oxidized clasts are common; clast composition - 50:50 intermediate-mafic volcanics and sediments versus granitoids
23			04	
24				
25			05	
26			06	
27			07	25 - 26.9 - subtle change - oxidation of clasts and matrix less evident and in this interval there begins to be consistent amounts of fine sand in the gravel matrix - superficially resembles till
28				
29				
30				
31				
32				26.9 - 28 Bedrock:- altered volcanic:- light to medium grey with local oxidation along fractures; fine grained (0.1 mm) but mineralogy and textures are not evident. well foliated; bleached - may be silicified; brown oxidized zone from 27.7 - 27.8 m; abundant sand contamination of sample in initial 0.4 m
33				
34				
35				
36				
37				
38				
39				
40				

28 m (93') EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 25 19 89

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-104 LOCATION 38+50 E 9+50 S Elev. 282

GEOLOGIST TURNER DRILLER G. Howg BIT NO. CB70224 BIT FOOTAGE 0-45.5

MOVE TO HOLE 4:15 - 4:30

DRILL 4:30 - 5:00

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

New Bit

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG							
0–16				0 - 0.5 ORGANICS 0.5 - 16.5 OJIBWAY II SEDIMENTS 0.5 - 1.5 beige-grey gritty clay 1.5 - 16.5 light grey gritty clay. 16.5 - 43.5 MATHESON TILL 16.5 - 20.5 light beige silt-fine sand matrix. Matrix supported pebbly till. Clasts include: 60% Abitibi metavolcanics & metasediments, 35-40% granitic, ~1-2% limestone	Note: check logged several character splits from hole March/89. by P. Collins Hole is correct as logged in the field						
17			01								
18			02								
19–20			03								

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 26 19 89

HOLE NO CB-89-104 LOCATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL 7:00 - 9:30

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

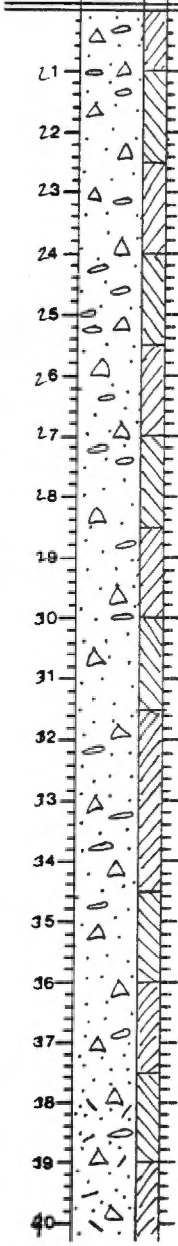
DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES / GRAPHIC LOG / INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						



SAMPLE NO.: 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15

20.5 - 43.5

light grey-beige silt - fine sand matrix, Matrix supported cobbly till. Cobbles include dark green basalt, bleached basalt, granite. Clasts composition is same as above with the proportion of Volcanics increasing to 70-80%. at 24.5 m.

38.0 - 40.8 ~25% of matrix is grey silty-clay. mixed with light grey-beige silt fine sand.

At 40.8 m matrix changes to light grey silt-fine sand. Clast composition >80% volcanic, <20% granitic.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-104 LOCATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

MOVE TO HOLE ______

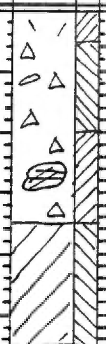
DRILL ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1			16	
3			17	large bleached basalt boulder 42.4 – 42.8 m.
4–5			18	43.5 - 45.5 BEDROCK - fine grained - medium grey greywacke interbedded with graphitic black siltstone. - (silvery-grey rock flour is ground graphite). - no sulphides observed - no quartz veins.
9				45.5 EOH
10				R. Turner

Depth scale: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 27 1989

HOLE NO CB-89-105 LOCATION L40E; 10N ELEVATION 286

GEOLOGIST K MacNeil DRILLER J Howg BIT NO. CB70245 BIT FOOTAGE 114-126.5

SHIFT HOURS
_____ TO _____

MOVE TO HOLE

DRILL 7:15-8:30

TOTAL HOURS

MECHANICAL DOWN TIME 8:30-8:45 Fix alternator bracket on compressor

DRILLING PROBLEMS

CONTRACT HOURS

OTHER 6:30-6:45 Drive to GT; 6:45-7:15 GT to drill

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
				0-1.4 No Return						
1				1.4 - 7.4 Ojibway II Sediments						
2				clay:- grey; slightly gritty; scattered pebbles; clay becomes very thick, soupy and water saturated below 5.0m, sand and pebble seams in clay below 7.0m	* Sample 03 - mostly bedrock cuttings and cave-in from overlying till					
7				7.4 - 10.6 Matheson Till						
8			01	grey-beige, unsorted, fine sand and silt matrix; cobble size clasts; clast composition - 55-60% intermediate-mafic volcanics and sediments						
10			02	35-40% granitoids						
			03*	<1% limestone						
11				10.6 - 12.5 Bedrock:- altered volcanic (mafic ?):-						
12			04	beige-grey (lightly oxidized) to 11.0m and unoxidized below 11.0m; fine grained; sample is sheared too altered to identify primary texture or mineralogy; alteration consists of bleaching (sericitization?) and development of ~5% disseminated and stringer calcite; Fe/Mg carbonate may be present but is not obvious from reaction with HCL						
20				12.5m (42') EOH						

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 26 19__

SHIFT HOURS
____ TO ____

TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO CB-89-106 LOCATION 42+00 E 8+00 S Elev. 282

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70224 BIT FOOTAGE 45.5 - 82

MOVE TO HOLE 9:30 - 10:00

DRILL 10:00 - 12:00

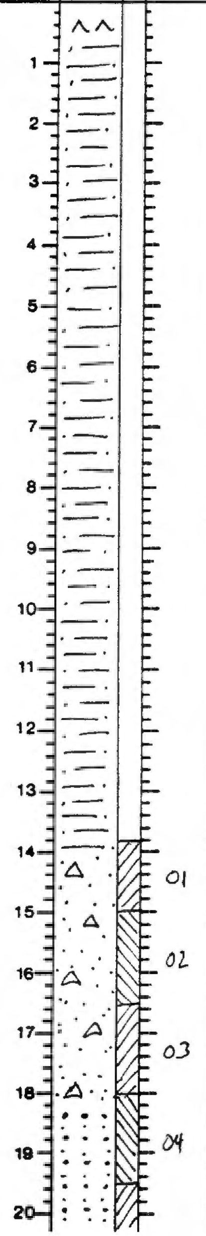
MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	



0 - 0.5 ORGANICS

0.5 - 13.8 OJIBWAY II SEDIMENTS

0.5 - 1.5 light beige gritty clay grading into light gray gritty clay.

1.5 - 13.8 light gray gritty clay

13.8 - 34.8 MATHESON TILL

light beige silt - fine sand matrix. Matrix supported, clasts include 70% volcanic, 25 - 30% granitic, 2 - 5% limestone.

18.6 - 20.4 Washed fine - medium sand and pea size gravel. Clast composition is similar to the overlying till.

Note: check logged character splits of several samples through hole March/89 by P. Collins. Found that samples 04 & 05 are slightly sorted (silt deficient) fine sand till matrices. Range of grains (50µm to 250µm). Also +10 mesh pebbles & cobble cuttings. Thus there is no sorted section within till.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-106 LOCATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

MOVE TO HOLE ________

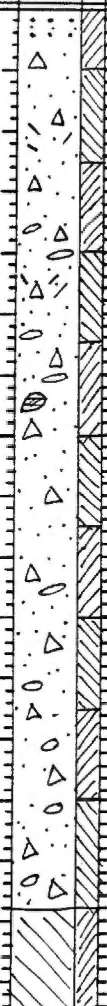
DRILL ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			05	
21				22.2 - 24.6 <10% grey silt-clay is introduced to the till matrix. Matrix becomes light grey silt-fine sand. Matrix supported and clast composition does not change. Very homogeneous till.
22			06	
23			07	
24				
25			08	23.8 - 34.8 till becomes cobbly (mostly basalt); Matrix supported. No change matrix and clast composition.
26			09	
27				34.8 - 36.5 BEDROCK - similar to hole 104 - graphitic black siltstone interbedded with medium grey greywacke. - Hosting small quartz veins <5%. - no sulfides or disseminated calcite.
28			10	
29				
30			11	
31			12	
32			13	36.5 - EOH
33				R. Turner
34			14	
35				
36			15	
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan. 27 1989

HOLE NO CB-89-107 LOCATION L45E; 11+25N ELEVATION 287

GEOLOGIST K MacNeil DRILLER J Howe BIT NO. CB 70245 BIT FOOTAGE 126.5-147.

SHIFT HOURS ____ TO ____

MOVE TO HOLE 8:45 - 9:00

DRILL 9:00 - 11:15

TOTAL HOURS ____

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

CONTRACT HOURS ____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	SAMPLE NO.
7	01
8	02
10	03
11	04
13	05
14	06
16	07
17	08
18	09
20	10

DESCRIPTIVE LOG

0 – 1.5 No Return

1.5 – 6.6 Ojibway II Sediments

clay:- beige (oxidized) to 3.0 and grey (unoxidized) below 3.0m; from ~2.7-3.1, the clay is very gritty and contains ≤10% pebbles (abundant limestone) -- this section is much grittier & pebble rich than overlying or underlying clay and could possibly be Cochrane Till; below 6.0m, no pebbles and little grit is present

6.6 – 18.8 Matheson Till

grey - beige, unsorted, fine sand and silt matrix. matrix supported; cobble size clasts; clast composition -
60% intermediate-mafic volcanics and sediments
40% granitoids

7.1-7.4 boulder - basalt

9.6-10.6 and 12-14m, minor grey gritty matrix clay

15.5-15.7 boulder - basalt

18.8 – 21 Bedrock:- mafic volcanic (possibly ultramafic) black; grain size of ~0.1-0.2 mm; schistose ~~to~~ sheared; appears to be 40%(+) chlorite; strong carbonate alteration -- both calcite (2-4%) and Fe/Mg carbonate (5%+) as disseminations

21m (70') EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 26 19 89

SHIFT HOURS

____ TO ____

TOTAL HOURS

____

CONTRACT HOURS

____

HOLE NO CB-89-108 LOCATION 16+50 E 15+25 S Elev. 279 m

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70224 BIT FOOTAGE 82 - 113.5

MOVE TO HOLE 12:00 - 2:45

DRILL 2:45 - 4:00

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE 4:00 - 5:00

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–20				0 - 0.5 ORGANICS 0.5 - 24.2 OJIBWAY II SEDIMENTS 0.5 - 1.0 medium to dark brown gritty clay. 1.0 - 1.5 beige gritty clay 1.5 - 16.5 light grey gritty clay. 16.5 - 24.2 silt mixed with < 5% light grey gritty clay. (very little return).

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-108 LOCATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

MOVE TO HOLE ______

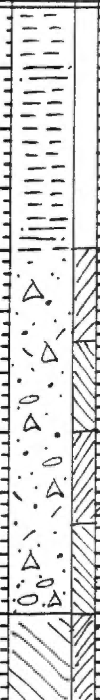
DRILL ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21				24.2 - 30.0 MATHESON TILL
22				light beige silt-fine sand matrix with <5% light grey silty-clay. Matrix supported; clasts and cobbles abundant. Clasts include ~60% volcanic and 40 granitic. Cobbles mainly black siltstone, basalt and granite.
23				at 28.0 - 29.5m grey silty-clay increases to ~ 20%.
24				29.8 Greywacke Cobbles containing ~ 30% graphitic black siltstone, quartz vein (<10%) and pyrite (2-5%)
25			01	
26			02	
27				
28			03	30.0 - 31.5 BEDROCK
29			04	- fine - medium grained
30				- medium grey greywacke
31			05	- quartz veining ~10%
32				- graphitic between 30.0-30.5 but not present below 30.5m.
13				- no sulphides observed.
14				31.5 EOH
15				R. Turner
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 27 1989

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-109 LOCATION L32+50E; 17+50N ELEVATION 290

GEOLOGIST K MacNeil DRILLER J Howy BIT NO. CB70174 BIT FOOTAGE 0-22

MOVE TO HOLE 11:15-12:00

DRILL 12:00 - 3:00

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

Page 1 of 2 New Bit

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–1.3				0-1.3 No Return
1.3–3.8				1.3 - 3.8 Ojibway II Sediments clay:- beige (oxidized); gritty; poor sample return below 2.0 but there appears to be abundant grit and pebbles (limestone and granitoids predominant)
4			01	
5			02	3.8 - 20.1 Matheson Till grey-beige, unsorted, fine sand and silt matrix; matrix supported; cobble size clasts; clast composition - 65% volcanics and sediments 34% granitoids <1% limestone @ 8.8m - magnetite Fe Fm cobble - till is very homogeneous - below 19.0m, 95% of clasts are intermediate to mafic volcanics and sediments
7			03	
8			04	
10			05	
11			06	
13			07	
14			08	
16			09	
17			10	
19			11	
20			12	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 27 1989

HOLE NO CB-89-109 LOCATION L 32+50E; 17+50N ELEVATION

GEOLOGIST DRILLER BIT NO. BIT FOOTAGE

SHIFT HOURS

TO

MOVE TO HOLE

DRILL

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER

MOVE TO NEXT HOLE

Page 2 of 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
21			13	20.1 - 22 Bedrock:- mafic volcanic (basalt) - dark green; fine grained (0.1 - 0.2 mm); well foliated; crystalline/volcanic texture; predominant mafic mineral is chlorite (in excess of 30% of sample); disseminated clear crystalline calcite in excess of 7%						
22										
23										
24										
25										
26										
27				22m (73') EOH						
28										
29										
30										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 27 19 89

SHIFT HOURS
____ TO ____

TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO GB-89-110 LOCATION L10 E 1+25 S Elev. 282

GEOLOGIST P. Collins DRILLER G. Houz BIT NO. GA90319 BIT FOOTAGE 1035-147

MOVE TO HOLE 6:45 - 7:00

DRILL 7:10 - 10:15

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER Travel 6:30 - 7:45 Am

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.
8			01
12			02
15			03
17.5			04
20			05

DESCRIPTIVE LOG

0.0 - 0.5 Organics

0.5 - 29.0 Ojibway I Sediments

(0.5 - 1.8) beige (oxidised), soft, slightly gritty clay

(1.8 - 4.0) beige fine grained sand (well sorted) occasional beige grey clay bed (thin)

(4.0 - 11.0) similar to 1.8 - 4.0 with thin medium grained sand beds.

(11.0 - 14.5) predominantly medium to coarse grained sand with occasional fine sand interbeds

(14.5 - 17.5) similar to 1.8 - 4.0

(17.5 - 26.0) similar to 11.0 - 14.5 with occasional granule clast

at 19.5 pull rods (bit plugged) also change hose & replace inner tube in head rod

note 7:00 - 7:10 remove swivel; inspect brass bushing found to be malfunctioning grinding causing contamination of samples; Have hose, replace with proper swivel.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 27 19 89

SHIFT HOURS ______ TO ______

TOTAL HOURS ______

CONTRACT HOURS ______

HOLE NO CB-89-110 LOCATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

MOVE TO HOLE ______

DRILL ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	SAMPLE NO.	DESCRIPTIVE LOG
21	05	20.0 - 29.6 beige fine grained sand.
23		29.6 - 32.5 Matheson Till
24	06	gradational contact into grey-beige fine sand / silt and grey gritty clay matrix (~5%) matrix supported till with cobble clasts of composition: 65% Volcanics and Sediments; 35% Granitoid
28	07	
29		32.3 - 32.5 bedrock cuttings yet still return on matrix ∴ took sample.
31	08	32.5 - 34.0 Bedrock
32	09, 10	- dark grey to black - very fine to fine grained - weak foliation - non calcareous - 2% quartz stringers / veinlets - <1% disseminated sulphides Meta Sediment - Siltstone / Greywacke

Depth scale: 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 28 1989

HOLE NO CB-89-111 LOCATION LINE 30 E 18+50 N ELEVATION 295

GEOLOGIST TURNER DRILLER J. HOWG BIT NO. CB70174 BIT FOOTAGE 22- 24.5

SHIFT HOURS
____ TO ____

TOTAL HOURS

CONTRACT HOURS

MOVE TO HOLE 7:00 - 7:15

DRILL 7:15 - 8:15

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 - 0.2 ORGANICS
				0.2 - 0.5 OJIBWAY II SEDIMENTS
1			01	dark brown gritty clay mixed with light beige gritty clay and forest litter.
2				
3				0.5 - 2.5 BEDROCK
4				Basalt -medium to dark green -fine grained -diabasic texture - disseminated (<5%) and vein (~10%) calcite - only trace of pyrite (<.1%).
5				
6				
7				
8				between 1.6 - 1.8 m ~50% of chips have Fe oxidation.
9				
10				R. Turner
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 27 1989

SHIFT HOURS ____ TO ____

TOTAL HOURS ____

CONTRACT HOURS ____

HOLE NO CB-89-112 LOCATION 2E 2+25 S Elev. 281

GEOLOGIST P. Collins DRILLER G. Hwg BIT NO. CB70223 / CB70224 BIT FOOTAGE 0.0-4.0 / 147.5-185.0

MOVE TO HOLE 10:15 - 10:45

DRILL 10:45 - 2:00

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	
0–20				0.0 - 1.0 Organics	Note: Check logged character splits April/89 by P. Collins. Samples are correct as logged
				1.0 - 22.0 Ojibway II Sediments	
				(1.0 - 12.0) grey beige, nongritty, soft clay - silty downsection.	
				(12.0 - 13.5) grey beige very fine sand silt interbeds. occasionally have: a limestone pebble; woodchips.	
				(13.5 - 22.0) beige-grey very fine to fine grained sand with occasional thin clay bed.	
				pebble bed at 18.5 m.	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 27 19 89

SHIFT HOURS

______ TO ______

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-112 LOCATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

MOVE TO HOLE ______

DRILL ______

MECHANICAL DOWN TIME ______

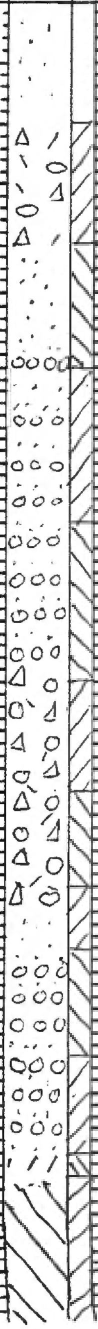
DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	SAMPLE NO.
21	
22	
23	01
24	
25	02
26	
27	03
28	
29	
30	04
31	
32	05
33	
34	06
35	07
36	08
37	
38	09
39	10
40	11
41	

GRAPHIC LOG / INTERVAL



DESCRIPTIVE LOG

22.0 - 23.8 Matheson Till

gradational contact into grey beige fine sand / silt and grey gritty clay matrix (10-15%). Cobble clasts of composition: 60% Volcanics and Sediments; 40% Granitoids.

23.8 - 31.0 Ojibway II Sediments

sorted fine to medium grained sand (25.8 - 31.0) interbedded sand and gravel. Beige sorted medium to coarse sand. Cobble gravel (matrix supported) of composition: 60% Volcanics and Sediments; 40% Granitoids.
occasional: fine sand beds; gritty clay; wood chips.

31.0 - 35.6 Matheson Till

very similar to 22.0 - 23.8

35.6 - 39.4 Missinaibi Sediments

Sand and Gravel: beige-ochre fine to medium grained sand. Cobble gravel (matrix supported) of ~~clast~~ composition: 45% Volcanics and Sediments; 55% Granitoids many of which are oxidized.
*at 37.5 pull rods to change bit.
39.0 - 39.4 grey green slightly gritty clay / rock powder lumps. with matrix.

39.4 - 41.5 Bedrock.
- black; O.B. contamination throughout.
- very finegrained; strong foliation; graphitic
- 1% disseminated sulphides (coarse pyrite)

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

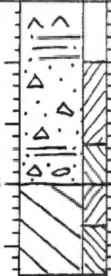
DATE Jan 28 19 89

SHIFT HOURS
____ TO ____

TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO CB-89-113 LOCATION Line 27+50 E 19+50 N ELEVATION 295
GEOLOGIST Turner DRILLER J. Howe BIT NO. CB70174 BIT FOOTAGE 24.5 - 29
MOVE TO HOLE 8:15 - 8:30
DRILL 8:30 - 9:15
MECHANICAL DOWN TIME ____
DRILLING PROBLEMS ____
OTHER ____
MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20			01, 02, 03, 04	

0 – 0.5 ORGANICS

0.5 - 1.0 OJIBWAY II SEDIMENTS

light beige gritty clay

1.0 - 3.0 TILL

MATRIX supported pebbly till. Matrix is beige brown silt-fine sand. Clasts include 30-40% limestone, 30-40% volcanics, 20% granitic.

2.3 - 2.5 light brown gritty clay

Between 2.5 and 3.0 m limestone clast percentage decreases to ~ 10% and volcanics increase to ~ 60%, granitic clasts 30%.

3.0 - 4.5 BEDROCK

3.0 - 3.7 BASALT
- dark green, chloritized
- fine grained, diabasic texture
- no vein or disseminated calcite
- no sulphides observed.

3.7 - 4.5 BLEACHED BASALT
- at 3.7 a thin zone of Fe oxidation. Bedrock color changes abruptly to medium grey.
- fine grained
- disseminated calcite <5%
- pyrite <.1%.

4.5 EOH

R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 27 19 89

HOLE NO CB-89-114 LOCATION 2W 2+25S Elev. 279

GEOLOGIST D. Collins DRILLER G. Hong BIT NO. CB70225 BIT FOOTAGE 4.0 - 40.0

SHIFT HOURS ____ TO ____

MOVE TO HOLE 2:00 - 2:15

DRILL 2:15 - 5:00

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER Travel 5:30 - 6:00 pm

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20			01, 02, 03, 04, 05, 06, 07	

0.0 - 0.5 Organics

0.5 - 8.6 Ojibway II Sediments

beige, oxidized, soft, slightly gritty clay.

8.6 - 21.6 Matheson Till

beige grey fine sand/silt and grey gritty clay matrix (5-7%) Till is matrix supported with cobble clasts of composition: 50% volcanics and sediments; 50% Granitoids.

15.8 - 16.2 sorted beige grey fine sand bed

16.2 - 19.6 increase in clay in matrix both gritty and non gritty partings. Fewer +10 mesh clasts yet there are -10 mesh cuttings. Occasional sorted fine sand bed

19.6 - 19.9 beige - compact non gritty clay bed

19.9 - 20.5 clay rich till. Compact grey gritty and fine sand/silt matrix. Cobble clasts of composition: 55% Volcanics and sediments; 45% Granitoids.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 27 19 89

HOLE NO CB-89-114 LOCATION 2w 2+25S

GEOLOGIST ____ DRILLER ____ BIT NO. ____ BIT FOOTAGE ____

SHIFT HOURS ____ TO ____

MOVE TO HOLE ____

DRILL ____

TOTAL HOURS ____

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

CONTRACT HOURS ____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			07	20.5 - 20.9 Boulder - diorite
21			08	20.9 - 21.4 similar to 19.7-20.5
22				21.4 - 21.6 Boulder - bleached basalt
23				21.6 - 24.6 Missinaibi Sediments
24				dark grey - beige, hard, compact, pure, non gritty clay
25			09	wood chips at 24.5 - 24.7
26				24.6 - 34.5 Lower Till
27			10	initially slightly sorted (silt deficient) to unsorted downsection
28				grey beige fine sand matrix with 2-3% grey gritty clay. Cobble
29			11	clasts of composition: 55% Volcanics and Sediments; 45% Granitoids
30			12	- noticed 1-2% limestone below 31.0m
31				
32			13	32.5 - 34.5 up to 30% gritty clay in matrix - Increases somewhat downsection (does not appear to be rock powder).
33				
34			14	
35			15	34.5 - 36.0 Bedrock
36				Meta Sediments - similar to CB-89-112.
37				
38				
39				
40				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 28 19 89

HOLE NO CB-89-115 LOCATION Line 26 E 16+25 N ELEVATION 300

GEOLOGIST TURNER DRILLER J. HOWE BIT NO. CB70174 BIT FOOTAGE 29 - 33.5

SHIFT HOURS
____ TO ____

MOVE TO HOLE 9:15 - 9:30

DRILL 9:30 - 10:15

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 - 0.5 ORGANICS
1				0.5 - 1.0 OJIBWAY II SEDIMENTS light beige gritty clay
2			01	
				1.0 - 3.0 TILL
3				- light beige silt - fine sand matrix. Matrix supported cobbly till.
4			02	- clasts include: ~ 30% limestone, 40% Abitibi metavolcanics and 20% granitic.
5				
6				
7				3.0 - 4.5 BEDROCK - fine grained, diabasic texture
8				- dark green, chloritized
9				- disseminated calcite (5-10%) - no sulphides
10				BASALT
11				4.5. EOH
12				R. Turner
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 28 1989

SHIFT HOURS
____ TO ____

TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO CB-89-116 LOCATION L6E; 2+25S ELEVATION 282

GEOLOGIST K MacNeil DRILLER G Howy BIT NO. CB70235 BIT FOOTAGE 40-91.5

MOVE TO HOLE 7:00-7:45

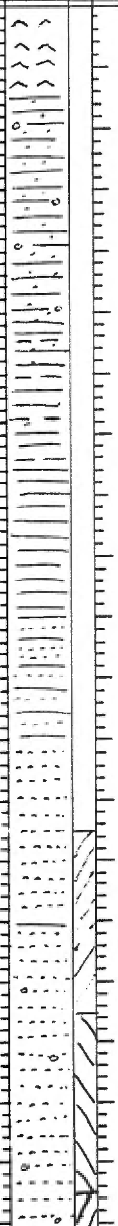
DRILL 7:45-11:00

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER 6:30-7:00 Travel to drill

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
				0 - 1.4 Organics						
				1.4 - 25.4 Ojibway II Sediments						
				1.4 - 7.5 clay :- grey ; slight grit and rare scattered pebbles ; section appears to become silt rich below 5.5m						
				7.5 - ~10 clay :- grey ; non-gritty ; very soft						
				~10 - 12 interbedded fine grained grey sand and clay -- proportions of sand increase downhole						
				12.0 - 25.4 sand :- beige grey to beige ; fine grained ; minor clay partings @ 15 and minor pebbles below 16.0m ; sand is well sorted and represents glaciofluvial sedimentation						
				25.2 - 25.4 pebbles become more prominent						
			01	25.4 - 36.8 Matheson Till						
			02	grey-beige, unsorted fine sand and silt matrix -- both clast and matrix rich sections in initial 2.5m ; till is matrix supported with cobble size clasts ; clast composition :- 50:50 intermediate - mafic volcanics and sediments versus granitoids <1% limestone						

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 28 19 89

HOLE NO CB-89-116 LOCATION L6E; 2+25S ELEVATION

GEOLOGIST DRILLER BIT NO. BIT FOOTAGE

SHIFT HOURS
TO

MOVE TO HOLE

DRILL

TOTAL HOURS

MECHANICAL DOWN TIME

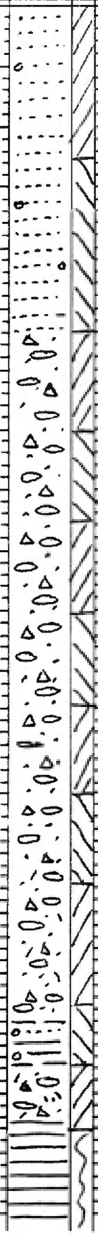
DRILLING PROBLEMS

CONTRACT HOURS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21			03	32-33.3 - matrix disproportionately abundant
22				@ 33.8 intersected small intermediate volcanic boulder
23				34.2-36.2 grey gritty matrix clay present in varying proportions
24			04	
25				36.2-36.8 unsorted fine sand and silt matrix
26			05	36.8-37.5 Missinaibi Sediments: return of fine silty/clayey platelets, fine to medium grained poorly sorted sand and scattered pebbles
27				
28			06	
29			07	37.5-38.5 Matheson Till: mixed fine sand/silt and grey gritty matrix clay; clasts similar to till from 25.4-36.8; presence of Matheson Till suggests Missinaibi Sediments from 36.8-37.5 form a "rip-up" clast deposited within Matheson Till
30				
31			08	
32			09	
33				
34			10	38.5-46.3 Missinaibi Sediments
35			11	38.5-43.2 clay:- grey; compact; non-gritty; very difficult to penetrate; below 40.5 silt varves are present
36				
37			12	
38			13	
39				
40			N.S.	



OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 28 1989
SHIFT HOURS
____ TO ____
TOTAL HOURS
____
CONTRACT HOURS
____

HOLE NO CB-89-116 LOCATION L6E; 2+25S ELEVATION ____
GEOLOGIST ____ DRILLER ____ BIT NO. ____ BIT FOOTAGE ____
MOVE TO HOLE ____
DRILL ____
MECHANICAL DOWN TIME ____
DRILLING PROBLEMS ____
OTHER ____
MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	
41				43.2 - 46.3 gravel:- cobbly, clast supported gravel from 43.2 - 44.3; 90% of clasts are black siltstone	
42			N.S.		* Sample 18 to be combined with sample 17 in lab
43					
44			14	44.3 - 46.3 matrix of medium to coarse sand/granules; cobble size clasts; Clast composition - 85% intermediate-mafic volcanics and sediments 15% granitoids	
45					
46			15		
47			16		
48				- from 45-46.3, gravel contains fine sand locally; appears to grade imperceptibly into Lower Till at 46.3	
49			17		
			18*		
50					
51				46.3 - 49.8 <u>Lower Till</u> grey, unsorted, fine sand and silt matrix; cobbly; clast supported; clast composition - 75% intermediate-mafic volcanics and sediments (35-40% black siltstone) 25% granitoids	
52					
53					
54					
55				48.4-48.6 boulder - feldspar porphyry	
56				48.6 - 49.8 grey-beige, gritty clay matrix; clay is very calcareous and contains scattered but consistent proportions (2-4%) of limestone granules; till is matrix supported and clast poor; pebble clasts	
57					
58					
59				49.8 - 51.5 <u>Bedrock</u>:- greywacke/siltstone:- black, fine grained (0.1-0.2 mm); schistose; predominantly greywacke with minor bands of black fissile siltstone; non-calcareous; 2-4% disseminated cubic pyrite	
60					

51.5m (172') EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 28 19 89

SHIFT HOURS

_____ TO _____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-117 LOCATION LINE 24 E 17+00N ELEVATION 298

GEOLOGIST TURNER DRILLER J. HOWG BIT NO. CB70174 BIT FOOTAGE 33.5 - 49.5

MOVE TO HOLE 10:15 - 10:30

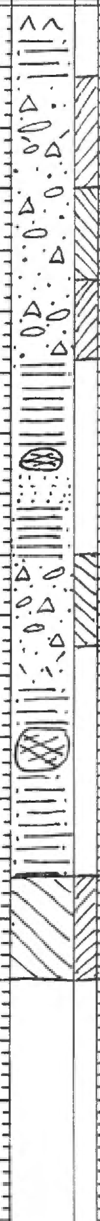
DRILL 10:30 - 12:30

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			01 (2); 02 (3.8); 03 (5.1); 04 (9.9); 05 (15.2)	see below

0 – 0.5 ORGANICS

0.5 – 1.3 OJIBWAY II SEDIMENTS
light beige brown gritty clay

1.3 – 5.8 TILL
- Matrix supported cobbly till
- matrix is light grey beige silt fine sand (with <5% silt-clay between 2.0 - 2.2 m).
- clasts include 10-20% limestone, 60% Abitibi metavolcanics, 20-30% granitic. Limestone clasts decrease to <1% after 3.4 m

5.8 - 7.2
medium grey, soft clay, no grit or pebbles.

7.2 - 7.6 bleached basalt boulder.

7.6 - 8.1 dark grey, washed, medium sand.

8.1 - 8.3 dark brown, gritty clay, containing <5% organics. (Character sample 117-A)

8.3 - 9.0 beige, gritty clay with <20%, light grey gritty clay. Volcanic pebbles (10-20%) observed.

9.0 - 11.2 TILL
matrix supported cobbly till. Grey, fine sand matrix. Clasts 80% Abitibi volcanics and 20% granitic.

11.2 - 11.8 olive green gritty clay grading into beige brown clay minor organics <2%. (character sample 117B)

11.8 - 12.6 basalt boulder

12.6 - 14.3 ORANGE - Brown (oxidized) gritty clay containing ~ 5-10% volcanic pebbles. (character sample 117C)

14.3 - 16 BEDROCK
- bleached intermediate - mafic volcanic
- medium brown grey (oxidized)
- fine grained, no disseminated calcite
- trace sulphides <.1%

R. Turner

<u>Note</u> check logged character splits of samples #01 to 04 April 89 by R.C.

117-01 to 03 beige to grey beige below 3.0 m unsorted i.e. sand/silt matrix size range (<50μ to 300μ). Very few +10 clasts; however, looked at +10 mesh fraction & found clasts to be subangular to subrounded pebble & cobble cuttings 55% Volcanics & sediments; 45% granitoids. Trace of limestone. Samples belong to unit 4 Matheson Till & not Cochrane Till as may be inferred from field log.

Since interval 1.3 to 5.8 belongs to Matheson Till unit 4 5.8 to 9.0 is Missinaibi glaciolacustrine sediments subunit 3c

#04 ochre coloured matrix with two sorted populations: 60% of matrix is fine sand and silt (<50μ & 180 to 250μ 40% is sorted medium grained sand (250μ to 600μ). Silt fraction may be derived from overlying lacustrine sediments or underlying unit. There is pervasive oxidation of +10 mesh subrounded pebbles & cobbles. Sample is most likely Missinaibi Sediments subunit 3a.

Also Kenzie McNeil logged character samples 117B & 117C. interval 11.2 to 14.3 is m found to be highly weathered bedrock rock powder/clay.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 28 1989

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO CB-89-118 LOCATION L14E; 14+50N (old grid) ELEVATION 277

GEOLOGIST K MacNeil DRILLER G Hawg BIT NO. CB7 6226 BIT FOOTAGE 0-48.5

MOVE TO HOLE 11:00-12:15

DRILL 12:15 - 4:30

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER 5:00-5:30 Travel

MOVE TO NEXT HOLE 4:30-5:00

New Bit

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1				0-1.4 Organics
2				1.4-15.7 Ojibway II Sediments
3				1.4-7.5 clay:- grey; slightly gritty with scattered pebbles
4				7.5-~12.0 clay:- pure; non-gritty
5				~12-15.7 sand:- beige; fine grained; rare clay partings to 14m; glaciofluvial(?)
6				15.7-17.1 grey-beige, sand matrix - fine grained to silty; cobbly - matrix supported. clast composition - 50:50 intermediate to mafic volcanics and sediments versus granitoids; this section is similar in appearance to Matheson Till but probably represents poorly sorted glaciofluvial gravel
7				
8				
9				
10				
11				
12				
13				
14				17.1-18.4 gravel/sand:- unsorted fine to medium grained sand + coarse granular sand and scattered pebbles
15			01	
16			02	
17			03	18.4-21.6 pebbly gravel - medium to coarse sand matrix; subrounded pebbles; fine sand common below 19.3; clast composition similar to section from 15.7-17.1
18				
19			04	
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 28 1989

HOLE NO CB-89-118 LOCATION L14E; 14+50N ELEVATION 277

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

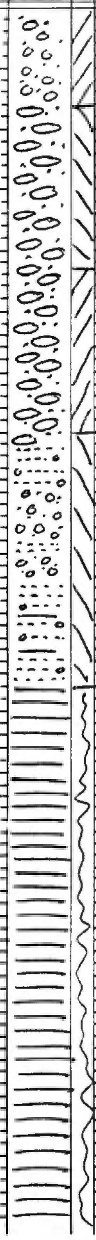
MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21–40			05 (21), 06 (23), 07 (26), 08 (29), N.S. (35.5)	

21.6 - 27.2 gravel - very cobbly; abundant granules but also consistent return of poorly sorted fine sand; moderate variations in clast composition from 50:50 to 65:35 intermediate - mafic volcanics and sediments versus granitoids

27.2 - 27.9 sand:- beige color; medium to coarse grained with local pebbles

27.9 - 29.3 pebbly gravel - common fine sand interbeds

29.3 - 31.1 sand:- beige, fine grained; rare pebble bands, a few clay partings below 30

31.1 - 47.2 Missinaibi Sediments

31.1 - 43.7 clay:- grey; compact; minor grit and pebbles in initial 0.2 m -- probable mixing of glaciofluvial sediments and clay at bit; clay is plastic, non-gritty below 31.3

- below 43.0 very fine grained grey sand interbedded with the clay

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 28 19 89

SHIFT HOURS

____ TO ____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-118 LOCATION L14E; 14+50N ELEVATION ____

GEOLOGIST ____ DRILLER ____ BIT NO. ____ BIT FOOTAGE ____

MOVE TO HOLE ____

DRILL ____

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
41				43.7-44.2 gravel:- cobbly; essentially clast supported with 99% black siltstone clasts
42				
43				
44			09	44.2-46.5 boulder- siltstone; black; fissile; weakly graphitic
45				
46			N.S.	46.5-47.2 gravel:- coarse grey sand matrix. Clasts are 100% black siltstone; considering that boulder from 44.2-46.5 and underlying bedrock are similar it is probable that this gravel represents overburden washed into a fracture in bedrock
47			10	
48			11	
49				
50				
11				47.2-48.5 **Bedrock:-** siltstone:- black; aphanitic; fissile; minor amounts ground to a grey clay at 48.2m; non-calcareous; no sulfides; may be ~~weakly~~, locally graphitic
12				
13				
14				
15				
16				48.5m (162') EOH
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 28 19 89

HOLE NO CB-89-119 LOCATION LINE 22 E 17+50N ELEVATION 293

GEOLOGIST TURNER DRILLER J. HOWG BIT NO. CB70174 BIT FOOTAGE 49.5-55.5

SHIFT HOURS

____ TO ____

MOVE TO HOLE 12:30 - 12:45

DRILL 12:45 - 1:15

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1				0 - 1.5 NO RETURN
				1.5 - 1.8 ORGANICS
2				1.8 - 3.5 OJIBWAY II SEDIMENTS light grey-beige gritty clay
3				3.5 - 4.4 TILL
4			01	MATRIX supported cobbly till. matrix is light grey-beige, silt-fine sand. Clasts include: limestone 30% Abitibi volcanics 60% granite 10%
5			02	
6				
7				
8				4.4 - 6.0 BEDROCK Bleached basalt - med green-grey - fine grained ~ 10% disseminated calcite + calcite vein - no sulphides observed.
9				
10				
11				
12				6.0 EOH
13				R. Turner
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 29 19 89

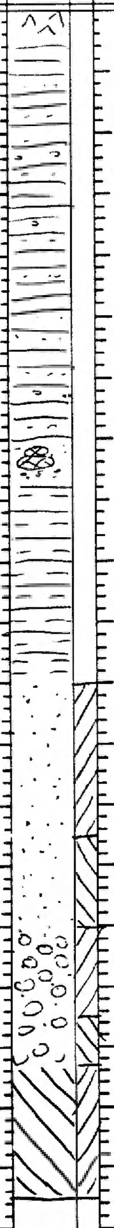
SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-120 LOCATION 13E ; 16+50N (old grid) ELEVATION 280
GEOLOGIST [illegible] DRILLER [illegible] BIT NO. [illegible] BIT FOOTAGE [illegible]
MOVE TO HOLE 7:00 - 7:30
DRILL 7:30 - 8:30
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER 6:30 - 7:00 [illegible]
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 - 0.4 Poor return - Organics
				0.4 - 17.3 Ojibway II Sediments
				0.4-7.3 clay - beige (oxidized) grading to grey (unoxidized) by 2.5m. Scattered granules/pebbles soft - water saturated below ~4.6m. Poor return 4.5-7.3m
				7.3 - granitic cobble
				7.8 boulder - biotite schist followed by thin (<0.1m) pebble sand which is rich in limestone
				7.8 - 11.0 clay / silt poor recovery
				11.0-17.3 glaciofluvial sediments
				11.0 - 12.8 sand - beige, well sorted generally medium to coarse grained with some fine sand beds and granule sand
12			01	12.8 - 13.1 granular sand
				13.1 - 14.9 fine to medium grained sand
14			02	14.9 - 17.3 Gravel : fine beige sand matrix. Pebbles/cobble clasts of composition 50% Volcanics and sediments; 50% Granitoids
16			03	
17			04	17.3 - 19.7 Bedrock : Greywacke medium to dark grey; fine to med grained (0.1 to 0.4mm). Strongly schistose to sheared - obscuring texture; some muddy partings weakly silicified. Below 18.9 light to medium grey: more massive - siltstone
18.5			05	
				19.5m (65') EOH



OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 28 19 89

SHIFT HOURS

____ TO ____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-121 LOCATION LINE 20+50E 18+25N ELEVATION 285

GEOLOGIST TURNER DRILLER J. HOWG BIT NO. CB70175 BIT FOOTAGE 0-7

MOVE TO HOLE 1:15 - 1:30

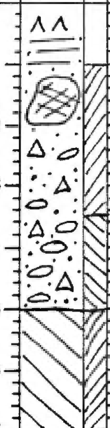
DRILL 1:30 - 2:15

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER NEW BIT, NEW SUB

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–7		1.0–5.0, 5.0–7.0	01, 02, 03	0-0.5 ORGANICS 0.5-1.0 OJIBWAY II SEDIMENTS light grey gritty clay 1.0-5.0 TILL Clast supported till matrix - light grey silt - fine sand clasts include Abitibi metavolcanic and metasediments 60%, granitic 25-30%, limestone 5-10%. Cobbles of all the above were intersected. Note: sample 02 is not ideal because there is very little matrix (mostly cutting from various boulders and cobbles). 5.0-7.0 BEDROCK - bleached volcanic - silicified with ~20% quartz veins - 5.0-6.0m trace sulphides < 2% - at 6.0-7.0m rock chips contain up to 30% massive and cubic pyrite, < 5% ARSENOPYRITE. 7.0 EOH R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 29 1988

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO CB-89-122 LOCATION L5E;18N (old grid) ELEVATION 284

GEOLOGIST K. MacNeil DRILLER G. Houg BIT NO. CB70226 BIT FOOTAGE 68.0-76.0

MOVE TO HOLE 8:30-9:00

DRILL 9:00 - 9:45

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–20			01 02 03	0.0 - 1.0 Organics 1.0 - 4.3 Ojibway II Sediments clay - beige ; slightly gritty 2.0 - very gritty clay seam c̄ scattered pebbles 2.5 - 4.3 sand ; very fine grained, grey with minor clay partings. 4.3 - 6.1 Matheson Till grey beige ; fine sand/silt matrix Cobble clasts of composition: 50% Volcanics and sediments ; 50% Granitoids <1% limestone Till is cobbly yet matrix supported. 6.1 - 8.5 Bedrock : greywacke - dark grey to black ; grain size of <0.1 to 0.3mm ; schistose - to sheared ; 2-3% quartz/carbonate veinlets. at 7.5m 3cm quartz/carbonate veinlet. 8.5 E.O.H.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 28 19 89

SHIFT HOURS ______ TO ______

TOTAL HOURS ______

CONTRACT HOURS ______

HOLE NO CB-89-123 LOCATION LINE 22 E 21+25 N ELEVATION 286.

GEOLOGIST TURNER DRILLER J. HOWG BIT NO. CB7017S BIT FOOTAGE 7-35 m

MOVE TO HOLE 2:15 - 2:30

DRILL 2:30 - 4:45

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE Move to Road 4:45 to 5:45

DEPTH IN METRES	SAMPLE NO.	DESCRIPTIVE LOG
0		0 - 0.5 ORGANICS
0.5		0.5 - 4.0 OJIBWAY II SEDIMENTS light grey, gritty clay
4.0		4.0 - 8.0 washed sand and pebbly gravel interbedded with grey, gritty clay pebbles includes ~20% limestone, 60% Abitibi metavolcanics, 20% granitic
6	01	
8.0		8.0 - MISSINABI SEDIMENTS grey clay, no grit or pebbles
16.5		16.5 - 18.0 brown, gritty clay organic rich interbedded with med grey, gritty clay. <1% black basalt pebbles. (character sample 123A).

Note: Check logged character splits of samples 01 to 04 April/89 by P. Collins.

#01 2 sorted populations are present: 80% is medium grading to coarse grained sand (250µ to 850µ) : 20% is sorted fine grained sand (100µ to 250µ) and minor silt (≤50µ). Few +10 granule sized clasts

#02, 03, 04, 05 correct as logged Missinaibi sand and gravel with up to 25% weathered clasts.

CONCLUSION. The interval 4.0-8.0 is sand and gravel of Cochrane member 8.0-16.5 is Ojibway II glaciolacustrine clay. The interval 16.5-21.0 is missinaibi clay (this was confirmed by logging character split of clay - found to be organic rich). 21.0-26.5 is missinaibi glaciofluvial member. Thus no Matheson Till was intersected

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-123 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

MOVE TO HOLE ________

DRILL ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21				21.0 - 26.5 Interbedded Sand & Gravel
22			02	med. grey, fine-medium sand; slightly washed; interbedded with pebbly gravel. Clasts include: 10% quartz, 10% granitic, 80 Abitibi metavolcanics and metasediments.
23			03	
24				
25			04	22.4 - 23 sorted, grey black sand.
26			05	23.0 - 26.5 mainly black siltstone pebbles 60-70%, volcanic ~20%, quartz <5%.
27			06	
8				26.5 - 28.0 BEDROCK - light-medium green-grey - fine grained - no calcite, only trace sulphides <.1% - Intermediate Volcanic
9				
10				
11				
12				28.0 EOH R. Turner
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 29 19 89

SHIFT HOURS
_____ TO _____

TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO CB-89-124 LOCATION 3E ; 17N ELEVATION 278

GEOLOGIST K. McNeil DRILLER G. Hong BIT NO. SB70226 BIT FOOTAGE 76.5 - 92.0

MOVE TO HOLE 9:45 - 10:00

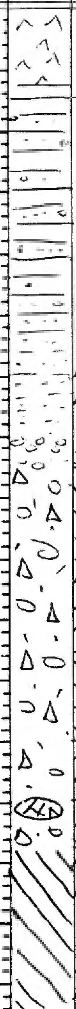
DRILL 10:00 - 11:15

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				
0–1				0.0 - 1.2 Organics
1–5				1.2 - 7.5 Ojibway II Sediments clay: grey; slightly gritty minor pebbles mainly limestone, volcanics. 4.0 - 5.7 clay - grey, soft, pure, non gritty; very fine sand/silt is common below 4.5 m
6–7			01	5.7 - 6.8 very fine silty sand with clay partings.
8			02	6.8 - 7.1 poorly sorted grey beige sand with scattered pebbles
10			03	7.1 - 7.4 Gravel: fine beige sand matrix; Cobble clasts of composit: 50% Volcanics and sediments;
11			04	50% Granitoids.; possibly washed till
12			05	7.4 small granitic boulder
13			06	7.5-13.6 Matheson Till
14–16			07	grey beige, fine sand/silt matrix cobbly; clast supported; clast composition: 50% Volcanics & Sediments; 50% Granitoids; below 10.3, grey gritty matrix clay in varying proportions
17–20				13.6 - 16.5 Bedrock - greywacke medium grey; grain size of 0.1 - 0.5 mm; well foliated; indistinct granular texture; 10-12% grey chlorite along foliation planes

16.5 (55') E.O.H.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 29 19 89

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-125 LOCATION LINE 50 E 5+00N ELEVATION 282 m

GEOLOGIST TURNER DRILLER J. HOWG BIT NO. CB70175 BIT FOOTAGE 35 - 54.5

MOVE TO HOLE 6:45 - 7:45

DRILL 7:45 - 9:45

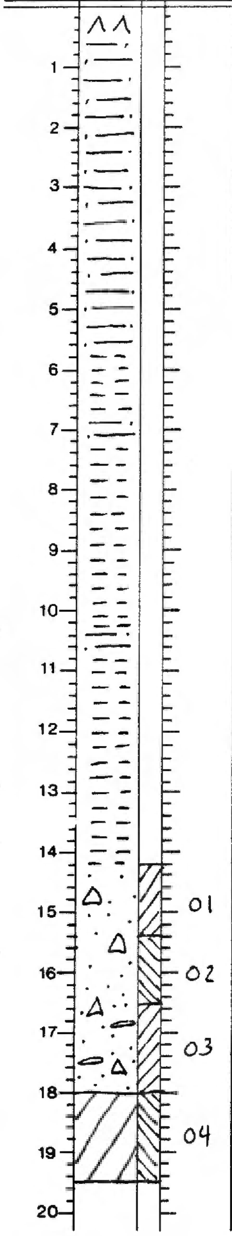
MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES / GRAPHIC LOG / INTERVAL / SAMPLE NO.	DESCRIPTIVE LOG						



0 - 0.5 ORGANICS

0.5 - 14.2 OJIBWAY II SEDIMENTS

0.5 - 5.6 light beige grey gritty clay.

5.6 - 14.2 silt mixed with minor grey, gritty clay (<5%).

14.2 - 18.0 MATHESON TILL
- matrix supported, pebbly till
- light grey silt - fine sand matrix.
- clasts include:

60-70% Abitibi belt metavolcanics (~40%) metasediments (~30%)

30% granitic

<1% limestone, <1% vein quartz

18.0 - 19.5 BEDROCK

- light - medium green
- fine grained, diabasic texture
- disseminated calcite (<5%) & vein calcite (<5%).
- no sulphides.

Basalt

19.5 EOH

R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 29 19 89

SHIFT HOURS
____ TO ____

TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO CB-89-126 LOCATION L16; 16+25N (old grid) ELEVATION 275.5

GEOLOGIST K. McNeil DRILLER G. Houg BIT NO. C070227 BIT FOOTAGE 0.0 - 12.0

MOVE TO HOLE 11:15 - 11:30

DRILL 11:30 - 12:30

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–1				0.0 - 1.0 Organics
1–7.2				1.0 - 7.2 Ojibway II Sediments clay: beige (oxidized) to grey (unoxidized) downsection with minor pebbles. 2.9 - 3.1 pebbly sand (Cochrane) 50% limestone 3.1 - 6.1 clay grey nongritty, very soft. 6.1 - 7.2 very fine silty sand with local clay partings
7.2–9.5			01, 02, 03	7.2 - 9.5 Matheson Till greybeige fine sand/silt matrix (grey gritty clay initially). Till is matrix supported with cobble clasts of composition: 55% Volcanics and sediments; 45% Granitoids 9.3 - 9.5 graphitic sediments are in abundance:- may partially be bedrock
9.5–12.0			04	9.5 - 12.0 Bedrock - siltstone black - may be weakly graphitic, schistose to sub fissile; <0.1mm in grain size below 11.0-11.8 ground fine sand and gritty grey or beige clay (oxidized shears?)

12.0 m E.O.H.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 29 19 89

SHIFT HOURS

______ TO ______

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-127 LOCATION 86 E 1175 N ELEVATION 278 m

GEOLOGIST Turner DRILLER J. Howg BIT NO. CB70176 BIT FOOTAGE 0-76.5

MOVE TO HOLE 9:45 - 2:15

DRILL 2:15 - 5:00

MECHANICAL DOWN TIME

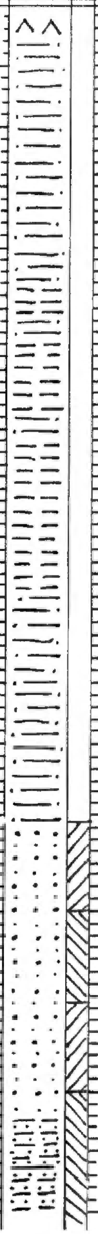
DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

NEW BIT Page 1 of 4

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



Depth (m): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

Sample No.: 01, 02, 03, 04

0 – 0.5 ORGANICS

0.5 – OJIBWAY II SEDIMENTS

0.5 – 1.5 light beige gritty clay

1.5 – 4.5 light grey gritty clay; contains < 2% pebbles, mainly volcanic and granitics.

4.5 – 9.8 silt (very little return), interbedded with light grey, gritty clay beds

9.8 – 13.5 light grey, gritty clay.

13.5 – 18.5 Interbedded fine-medium, beige sand with pebbly (pea size) gravel. Clasts are dominantly Abitibi Belt (70%), ~40% black siltstone, ~30% basalt and schist, 30% granitic, < 1% limestone.

18.5 – 21.0 silt and fine, beige, sand mixed with < 5% soft, grey, gritty clay and ~5% small pebbles (content similar to gravel above).

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-127 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

MOVE TO HOLE ________

DRILL ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21			05	20.8 - 26.6 Gravel. Pebbly with medium grained, sand matrix interbedded with fine sand and silt. Pebbles 70% volcanic/sedimentary, 30% granitic.
22				
23			06	26.6 - 27.0 fine, well sorted, beige, sand.
24				
25			07	27.0 - 33.2 Gravel, Pebbly interbedded with fine-medium, beige sand. Clast composition 70% Abitibi, 30% volcanic. At 29.6 m limonitic staining is observed on ~10% clasts.
26			08	
27				
28			09	33.2 - 33.7 fine, well sorted sand.
29			10	33.7 - 46.5 Gravel, Pebbly mixed with beige fine sand. Clast composition as above.
30				
31			11	
32			12	
33				
34			13	
35			14	
36				
37			15	
38			16	
39				
40			17	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 30 1989

HOLE NO CB-89-127 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL 7:00 - 5:15

TOTAL HOURS ______

MECHANICAL DOWN TIME 10:45 - 11:15 Fix chip hose

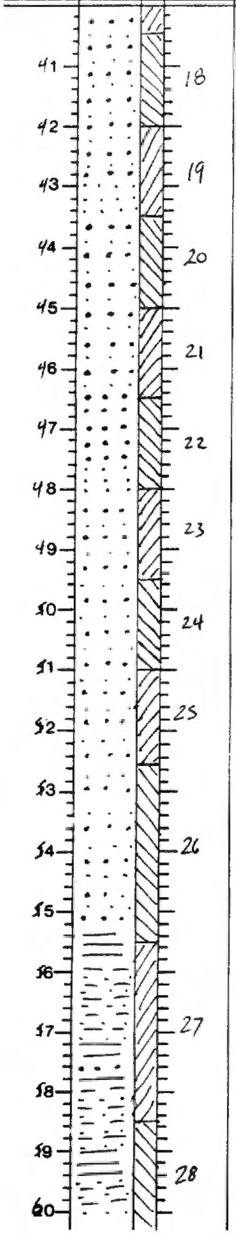
DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



46.5 - 55.1 Coarse gravel and medium to coarse sands interbedded. Clast composition ~60% Abitibi metavolcanics and ~40% granitic.

55.1 - 56.0 Missinabi SEDIMENTS hard, grey clay

56.0 - .5 Silt - fine sand mixed with 5-10% grey clay and ~ 2%-20% pebbles (including metavolcanics 60%, 20% siltstone, 20% granitic).

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE __________ 19 __

HOLE NO CB-81-129 LOCATION __________

GEOLOGIST __________ DRILLER __________ BIT NO. __________ BIT FOOTAGE __________

SHIFT HOURS

______ TO ______

MOVE TO HOLE __________

DRILL __________

TOTAL HOURS

______

MECHANICAL DOWN TIME __________

DRILLING PROBLEMS __________

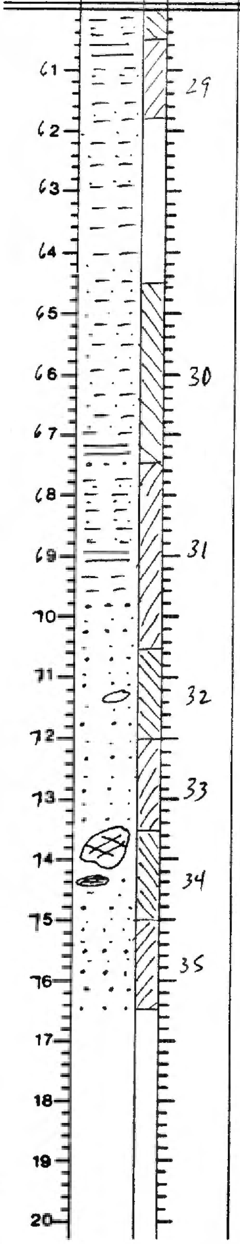
CONTRACT HOURS

______

OTHER __________

MOVE TO NEXT HOLE __________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						



70.5 - 76.5 Gravel, Cobbly mixed with coarse sand and pebbles. Clasts include 75% volcanic, 15% granitic, 5% quartz. limonitic staining present ~ 5% clasts becoming more abundant at 75.4 m

76.5 EoH.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 12 19 89

HOLE NO CB-89-127 LOCATION Re-drill 3 m East of 127 ELEVATION 278 m

GEOLOGIST D Holmes DRILLER G. Howe BIT NO. CB70207 BIT FOOTAGE 0 - 77.0 m

SHIFT HOURS ______ TO ______

MOVE TO HOLE 7:00 - 7:15 AM

DRILL 7:15 - 12:30 PM

TOTAL HOURS ______

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS ______

OTHER travel 5:15 - 7:00 AM travel 5:00 - 5:30 PM

MOVE TO NEXT HOLE 12:30 - 5:00 PM

New Bit

page 1

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	
				0 - 13.5 OJIBWAY II SEDIMENTS 0 - 8.0 clay: slightly gritty, grey compact, soft after 3.0 m 8.0 - 13.5 clay: grey non-gritty soft with beige silt varves 13.5 - 56.5 MATHESON TILL - abrupt contact with overlying clay 13.5 - 19.5 matrix supported till fine grey sand-silt matrix; cobble clasts compositions approx. 50-60% Volcanics/Sediments 40-50% Granitoid 19.5 - 19.6 gritty clay/silt, compact matrix	Note: Hole was originally drilled ~~logged~~ and sampled January 29. The hole was re-drilled to attain a bedrock sample. It was logged but the overburden was not sampled.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 12 1989

SHIFT HOURS
_____ TO _____

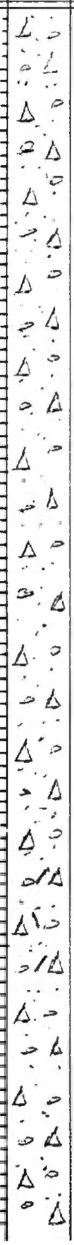
TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO CB-89-127 LOCATION re-drill ELEVATION _____
GEOLOGIST D. Holmes DRILLER _____ BIT NO. _____ BIT FOOTAGE _____
MOVE TO HOLE _____
DRILL _____
MECHANICAL DOWN TIME _____
DRILLING PROBLEMS _____
OTHER _____
MOVE TO NEXT HOLE _____

page 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21				19.6 - 27.0 matrix supported till Fine grey sand-silt matrix; clast composition 60:40
22				
23				27.0 - 27.4 sandy matrix supported till, clast composition still 60:40
24				
25				27.4 - 34.0 matrix supported till Fine grey sand-silt matrix; cobble clasts 60:40
26				
27				34.0 - 36.0 till as above with a clay-silt component to the matrix.
28				
29				36.0 - 55.0 till similar to 27.4 - 34.0
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				



OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 12 19 89

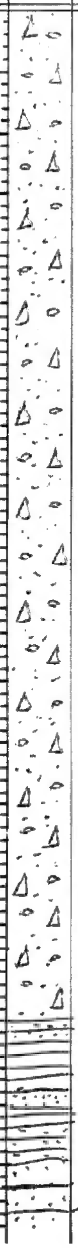
HOLE NO CB-89-127 LOCATION re-drill ELEVATION ______
GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS
______ TO ______
TOTAL HOURS
______
CONTRACT HOURS
______

MOVE TO HOLE ______
DRILL ______
MECHANICAL DOWN TIME ______
DRILLING PROBLEMS ______
OTHER ______
MOVE TO NEXT HOLE ______

page 3

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
41				at 51.0 few hard gritty grey lumps in till matrix
42				
43				55.0 - 56.5 matrix supported clay till fine grey sand-silt and clay-silt matrix;
44				clast composition approx.
45				60% volcanics/sediments 40% granitoid
46				
47				56.5 - 74.2 MISSINAIBI SEDIMENTS
48				56.5 - 57.0 clay: very compact blue-grey, slightly gritty with a few pebbles
49				
50				57.0 - 57.8 clay as above, non-gritty
51				57.8 - 58.0 very fine grained grey sand
52				58.0 - 58.4 very compact clay, non-gritty, blue-grey colour, very hard drilling
53				
54				58.4 - 59.0 clay: gritty with some very fine grained sand
55				and silt and pebbles
56				59.0 - 61.0 interbedded very fine grained sand, pebbles and
57				clay (looks like a clay till)
58				
59				
60				



OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 12 1989

HOLE NO CB-89-127 LOCATION re-drill ELEVATION

GEOLOGIST DRILLER BIT NO. BIT FOOTAGE

SHIFT HOURS
TO

MOVE TO HOLE

DRILL

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER

MOVE TO NEXT HOLE

page 4

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
61–74				61.0-61.5 clay, blue grey, non-gritty compact 61.5-63.0 pebble sand - very fine grey sand, clay-silt and pebbles - cobbles approx 60/40 63.0-65.5 clay: grey-green, tough clay - brittle approx 0.5cm thick interbeds in very fine beige sand - silt. 65.5-66.5 Fine grained beige sand at 66.5 compact non-gritty grey clay 66.5-67 fine grey-beige sand 67.0-68.0 clay: grey-green and beige varved clay, both are compact, varves approx 2cm 68.0-69.5 very fine grey sand 69.5-74.2 clast supported cobble gravel (could be Lower Till but lacks matrix) clast compositions approx. 75% volcanic 25% granitoid trace iron formation and limestone <5% of clasts limonite stained - Fine grey sand-silt and medium sand from 71.5 to 74.2
75			36 Bedrock	74.2-77.0 BEDROCK
76–77			37 Bedrock	74.2-76.0 ochre coloured bedrock clay with a few sericitic chips - grades to a greenish rock-flour clay with an increase in chips after 75.8 * Sample 127-36 from this interval 76.0-77.0 green clay and chips schistose, very fine grained <1% carbonate in clay or chips * Sample 127-37 from this interval
78–80				

77.0 EOH Weathered Mafic Volcanic

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 29 19 89

HOLE NO CB-89-128 LOCATION L4E ; 25N ELEVATION 282

GEOLOGIST K. McNeil DRILLER G. Howey BIT NO. CR70227 BIT FOOTAGE 12 - 47.5

SHIFT HOURS ______ TO ______

MOVE TO HOLE 12:30 - 1:30

DRILL 1:30 - 4:30

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

Page 1 of 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
0–4				0.0 - 1.3 Organics						
				1.3 - 4.6 Ojibway II Sediments clay - grey slightly gritty with scattered limestone granitic & volcanic pebbles.						
4–7			01	4.6 - 5.0 Matheson Till grey beige fine sand/silt matrix Cobble clasts of composition: 50% Volcanics and Sediments; 50% Granitoids. 4.8 - 5.0 boulder granodiorite.						
8–10			02	5.0 - 10.3 clay: grey, soft; non gritty 5.8: very fine grey silty sand with clay partings.						
10–20			03 04 05 06 07 08 09	10.3 - 34.1 Matheson Till grey beige fine sand/silt matrix Cobble clasts of composition: 60% Volcanics and sediments; 40% Granitoids <1% limestone 13.1 - 13.3 boulder - diabase 13.4 - 13.8 blder - basalt 14.0 - 14.2 boulder - intermediate volcanic 14.5 - 14.7 boulder - granodiorite. 22.6 - 22.9 boulder - monzonite 24.4 - 24.6 boulder - altered mafic volcanic 24.6 - 25.3 minor grey gritty matrix clay 25.3 - 26 fine sand/silt matrix 26 - 27.4 grey gritty matrix clay occurs sporadically						

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 29 19 89

HOLE NO CB-89-128 LOCATION L1E; 25N ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21			09 (cont)	27.4-27.6 clay :- grey; compact
				@ 27.8 clay :- grey; compact
22			10	27.8-28.3 grey gritty matrix clay
23			11	28.3-28.7 clay :- grey; very compact; obviously Missinaibi Formation but probably not in situ
24				
25			12	28.7-29.3 grey gritty matrix clay
26			13	
27				29.3 - 34.1 grey-beige, fine sand and silt matrix; cobbly: clast supported; from 29.3 to 32 m, 95% of the clasts are volcanics/sediments, most of which are grey sediments
28			14	
29			15	
30				-from 32 - 33.5, abundant oxidized cobbles; clast composition changes to 75:25 volcanics/sediments versus granitoids
31			16	
32			17	
33			18	-from 33.5-34.1, minor beige gritty matrix clay
34				
35				34.1 - 35.5 <u>Bedrock</u>: altered volcanic :- much of sample above 35m is ground to grey white non-calcareous clay; competent chips are light grey, strongly foliated, fine grained and sericitic(?); textures not distinct but may be tuffaceous: sample is more competent below 35m with ~5% veinlet quartz-carbonate.
36				
37				
38				
39				
40				

35.5m (118') EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE JAN 31 19 89

SHIFT HOURS

_______ TO _______

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-129 LOCATION Line 90E 400N ELEVATION 280 m

GEOLOGIST TURNER DRILLER J. HOWG BIT NO. CB70178 BIT FOOTAGE 0-50.4

MOVE TO HOLE 11:30 - 11:45

DRILL 11:45 - 5:45

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE 5:45 - 6:00 move to road

New Bit

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	
				0 – 0.5 ORGANICS	Note: Based on field description and laboratory logs the interval 39.0 to 46.7 is assumed to be Matheson Till and not sand and gravel as originally logged. [illegible]
1				0.5 - 22.5 OJIBWAY II SEDIMENTS	
2				0.5 – 1.0 light, beige gritty clay 1.0 – 8.2 light, grey gritty clay	
3				8.2 – 13.5 silt (very little return)	
4				13.5 – 15.8 light grey, gritty clay	
5				15.8 - 22.5 Gravel, Pebbly with fine to medium sand matrix, beige.	
6				Pebbles 60% Abitibi meta volcanics, 40% granitic. ~ 5% of clasts	
7				have limonitic stain and < 1% small wood fragments observed.	
8				Cobbles abundant before 18 m.	
9					
10					
11					
12					
13					
14					
15					
16					
17			01		
18					
19			02		
20					

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-129 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

MOVE TO HOLE ________

DRILL ________

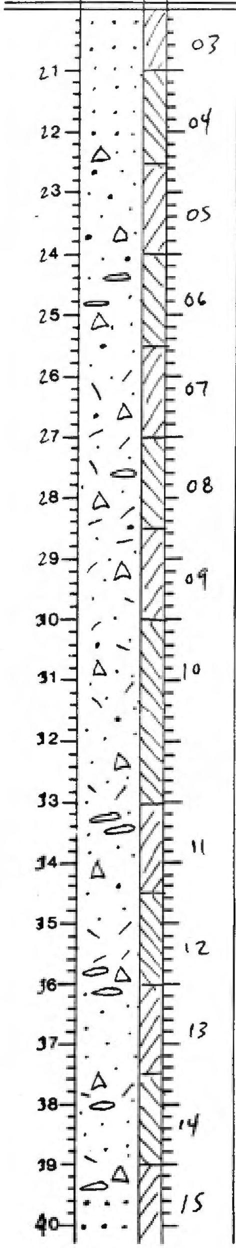
MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



22.5 - 39.0 MATHESON TILL
Matrix supported, cobbly till. Matrix is fine beige sand. Clasts include 60% Abitibi metavolcanics and 40% granitic, <1% limestone. Grey gritty clay (20-60%) is present in matrix after 25.8 m.

39.0 - 46.7 Gravel, pebbly interbedded with medium to coarse grained sand beds. Clasts include 80% Abitibi metavolcanics, 20% granitic, no limestone or limonitic staining observed.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-129 LOCATION ________ ELEVATION ________
GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________
MOVE TO HOLE ________
DRILL ________
MECHANICAL DOWN TIME ________
DRILLING PROBLEMS ________
OTHER ________
MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.
41			16
42			
43			17
44			
45			18
46			
47			19
48			20
49			
50			21
51			
12			
13			
14			
15			
16			
17			
18			
19			
20			

DESCRIPTIVE LOG

41.7 - 49.0 Gravel, Pebbly with fine sand matrix and ~10% gray gritty clay.

49.0 - 50.5 BEDROCK

49.0 - 49.7 ~ 60% chip samples are dark green basalt, fine grained.
40% light - medium green bleached basalt, fine grained, < 5% calcite disseminated, no sulphides observed.

49.7 - 50.5 ~80% bleached basalt (as above)
- fine grained
- light - medium green
- < 5% calcite disseminated
- no sulphides observed
- ilmenite or magnetite < 1%

note: very few chips returned, -10 was sampled as well.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 30 19 89

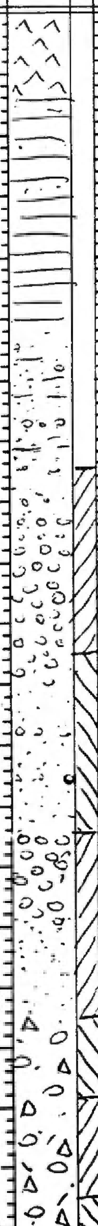
SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-130 LOCATION L4E ; 25N ELEVATION 283
GEOLOGIST K. MacNeil DRILLER G. Houg BIT NO. CB70226 BIT FOOTAGE 68-92
MOVE TO HOLE 7:30 - 7:45
DRILL 7:45 - 9:45
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER 6:30 - 7:30 Travel
MOVE TO NEXT HOLE

Pg 1of 2 -

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20			01 (9 m), 02 (12 m), 03 (15 m), 04 (17 m), 05 (19 m), 06 (20 m)	see below

0.0 - 1.3 Organics

1.3 - 16.7 Ojibway II Sediments

Clay : grey ; slightly gritty ; clay grades into non gritty clay down hole

5.0 - 7.0 Sand : grey ; very fine to silty with local clay partings and granular sand / pebbles

7.0 - 16.7 glacioFluvial sediments

7.0 - 8.2 sand ; grey fine grained c̄ minor pebbles below 7.5 m

8.2 - 8.7 Gravel : fine silty sand matrix with rounded pebble clasts of composition : 60%-70% Granitoids

8.7 - 11.3 Gravel. medium to coarse sand matrix with common fine sand ; rounded pebbles ; local sandrich zones ; 60-70% of clasts are granitoids
- fine sand very common intermixed below 10.5 m

11.3 - 13.7 Sand : fine to med grained Local pebble beds & granules.

13.7 - 14.9 Gravel : coarse to granular Sand matrix ; pebble clasts ; matrix supported.

14.9 - 16.7 Sand : , fine, beige sorted local pebble beds.

16.7 - 21.8 Matheson Till

grey beige unsorted fine sand/silt matrix. Cobble clasts of composition 60% Volcanics and Sediments ; 40% Granitoids (abundant return)

17.8 - 18.3 clast supported

18.3 - 21.8 grey gritty clay matrix ranging from partings to fine sand/silt.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 30 19 89

HOLE NO CB-89-130 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			06	21.5 - 24.0 <u>Bedrock</u> - greywacke
21			07	medium grey; grain size of 0.1-0.2mm
22				granular sedimentary texture;
23			08	well foliated; few cherty (grey) laminations (<1cm thick); 0.1 disseminated pyrite
24				
25				24.0 m (80') E.O.H.
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 1 19 89

SHIFT HOURS
____ TO ____

TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO CB-89-131 LOCATION Line 82 E 4400 N Elev. 277
GEOLOGIST Turner MacNeil DRILLER J Howg BIT NO. CB70178 BIT FOOTAGE 50.5 - 94.5
MOVE TO HOLE 7:00 - 7:45
DRILL 7:45 - 3:30
MECHANICAL DOWN TIME Replace liners in bean pump 3:30 - 4:30
DRILLING PROBLEMS
OTHER
MOVE TO NEXT HOLE

0

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1				0 - 0.5 NO RETURN
				0.5 - 1.5 ORGANICS
2				1.5 - 2.5 ORGANICS mixed with light beige gritty clay.
3				2.5-35.8 OJIBWAY II SEDIMENTS
4				2.5-31.4 Grey gritty clay containing <1% pebbles of limestone and basalt.
5				
6				25 - 31.4 gradational change from grey gritty clay to non gritty grey clay.
7				
8				note: poor recovery throughout the glacial lacustrine section.
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS
______ TO ______

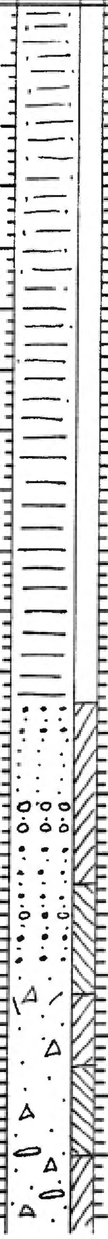
TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-131 LOCATION ______
GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______
MOVE TO HOLE ______
DRILL ______
MECHANICAL DOWN TIME ______
DRILLING PROBLEMS ______
OTHER ______
MOVE TO NEXT HOLE ______

②

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21–31				31.4 - 32.0 Gravel, pebbly with beige, coarse sand and granule matrix. Clasts include 30-40% Abitibi metavolcanics and metasediments, 60-70% granitic. 32.0 - 33.2 beige, well sorted, coarse sand. 33.2 - 33.6 Gravel, cobbly with beige, coarse sand matrix. No change in clast composition. 33.6 - 35.8 Gravel, pebbly (pea size) with beige coarse - granular sand matrix, Clast composition remains the same. Becoming cobbly at 35.0 m.
32–40			01 02 03 04 05	35.8 - 49.7 MATHESON TILL matrix supported cobbly till matrix is beige silt - fine sand containing (<5-30%) grey gritty clay. Clasts composition includes ~50% Abitibi metavolcanics and ~50% granitic. Contact between gravel and till is gradational. At 36.2 m < 5% grey gritty clay appears in the matrix and increases to ~30% by 36.6 m.



OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-131 LOCATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. CB8970179 BIT FOOTAGE 0-6.5m

MOVE TO HOLE ________

DRILL ________

MECHANICAL DOWN TIME ________

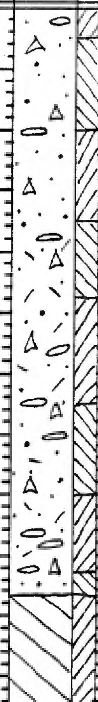
DRILLING PROBLEMS ________

OTHER ________

MOVE TO NEXT HOLE ________

New Bit

③

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
41			06	46.4-49.7m the clast content changes to ~70% Abitibi (~50 basalt and schist, 20% black siltstone) ~30% granitic. Rare grey gritty clay coatings on some clasts.
42				
43			07	
44			08	
45				49.7-51.5 BEDROCK
46			09	Black siltstone - fine grained, non-graphitic - thinly bedded with medium grey, fine grained, greywacke
47			10	- < 2% calcite veining, no calcite dissemination.
48				- sulphide < .1% pyrite.
49			11	
50			12	51.5 EOH
51			13	R. Turner
52				
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 30 1984

SHIFT HOURS
_____ TO _____

TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO CB-84-132 LOCATION 7E ; 26+75N ELEVATION 287

GEOLOGIST K. McNeil DRILLER G. Houg BIT NO. CB 70226 BIT FOOTAGE 92-117

MOVE TO HOLE 9:45-10:00

DRILL 10:00 - 11:45

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

Pg 1 of 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20			01, 02, 03, 04	

0.0 - 1.3 Organics

1.3 - 16.3 Ojibway II Sediments

Clay: - grey to locally grey beige (cont'd 1.5 - 3.0m) slightly gritty rare pebbles.

9.3 - 10.4 hit essentially pure, non gritty grey clay.

10.4 volcanic cobble.

10.5 - 13.3 very fine grey silty sand predominates : below 10.5 minor clay partings.

13.3 - 16.3 sand : very fine to fine grained ; at 13.8-14.0 clay seam rare grey clay partings below 14.0m

16.3 - 22.4 Matheson Till

unsorted grey beige, fine sand silt matrix. Cobble clasts of composition: 60% Volcanics and Sediments ; 40% Granitoids. Till is matrix supported.

18.9 Till becomes very cobbly with increasing %age of Volcanics and sediments to 85%

boulders at: 19.4-19.8 bleached greywacke

20.7 - 20.9 greywacke

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 30 1989

HOLE NO CB-89-132 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			04	21.3 9.9% black siltone clasts
21				22.2 - 22.4 may be bedrock. Due to abundant siltstone in 'till', it is difficult to accurately determine the till / bedrock inter face
22			05	
23				
24			06	22.4 <u>Bedrock</u>: <u>Siltstone</u> black << 0.1mm in grain size; finely schistose to fissile; 1-2% coarsely disseminated pyrite.
25				25.0 E.O.H.
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 2 19 89

HOLE NO CB-89-133 LOCATION Line 78E 5+75N ELEVATION 277

GEOLOGIST TURNER DRILLER J. HOWG BIT NO. CB70179 BIT FOOTAGE 6.5-51m

SHIFT HOURS ____ TO ____

MOVE TO HOLE

DRILL 7:15 - 7:45

TOTAL HOURS ____

MECHANICAL DOWN TIME 7:45am 8:45 pm AIR COMPRESSOR & GOVERNOR

DRILLING PROBLEMS

CONTRACT HOURS ____

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG							
				0 - 0.5 ORGANICS 0.5 - 23.3 OJIBWAY II SEDIMENTS 0.5 - 2.5 Beige brown gritty clay 2.5 - 20.8 light grey gritty clay with 1-5% pebbles including basalt, granite and limestone. - poor recovery.	Note: check logged character splits of samples 25 to 30. March/89 by P. Allan. Found samples to be correct as logged in the field with the exception of sample 28 which was logged as till and was found to be sorted sand with pebble beds.						

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 3 19 89

SHIFT HOURS
____ TO ____

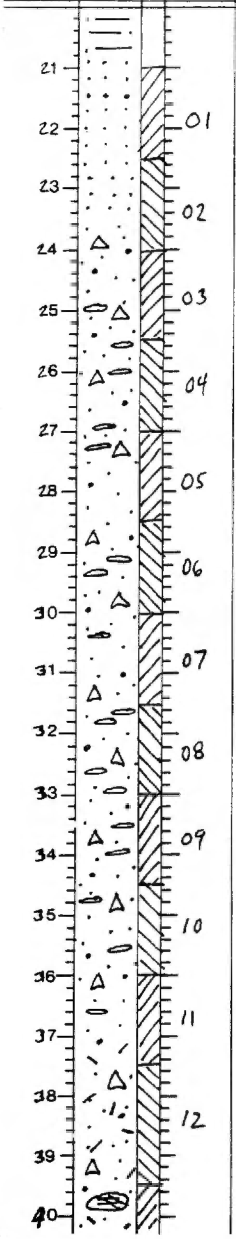
TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO CB-89-133 LOCATION ____ ELEVATION ____
GEOLOGIST ____ DRILLER ____ BIT NO. ____ BIT FOOTAGE ____
MOVE TO HOLE ____
DRILL 11:15 - 5:00
MECHANICAL DOWN TIME ____
DRILLING PROBLEMS ____
OTHER ____
MOVE TO NEXT HOLE ____

page 2 of 4

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



20.8 - 22.1 beige, medium grained sand, washed and sorted. Minor interbeds of pebbly gravel (pea size). Clasts include ~50% Abitibi metavolcanics and meta-sediments, ~50% granitic. Many of the granitic pebbles have hematitic alteration.

22.1 - 23.3 beige, fine sand, well sorted, <2% clasts.

23.3 - 58.8 MATHESON TILL

23.3 - 37.1 matrix supported cobbly till matrix is beige, silt-fine sand and clasts 60% granitic (mainly small pebbles and granules; 20-30% have red hematitic alteration), 40% Abitibi Belt (~30% basalt, 10% black siltstone). Limonitic staining on ~5% of clasts. Till becomes cobbly at ~25 m.

37.1 - 58.8 <5% grey gritty clay is introduced into matrix (occurs as clay lumps on 10 mesh screen and as coatings on some of the clasts.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 4 19 89

SHIFT HOURS
____ TO ____

TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO CB-89-133 LOCATION ____ ELEVATION ____

GEOLOGIST ____ DRILLER ____ BIT NO. CB70234 CB70235 BIT FOOTAGE 0-2 m 0-20.5 m

MOVE TO HOLE ____

DRILL ____

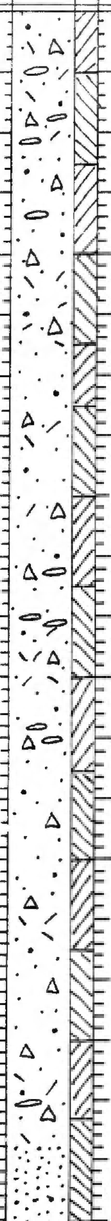
MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER ____

MOVE TO NEXT HOLE ____

2 New Bits

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			13	
41				44.5 - 58.8 medium grey, compact Missinabi clay < 2% is encorporated in till matrix. with softer, light-medium grey gritty clay (as above).
42			14	
43			15	
44				
45			16	58.8 - 67.5 MISSINABI SEDIMENTS
46			17	58.8 - 60.5 fine-medium, beige sand well sorted and interbedded with minor pebbly gravel beds (<10cm). Sand coarsens downward
47			18	
48				60.5 - 61.5 mixed with pebbly gravel (clasts include: ~80% Abitibi - 20% metasediments and 60% metavolcanics, < 20% granitic; many clasts have limonitic staining and granitic clasts have red hematitic weathering).
49			19	
50			20	
51				
52			21	
53			22	
54				
55			23	
56			24	
57				
58			25	
59			26	
60				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

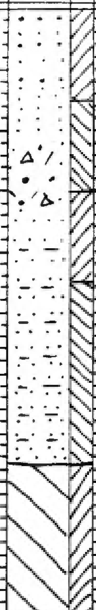
SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO cB-89-133 LOCATION ________ ELEVATION ________
GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________
MOVE TO HOLE ________
DRILL ________
MECHANICAL DOWN TIME ________
DRILLING PROBLEMS ________
OTHER ________
MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



Depth	Sample No.	Descriptive log
61	27	61.5 - 62.0 beige, fine sand, well sorted containing <5% clasts mainly Abitibi metavolcanics and ~~some~~ granitics.
62	28	
63		62.0 - 63.5 Till? silt - fine sand with 10-20% pebbles and <5% grey gritty clay, and compact, gray clay (Missinabi). few clasts have grey clay coatings.
64	29	
65		
66	30	63.5 - 67.5 beige fine sand and silt containing <2% small granular sand and Missinabi hard grey clay.
67		
68		67.5 - 70.0 BEDROCK
69	31	67.5 - 67.7 light-medium green rock flour.
70		67.7 - 70.0 BASALT - medium green - fine grained - slightly foliated, chloritic - diabassic texture - disseminated & vein calcite <5% - no sulphides observed.
71		
12		
13		70.0 EOH
14		
15		R. Turner
16		
17		
18		
19		
20		

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 30 1989

SHIFT HOURS
____ TO ____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-134 LOCATION L3W ; 15N ELEVATION 274

GEOLOGIST K.McNeil DRILLER G. Howg BIT NO. CB70226 BIT FOOTAGE 117-150

MOVE TO HOLE 11:45 - 1:15

DRILL 1:15 - 3:30

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0.0 - 1.5 Organics
				1.5 - 18.5 Ojibway II Sediments
				Clay: grey; gritty; scattered pebbles - limestone, granitoids volcanics
				at approximately 11.0m clay is grey soft, non gritty.
				18.5 - 25.9 Matheson Till
				grey beige fine sand/silt matrix Cobble clasts in matrix supported till of composition: 60% Volcanics and sediments; 40% Granitoids
				20.8-21.0 - boulder - greywacke
				21.1 - 21.6 boulder - mafic volcanic
				21.9 - 22.1 boulder - amphibolite
				~23 - 24.1 - predominantly matrix sand - poorly sorted with few clasts; below 23m, matrix appears slightly deficient in silt
				25.4 - 25.8 minor grey gritty matrix clay
				@25.8 - green gritty matrix clay (boulder cuttings?)
19			01	
20			02	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 30 1989

HOLE NO CB-89-134 LOCATION L3W; 15N ELEVATION

GEOLOGIST DRILLER BIT NO. BIT FOOTAGE

SHIFT HOURS

TO

MOVE TO HOLE

DRILL

TOTAL HOURS

MECHANICAL DOWN TIME

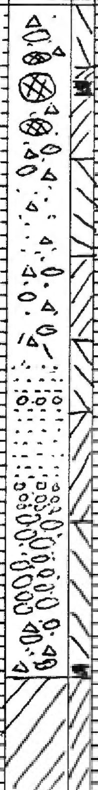
DRILLING PROBLEMS

CONTRACT HOURS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			02 (cont)	25.9 - 30.1 <u>Missinaibi Sediments</u>
21				
22			03	25.9-26.4 sand:- fine grained; sorted; beige
23			04	26.4-26.6 - gravel :- medium to course oxidized sand matrix and oxidized pebbles (70% of clasts are granitoids)
24				
25			05	26.6-27.8 sand:- fine grained; beige
26			06	27.8-28.3 granular, pebbly sand
27				
28			07	28.3- 30.1 gravel:- fine grained, poorly sorted <u>beige</u> sand with cobbles; clast composition - 50:50 volcanics / sediments versus granitoids - this section has a till-like appearance but matrix is oxidized beige and is poorly sorted
29				
30			08	
31				
32			09	
33				30.1 - 31.1 <u>Lower Till</u> very subtle change to a grey beige, fine sand and silt matrix; till is cobbly but is matrix supported; very minor amounts of gritty clay at 30.- m; 30.8-31 boulder - greywacke
34				
35				
36				
37				31.1 - 33 <u>Bedrock:-</u> greywacke(?) - greenish beige, oxidized; mud ground to grey white clay; strongly sheared, non-calcareous; sericitic; textures not apparent
38				
39				
40				



32 - 32.8 rock is more competent and appears granular and less sheared or altered; sample also contains black, aphanitic cherty partings

33m (110') EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 5-6 19 89

SHIFT HOURS
______ TO ______

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-135 LOCATION L 79+25E ; 8+75N ELEVATION 278 m
GEOLOGIST D. Holmes DRILLER J. Houg BIT NO. CB70235 BIT FOOTAGE 23.0-56.2
MOVE TO HOLE Feb. 6 9:30-10:15 AM
DRILL Feb 6 10:15-1:45 PM
MECHANICAL DOWN TIME all day Feb 5, 7:00-9:30 AM on Feb 6
DRILLING PROBLEMS
OTHER
MOVE TO NEXT HOLE

page 1

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 - 0.5 Organics
				0.5 - 19.2 OJIBWAY II SEDIMENTS
				0.5 - 3.0 clay, compact, gritty beige colour
				3.0 - 12.0 clay gradually becomes less compact, grey colour - still gritty with a few pebbles mostly limestone
				12.0 - 19.2 clay, soft non-gritty grey clay with subtle beige silt varves
19-20			01	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 6 1989

HOLE NO CB-89-135 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

page 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21			01	19.2 - 31.6 MATHESON TILL - abrupt contact with overlying clay
22			02	
23			03	19.2-26.0 sandy matrix supported till; fine grey to grey-beige sand-silt matrix, mostly cobble clasts - approx. composition 50% volcanics/sediments and 50% granitoid
24				
25			04	
26			05	26.0-30.0 matrix supported till; fine grey sand-silt and frequently clay matrix (grey, gritty lumps); cobble clast composition approx. 50/50
27				
28			06	
29			07	30.0-31.6 clast supported till; fine grey sand-silt matrix; cobble clast composition 50/50 to 60% volcanics/sediments 40% granitoid
30				
31			08	
32				
33			09 Bedrock	* at 24 m pull rods because of total loss of return - unplug bottom rod and re-drill.
34				
35				31.6 - 33.2 BEDROCK - medium grey-green colour - moderate foliation - granular texture - grain size .1 to .2 mm - predominant mafic mineral is grey chlorite est. 20% of the sample
36				
37				
38				
39				
40				- < 1% slow reacting carbonate (to HCl)

· trace disseminated py.

< 1% quartz veinlets

33.2 EOH Graywacke

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 30,31 19 89

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO CB-89-136 LOCATION L5W, 13+75N ELEVATION 273

GEOLOGIST K. MacNeil DRILLER G. Howg BIT NO. CB70192 BIT FOOTAGE 0.0-30.0

MOVE TO HOLE 3:30 - 3:45 Jan 30

DRILL 3:45 - 4:45 30th 7:45 - 9:15 31sts

MECHANICAL DOWN TIME

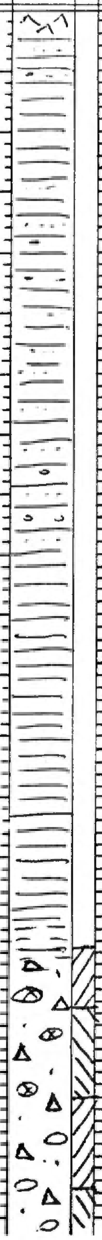
DRILLING PROBLEMS

OTHER 4:45

MOVE TO NEXT HOLE

Pg. 1 of 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0.0 - 0.7 Organics
1				0.7 - 15.7 Ojibway II Sediments
2				clay : grey ; slightly gritty
				2.5 - 2.7 boulder - greywacke
3				2.7 - 9.3 gritty clay with pebbles (occasionally). Generally volcanics & sediments ; very little limestone
4				9.3 - 15.7 grey, non-gritty clay
				15.7 - 27.0 Matheson Till
5				grey beige fine sand / silt matrix
6				Cobble clasts of composition :
7				50% Volcanics and Sediments ; 50% Granitoids . <1% limestone
8				16.3 - 16.4 lose return
				18.3 - 18.6 lose return
9				
10				
11				* 16.5m stop for day Jan 30
12				
13				
14				
15				
16			01	
17			02	
18				
19			03	
20			04	



OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 30/31 19 89

SHIFT HOURS

____ TO ____

TOTAL HOURS

____

CONTRACT HOURS

____

HOLE NO CB-89-136 LOCATION ____ ELEVATION ____

GEOLOGIST ____ DRILLER ____ BIT NO. ____ BIT FOOTAGE ____

MOVE TO HOLE ____

DRILL ____

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			04	25.6 - 27.6 grey, gritty clay matrix
21				
			05	27.6 - 27.9 predominantly fine sand / silt matrix with minor clay
22				
23			06	27.9 - 30.0m Bedrock grey wacke ; (possibly volcanic) light grey (bleached); strongly foliated; Faint granular texture (yet could be structurally induced) non calcareous; rare black silty partings.
24				
25			07	
26			08	
27				
			09	
28				30.0 E.O.H.
29			10	
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 6,7 19 89

HOLE NO CB-87-137 LOCATION L 82+00 E ; 7+75N ELEVATION 279 m

GEOLOGIST D. Holmes DRILLER J. Houg BIT NO. CB70236 BIT FOOTAGE 0 - 58.5

SHIFT HOURS

______ TO ______

MOVE TO HOLE Feb. 6 1:45 - 2:30 PM

DRILL Feb 6 2:30 - 5:00 PM Feb 7 7:15 AM - 1:15 PM

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER travel Feb 6 5:00 - 6:00 PM travel Feb 7 6:15 - 7:15 AM

MOVE TO NEXT HOLE

New Bit, New Bit Sub

Page 1

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG							
1				0 - 0.2 Organics							
2				0.2 - 21.0 OJIBWAY II SEDIMENTS							
3				0.2 - 1.0 dark brown very compact organic-rich clay							
4				1.0 - 4.0 clay - beige, gritty, compact							
5											
6				4.0 - 16.0 clay - grey colour, slightly gritty with a few pebbles and granules (less than 1 per metre)							
7				- becomes softer downsection							
8											
9				16.0 - 21.0 gray clay - non-gritty, soft with subtle beige silt varves							
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 6,7 19 89

HOLE NO CB-89-137 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

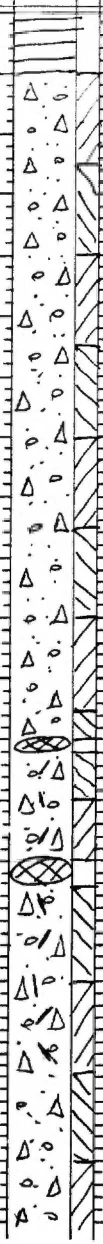
CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

page 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.
21			
22			01
23			02
24			
25			03
26			04
27			
28			05
29			06
30			
31			07
32			08
33			08
34			09
35			10
36			
37			11
38			12
39			
40			13



DESCRIPTIVE LOG

21.0 - 48.0 MATHESON TILL
- abrupt contact with overlying clay

21.0 - 32.0 matrix supported till; Fine beige-grey to grey sand-silt matrix (grey after 23.0 m) with cobble clasts approx. 50 to 60 % volcanics/sediments and 40 to 50 % granitoid

32.0 - 32.2 boulder - gabbro

32.2 - 34.0 matrix supported till with fine grey sand-silt and clay-silt matrix; - very compact gritty grey-beige clay with pebbles and cobbles approx 60:40 with a trace of limestone.

34.0 - 34.4 boulder - mafic volcanic

34.4 - 37.0 matrix supported till similar to 32.2 to 34.0

37.0 - 40.5 ~~sandy~~ matrix supported till; fine grey sand-silt to beige sand-silt with clast composition remaining 60:40

→ pull rods at 37.5m to replace an o-ring

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 6,7 19 89 | HOLE NO CB-89-137 | LOCATION ______ | ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

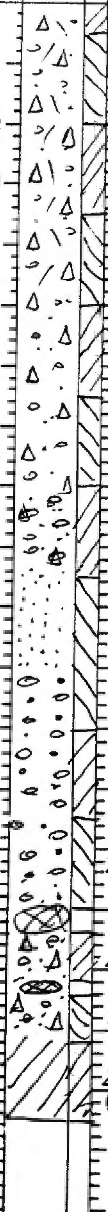
SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

MOVE TO HOLE ______
DRILL ______
MECHANICAL DOWN TIME ______
DRILLING PROBLEMS ______
OTHER ______
MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



Depth (metres): 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60

Sample No.: 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, Bedrock

40.5 - 45.0 clast supported till with lots of return ; compact clay-silt ~~40.5 to 4~~ matrix ; clast compositions same as above

45.0 - 48.0 sandy matrix supported till ; fine beige sand-silt matrix ; cobble clasts approx. 60% volcanics/sediments 40% granitoid upto 20% of the clasts are oxidized, limonite stained.

48.0 - 55.0 MISSINAIBI SEDIMENTS
- gradational contact with overlying till
48.0 - 49.5 matrix supported cobble gravel
49.5 - 50.0 fine beige (strongly oxidized) sand
50.0 - 51.0 medium beige (strongly oxidized) sand.

51.0 - 55.0 matrix supported cobble gravel similar to 48.0 - 49.5 consists of medium grained beige sand (no fine sand or silt) matrix with cobbles approx. 60/40 upto 25% of which are limonite stained.

55.0 - 57.2 LOWER TILL
- abrupt contact with overlying sand/gravel
55.0 - 55.4 boulder - intermediate volcanic
55.4 - 56.2 clast supported till; fine grey sand-silt matrix with a few gritty grey clay-silt lumps, clast compositions approx 70/30,
→ no evidence of any oxidation
56.2 - 56.4 boulder - graphitic mudstone
56.4 - 57.2 till similar to 55.4 to 56.2

57.2 - 58.5 BEDROCK
- dark grey clay 57.2 to 57.6 with black chips below 57.6
- chips are very fine grained, schistose
- no sulphides but graphite is evident
Graphitic Mudstone.

58.5 EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

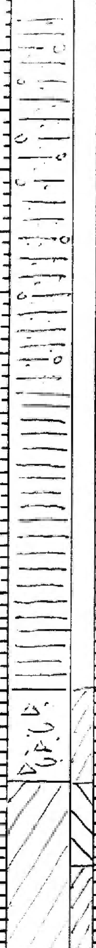
DATE Jan 31 19__

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-86-138 LOCATION L8W ; 13+50N ELEVATION 271
GEOLOGIST K. McNeil DRILLER G. Hong BIT NO. CB70192 BIT FOOTAGE 30.0-46.0
MOVE TO HOLE 9:15 - 9:30
DRILL 9:30 - 10:30
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER close to diamond drill setup.
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–11				0.0 - 0.5 No Return (clay at surface) 0.5 - 11.6 Ojibway II Sediments clay: beige (oxidized) to 3.0 m then grey - slightly gritty. 6.5 - 6.7 boulder - greywacke 6.7 - 11.6 non gritty grey clay
12			01	11.6 - 13.1 Matheson Till grey beige fine sand / silt matrix Matrix supported till with cobble clasts of composition: 50% Volcanics and sediments; 50% Granitoids
14			02	13.1 - 16.0 Bedrock - Siltstone medium grey; aphanitic; fissile; quartz veining pervasive (approx. 40-50% of sample); 3-5% disseminated cubic pyrite
15			03	
16				16m (53') EOH
17–20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 7,8 19 89

SHIFT HOURS

_______ TO _______

TOTAL HOURS

____

CONTRACT HOURS

____

HOLE NO CB-89-139 LOCATION L 86+00 E ; 6+00 N ELEVATION 278 M

GEOLOGIST D. Holmes DRILLER J. Hong. BIT NO. CB70237 BIT FOOTAGE 0 - 61.5

MOVE TO HOLE Feb 7 1:15 - 1:30 PM

DRILL Feb 7 1:30 - 5:30 PM Feb 8 7:30 - 10:15 AM

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER travel 5:30 - 6:15 PM Feb 7 travel 6:30 - 7:30 AM Feb 8

MOVE TO NEXT HOLE

New Bit

page 1

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0				0 - 0.2 Organics
1				0.2 - 16.0 OJIBWAY II SEDIMENTS
2				0.2 - 3.0 clay, beige gritty compact
3				3.0 - 7.0 clay, grey gritty with a few pebbles, compact becoming softer downsection
5				7.0 - 16.0 clay, grey non-gritty soft with subtle beige silt varves.
8				16.0 - 60.0 MATHESON TILL
9				- abrupt contact with overlying clay
10				16.0 - 21.0 matrix supported till; Fine grey-beige to grey sand-silt matrix with cobble clasts
17			01	
19			02	
20			03	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 7, 19 89

HOLE NO CB-89-139 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

page 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40			03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16	21.0 - 32.5 matrix supported till; Fine grey sand silt and clay-silt matrix; cobble clast compositions approx. 50% volcanics/sediments, 50% granitoid - only occasional clay in matrix from 22.5 to 32.5 32.5 - 37.0 till as above with a compact clay-silt matrix 37.0 - 38.5 clast supported till Fine grey sand-silt matrix; cobble clasts 50:50 38.5 - 52.5 matrix supported till, Fine grey sand-silt matrix; cobble clast compositions approx. 60% volcanics/sediments 40% granitoid

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 28 19 87

HOLE NO CB-89-139 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS

______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS

______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS

______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
41–60			16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30	52.5 - 60.0 clast supported till Fine grey sand - silt matrix; cobble clasts approx. 70% volcanics/sediments 30% granitoid. - up to 28 oxidized limonite stained clasts after 57 m.

Depth marks: 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 28 19 89

HOLE NO CB-89-139 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
61			31 Bedrock	60.0-61.5 BEDROCK - dark grey clay with a few black chips from 60.0 to 61.0 - dark black clay after 61.0m - trace red hematite stain on the black clay - slightly graphitic 60.0 to 61.0 strongly graphitic after 61.0 << 1% visible cubic pyrite in the clay - chips are very fine grained, schistose Graphitic Mudstone
62				
63				
64				
65				
66				
67				
68				
69				
70				61.5 EOH
71				
72				
73				
74				
75				
76				
77				
78				
79				
80				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 31 1989

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-140 LOCATION L6W;18N ELEVATION 274
GEOLOGIST K MacNeil DRILLER E Harvey BIT NO. CB70192 BIT FOOTAGE 46-73
MOVE TO HOLE 10:30 - 11:15
DRILL 11:15 - 1:30
MECHANICAL DOWN TIME ______
DRILLING PROBLEMS ______
OTHER ______
MOVE TO NEXT HOLE ______

Page 1/2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1 – 10				0 – ~1.0 Organics ~1.0 – 10.4 Ojibway II Sediments clay – beige (oxidized) grading into grey slightly gritty clay and laminar pebbles – below ~5.5 m – clay is grey and non-gritty
11			01	10.4 – 24.8 Matheson Till grey-beige, fine sand and silt matrix -- matrix supported; cobble size clasts; clast composition – 55% intermediate-mafic volcanics and sediments, 44% granitoids, <1% limestone
13			02	@ 19.3 boulder – granodiorite
14			03	below 19.6 to ~21.1, beige-grey matrix sand/silt (poorly sorted?) with minor clay and silt platelets (laminations) and scattered pebbles
16			04	21.1 – 21.6 predominantly fine grey sand and grey clay seams
17			05	21.6 – 22 – grey gritty clay matrix @ 22 m – thin clay seam
19			06	22.2 – 24 predominantly unsorted fine silty matrix sand – few clasts
20				

23.1 – 23.3 boulder – biotite schist

24 – 24.8 clasts 75 – 80% volcanics and sediments

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Jan 31 1989

SHIFT HOURS

_____ TO _____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-140 LOCATION 6W; 18N ELEVATION 274

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

MOVE TO HOLE

DRILL

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

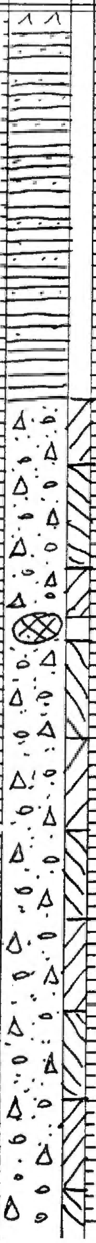
DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			07 (cont.)	
21				
22			08	24.8 - 27.0 Bedrock:- greywacke: medium grey; strongly foliated to schistose; may be sheared; grain size of 0.1-0.3 mm; indistinct granular texture - some grains appear stretched; non-calcareous; 10% disseminated pyrite @ 26.5 portions ground to beige oxidized clay
23				
24			09	
25			10	
26			11	
27				
28				
29				27m (80') EOH
30				
31				
32				
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 8 19 89
SHIFT HOURS
____ TO ____
TOTAL HOURS
____
CONTRACT HOURS
____

HOLE NO CB-89-141 LOCATION L90+00E ; 8+50N ELEVATION 281 m
GEOLOGIST D. Holmes DRILLER J. Howg BIT NO. CB70238 BIT FOOTAGE 0 - 44.5
MOVE TO HOLE 10:15 - 10:45 AM
DRILL 10:45 - 4:30 PM
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER travel 4:30 PM - 5:30 PM
MOVE TO NEXT HOLE

page 1

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20			01, 02, 03, 04, 05, 06, 07, 08, 09, 10	

0 - 0.2 Organics

0.2 - 6.4 OJIBWAY II SEDIMENTS

0.2 - 1.5 clay, compact gritty beige colour

1.5 - 5.5 clay, grey slightly gritty with a few pebbles
- compact but softer downsection

5.5 - 6.4 clay grey, non-gritty and soft

6.4 - 37.5 MATHESON TILL
- abrupt contact with overlying clay

6.4 - 9.4 matrix supported till; fine grey-beige to beige sand-silt matrix; cobbles approx. 50% volcanics/sediments 50% granitoid

- at 9.4 intersected a mafic volcanic cobble with up to 2% visible dissem. sulphides

9.4 - 10.0 clast supported till with fine grey sand-silt matrix and cobble compositions approx. 75% volcanics 25% granitoid

10.0 - 10.4 mineralized mafic volcanic boulder with 2 to 5% pyrite and pyrrhotite

10.4 - 19.4 matrix supported till similar to 6.4 to 9.4

at 19.4 intersected a strongly graphitic cobble

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 8 1989

HOLE NO CB-89-141 LOCATION ____ ELEVATION ____

GEOLOGIST ____ DRILLER ____ BIT NO. ____ BIT FOOTAGE ____

SHIFT HOURS ____ TO ____

MOVE TO HOLE ____

DRILL ____

TOTAL HOURS ____

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

CONTRACT HOURS ____

OTHER ____

MOVE TO NEXT HOLE ____

page 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40			10, 11, 12, 13, 14, 15, 15, 16, 17, 18, 19, 20, 21, 22	

19.4 - 28.0 matrix supported till as above

28.0 - 28.2 boulder mafic volcanic

28.2 - 31.5 matrix supported till as above

31.5 - 35.8 matrix supported till, Fine grey sand-silt and clay-silt matrix; cobble compositions approx 60% volcanics/sediments with a trace limestone approx. 2% of cobbles are limonite stained

35.8 - 37.5 ~~sandy~~ matrix supported till after going through volcanic cobble.
- Fine beige sand matrix (oxidized); cobble compositions approx. 60:40 with upto 5% of the clasts being oxidized (limonite stained)

37.5 - 42.8 MISSINAIBI SEDIMENTS
- gradational contact with overlying till

37.5 - 38.0 Fine beige sand (oxidized)

38.0 - 39.0 matrix supported gravel medium beige sand with cobbles 75:25
- 15-20% of clasts are limonite stained

39.0 - 40.0 interbedded fine grained beige sand, medium grained oxidized sand and matrix supported gravel

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 8 19 89

HOLE NO CB-89-141 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

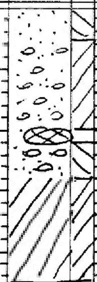
DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

page 3

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			22	40.0 - 40.5 coarse oxidized sand
41			23	40.5 - 42.0 matrix supported gravel
42				42.0 - 42.2 boulder - greywacke
43			24	42.2 - 42.8 clast supported gravel, mostly volcanic cobbles
44			25 Bedrock	
45				42.8 - 44.5 BEDROCK
46				- some contamination (granules) from overlying sand/gravel
47				
48				- medium gray-green colour
				- well foliated
49				- approx. 0.1 mm grainsize
50				- predominant mafic mineral is chlorite
51				- 2-5% slow reacting carbonate (to HCl)
52				
53				- trace cubic dissem. pyrite
54				- oxidized fracture at 43.6 m
55				Intermediate Volcanic
56				44.5 EOH
57				
58				
59				
60				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE January 31 19 89

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO CB-89-142 LOCATION 10+00W; 15+75N ELEVATION 272m

GEOLOGIST K. MacNeil DRILLER G. Hong BIT NO. CB70192 BIT FOOTAGE 73-88m

MOVE TO HOLE 1:30 - 1:45 PM

DRILL 1:45 - 2:45 PM

MECHANICAL DOWN TIME 3:15 - 4:00 PM differential - rear end.

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE 2:45 - 3:15 PM

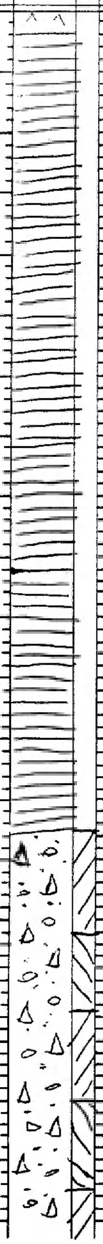
DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–1				0 - 0.5 Organics
1–3				0.5 - 10.7 OJIBWAY II SEDIMENTS 0.5-10 clay - beige (oxidized) grading to dark grey clay by 3 m; gritty with scattered pebbles
4–6				4.0 - 4.2 boulder - biotite schist 4.2 - 7.0 clay as above boulder 7.0 - 10.7 clay - grey; non-gritty; no pebbles
7–10				10.7 - 12.6 MATHESON TILL matrix supported till; - grey-beige fine sand/silt matrix; cobble clast composition approx. 60% Volcanics/Sediments 40% granitoid
11			01	
12			02	12.6 - 15.0 BEDROCK Mafic volcanic (possibly siltstone)
13–14			03	- dark green colour - < 0.1 mm grain size; - finely foliated; indistinguishable texture; - rock becomes more of a grey colour below 13.3 m and has a poorly fissile structure
15–20				15.0 m (50') EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb. 9 19 89
SHIFT HOURS ____ TO ____
TOTAL HOURS ____
CONTRACT HOURS ____

HOLE NO CB-89-143 LOCATION L 94+00 E , 71+00 N ELEVATION 282 m
GEOLOGIST D. Kontes DRILLER J. Hoag BIT NO. CB701238 BIT FOOTAGE 44.5-96
MOVE TO HOLE 7:30 - 8:00 AM
DRILL 8:00 - 12:45
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER travel 6:30 - 7:30 A.M
MOVE TO NEXT HOLE

page 1

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–20			01, 02, 03, 04, 05	see below

0-0.2 Organics

0.2-13.5 OTTAWA II SEDIMENTS

0.2-2.0 clay: beige, compact, gritty

2.0-5.5 clay: grey, soft, slightly gritty, few pebbles

5.5-13.5 clay: grey, very soft non-gritty with beige silt varves
- occassional rare pebble

13.5-31.5 MATHESON TILL
- abrupt contact with overlying clay/silt

13.5-20.0 sandy matrix supported till; fine grey-beige sand-silt matrix; cobbles approx 50% volcanics/sediments 50% granitoid ranging upto 60:40

Sample nos.: 01 (14.5), 02 (16), 03 (17.5), 04 (18.5), 05 (20)

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 9 19 89

HOLE NO CB-89-143 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

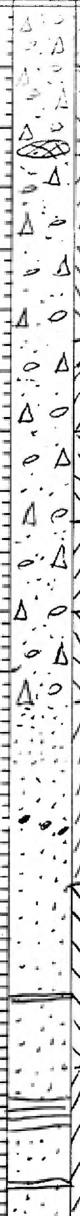
CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

page 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.
21			05
22			06
23			07
24			
25			08
26			09
27			
28			10
29			11
30			
31			12
32			
33			13
34			
35			
36			14
37			
38			
39			15
40			



DESCRIPTIVE LOG

20.0 - 21.5 matrix supported till; Fine grey sand-silt matrix; cobbles compositions approx 60:40

21.5 - 22.0 clost supported till, Fine grey sand-silt matrix, mostly volcanic cobbles.

22.0 - 22.4 boulder mafic volcanic

22.4 - 31.5 matrix supported till similar to 20.0 to 21.5

31.5 - 49.6 MISSINAIBI SEDIMENTS

gradational contact with overlying till over a 0.5m interval

31.5 - 32.5 medium beige sand and coarse grained sand

32.5 - 38.0 Fine grained beige to grey-beige sand occasional pebbles < 1 per metre with a pebble horizon at 33.8 < 0.1 m thick and compact clay at 36.6 for 0.1 m

38 - 38.5 very compact 'dry' clay, grey, slightly gritty and very brittle
- colour changes slightly to grey green at 38.2
- other clay intersections occur in Fine beige sand at 39.5, 40.5, 41.5, 42.5 and 48.0 metres all of which are < 0.1m thick

38.5 - 49.6 Fine beige sand

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 7 1989

HOLE NO CB-89-143 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

P-92.3

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
41–60			15, 16, 17, 18, 19 Bedrock	49.6 - 51.8 BEDROCK - light grey clay and dark grey chips (occasionally grey-green) - ochre coloured bedrock clay from 49.8 to 50.2 - after 50.2 approx. 50% of return is chips - chips are very fine grained - well foliated - predominant mafic mineral is grey chlorite - trace dissaminated cubic pyrite - <1% dissaminated calcite - slightly graphitic Mudstone 51.8 EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 3 19 89

HOLE NO CB-89-144 LOCATION L 4W; 18N ELEVATION 276

GEOLOGIST K MacNeil DRILLER G. Howe BIT NO. CB30193 BIT FOOTAGE 0-24

SHIFT HOURS ______ TO ______

MOVE TO HOLE 12:30-1:15

DRILL 1:15-2:30

TOTAL HOURS ______

MECHANICAL DOWN TIME

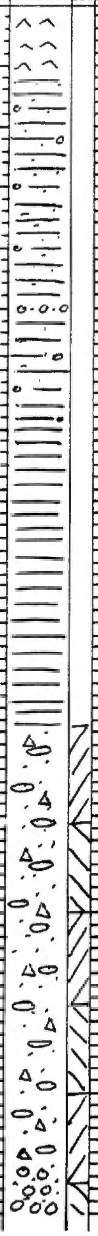
DRILLING PROBLEMS

CONTRACT HOURS ______

OTHER

MOVE TO NEXT HOLE

Page 1 of 2 New Bit

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–1				0 - ~1.0 Organics
1–12				~1.0 - 11.9 Ojibway II Sediments clay:- beige (oxidized), very gritty with common limestone and granitoid pebbles -- resembles Cochrane Till; gritty clay grades into grey (unoxidized) clay with less grit and fewer pebbles by about 2.0m; below 4.0m, the clay becomes very soft and soupy; @ 5.0m, ~~intersect~~ a thin sand/pebble seam; by ~7.0m, section is predominantly non-gritty clay and silt
12–20			01 02 03 04 05	11.9 - 19.1 Matheson Till grey beige, unsorted, fine sand and silt matrix - matrix supported; cobble size clasts; clast composition: 50% intermediate-mafic volcanics and sediments 50% granitoids 13.2-13.4 boulder - granodiorite - rare gritty clay cutans on some clasts - below 17.1m, slightly beige (oxidized) matrix and 25-30% oxidized clasts - abundant return

Depth scale: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 3 1989

HOLE NO CB-89-144 LOCATION L4W; 18N ELEVATION

GEOLOGIST DRILLER BIT NO. BIT FOOTAGE

SHIFT HOURS

TO

MOVE TO HOLE

DRILL

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21			06	19.1 - 22.1 Missinaibi Sediments 19.1 - 20.4 gravel:- medium to coarse grained sand matrix; matrix is beige in color; pebble size clasts - many are oxidized; clast composition - 50% intermediate - mafic volcanics and sediments 50% granitoids no limestone 20.4 - 20.6 sand:- fine grained; beige 20.6 - 21 gravel:- as from 19.1 - 20.4 21 - 22.1 gravel:- fewer oxidized clasts. Common presence of fine sand throughout the section suggests gravel & sand are finely bedded
22				
23			07	22.1 - 24 Bedrock:- intermediate lapilli tuff:- grey; fine (<0.1mm) matrix enclosing 30-50% light to dark grey, aphanatic, angular to sub angular fragments -- fragments appear to be up to 1cm in size and are similar to matrix except for grain size; non-calcareous; 0.5% disseminated pyrite; poor foliation
24				24m (80') EOH

25, 26, 27, 28, 29, 30, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 9 1989

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO CB-89-145 LOCATION L82+00E; 21+75N ELEVATION 283 m

GEOLOGIST D. HOLMES DRILLER J. Hong BIT NO. CB70239 BIT FOOTAGE 0 - 37.5

MOVE TO HOLE 12:45 - 2:15PM

DRILL 2:15 - 4:45PM

MECHANICAL DOWN TIME

DRILLING PROBLEMS

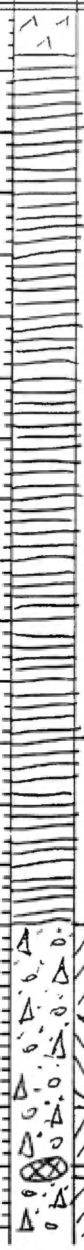
OTHER timed 4.45 - 5.30PM

MOVE TO NEXT HOLE

New Bit

page 1

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 - 0.5 Organics
1				0.5 - 15.0 OJIBWAY II SEDIMENTS
2				0.5 - 11.5 clay: grey slightly gritty with occassional pebble - compact becoming softer downsection
3				
4				
5				11.5 - 15.0 clay: gray non-gritty and soft with beige silt varves
6				
7				
8				15.0 - 36.0 MATHESON TILL - abrupt contact with overlying clay
9				
10				
11				15.0 - 19.0 matrix supported till: Fine grey sand-silt matrix with cobble clast composition between 50 - 60% volcanics/ sediments and 40-50% granitoid
12				
13				
14				
15				19.0 - 19.2 boulder - mafic volcanic
16			01	19.2 - 36.0 till similar to 15.0 to 19.0 with occasional gritty grey clay lumps in the matrix from 19.0 to 22.0.
17			02	
18			03	
19				
20			04	



OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 9 19 89

SHIFT HOURS

_____ TO _____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-145 LOCATION _____ ELEVATION _____

GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____

MOVE TO HOLE _____

DRILL _____

MECHANICAL DOWN TIME _____

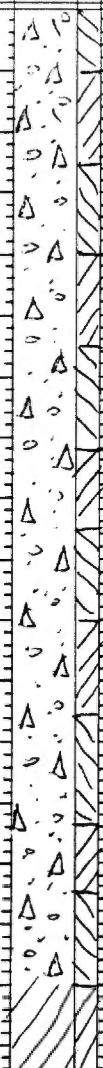
DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

page 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			04	
21			05	
22				
23			06	
24			07	
25				
26			08	
27			09	36.0 - 37.5 BEDROCK
28				- grey colour
29			10	- well foliated
30				- fine grained
31			11	- granular texture
32				- predominant mafic mineral is grey chlorite
33			12	- oxidized ochre colour fracture at 36.4m
34			13	<2% slow reacting carbonate (to HCl)
35			14	
36				Greywacke
37			15 Bedrock	37.5 EOH
38				
39				
40				



OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 3 1989

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-146 LOCATION L2W ; 19N ELEVATION 278

GEOLOGIST K MacNeil DRILLER G Howy BIT NO. CB70193 BIT FOOTAGE 24-42

MOVE TO HOLE 2:30-2:45

DRILL 2:45-4:00

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER 5:00 - 5:45 Travel

MOVE TO NEXT HOLE 4:00-5:00

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 - ~1.2 Organics
1				1.2 - 11.1 Cochrane II Sediments
2				1.2-7.0 clay:- grey; gritty; rare granules and pebbles
4				~7.0 - 10.5 clay:- grey; no grit or pebbles
5				10.5-11.1 very fine silty sand
6				11.1 - 15.7 Matheson Till
7–10				grey-beige, unsorted fine sand and silt matrix; matrix supported; cobble size clasts; clast composition - 55% intermediate-mafic volcanics and sediments 45% granitoids
11				@ 14.7 small diabase boulder
12			01	15.7 - 18 Bedrock:- greywacke:- light to medium grey; well foliated; granular, sandy texture; moderate development of disseminated Fe/Mg carbonate - ~5%; 0.1% disseminated pyrite. local silty and muddy partings; @ 17.3-17.6, 20% veinlet quartz; 17.6-17.9 - 40% veinlet quartz
13			02	
14			03	
15			04	
17			05	
19				18m (60') EOH
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 1989

SHIFT HOURS ______ TO ______

TOTAL HOURS ______

CONTRACT HOURS ______

HOLE NO CB-89-147 LOCATION L84+00E ; 21+75N ELEVATION 284 m

GEOLOGIST D. Holmes DRILLER J. Hong BIT NO. CB70239 BIT FOOTAGE 37.5-56.5

MOVE TO HOLE 7:15 - 7:30 AM

DRILL 7:30 - 10:00 AM

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER Travel 6:15 - 7:15 AM

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–16				0-0.5 Organics
				0.5-16.0 OJIBWAY II SEDIMENTS
				0.5-9.0 clay: grey gritty and compact becoming softer downsection - a few small pebbles < 1 per metre
				9.0-16.0 clay: grey non-gritty and soft with beige silt varves
16–17.5			01	16.0 - 17.5 MATHESON TILL - abrupt contact with overlying clay matrix supported till. Fine grey sand-silt matrix; cobbles approx. 50-60% volcanics and sediments and 40-50% granitoid composition
17.5–19			02 Bedrock	17.5-19.0 BEDROCK - grey to dark grey - black - weakly foliated but well foliated from 18.5 to 18.7 m - very fine grained, < 0.1 mm - granular texture < 2% dissem. calcite << 1% vein calcite - brown ochre bedrock clay & chips 18.7 m Graywacke / Mudstone

19.0 EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 4 19 89

SHIFT HOURS

____ TO ____

TOTAL HOURS

____

CONTRACT HOURS

____

HOLE NO CB-89-148 LOCATION L12E; 18+25N ELEVATION 285

GEOLOGIST K. MacNeil DRILLER G. Houry BIT NO. CB70193 BIT FOOTAGE 42-54

MOVE TO HOLE ____

DRILL 7:00-8:15

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER 6:30 - 7:00 Travel

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–1.3				0 - 1.3 No Return
1.3–7.7				1.3 - 7.7 Ojibway II Sediments 1.3-6.0 clay:- beige (oxidized) to 3.0 and grey (unoxidized) below 3.0m; clay is gritty with scattered pebbles; fine sand varves are common below 5.0m 6.0 - 7.7 sand:- grey; fine to very fine grained
7.7–10.1			01, 02	7.7 - 10.1 Matheson Till grey-beige, unsorted fine sand and silt matrix; matrix supported; cobble size clasts; clast composition - 55% intermediate-mafic volcanics and sediments 45% granitoids
10.1–12			03	10.1 - 12 Bedrock:- greywacke/siltstone:- medium to dark grey; fine grained; grain size of 0.1mm and less; well foliated to schistose; 5% disseminated Fe/Mg carbonate @ 12.6 - 20% veinlet quartz-carbonate

12m (40') EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 10 19 89

SHIFT HOURS ____ TO ____

TOTAL HOURS ____

CONTRACT HOURS ____

HOLE NO CB-89-149 LOCATION L86+00E; 21+00N ELEVATION 286m

GEOLOGIST D. Holmes DRILLER J. Hoag BIT NO. CB70237 BIT FOOTAGE 56.5 -85.50

MOVE TO HOLE 10:00-10:15 AM

DRILL 10:15 - 12:30 PM

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

page 1

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20			01	0-0.5 Organics 0.5-19.0 OJIBWAY II SEDIMENTS 0.5-9.0 clay: grey gritty, compact, softer downsection - occasional pebble 9.0-17.5 clay: grey, non-gritty soft with beige silt varves 17.5-19.0 fine grey-beige sand 19.0-27.0 MATHESON TILL - abrupt contact with overlying sand. matrix supported till; Fine grey sand-silt matrix; cobble clasts compositions approx 50-60% volcanics/sediments 40-50% granitoid

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 10 19 89

HOLE NO CB-89-149 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

page 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			01	
21				
			02	
22				
23			03	
24				27.0 - 29.5 BEDROCK * top 0.5 m of bedrock is contaminated by overlying till → not sampled.
25			04	
26			05	- light grey-green to beige colour chips becoming predominantly beige-ochre clay after 28.5
27			*	
28			06 Bedrock	- bedrock is fractured with up to 5% of chips having ochre oxidation along fracture surfaces
29				
30				- well foliated, schistose after 28.0 m
31				
32				- very fine grained
33				- quartz vein in clay at 28.6 m
34				5-10% slow reacting carbonate (to HCl)
35				
36				Bleached mafic volcanic (?)
37				29.5 EOH
38				
39				
40				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 4 1989

SHIFT HOURS ___ TO ___

TOTAL HOURS ___

CONTRACT HOURS ___

HOLE NO CB-89-150 LOCATION L11E; 12+75N ELEVATION 275

GEOLOGIST K MacNeil DRILLER G Hoag BIT NO. CB70193 BIT FOOTAGE 54-88-5

MOVE TO HOLE 8:15-8:45

DRILL 8:45-11:15

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

Page 1/2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–13				0 – ~1.0 Organics 2/fine sand ~1.0 – 13.4 Ojibway II Sediments ~1.0 – ~3.5 clay:- grey; gritty; rare pebbles and granules ~3.5 – ~10 clay:- grey, non-gritty; no pebbles ~10 – 12 very fine silty sand with clay varves 12 – 13.4 sand:- fine grained; local pebble bands 13.4 – 19.2 Matheson Till grey-beige, unsorted, fine sand and silt matrix; minor gritty matrix clay below 14m; till is matrix supported and contains cobbles; clast composition - 50-60% intermediate - mafic volcanics and sediments 40-50 granitoids - below 13.5m, oxidized clasts and beige-grey, gritty matrix clay are common; oxidized clasts form 40% of clasts. matrix sand ~~…~~ beige color. matrix clay is negligible below 16.5m but reappears at 17.8m
14			01	
15–16			02	
17			03	19.2 – 30.5 Missinaibi Sediments
18–19			04	19.2 – 19.9 poorly sorted fine to medium grained sand with a few hard clay/silt "platelets"
20				19.9 – 20.1 clay:- grey; compact

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 4 1989

HOLE NO CB-89-150 LOCATION L11E; 12+75N ELEVATION ____

GEOLOGIST ____ DRILLER ____ BIT NO. ____ BIT FOOTAGE ____

SHIFT HOURS ____ TO ____

MOVE TO HOLE ____

DRILL ____

TOTAL HOURS ____

MECHANICAL DOWN TIME ____

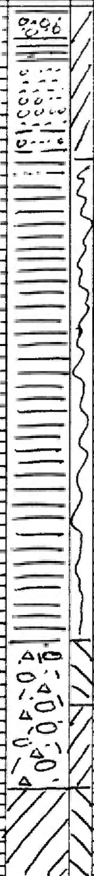
DRILLING PROBLEMS ____

CONTRACT HOURS ____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21–40			05 (~21.3)	
			N.S. (~25.8)	
			06 (~31)	
			07 (~32.2)	
			08 (~33.7)	



20.1-20.5 pebbly sand

20.5-20.9 clay - slight grit on outside of clay lumps

20.9-22.4 fine grey sand with scattered pebbles; clay varves are common; sandy/pebbly zones appear to be 0.3-0.4m wide and clay varves 0.1-0.2m

22.4-30.5 clay predominant with minor sand and pebble partings in initial 0.5m

30.5-32.9 Lower Till

grey beige, fine sand and silt to gritty clay matrix; cobbly, clast supported to 31.3m; clast composition:

55% intermediate-mafic volcanics and sediment

40 % granitoids

2 % limestone

* note:- abundance of clay and limestone pebbles in Lower Till which may suggest the section is actually Matheson Till

32.9-34.5 Bedrock:- siltstone

32.9-33.8 most of sample ground to grey-white clay; the few competent chips are greyish, sheared, sericitic and very fine grained

33.8-34.5 chips more competent. medium grey; aphanitic to very fine grained (<0.1 mm); well foliated to sub-fissile non-calcareous; no sulfides

34.5m (115') EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 10 1989

SHIFT HOURS

____ TO ____

TOTAL HOURS

____

CONTRACT HOURS

____

HOLE NO CB-89-151 LOCATION L 88+00E ; TL20N ELEVATION 287 m

GEOLOGIST D. Holmes DRILLER J. Hows BIT NO. CB70246 BIT FOOTAGE 0 - 11.8

MOVE TO HOLE 12:30 - 12:45 PM

DRILL 12:45 - 2:15

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0-0.5 Organics
1				0.5-7.5 OJIBWAY II SEDIMENTS
2				0.5-2.5 clay: beige, gritty, compact with occasional pebbles
4				2.5-6.5 clay: grey, gritty, compact with a few pebbles
5				6.5-7.5 clay, grey non-gritty, soft
8			01	7.5-10.2 MATHESON TILL
				- abrupt contact with overlying clay
9			02	- fine grey sand-silt matrix; cobble clast composition approx. 50-60% volcanics, 40-50% granitoid
11			03 Bedrock	
13				10.2-11.8 BEDROCK
14				- dark green
				- weakly foliated, volcanic texture
15				- fractured with oxidized brown-ochre clay and chips in upper 0.5m of bedrock
17				- grain size 0.01 to 0.2 mm
18				- predominant mafic mineral is green chlorite, up to 50% of the rock
20				- < 0.5% qtz veinlets in upper 0.5m
				- 1% calcite veinlets
				- 5-10% fast and slow reacting carbonate - dissem.

11.8 EOH

Mafic Volcanic

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 4 19 89

SHIFT HOURS
____ TO ____

TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO CB-89-152 LOCATION L8E; 12+75N ELEVATION 275

GEOLOGIST K MacNeil DRILLER G Howe BIT NO. CB70193 BIT FOOTAGE 88.5-132.5

MOVE TO HOLE 11:15-11:30

DRILL 11:30 - 2:15

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
0–20				0-1.5 No Return 1.5 - 27.1 Ojibway II Sediments 1.5- ~16 clay:- beige (oxidized) to ~2.8 and grey (unoxidized) below 2.8. clay is gritty with scattered limestone, granitoid and volcanic pebbles ~16.0-27.1 clay:- grey; non gritty; no pebbles; below 26 m very fine grained silty sand is present; at 27-27.1, intersect a siltstone cobble						

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 4 19 88

HOLE NO CB-89-152 LOCATION L8E; 12+75N ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS

______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS

______

MECHANICAL DOWN TIME ______

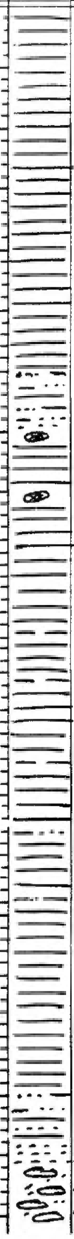
DRILLING PROBLEMS ______

CONTRACT HOURS

______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21–40			01	27.1 - 41.1 Missinaibi Sediments 27.1-38 clay:- grey; compact @ 28.1 intersect a volcanic cobble - very fine silty sand to silt becomes common downhole 38-38.6 very fine silty sand predominant - clay varves are common 38.6 - 39.1 sand- very fine grained; grey 39.1-41.1 gravel:- no natural matrix - clast supported. cobble size clasts 98% of clasts are black meta-sediments

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 4 1989

HOLE NO CB-89-152 LOCATION L 8E ; 12+75N ELEVATION
GEOLOGIST DRILLER BIT NO. BIT FOOTAGE

SHIFT HOURS
TO
MOVE TO HOLE
DRILL
TOTAL HOURS
MECHANICAL DOWN TIME
DRILLING PROBLEMS
CONTRACT HOURS
OTHER
MOVE TO NEXT HOLE

Page 3/3

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			01	
41			02	41.1 - 43.5 Bedrock :- siltstone:- medium to dark grey; bleached locally; fissile aphanitic; non-calcareous, below 40.6, much of sample is ground to light grey to dark grey clay
42			03	42.4 - 42.7 much of sample ground to dark grey gritty clay but black silt/mudstone chips are invariably present; dark color of clay and chips appears due to graphite
43				42.7 - 43.5 greywacke:- bleached; grain size of < 0.1 mm; highly schistose to sheared, sandy texture; much ground to grey white clay below 43.2
44				
45				
46				
47				
48				
49				
50				
11				
12				
13				
14				43.5m (145') EOH
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 10 1989

SHIFT HOURS ______ TO ______

TOTAL HOURS ______

CONTRACT HOURS ______

HOLE NO CB-89-153 LOCATION L 90+00E ; 19+25N ELEVATION 288m

GEOLOGIST D. Holmes DRILLER J. Howes BIT NO. CB70246 BIT FOOTAGE 11.9 - 18.9

MOVE TO HOLE 2:15 - 2:30 PM

DRILL 2:30 – 3:15 PM

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
0–1				0-0.5 Organics						
1–5				0.5-5.0 OJIBWAY II SEDIMENTS clay: grey slightly gritty compact - no pebbles - directly overlies bedrock						
5–7			0/ Bedrock	5.0-7.0 BEDROCK - dark green - Foliated - grain size 0.1 to 0.2mm predominant mafic mineral is green chlorite approx 50% of rock - >10% disseminated calcite < 1% calcite stringers Mafic Volcanic						
				7.0 EOH						

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 4 19 89

SHIFT HOURS ____ TO ____

TOTAL HOURS ____

CONTRACT HOURS ____

HOLE NO CB-89-154 LOCATION L5E; 11+25N ELEVATION 276

GEOLOGIST K MacNeil DRILLER G Howg BIT NO. CB70194 BIT FOOTAGE 0-32.5

MOVE TO HOLE 2:15-2:30

DRILL 2:30-4:30

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

* New Bit *

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 - ~1.0 No Return
1				~1.0 - 1.4 Organics & Clay
2				1.4 - 18.6 Ojibway II Sediments
3				1.4 - ~12 clay:- beige (oxidized) to ~3.0 and grey (unoxidized) below 3.0m; clay is gritty with scattered pebbles and pebble beds @ 2.0, 3.5 and 8.2
7				~12 - 17 clay:- grey; no grit or pebbles
8				17 - 18.6 very fine silt and sand predominant
10				18.6 - ~30 Matheson Till
11				grey-beige, unsorted fine sand and silt matrix, matrix supported; cobble size clasts; clast composition - 50% intermediate-mafic volcanics and sediments 50% granitoids <1% limestone
15				- abundant (30-40%) oxidized clasts below 21m; matrix also has a beige coloration - abundant return; may be grading into Missinaibi gravel below 28.5m
19			01	
20			02	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 4 1989

HOLE NO CB-89-154 LOCATION L5E; 11+25N ELEVATION ______

GEOLOGIST K MacNeil DRILLER G Howey BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

TOTAL HOURS ______

CONTRACT HOURS ______

MOVE TO HOLE ______

DRILL ______

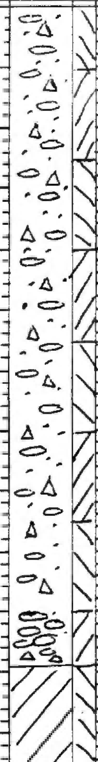
MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21			02	~30 - 30.6 Missinaibi Sediments
22			03	gravel :- beige; medium to coarse sand matrix; matrix supported; cobbly; clast
23			04	composition - 50:50 volcanics/
24				sediments versus
25			05	granitoids
26			06	- not dissimilar to overlying till -
27				30.6 - 30.9 Lower Till (??)
28			07	grey, fine sand and silt matrix; cobbles; 75%
29			08	of chips are volcanics and sediments; section
30			09	not thick enough to accurately log
31				30.9 - 32.5 Bedrock:-
32			10	silt/mudstone - black; very fine grained; much is ground to
33				grey-black clay; black due to graphite
34				
35				32.5 ~ (106') EOH
36				
37				
38				
39				
40				



OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 10, 11 19 89

SHIFT HOURS

_____ TO _____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-155 LOCATION LINE 80 E 22+50 N ELEVATION 282 m

GEOLOGIST TURNER DRILLER J. HOWG BIT NO. CB70246 BIT FOOTAGE 18.8-49.8

MOVE TO HOLE Feb 10 3:15 - 4:30

DRILL Feb 11 7:45 - 10:15

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG

Depth (m): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

Sample No.: 01, 02, 03, 04, 05

0-0.5 No Return

0.5-1.0 organics

1.0-12.5 OJIBWAY II SEDIMENTS

1.0-1.5 Dark brown organic rich gritty clay

1.5-12.5 - grades into light grey gritty clay < 1% small pebbles

-at 9.0m grades into very soft, less gritty clay

12.5 - 24.5 MATHESON TILL

12.5 - 16.8 Matrix supported pebbly till. Matrix is light grey-beige silt-fine sand. Clasts include ~60% Abitibi Belt (40% basalt, 20% schist); ~40% granite.

16.8 - 19.5 Till becomes cobbly, matrix supported. Matrix and clast content is similar to the above (12.5-16.8 interval).

At 18.0m grey, gritty clay coatings are observed on ~5% of clasts; and increases to 10-40% of matrix by 19.5m. The till grades into Missinaibi clay.

19.5 - 24.8 Missinaibi SEDIMENTS

Grey, hard clay, minor pebbles <2% (basalt & granite). Very slightly gritty zones.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

HOLE NO CB-89-155 LOCATION ____________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

SHIFT HOURS ________ TO ________

MOVE TO HOLE ________

DRILL ________

TOTAL HOURS ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

CONTRACT HOURS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				24.8 - 27.4 Interfingering or mixing of Missinaibi clay encorporated into Matheson Till. Grades into a good till by 27.4m.
				27.4 - 29.5 MATHESON TILL
				Matrix supported cobbly till. Matrix is beige silt-fine sand with 5-10% grey gritty clay lumps. Clasts are 60-70% Abitibi Belt (~50% basalt, ~20 schist), 30-40% granite.
26			06	
28			07	29.5 - 31.0 BEDROCK
29			08	two lithologies ① - medium grey - fine grained - fractured - disseminated calcite < 1% Greywacke - hosting massive calcite vein and minor pyrite < .1%
30			09	
				Greywacke is thinly interbedded with ② - black - fine grained - finely laminated Siltstone - hosting massive syngenetic pyrite < 2%
				31.0 EOH
				R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 5 19 89

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-156 LOCATION LINE 2E 10W ELEVATION 275 m

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70194 BIT FOOTAGE 32.5 - 77 m

MOVE TO HOLE 7:45 - 8:00

DRILL 8:00 - 10:45

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

page 1

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	
0–20				0 - 0.5 ORGANICS (FOREST Litter) 0.5 - 37.0 OJIBWAY II SEDIMENTS 0.5 - 21.2 CLAY MEMBER 0.5 - 3.5 beige-brown gritty clay (1.0 - 1.25 granitic cobble) 3.5 - 14.0 gradational change from light beige to light grey gritty clay. < 2cm basalt and granitic pebbles. 14.0 - 21.2 gradational change to very soft, grey clay, very little grit.	Note: I made a spotcheck of several samples in hole March/April 89 by P. Collins. Found that log description as accurate - no changes.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

HOLE NO CB-89-156 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

SHIFT HOURS ____ TO ____

MOVE TO HOLE ________

DRILL ________

TOTAL HOURS ________

MECHANICAL DOWN TIME ________

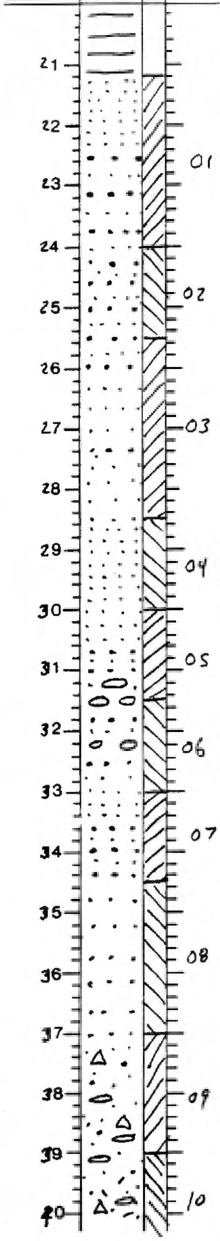
DRILLING PROBLEMS ________

CONTRACT HOURS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



21.2 - 37.0 OJIBWAY II SAND + GRAVEL

21.2 - 22.3 fine - medium grained, beige sand, sorted. < 5% small granitic pebbles (~70-80%) and Abitibi (< 20%).

22.3 - 26.0 Gravel, pebbly with abundant fine-medium grained, beige sand. Clasts include ~60% granitic, ~40% Abitibi (of which ~20% have limonitic staining). Many of the granitic clasts are hematized.

26.0 - 28.5 Coarse - medium grained granular sand; well sorted and washed. Minor pebbly gravel interbeds.

28.5 - 30.5 fine beige sand, well sorted < 5% clasts.

30.5 - 31 Gravel, pebbly with fine sand matrix abundant. Clast content as above

31. - 33 Gravel, cobbly - matrix + clast content does not change. Extensive limonitic staining.

33. - 33.3 fine, well sorted, beige sand

33.3 - 37.0 medium - coarse granular sand (brownish - orange color due to extensive limonite weathering). Mixed thin beds of small pebble gravel. Clast composition ~60% Abitibi and 40% granitic.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

HOLE NO CO-89-156 LOCATION ____________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

SHIFT HOURS ________ TO ________

MOVE TO HOLE ________

DRILL ________

TOTAL HOURS ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

CONTRACT HOURS ________

OTHER ________

MOVE TO NEXT HOLE ________

Page 3 of 3

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			10	
41				37.0 - 40.8 MATHESON TILL matrix supported cobbly till, defined contact between till and overlying sand and gravel. matrix is light gray beige silt - fine sand. Clasts include ~ 70% Abitibi Belt, 30% granitic, < 1% limestone. Decrease in limonite stained clasts. Matrix contains < 5% gray gritty clay lumps.
42				
43			11	
44				
45				
6				
7				40.8 - 42.4 MISSINABI SEDIMENTS varved medium grey clay, no grit, with < 2% small basalt pebbles, pebbles completely disappear at 41.0 m.
8				
9				
10				42.4 - 44.5 BEDROCK
11				42.4 - 43.2 - fine grained black siltstone - no sulphides, < 2% quartz vein. interbedded with greywacke.
12				43.2 - 44.2 - grey, fine grained greywacke - no sulphides
13				44.2 - 44.5 - rock flour, black siltstone
14				
15				44.5 EOH R. Turner
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 11 19 89

SHIFT HOURS
_____ TO _____

TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO CB-89-157 LOCATION 78+50 E 23 N ELEVATION 281

GEOLOGIST TURNER DRILLER J. HOWE BIT NO. CB70246 BIT FOOTAGE 49.8-91.1

MOVE TO HOLE 10:15 - 10:45

DRILL 10:45 - 3:00

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20		12.0–20.0	01, 02, 03, 04, 05	see below

0 – 0.5 NO RETURN

0.5 – 1.5 ORGANICS mixed with orange-brown, organic rich, gritty clay.

1.5 – 11.7 OJIBWAY II SEDIMENTS

1.5 - 8.9 light grey, gritty clay with <1% small pebbles.

8.9 - 9.0 thin coarse sand and small pebbly bed.

9.0 - 11.7 grey, less gritty glacial lacustrine clay

11.7 – 22.0 MATHESON TILL

11.7 - 18.3 Matrix supported pebbly till. matrix is beige silt-fine sand. Clasts ~60% Abitibi (basalt & schist 30%, siltstone 30%); ~40% granite; limestone & quartz < 1%.

18.3 - 19.8 grey gritty clay (5-35%) appears in matrix encorporated from Missinaibi sediments. Mixed with beige silt and < 5% small pebbles.

19.8 - 22.0 beige silt-fine sand is mixed with <5% grey gritty clay lumps and <1% small basalt pebbles.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-157 LOCATION ________ ELEVATION ______
GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______
MOVE TO HOLE ______
DRILL ______
MECHANICAL DOWN TIME ______
DRILLING PROBLEMS ______
OTHER ______
MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			06	22.0 - 27.0 MISSINAIBI SEDIMENTS
21			07	medium grey, hard, clay not a pure glacial lacustrine clay. It contains washed thin sandy beds with < 1% pebbles. Pure grey clay is interbedded or mixed with gritty clay. Possibly a rip up clast or wedge in the till.
22–26				
27				27.0 - 32.6 MATHESON TILL MIXED WITH GREY CLAY
28			08	gritty clay matrix (60-70%) and beige silt-fine sand (30-40%). Clasts ~60% Abitibi Belt, ~40% granite many clasts are clay coated. Missinaibi clay (pure) rip-up clasts encorporated. Grades into good Matheson Till by 32.6 m.
29			09	
30–31			10	
32			11	
33				32.6 - 40.0 MATHESON TILL
34			12	Matrix supported cobbly till. matrix is light beige silt-fine sand; gray clay coatings on ~5% clasts. Clasts include 70-80% Abitibi (~40% volcanics and 40% sediments), 30-40% granite.
35			13	
36–37			14	
38			15	
39–40			16	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS
________ TO ________

TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO CB-89-157 LOCATION ________ ELEVATION ________
GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________
MOVE TO HOLE ________
DRILL ________
MECHANICAL DOWN TIME ________
DRILLING PROBLEMS ________
OTHER ________
MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1			17	40.0 - 41.3 BEDROCK - light to medium grey - aphanitic groundmass and quartz eyes (<1 ~2mm) infilling vesicles, slight foliation - disseminated calcite < 5% - no sulphides observed - brecciated and infilled with quartz veinlets. Intermediate Volcanic Dacite or Andesite? Note: contamination from overlying till is present in bedrock chips as the hole was making water. 41.3 EOH R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 5 1989

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-158 LOCATION L 2+00W ; 10+00N ELEVATION 274 m

GEOLOGIST D. Holmes DRILLER G. Hong BIT NO. CB70174 / CB70195 BIT FOOTAGE 77.0 - 107.5 / 0 - 34.5

MOVE TO HOLE 10:45 - 11:00 AM

DRILL 11:00 - 1:30 PM

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

New Bit, New Bit Sub, lost 2 rods

page 1

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG							
				0 - 0.5 Organics							
1				0.5 - 30.0 OJIBWAY II SEDIMENTS							
2				0.5 - 3.0 light beige-brown gritty clay							
3				3.0 - 29.8 clay, grey variably gritty - non-gritty, soft becomes nongritty and softer downsection with subtle beige silt varves							
4											
5											
6				29.8 - 30.0 Fine grey sand							
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 5 19 89

HOLE NO CB-89-158 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

page 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21				30.0 - 33.0 MATHESON TILL
22				- abrupt contact with overlying clay/sand
23				matrix supported till with fine grey sand-silt matrix
24				and 65-70% greywacke cobble clasts, 10% volcanics
25				and 20-25% granitoid
26				- pull rods at 33.5m after
27				having a recovery problem
28				→ lost 2 rods, bit and bitsub in hole, redrilled hole 5m
29				south (did not rename or re-sample)
30				
31			01	33.0 - 34.5 BEDROCK
32			02	- grey colour
33				- grain size < 0.1mm
34			03 Bedrock	- granular texture - moderate to well foliated a few chips displayed chloritic shears
35				- predominant mafic mineral is
36				grey chlorite
37				< 1% carbonate
38				< 1% quartz vein (associated
39				with vein pyrite at 34.0m)
40				Greywacke

34.5 EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 11,12 1989

HOLE NO CB-89-159 LOCATION LINE 76E 24+50N ELEVATION 281

GEOLOGIST TURNER DRILLER J. HOWG BIT NO. CB70247 BIT FOOTAGE 0-46.5

SHIFT HOURS ______ TO ______

MOVE TO HOLE 3:00 - 3:30

DRILL 3:30 - 5:00

TOTAL HOURS ______

MECHANICAL DOWN TIME

DRILLING PROBLEMS

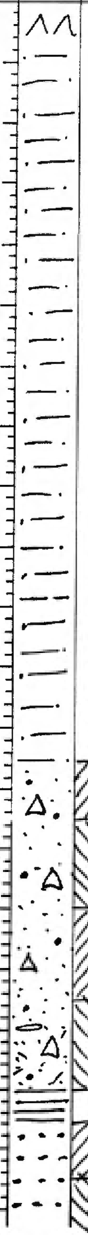
CONTRACT HOURS ______

OTHER

MOVE TO NEXT HOLE

NEW BIT

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–12				0 – 0.5 ORGANICS 0.5 – 12.5 OJIBWAY II SEDIMENTS 0.5 – 12.5 light grey gritty clay with < 1% small basalt pebbles.
13			01	12.5 – 34.7 MATHESON TILL & INTERBEDDED SORTED SEDIMENTS. 12.5 – 18.0 Matrix supported pebbly till. Matrix is beige silt-fine sand. Clasts ~ 60% Abitibi (30% basalt, 20% black siltstone, < 10% Int. volc.) ~40% granite. Between 16-18 m grey gritty clay is encorporated into matrix (5-40%).
14			02	
15–16			03	
17			04	
18				18.0 – 18.5 grey, hard, clay with small basalt and granite pebbles. 18.2 non gritty clay.
19			05	18.5 – 26.5 Sorted SEDIMENTS 18.5 – 25.0 Gravel, pebbly with medium to coarse grained granular sand matrix; beige. Clasts ~50% Abitibi Belt, 50% granite. Thin gritty clay lenses occurring at 20.1 m and 24. m. 25 – 26.5 well sorted, beige, fine grained sand.
20			06	



OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

HOLE NO CB-89-159 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

SHIFT HOURS ________ TO ________

MOVE TO HOLE ________

DRILL ________

TOTAL HOURS ________

MECHANICAL DOWN TIME ________

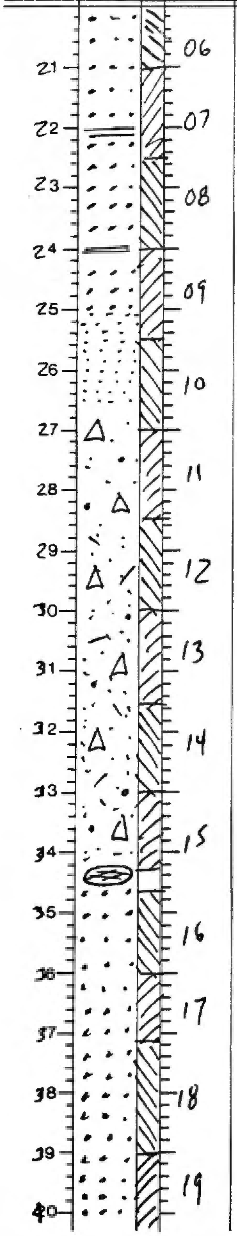
DRILLING PROBLEMS ________

CONTRACT HOURS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



fine beige sand grades into till after 26.5 m.

26.5 - 34.7 MATHESON TILL

Matrix supported pebbly till matrix and clast composition similar to till between 12.5 - 18.0 m.

31.0 - 34.7 there is a gradual increase in Abitibi clasts >80% and <20% granite, <1% banded iron formation. About 10% of clasts have limonite staining. Till is probably sourced from Missinaibi fluvial section.

34.7 - 40.5 MISSINAIBI SEDIMENTS

Gravel, pebbly with coarse granular sand matrix. Clasts >80% Abitibi (basalt 45%, siltstone 35%, schist 10%); <20% granite, <5% IRON FORM. Extensive limonite staining on 20-30% of clasts.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS
________ TO ________

TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO CB-89-159 LOCATION ____________ ELEVATION ________
GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________
MOVE TO HOLE ________
DRILL ________
MECHANICAL DOWN TIME ________
DRILLING PROBLEMS ________
OTHER ________
MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			19	40.5 - 44.0 LOWER TILL 7
41			20	clast supported cobbly till. matrix is beige silt - fine sand
42				clast composition is similar
43			21	to Miss. Gravel and >95% of cobbles are Abitibi. Limonitic
44			22	weathering is present on some
45			23	clasts (5-10%).
46				44.0 - 46.5 BEDROCK
47				44.0 - 45.7 >95% massive
48				syngenetic, pyrite and minor pyrrhotite. Fracture
49				and infilled with <5% quartz vein.
50				
11				45.7 - 46.0 Milkly white quartz vein and ground quartz
12				rock flour (~85%) with massive and cubic
13				pyrite <15%.
14				46.0 - 46.5 Host bedrock
15				- ligh grey - fine grained, sugary texture.
16				- fractured
17				- thinly bedded with black siltstone? (<5%).
18				- silicified + quartz veining.
19				Greywacke
20				46.5 EOH note: character samples of fines:

44 - 44.4 m
44.4 - 45.1 m
45.1 - 46.5 m

R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 5 19 89

SHIFT HOURS

_____ TO _____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-160 LOCATION Line 2E 20+50N ELEVATION 280 m

GEOLOGIST ~~HOLMES~~ TURNER DRILLER G. HowG BIT NO. CB7019S BIT FOOTAGE 34.5 - 52. m

MOVE TO HOLE 1:30 – 3:00

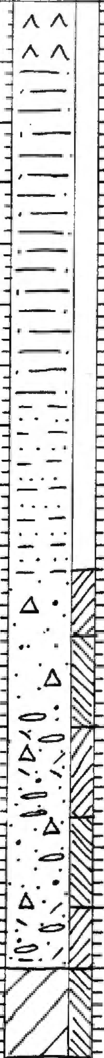
DRILL 3:00 - 4:00

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE to road 4:00 - 5:00

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20			01, 02, 03, 04, 05, 06	

0 - 1.0 ORGANICS

1.0 - 9.5 OJIBWAY II SEDIMENTS

1.0 - 6.5 light beige-brown gritty clay, < 1% small pebbles.

6.5 - 9.5 light beige silt - fine sand (very little recovery).

9.5 - 16.0 MATHESON TILL

9.5 - 12.4 light beige silt - fine sand matrix supported cobbly till clast content 60% Abitibi (~ 40% metavolcanics, ~ 20% metasediments), 40% granitic.

12.4 - 13.0 fine grained sand - silt matrix containing ~ 10-20% gray gritty clay. No change in clast content.

13.0 - 16.0 Till becomes clast supported. clasts include mainly Abitibi > 75%, and granitic < 35%. Matrix is ~~beige~~ silt - fine sand with gray gritty clay.

16.0 - 17.5 BEDROCK

- dark charcoal gray - black
- fine grained
- thinly laminated
- no calcite or quartz veining
- trace pyrite < .1%

Black Siltstone

17.5 EOH

R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 10 19 89

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-161 LOCATION LINE 88E 23+50N ELEVATION 286

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70205 BIT FOOTAGE 0-23 m

MOVE TO HOLE 10:30 - 10:45

DRILL 10:45 - 12:30

MECHANICAL DOWN TIME

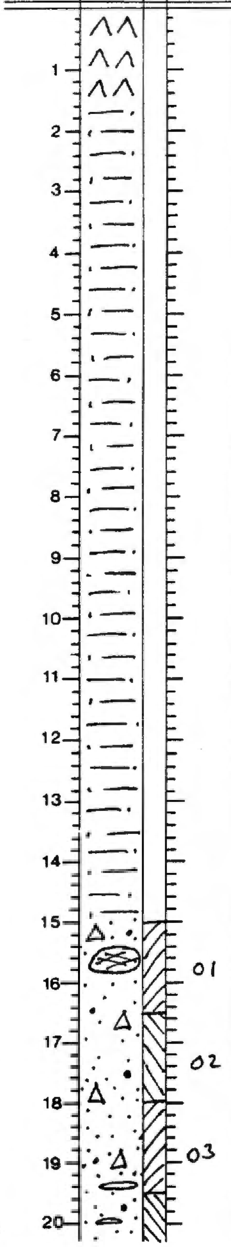
DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

NEW BIT

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



0 - 1.5 ORGANICS

1.5 - 15.0 OJIBWAY II SEDIMENTS

light grey, gritty clay with < 1% small basalt and granite pebbles, after 6.0 m less gritty.

15.0 - 21.2 MATHESON TILL

Matrix supported pebbly till matrix is light beige silt-fine sand. Clasts include ~65% Abitibi Belt (40% volcanics, 20% sediments), ~35% granite, < 1% maroon ironstone (magnetic) observed. Minor grey clay coatings present on ~5% of clasts.

21.2 - 23.0 BEDROCK

- dark grey to black
- folliated, schist
- fine grained
- extensive Fe oxidation (magnetite present?)
- sulphides < .1% (pyrite)
- calcite disseminated (< 5%)

Metabasalt,

23.0 EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-161 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

MOVE TO HOLE ________

DRILL ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG							
			04								
21											
22			05								
23											
24											
25											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 6 19 89

SHIFT HOURS

______ TO ______

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-162 LOCATION Line 2W 23+50N ELEVATION 282 m

GEOLOGIST Turner DRILLER G. Howe BIT NO. C870195 BIT FOOTAGE 34.5-

MOVE TO HOLE 7:00 - 7:45

DRILL 7:45 - 8:15

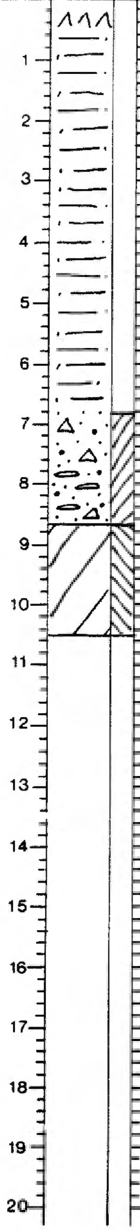
MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



0 – 0.5 ORGANICS

0.5 - 6.8 OJIBWAY II SEDIMENTS

0.5 - 1.0 brown, gritty clay

1.0 - 1.5 light beige-brown gritty clay grading into light grey gritty clay.

1.5 - 6.8 light grey gritty clay, at ~3.5 m less grit in clay.

6.8 - 8.7 MATHESON TILL

01

matrix supported cobbly till. Matrix is light grey-beige, silt fine sand. Clasts include ~ 60% Abitibi Belt (~40% metavolcanic and ~20% metasediment) and 40% granitic. no limestone observed.

02

8.7 - 10.5 BEDROCK

- light to medium grey
- fine grained
- thinly laminated with micaceous? parting planes
- no sulphides or calcite observed

Greywacke

10.5 EOH

R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 10 1989

HOLE NO CB-89-163 LOCATION LINE 94E 26+50N ELEVATION 287 m

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70205 BIT FOOTAGE 23 – 74m

SHIFT HOURS

_____ TO _____

MOVE TO HOLE 12:30 - 1:00

DRILL 1:00 - 4:00

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
0–4.4				0 - 4.4 ORGANICS						
4.4–20				4.4 - 20.0 OJIBWAY II SEDIMENTS light grey, gritty clay with < 1% small basalt and granite pebbles. Grades into less gritty clay after 6.0 m.						

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

HOLE NO CB-89-163 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

SHIFT HOURS ________ TO ________

MOVE TO HOLE ________

DRILL ________

TOTAL HOURS ________

MECHANICAL DOWN TIME ________

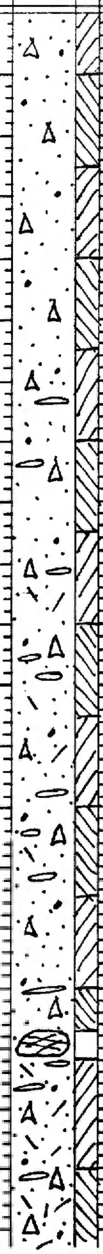
DRILLING PROBLEMS ________

CONTRACT HOURS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			01	20.0 – 41.5 MATHESON TILL
21				20.0-26. MATRIX supported pebbly till matrix beige silt - fine sand clasts include 50-60% Abitibi BELT (>50% volcanic and schist, < 10% sediments), 40-50% granite.
22			02	
23			03	
24				At 24.2 grey clay coatings appear on clasts and as < 5% clay lumps in matrix
25			04	
26			05	
27				26.0 - 36.7 Matrix supported cobbly till matrix and clast content does not change.
28			06	
29			07	36.7-37.2 Basalt Boulder, dark green, fine grained, slightly foliated, chloritized, trace pyrite <.1%.
30				
31			08	
32			09	37.2- 41.5 Grey clay lumps increase from 5-15% to 30-50% of matrix. Matrix is beige silt - fine sand. Abitibi clasts increase to ~70% clast pop. Gradational contact into grey, hard clay.
33				
34			10	
35			11	
36			12	
37				
38			13	
39				
40			14	



OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS ______ TO ______

TOTAL HOURS ______

CONTRACT HOURS ______

HOLE NO CB-89-163 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

MOVE TO HOLE ________

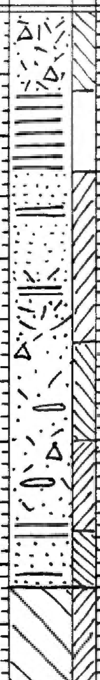
DRILL ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
41			14	41.5 - 42.7 MISSINAIBI SEDIMENTS grey, non gritty, hard clay. Possibly a rip-up clast?
42				
43				42.7 - 44.0 Missinaibi clay mixed with till? Grey, gritty clay and beige, fine sand and small pebbles (basalt) < 5%. From 43.4 - 44.0 fine beige sand, slightly sorted
44			15	
45				
46			16	
47				44.0 - 48.5 LOWER TILL ? Grey gritty clay matrix (60-80%) with fine sand - silt (20-40%). clasts abundant > 80% basalt, < 20% granite.
48			17	
49			18	
50			19	48.5 - 49.3 SORTED SEDIMENTS 48.5 - 48.7 non gritty, light beige clay. 48.7 - 49.1 medium grained orange-beige sand, well sorted 49.1 - 49.2 light beige clay 49.2 - 49.3 fine beige sand.
51				
52				
53				
54				
55				
16				49.3 - 51.0 BEDROCK - medium to dark green - fine grained groundmass with phenocrysts - slightly foliated - no calcite dissemination - brecciated and infilled with quartz - no sulphides Mafic Volcanic
17				
18				
19				
20				

51.0 EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 6 1989

SHIFT HOURS
____ TO ____

TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO CB-89-164 LOCATION 0+00 4+00 N ELEVATION 283

GEOLOGIST TURNER DRILLER G HOWG BIT NO. C870195 BIT FOOTAGE 45 - 88.5

MOVE TO HOLE 8:15 - 10:00

DRILL 10:00 - 1:00

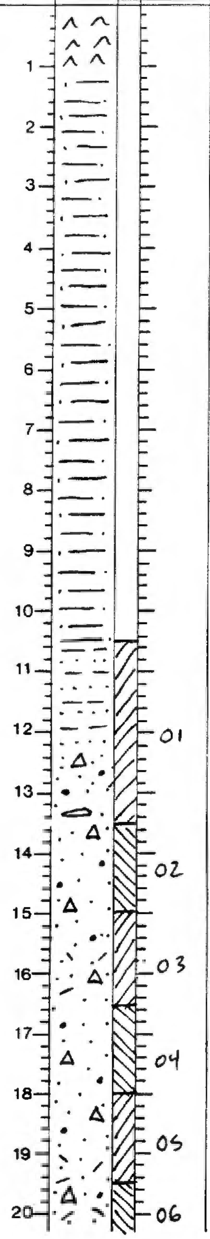
MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



0 - 1.0 ORGANICS

1.0 - 12.2 OJIBWAY II SEDIMENTS

1.0 - 3.5 beige brown, gritty clay

3.5 - 10.5 Soft light grey gritty clay < 1" pebbles. After 6.0 m very little grit.

10.5 - 12.2 silt - beige, fine sand containing < 2" clasts. Gradational contact into till.

12.2 - 32.8 MATHESON TILL

12.2 - 15.6 Matrix supported pebbly till matrix is light grey beige silt - fine sand (very sandy) clasts include ~ 50% Abitibi and 50% granitic, well rounded limestone < 1%.

15.6 - 22.5 Grey gritty clay (5-10%) is encorporated in matrix. Clasts composition remains constant.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS ______ TO ______

TOTAL HOURS ______

CONTRACT HOURS ______

HOLE NO CB-89-164 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

MOVE TO HOLE ________

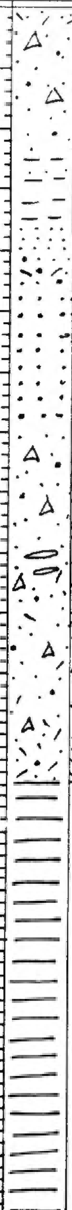
DRILL ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21–40			06, 07, 08, 09, 10, 11, 12, 13, 14	

22.5 - 23.5 Silt (no return)

23.5 - 24.0 fine grained beige sand (no clasts).

24.0 - 24.5 fine grained beige sand mixed with < 10% grey, gritty clay and pebbles. Clast composition ~ 60% Abitibi and 40% granitic.

24.5 - 26.7 Gravel, ? Pebbly. Matrix fine-medium grained sand, beige. The clast content ~ 60% Abitibi, 40% granitic. ~ 20% of Abitibi clasts have limonitic weathering. Gradational contact from overlying sand.

26.7 - 32.8 Till, matrix supported, pebbly. matrix is beige silt-fine sand containing < 10% grey gritty clay (appear as lumps on 10 mesh screen and on coatings on clasts). clasts are ~ 60/40 Abitibi/granitic increasing to 80/20 respectively by 31.5 m. (60% volcanic, 20% sed.). The grey gritty clay also increases to ~ 30% of matrix. It is encorporated from underlying Missinabi Clay.

32.8 - 40.8 MISSINABI SEDIMENTS

medium grey, hard, non gritty clay. < 1% small basaltic or black siltstone pebbles observed.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

HOLE NO CB-89-164 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

SHIFT HOURS ________ TO ________

MOVE TO HOLE ________

DRILL ________

TOTAL HOURS ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

CONTRACT HOURS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
41			15	40.8 - 41.8 MATRIX supported cobbly gravel or till? matrix fine sand (med grey) clasts > 50% Abitibi (~60% black siltstone, 30% metavolcanic). < 10% granitic.
42			16	
43				
44				41.8 - 43.5 BEDROCK ~60% rock flour, 40% chips
45				
6				41.8 - 42.8 - fine grained - black - thinly laminated - cubic pyrite < 1% - calcite vein < 1% Black siltstone
7				
8				
9				42.8 - 43.5 - fine grained - medium to dark charcoal grey - trace pyrite < 1% Greywacke
10				
11				
12				Black Siltstone interbedded with Greywacke
13				
14				43.5 EOH.
15				R. Turner
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 10/11 1989

SHIFT HOURS
____ TO ____

TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO CB-89-165 LOCATION L98+00E, 25+50N ELEVATION 286

GEOLOGIST D. HOLMES DRILLER G. King BIT NO. CB-90205 BIT FOOTAGE 74.0 – 126

MOVE TO HOLE Feb 10 4:00 - 4:30PM

DRILL Feb 10 4:30 - 5:15PM Feb 11 7:30 - 10:15 AM

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER travel Feb 10 5:15 - 6:30 PM travel Feb 11 6:15 - 7:30

MOVE TO NEXT HOLE

page 1

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–4				0 - 4.0 Organics (Peat)
2–4				4.0 - 17.6 OJIBWAY II SEDIMENTS - light grey colour, gritty clay, becomes softer downsection, very soft after 8.0m
6–13				17.6 - 31.2 MATHESON TILL - abrupt contact with overlying clay 17.6-17.8 boulder - granite 17.9-22.9 matrix supported till; fine beige silt and fine sand; cobble clasts approx. 50 to 60% volcanics/sediments 40 to 50% granitoid. with trace limestone and iron formation.
19			01	
20			02	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 10/19 89

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-165 LOCATION ______ ELEVATION ______
GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______
MOVE TO HOLE ______
DRILL ______
MECHANICAL DOWN TIME ______
DRILLING PROBLEMS ______
OTHER ______
MOVE TO NEXT HOLE ______

page 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.
21			02
22			03
23			04
24–25			05
26			06
27–28			07
29			08
30–31			09
32			10 Bedrock
33			
34			
35			
36			
37			
38			
39			
40			

DESCRIPTIVE LOG

22.0 - 27.0 matrix supported till;
fine grey sand-silt matrix with
a clay-silt component between
25.0 and 25.4 and at 29.5;

cobble clast composition are
approx 60% volcanics/sediments
40% granitoid with upto 2%
iron formation from 25.4 to 27.0

27.0 - 27.4 boulder intermediate
volcanic

27.4 - 31.2 matrix supported till
similar to 22.0 to 27.0

31.2 - 32.8 BEDROCK
- dark green, mottled white
- Foliated
- fine grained approx 0.0 lum
- predominant mafic mineral is green chlorite upto 50% of the rock
- 5-10% calcite veinlets
- 5% slow and fast reacting disseminated carbonate (to HCl)
- trace dissem. cubic pyrite

Mafic Volcanic

32.8 EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 6 19 89

HOLE NO CB-89-166 LOCATION 0+00 13+75 N ELEVATION 293 m

GEOLOGIST TURNER DRILLER G. HowG BIT NO. CB70195 BIT FOOTAGE 88.5 - 97

SHIFT HOURS ______ TO ______

MOVE TO HOLE 1:00 - 2:30

DRILL 2:30 - 3:00

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0				0 - 0.5 ORGANICS
1				0.5 - 6.0 OJIBWAY II SEDIMENTS
2				0.5 - 1.0 beige, brown gritty clay
				1.0 - 6.0 light gray gritty clay.
4				6.0 - 6.6 MATHESON TILL
				Matrix supported pebbly till
5				matrix light grey silt - fine sand.
				clasts include >75% Abitibi
6			01	Belt (~50% metaseds, 25 metavolc.),
7				<25% granitic, <1% limestone.
8			02	Note: sample 01 is undersize
				an attempt to get a larger
9				sample by washing did not
				work.
10				6.6 – 8.5 BEDROCK
11				- black
				- fine grained
12				- cubic pyrite <.1%
13				- no quartz or calcite veining
				Black siltstone
14				8.5 EOH
				R. Turner
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 11 19 89

HOLE NO CB-89-167 LOCATION L96+00E; 20+00N ELEVATION 284

GEOLOGIST D. Holmes DRILLER G. Howa BIT NO. CB70206 BIT FOOTAGE 0 - 34.E

SHIFT HOURS

____ TO ____

MOVE TO HOLE 10:15 - 10:30 AM

DRILL 10:30 - 1:30 PM

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER

MOVE TO NEXT HOLE

New Bit

page 1

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0				0-3.0 Organics (peat)
1				3.0 - 13.0 OJIBWAY II SEDIMENTS
2				3.0-6.0 clay: grey, compact, slightly gritty, softer downsection
3				
4				6.0 - 13.0 clay: grey, soft, non-gritty with beige silt varves
5				
6				
7				13.0 - 26.6 MATHESON TILL
8				- abrupt contact with overlying clay
9				13.0 - 22.5 matrix supported till; fine grey sand-silt matrix; cobble clast compositions approx. 50% volcanics/sediments 50% granitoid
10				
11				
12				
13				
14			01	
15				
16			02	
17			03	
18				
19			04	
20			05	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 11 19 89

HOLE NO CB-89-167 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

SHIFT HOURS ________ TO ________

MOVE TO HOLE ________

DRILL ________

TOTAL HOURS ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

CONTRACT HOURS ________

OTHER ________

MOVE TO NEXT HOLE ________

page 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21–26			05, 06, 07, 08, 09	22.5 - 26.6 matrix supported till similar to 13.0 - 22.5 with occasional clay - silt component in matrix - increase after 25.0 m to compact clay - silt till matrix
26–28				26.6 - 28.4 MISSINAIBI SEDIMENTS? (or Missinaibi rip-up clast) gradational contact with overlying till 26.6 - 28.0 very compact grey clay, non-gritty with rare pebbles 28.0 - 28.4 clay becomes gritty with approx 1% pebbles
29–32			10, 11, 12	28.4 - 32.6 LOWER TILL? (or continuation of Matheson Till) matrix supported till 28.4 - 30.5 fine grey sand - silt matrix, cobble clast compositions approx. 50% volcanics / sediments 50% granitoid 30.5 - 32.6 matrix supported till fine grey to grey - beige sand silt and compact beige clay - silt matrix, cobble clast compositions 50 - 60% volcanics / sediments 40 - 50% granitoid with 2% limonite stained clasts increasing downsection to 10% of the clasts
33–34			13 Bedrock	32.6 - 34.5 BEDROCK - dark grey chips and light grey clay - chips are very fine grained, (clean), well foliated - predominant mafic mineral is chlorite - 5% calcite veinlets 2 - 5% dissem. calcite - < 1% quartz veinlets

34.5 EOH Greywacke

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 6 19 89

HOLE NO CB-89-168 LOCATION LINE 4E 16+50N ELEVATION 289

GEOLOGIST TURNER DRILLER G HOWG BIT NO. CB70195 BIT FOOTAGE 97-121

SHIFT HOURS

MOVE TO HOLE 3:00 - 3:30

_____ TO _____

DRILL 3:30 - 5:00

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG

Depth scale: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

Sample No.: -01, -02, -03, -04, -05, -06

0-0.5 ORGANICS

0.5-11.2 OJIBWAY II SEDIMENTS

0.5-6.0 light brown to beige gritty clay.

6.0-9.5 light grey, gritty clay

9.5-11.2 mostly silt mixed with soft, light grey, gritty clay.

11.2-19.6 MATHESON TILL

MATRIX supported pebbly till. matrix is light grey-beige silt-fine sand. Grey gritty clay occurs as coatings on < 1% of the clasts. clasts include ~ 60% Abitibi Belt (metasediments 40%, metavolcanics 20%), ~ 40% granitic, < 1% limestone and quartz.

At 18.0 m the till becomes cobbly and between 19.2 - 19.6 grey gritty clay increases to ~ 20% of matrix, (incorporated from underlying Missinaibi sediments).

19.6-23.4 MISSINAIBI SEDIMENTS

light-medium grey, non gritty, compacted clay.

A weathered greywacke dropstone occurs between 21 - 21.2 m.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 7 19 89

HOLE NO CB-89-168 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. CB70196 BIT FOOTAGE 0-3.5

SHIFT HOURS

____ TO ____

MOVE TO HOLE ________

DRILL 7:00 - 8:00

TOTAL HOURS ____

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

CONTRACT HOURS ____

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21				23.4 - 26.0 LOWER TILL ? Clast supported till, very little matrix - grey, silt - fine sand. Cobbles > 98% Abitibi Belt (~60% black siltstone + greywacke, 40% basalt), < 2% granitic. note: Samples 07-09 are mainly cuttings from various cobbles.
22				
23				
24			07	
25			08	
26			09	26.0 - 27.5 BEDROCK -dark grey black -fine grained, massive, diabassic texture. -no sulphides observed -no disseminated calcite Basalt.
27			10	
28				27.5 EOH
29				R. Turner
30				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 7 19 89

SHIFT HOURS

____ TO ____

TOTAL HOURS

____

CONTRACT HOURS

____

HOLE NO CB-89-169 LOCATION Line 2E 17+00 N ELEVATION 291 m

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70196 BIT FOOTAGE 3.5-28

MOVE TO HOLE 8:00 - 8:15

DRILL 8:15 - 9:15

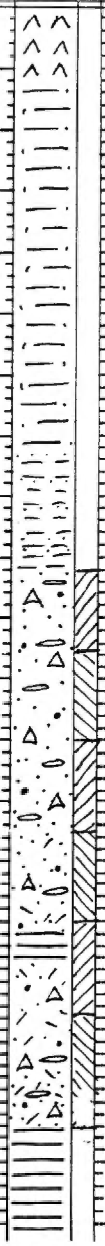
MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



Depth scale: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

Sample No.: 01, 02, 03, 04, 05, 06

0-1.3 ORGANICS

1.3 - 9.2 OJIBWAY II SEDIMENTS

1.3-1.5 light beige, gritty clay

1.5-7.5 grades into light grey gritty clay, < 1% pebbles (basalt, granite, limestone) becomes very soft with less grit after 7.0 m.

7.5-9.2 silt and light beige fine sand.

9.2 - 18.5 MATHESON TILL

Matrix supported cobbly till. matrix is light grey silt-fine sand. clasts include ~60% Abitibi Belt metavolcanics and metasediments, ~40% granitic, < 2% limestone.

14.9-15.6 20-30% grey gritty clay is encorporated into the matrix. grading into a thin grey, gritty clay lens between 15.2 - 15.6 m. (< 5% small basalt and granitic pebbles).

15.6 - 18.5 Cobbly till with grey gritty clay & fine sand matrix. clasts are > 80% Abitibi Belt and < 20% granitic.

18.5 - 21.7 MISSINAIBI SEDIMENTS

medium grey, non-gritty, hard clay.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-169 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

MOVE TO HOLE ______

DRILL ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21				21.7 - 23 LOWER TILL ?
				Clast supported cobbly till. Matrix includes grey gritty clay and fine sand. Clasts include > 95% Abitibi Belt (~75% sediments, 20% volcanic), < 5% granitic.
22			07	
23				
24			08	
25				23.0 - 24.5 BEDROCK
26				- black - fine grained - thinly laminated, friable - no calcite or sulphide observed
7				
8				Black Siltstone
9				24.5 EOH
10				R. Turner
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 7 19 89

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO CB-89-170 LOCATION Line 2E 20+75 N ELEVATION 285

GEOLOGIST TURNER DRILLER G. HowG BIT NO. CB70196 BIT FOOTAGE 28-43.0

MOVE TO HOLE 9:15 - 9:45

DRILL 9:45 - 10:30

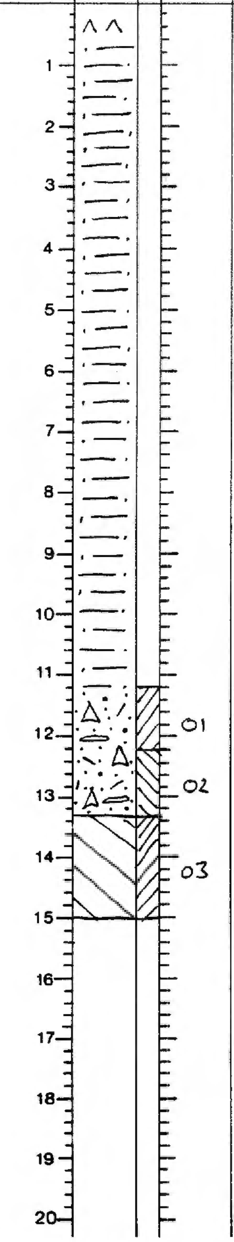
MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



0-0.5 ORGANICS

0.5 - 11.2 OJIBWAY II SEDIMENTS

0.5 - 1.5 light beige brown gritty clay, < 2% small basalt, limestone and granitic pebbles.

1.5 - 8.5 light grey - beige gritty clay.

8.5 - 11.2 clay becomes very soft, less grit.

11.2 - 13.3 MATHESON TILL

Matrix supported cobbly till. matrix is light grey-beige silt-fine sand with ~10% grey gritty clay. Clasts include ~50% Abitibi Belt and 50% granitic, < 1% limestone.

13.3 - 15.0 BEDROCK

- pale to medium greenish grey
- fine grained, chloritic
- < 5% disseminated calcite
- trace cubic pyrite < .1%

Bleached Basalt

15.0 EOH

R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 7 1989

HOLE NO CB-89-171 LOCATION 0+00 17+50 N ELEVATION 292 m

GEOLOGIST TURNER DRILLER G HOWG BIT NO. CB70196 BIT FOOTAGE 43 - 72 m

SHIFT HOURS ____ TO ____

MOVE TO HOLE 10:30 - 11:00

DRILL 11:00 - 1:30

TOTAL HOURS ____

MECHANICAL DOWN TIME ____

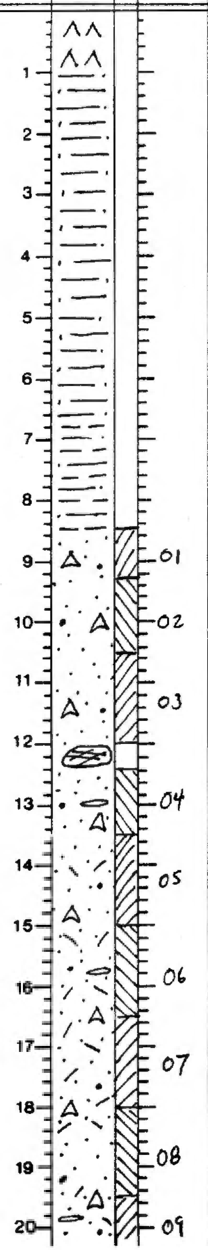
DRILLING PROBLEMS ____

CONTRACT HOURS ____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



0 - 1.0 ORGANICS (forest litter and dark brown peat).

1.0 - 8.5 OJIBWAY II SEDIMENTS

1.0 - 2.5 beige gritty clay

2.5 - 6.8 grades into light grey, gritty clay becoming very soft after 4.5 m.

6.8 - 8.5 silt mixed with grey clay, very little return.

8.5 - 23.3 MATHESON TILL

8.5 - 13.0 Matrix supported pebbly till. Matrix is light beige silt - fine sand. Clasts include ~60% Abitibi Belt (40% metavolcanic, 20% sed.) and 40% granitic, < 1% limestone.

12.0 - 12.4 basalt boulder.

13.0 - 23.3 Grey gritty clay (<5-10%) is encorporated into matrix. It occurs as clay lumps on the screen and as coatings on pebbles. An increase in Abitibi clasts are observed (~70%) granitics ~30%.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS ________ TO ________

TOTAL HOURS ________

CONTRACT HOURS ________

HOLE NO CB-84-171 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

MOVE TO HOLE ________

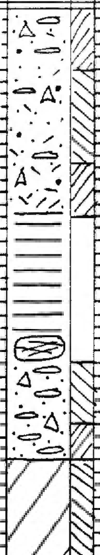
DRILL ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21–29 (scale continues 30, 11–20)			09, 10, 11, 12, 13, 14	

Till becomes cabbly after 20.0 m.
The clast composition is similar to the interval (13.0 - 23.3 m).

22.5 - 23.3 Grey gritty clay fraction of the matrix increases to ~60% at 23.0 m encorporated from the underlying Missinaibi clay.

23.3 - 25.2 Missinaibi SEDIMENTS
grey, non-gritty, compact clay.

25.2 - 25.8 dark green basalt boulder

25.8 - 27.4 LOWER TILL ?
Matrix poor clast supported, cobbly till
matrix is fine grey sand and minor silt. Cobbles > 95% Abitibi Belt (~50% metavolcanic and ~45% metasediments); < 5% granitic and quartz.

27.4 - 29.0 BEDROCK
- black
- fine grained, thinnly laminated
- trace pyrite <.01% and quartz veining <1%
Black siltstone

finely interbedded with medium grey, fine grained greywacke.

note: samples 12 & 13 are mostly cutting from various cobbles.

29.0 EOH

R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 7 1989

SHIFT HOURS

_____ TO _____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-172 LOCATION LINE 4E 4+50N ELEVATION 285

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70196 BIT FOOTAGE 72-90.5

MOVE TO HOLE 1:30 - 2:30

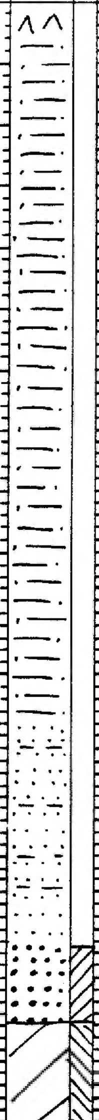
DRILL 2:30 - 3:00

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20			01, 02	0 - 0.5 ORGANICS 0.5 - 16.7 OJIBWAY II SEDIMENTS 0.5 - 1.5 beige-brown gritty clay 1.5 - 11.6 light grey gritty clay with <1% small basalt and granite pebbles. 11.6 - 15.5 silt and beige fine sand (no +10). 15.5 - 15.7 beige fine sand with minor pebbles (<15%). 15.7 - 16.7 Gravel, pebbly with a beige, medium sand, washed, matrix. Clasts include ~60 Abitibi (sediments 40% volcanics 20%), ~40 granite. 16.7 - 18.5 BEDROCK - black - fine grained, thinly laminated - cubic pyrite <1% - minor quartz veining <1% at ~18.0 m a sulphide rich band (<5%) cubic pyrite (1-5mm). Black Siltstone 18.5 EOH R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 7 19 89

SHIFT HOURS
____ TO ____

TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO CB-89-173 LOCATION LINE 8E 4+50N ELEVATION 288 m

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70196 BIT FOOTAGE 90.5-110.5

MOVE TO HOLE 3:00 - 3:30

DRILL 3:30 - 4:30

MECHANICAL DOWN TIME

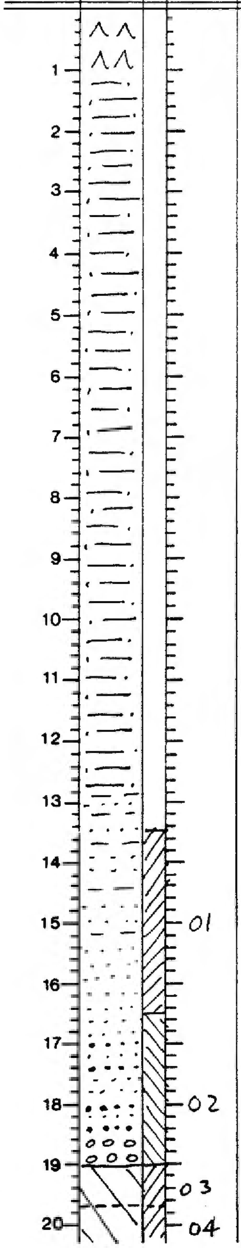
DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE 4:30 - 5:30 to road

Page 1 of 2

DEPTH IN METRES | GRAPHIC LOG | INTERVAL | SAMPLE NO.



DESCRIPTIVE LOG

0 - 1.0 ORGANICS

1.0 - 19.0 OJIBWAY II SEDIMENTS

1.0 - 1.5 beige gritty clay with <1% small pebbles (basalt & granite)

1.5 - 12.7 light grey gritty clay, becomes soft and less gritty after 5.5 m.

12.7 - 16.5 silt - fine beige sand with <1% small basalt, granite and limestone pebbles.

16.5 - 18.0 gradational contact from silt - fine beige sand to pebbly gravel. clast composition ~60 Abitibi, 40% granite and <1% limestone.

18.0 - 19.0 Cobbly gravel, very little matrix. clast are entirely Abitibi.

19.0 - 21.0 BEDROCK

19.0 - 19.7 (sample 03)
- medium green-grey
- fine grained, massive
- diabasic texture
- disseminated calcite <5%
Basalt

becomes bleached at depth.

19.7 - 21.0 (sample 04)
- light grey
- fine grained
- disseminated calcite 5-10%
- trace pyrite <.1%
Bleached Basalt

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-173 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

MOVE TO HOLE ________

DRILL ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
			04	21.0 EOH						
21				R. Turner						
22										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 4 1989
HOLE NO CB-89-150 LOCATION L11E; 12+75N ELEVATION 275
GEOLOGIST K MacNeil DRILLER C Howg BIT NO. CB70193 BIT FOOTAGE 54-88-S

SHIFT HOURS
____ TO ____
MOVE TO HOLE 8:15-8:45
DRILL 8:45-11:15

TOTAL HOURS
MECHANICAL DOWN TIME
DRILLING PROBLEMS

CONTRACT HOURS
OTHER
MOVE TO NEXT HOLE

Page 1/2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20			01, 02, 03, 04	0 – ~1.0 Organics & fine sand
				~1.0 – 13.4 Ojibway II Sediments
				~1.0 – ~3.5 clay:- grey; gritty; rare pebbles and granules
				~3.5 – ~10 clay:- grey; non-gritty; no pebbles
				~10 – 12 very fine silty sand with clay varves
				12 – 13.4 sand:- fine grained; local pebble bands
				13.4 – 19.2 Matheson Till
				grey-beige, unsorted, fine sand and silt matrix; minor gritty matrix clay below 14m; till is matrix supported and contains cobbles; clast composition - 50-60% intermediate - mafic volcanics and sediments 40-50 granitoids - below 13.5m, oxidized clasts and beige-grey, gritty matrix clay are common; oxidized clasts form 40% of clasts; matrix sand more of a beige color; matrix clay is negligible below 16.5m but reappears at 17.8m
				19.2 – 30.5 Missinaibi Sediments
				19.2 – 19.9 poorly sorted fine to medium grained sand with a few hard clay/silt "plates"
				19.9 – 20.1 clay:- grey; compact

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 4 1989

HOLE NO CB-89-150 LOCATION L11E; 12+75N ELEVATION ____

GEOLOGIST ____ DRILLER ____ BIT NO. ____ BIT FOOTAGE ____

SHIFT HOURS ____ TO ____

MOVE TO HOLE ____

DRILL ____

TOTAL HOURS ____

MECHANICAL DOWN TIME ____

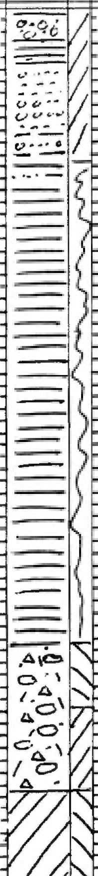
DRILLING PROBLEMS ____

CONTRACT HOURS ____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21			05	20.1-20.5 pebbly sand 20.5-20.9 clay - slight grit on outside of clay lumps
22–25				20.9-22.4 fine grey sand with scattered pebbles; clay varves are common; sandy/pebbly zones appear to be 0.3-0.4 m wide and clay varves 0.1-0.2 m
26–30			N.S.	22.4-30.5 clay predominant with minor sand and pebble partings in initial 0.5 m
31			06	30.5-32.9 Lower Till grey beige, fine sand and silt to gritty clay matrix; cobbly; clast supported to 31.3 m; clast composition: 55% intermediate-mafic volcanics and sediment 40% granitoids 2% limestone
32			07	* note:- abundance of clay and limestone pebbles in Lower Till which may suggest the section is actually Matheson Till
33–34			08	32.9-34.5 Bedrock:- siltstone 32.9-33.8 most of sample ground to grey-white clay; the few competent chips are greyish, sheared, sericitic and very fine grained 33.8-34.5 chips more competent, medium grey, aphanitic to very fine grained (<0.1 mm); well foliated to sub-fissile; non-calcareous; no sulfides
35–40				



34.5 m (115') EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 10 1989

SHIFT HOURS ______ TO ______

TOTAL HOURS ______

CONTRACT HOURS ______

HOLE NO CB-89-151 LOCATION L 88+00E ; TL20N ELEVATION 287 m

GEOLOGIST D. Holmes DRILLER J. Hong BIT NO. CB70246 BIT FOOTAGE 0 - 11.8

MOVE TO HOLE 12:30 - 12:45 PM

DRILL 12:45 - 2:15

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–0.5				0 - 0.5 Organics
0.5–7.5				0.5 - 7.5 OJIBWAY II SEDIMENTS
				0.5 - 2.5 clay: beige, gritty, compact with occasional pebbles
				2.5 - 6.5 clay: grey, gritty, compact with a few pebbles
				6.5 - 7.5 clay, grey non-gritty, soft
7.5–10.2			01, 02	7.5 - 10.2 MATHESON TILL
				- abrupt contact with overlying clay
				- fine grey sand-silt matrix; cobble clast composition approx. 50-60% volcanics, 40-50% granitoid
10.2–11.8			03 Bedrock	10.2 - 11.8 BEDROCK
				- dark green
				- weakly foliated, volcanic texture
				- fractured with oxidized brown-ochre clay and chips in upper 0.5 m of bedrock
				- grain size 0.1 to 0.2 mm
				- predominant mafic mineral is green chlorite, up to 50% of the rock
				- < 0.5% qtz veinlets in upper 0.5 m
				- 1% calcite veinlets
				- 5-10% fast and slow reacting carbonate - dissem.

11.8 EOH

Mafic Volcanic

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 4 19 89
SHIFT HOURS
____ TO ____
TOTAL HOURS
____
CONTRACT HOURS
____

HOLE NO CB-89-152 LOCATION L8E; 12+75N ELEVATION 275
GEOLOGIST K MacNeil DRILLER G Howg BIT NO. CB70193 BIT FOOTAGE 88.5-132.5
MOVE TO HOLE 11:15-11:30
DRILL 11:30-2:15
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20				0-1.5 No Return 1.5 - 27.1 Ojibway II Sediments 1.5-~16 clay:- beige (oxidized) to ~2.8 and grey (unoxidized) below 2.8. clay is gritty with scattered limestone, granitoid and volcanic pebbles ~16.0-27.1 clay:- grey; non gritty; no pebbles; below 26 m, very fine grained silty sand is present; at 27-27.1, intersect a siltstone cobble

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 4 19 89

SHIFT HOURS

____ TO ____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-152 LOCATION L8E; 12+75N ELEVATION ____

GEOLOGIST ____ DRILLER ____ BIT NO. ____ BIT FOOTAGE ____

MOVE TO HOLE ____

DRILL ____

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21				27.1-41.1 Missinaibi Sediments
22				27.1-38 clay:- grey; compact @ 28.1 intersect a volcanic cobble - very fine silty sand to silt becomes common downhole
23				
24				
25				38-38.6 very fine silty sand predominant - clay varves are common
26				
27				38.6-39.1 sand - very fine grained; grey
28				39.1-41.1 gravel:- no natural matrix - clast supported. cobble size clasts, 98% of clasts are black meta-sediments
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40			01	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 4 1989

HOLE NO CB-89-152 LOCATION L 8E ; 12+75N ELEVATION

GEOLOGIST DRILLER BIT NO. BIT FOOTAGE

SHIFT HOURS
TO

MOVE TO HOLE
DRILL

TOTAL HOURS

MECHANICAL DOWN TIME
DRILLING PROBLEMS

CONTRACT HOURS

OTHER
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			01	
41			02	41.1 - 43.5 Bedrock :- siltstone:- medium to dark grey; bleached locally; fissile aphanitic; non-calcareous; below 40.6, much of sample is ground to light grey to dark grey clay
42			03	
43				
44				
45				42.4 - 42.7 much of sample ground to dark grey gritty clay but black silt/mudstone chips are invariably present; dark color of clay and chips appears due to graphite
46				
47				
48				
49				
50				42.7 - 43.5 greywacke:- bleached; grain size of < 0.1 mm; highly schistose to sheared; sandy texture; much ground to grey white clay below 43.2
11				
12				
13				
14				43.5 m (145') EOH
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 10 19 89

SHIFT HOURS ____ TO ____

TOTAL HOURS ____

CONTRACT HOURS ____

HOLE NO CB-89-153 LOCATION L 90+00E ; 19+25N ELEVATION 288m

GEOLOGIST D. Holmes DRILLER J. Howg BIT NO. CB70246 BIT FOOTAGE 11.8 - 18.8

MOVE TO HOLE 2:15 - 2:30 PM

DRILL 2:30 - 3:15 PM

MECHANICAL DOWN TIME ____

DRILLING PROBLEMS ____

OTHER ____

MOVE TO NEXT HOLE ____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–0.5				0-0.5 Organics
0.5–5.0				0.5-5.0 OJIBWAY II SEDIMENTS clay: grey slightly gritty compact - no pebbles - directly overlies bedrock
5.0–7.0			01 Bedrock	5.0-7.0 BEDROCK - dark green - Foliated - grain size 0.1 to 0.2mm predominant mafic mineral is green chlorite approx 50% of rock - >10% disseminated calcite < 1% calcite stringers Mafic Volcanic
				7.0 EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 4 19 89

HOLE NO CB-89-154 LOCATION L5E; 11+25N ELEVATION 276

GEOLOGIST K MacNeil DRILLER G Huwy BIT NO. C370194 BIT FOOTAGE 0-32.5

SHIFT HOURS ______ TO ______

MOVE TO HOLE 2:15-2:30

DRILL 2:30-4:30

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

Page 1 of 2 * New Bit *

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 - ~1.0 No Return
1				~1.0 - 1.4 Organics ≥ Clay
2				1.4 - 18.6 Ojibway II Sediments
3				1.4 - ~12 clay:- beige (oxidized) to ~3.0 and grey (unoxidized) below 3.0m; clay is gritty with scattered pebbles and pebble beds @ 2.0, 3.5 and 8.2
7				~12 - 17 clay:- grey; no grit or pebbles
8				17 - 18.6 very fine silt and sand predominant
10				18.6 - ~30 Matheson Till
11				grey-beige, unsorted fine sand and silt matrix; matrix supported; cobble size clasts; clast composition - 50% intermediate-mafic volcanics and sediments 50% granitoids <1% limestone
15				- abundant (30-40%) oxidized clasts below 21m; matrix also has a beige coloration - abundant return; may be grading into Missinaibi gravel below 28.5m
19			01	
20			02	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 4 1989

HOLE NO CB-89-154 LOCATION L5E; 11+25N ELEVATION ______

GEOLOGIST K MacNeil DRILLER G Hewy BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

TOTAL HOURS ______

CONTRACT HOURS ______

MOVE TO HOLE ______

DRILL ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			02	
21				~30 - 30.6 Missinaibi Sediments
22			03	gravel :- beige ; medium to coarse sand matrix; matrix supported - cobbly; clast composition - 50:50 volcanics/ sediments versus granitoids — not dissimilar to overlying till -
23			04	
24				
25			05	
26			06	
27				30.6 - 30.9 Lower Till (??)
28			07	grey, fine sand and silt matrix ; cobbles; 75% of chips are volcanics and sediments; section not thick enough to accurately log
29			08	
30			09	
31				30.9 - 32.5 Bedrock:-
32			10	silt/mudstone - black ; very fine grained; much is ground to grey - black clay, black due to graphite
33				
34				
35				32.5 ~ (106') EOH
36				
37				
38				
39				
40				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 10, 11 19 89

SHIFT HOURS
______ TO ______

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-155 LOCATION LINE 80E 22+50N ELEVATION 282 m

GEOLOGIST TURNER DRILLER J. HOWG BIT NO. CB70246 BIT FOOTAGE 18.8-49.8

MOVE TO HOLE Feb 10 3:15 - 4:30

DRILL Feb 11 7:45 - 10:15

MECHANICAL DOWN TIME

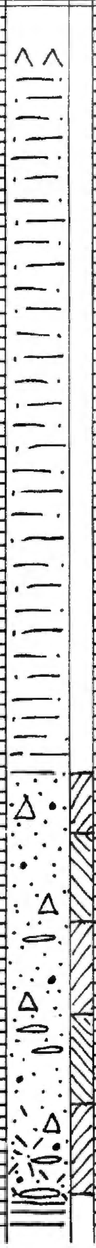
DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

Page 1 of 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



Depth scale: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

Sample no.: 01, 02, 03, 04, 05

0-0.5 No Return

0.5-1.0 organics

1.0 - 12.5 OJIBway II SEDIMENTS

1.0 - 1.5 Dark brown organic rich gritty clay

1.5 - 12.5 - grades into light grey gritty clay < 1% small pebbles

-at 9.0m grades into very soft, less gritty clay

12.5 - 21.5 MATHESON TILL

12.5 - 16.8 MATRIX supported pebbly till. Matrix is light grey-beige silt-fine sand. Clasts include ~60% Abitibi Belt (40% basalt, 20% schist); ~40% granite.

16.8 - 19.5 Till becomes cobbly, matrix supported. Matrix and clast content is similar to the above (12.5-16.8 interval).

At 18.0m grey, gritty clay coatings are observed on ~5% of clasts; and increases to 10-40% of matrix by 19.5m. The till grades into Missinaibi clay.

19.5 - 24.8 Missinaibi SEDIMENTS

Grey, hard clay, minor pebbles <2% (basalt + granite). Very slightly gritty zones.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

HOLE NO CB-89-155 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

SHIFT HOURS ________ TO ________

MOVE TO HOLE ________

DRILL ________

TOTAL HOURS ________

MECHANICAL DOWN TIME ________

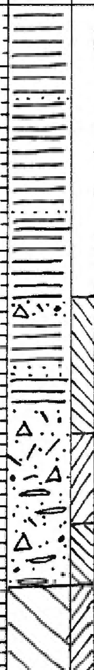
DRILLING PROBLEMS ________

CONTRACT HOURS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21 – 24				24.8 - 27.4 Interfingering or mixing of Missinaibi clay encorporated into Matheson Till. Grades into a good till by 27.4m.
				27.4 - 29.5 MATHESON TILL
25 – 27			06	Matrix supported cobbly till. Matrix is beige silt-fine sand with 5-10% grey gritty clay lumps. Clasts are 60-70% Abitibi Belt (~50% basalt, ~20 schist), 30-40% granite.
27 – 28			07	
28 – 29			08	29.5 - 31.0 BEDROCK
29.5 – 31			09	two lithologies ① - medium grey - fine grained - fractured - disseminated calcite < 1% Greywacke - hosting massive calcite vein and minor pyrite < .1% Greywacke is thinly interbedded with ② - black - fine grained - finely laminated Siltstone - hosting massive syngenetic pyrite < 2%
32, 33, 14, 15, 16, 17, 18, 19, 20				31.0 EOH



R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 5 19 89

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-156 LOCATION Line 2E 10W ELEVATION 275m

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70194 BIT FOOTAGE 32.5 - 77m

MOVE TO HOLE 7:45 - 8:00

DRILL 8:00 - 10:45

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

page 1

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	
1–20				0 - 0.5 ORGANICS (FOREST Litter) 0.5 - 37.0 OJIBWAY II SEDIMENTS 0.5 - 21.2 CLAY MEMBER 0.5 - 3.5 beige-brown gritty clay (1.0 - 1.25 granitic cobble) 3.5 - 14.0 gradational change from light beige to light grey gritty clay. < 2" basalt and granitic pebbles. 14.0 - 21.2 gradational change to very soft, grey clay, very little grit.	Note: I made a spotcheck of several samples in hole March/April 89 by P. Collins. Found that log description as accurate - no changes.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-156 LOCATION ____________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

MOVE TO HOLE ________

DRILL ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21				21.2 - 37.0 OJIBWAY II SAND & GRAVEL
22			01	21.2 - 22.3 fine - medium grained, beige sand, sorted. <5% small granitic pebbles (~70-80%) and Abitibi (<20%).
23				
24			02	22.3 - 26.0 Gravel, pebbly with abundant fine - medium grained, beige sand. Clasts include ~60% granitic, ~40% Abitibi (of which ~20% have limonitic staining). Many of the granitic clasts are hematized.
25				
26				
27			03	26.0 - 28.5 Coarse - medium grained granular sand; well sorted and washed. Minor pebbly gravel interbeds.
28				
29			04	
30				28.5 - 30.5 fine beige sand, well sorted <5% clasts.
31			05	30.5 - 31 Gravel, pebbly with fine sand matrix abundant. Clast content as above
32			06	
33				31. - 33 Gravel, cobbly - matrix & clast content does not change. Extensive limonitic staining.
34			07	33. - 33.3 fine, well sorted, beige sand
35				
36			08	33.3 - 37.0 medium - coarse granular sand (brownish - orange color due to extensive limonite weathering). Mixed thin beds of small pebble gravel. Clast composition ~60% Abitibi and 40% granitic.
37				
38			09	
39				
40			10	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

HOLE NO CB-89-156 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

SHIFT HOURS

________ TO ________

MOVE TO HOLE ________

DRILL ________

TOTAL HOURS

____

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

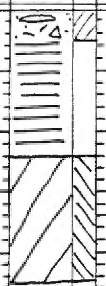
CONTRACT HOURS

____

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
			10							
41				37.0 - 40.8 MATHESON TILL						
42				matrix supported cobbly till, defined contact between till and overlying sand and gravel.						
43				matrix is light grey beige silt - fine sand. Clasts include ≈						
44			11	70% Abitibi Belt, 30% granitic, <1% limestone. Decrease in limonite						
45				stained clasts. Matrix contains < 5% grey gritty clay lumps.						
6										
7				40.8 - 42.4 MISSINABI SEDIMENTS						
8				varved medium grey clay, no grit, with < 2% small basalt pebbles, pebbles completely						
9				disappear at 41.0 m.						
10				42.4 - 44.5 BEDROCK						
11				42.4 - 43.2 - fine grained black siltstone - no sulphides, < 2% quartz vein. interbedded with greywacke.						
12				43.2 - 44.2 - grey, fine grained greywacke - no sulphides						
13				44.2 - 44.5 - rock flour, black siltstone						
14										
15				44.5 EOH						
				R. Turner						
16										
17										
18										
19										
20										



OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 11 1989

SHIFT HOURS ____ TO ____

TOTAL HOURS ____

CONTRACT HOURS ____

HOLE NO CB-89-157 LOCATION 78+50 E 23 N ELEVATION 281

GEOLOGIST TURNER DRILLER J. HOWE BIT NO. CB70246 BIT FOOTAGE 49.8-91.1

MOVE TO HOLE 10:15 - 10:45

DRILL 10:45 - 3:00

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 – 0.5 NO RETURN
1				0.5 - 1.5 ORGANICS mixed with orange-brown, organic rich, gritty clay.
2				
3				1.5 - 11.7 OJIBWAY II SEDIMENTS
4				1.5 - 8.9 light grey, gritty clay with <1% small pebbles.
5				8.9 - 9.0 thin coarse sand and small pebbly bed.
6				
7				9.0 - 11.7 grey, less gritty glacial lacustrine clay
8				
9				11.7 - 22.0 MATHESON TILL
10				11.7 - 18.3 Matrix supported pebbly till, matrix is beige silt-fine sand. Clasts ~60% Abitibi (basalt & schist 30%, siltstone 30%), ~40% granite; limestone & quartz < 1%.
11				
12				
13			01	
14			02	18.3 - 19.8 grey gritty clay (5-35%) appears in matrix encorporated from Missinaibi sediments. Mixed with beige silt and < 5% small pebbles.
15				
16			03	
17			04	19.8 - 22.0 beige silt-fine sand is mixed with < 5% grey gritty clay lumps and < 1% small basalt pebbles.
18				
19			05	
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-157 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

MOVE TO HOLE ________

DRILL ________

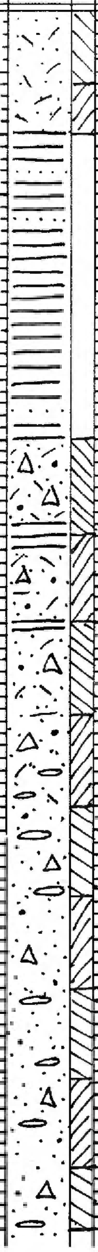
MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



Depth (m): 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40

Sample no.: 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16

22.0 - 27.0 MISSINAIBI SEDIMENTS
medium grey, hard, clay
not a pure glacial lacustrine clay. It contains washed thin sandy beds with < 1% pebbles. Pure grey clay is interbedded or mixed with gritty clay. Possibly a rip up clast or wedge in the till.

27.0 - 32.6 MATHESON TILL MIXED WITH GREY CLAY

gritty clay matrix (60-70%) and beige silt-fine sand (30-40%). Clasts ~60% Abitibi Belt, ~40% granite many clasts are clay coated. Missinaibi clay (pure) rip-up clasts encorporated, Grades into good Matheson Till by 32.6 m.

32.6 - 40.0 MATHESON TILL

Matrix supported cobbly till. matrix is light beige silt - fine sand; grey clay coatings on ~ 5% clasts. clasts include 70-80% Abitibi (~40% volcanics and 40% sediments), 30-40% granite.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-157 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

MOVE TO HOLE ______

DRILL ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1			41	40.0 - 41.3 BEDROCK - light to medium grey - aphanitic groundmass and quartz eyes (<1~2mm) infilling vesicles, slight foliation - disseminated calcite <5% - no sulphides observed - brecciated and infilled with quartz veinlets. Intermediate Volcanic Dacite or Andesite? note: contamination from overlying till is present in bedrock chips as the hole was making water. 41.3 EOH R. Turner
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 5 1989

HOLE NO CB-89-158 LOCATION L 2+00 W ; 10+00 N ELEVATION 274 m

GEOLOGIST D. Holmes DRILLER G. Hong BIT NO. CB70174 / CB70195 BIT FOOTAGE 77.0 - 107.5 / 0 - 34.5

SHIFT HOURS ______ TO ______

MOVE TO HOLE 10:45 - 11:00 AM

DRILL 11:00 - 1:30 PM

TOTAL HOURS ______

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS ______

OTHER

MOVE TO NEXT HOLE

New Bit, New Bit Sub, Lost 2 rods

page 1

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 - 0.5 Organics
1				0.5 - 30.0 OJIBWAY II SEDIMENTS
2				0.5 - 3.0 light beige-brown gritty clay
3				3.0 - 29.8 clay, grey variably gritty - non-gritty, soft becomes nongritty and softer downsection with subtle beige silt varves
4				
5				
6				29.8 - 30.0 Fine grey sand
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 5 19 89

SHIFT HOURS
______ TO ______

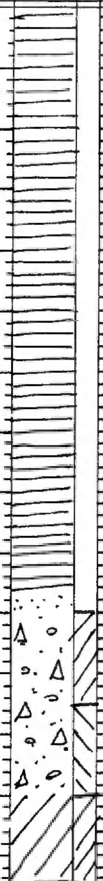
TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-158 LOCATION ______ ELEVATION ______
GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______
MOVE TO HOLE ______
DRILL ______
MECHANICAL DOWN TIME ______
DRILLING PROBLEMS ______
OTHER ______
MOVE TO NEXT HOLE ______

page 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21				30.0-33.0 MATHESON TILL
22				- abrupt contact with overlying clay/sand
23				matrix supported till with fine grey sand-silt matrix
24				and 65-70% greywacke
25				cobble clasts, 10% volcanics and 20-25% granitoid
26				
27				- pull rods at 33.5m after having a recovery problem
28				→ lost 2 rods, bit and bitsub in hole, redrilled hole 5m
29				south (did not rename or re-sample)
30				
31			01	33.0-34.5 BEDROCK
32			02	- grey colour
33				- grain size < 0.1mm
34			03 Bedrock	- granular texture
				- moderate to well foliated a few chips displayed chloritic shears
35				- predominant mafic mineral is grey chlorite
36				< 1% carbonate
37				< 1% quartz vein (associated with vein pyrite at 34.0m)
38				
39				
40				Graywacke



34.5 EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 11,12 1989

SHIFT HOURS

____ TO ____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-159 LOCATION LINE 76E 24+50N ELEVATION 281

GEOLOGIST TURNER DRILLER J. HOWG BIT NO. CB70247 BIT FOOTAGE 0-46.5

MOVE TO HOLE 3:00 - 3:30

DRILL 3:30 - 5:00

MECHANICAL DOWN TIME

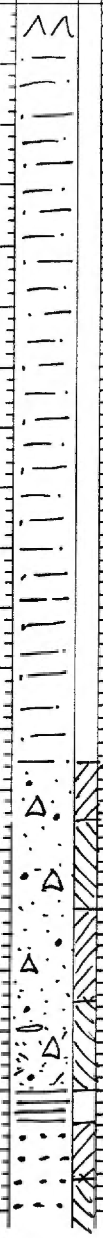
DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

NEW BIT Page 1 of 3

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



Depth scale: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

Sample no.: 01, 02, 03, 04, 05, 06

0 – 0.5 ORGANICS

0.5 – 12.5 OJIBWAY II SEDIMENTS

0.5 – 12.5 light grey gritty clay with < 1% small basalt pebbles.

12.5 – 34.7 MATHESON TILL & INTERBEDDED SORTED SEDIMENTS.

12.5 – 18.0 Matrix supported pebbly till. Matrix is beige silt-fine sand. Clasts ~ 60% Abitibi (50% basalt, 20% black siltstone, < 10% Int. volc) ~40% granite. Between 16-18 m grey gritty clay is encorporated into matrix (5-40%).

18.0 – 18.5 grey, hard, clay with small basalt and granite pebbles. 18.2 non gritty clay.

18.5 – 26.5 Sorted SEDIMENTS

18.5 – 25.0 Gravel, pebbly with medium to coarse grained granular sand matrix; beige. Clasts ~50% Abitibi Belt, 50% granite. Thin gritty clay lenses occurring at 20.1 m and 24. m.

25 – 26.5 well sorted, beige, fine grained sand.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

HOLE NO eB-89-159 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

SHIFT HOURS

________ TO ________

MOVE TO HOLE ________

DRILL ________

TOTAL HOURS

____

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

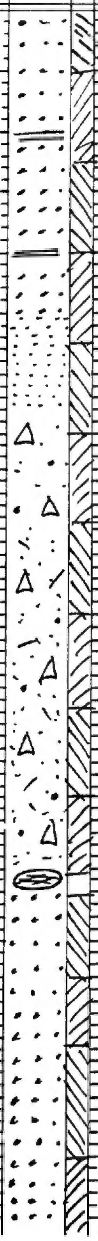
CONTRACT HOURS

____

OTHER ________

MOVE TO NEXT HOLE ________

Page 2 of 3

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40			06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19	fine beige sand grades into till after 26.5 m. 26.5 - 34.7 MATHESON TILL Matrix supported pebbly till matrix and clast composition similar to till between 12.5 - 18.0 m. 31.0 - 34.7 there is a gradual increase in Abitibi clasts >80% and <20% granite, <1% banded iron formation. About 10% of clasts have limonite staining. Till is probably sourced from Missinaibi fluvial section. 34.7 - 40.5 MISSINAIBI SEDIMENTS Gravel, pebbly with coarse granular sand matrix. clasts >80% Abitibi (basalt 45%, siltstone 35%, schist 10%); <20% granite, <5% IRON FORM. Extensive limonite staining on 20-30% of clasts.						

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

HOLE NO CB-89-159 LOCATION ____________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

SHIFT HOURS ____ TO ____

MOVE TO HOLE ____________

DRILL ____________

TOTAL HOURS ________

MECHANICAL DOWN TIME ____________

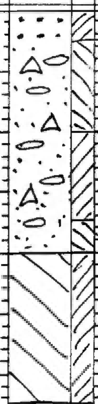
DRILLING PROBLEMS ____________

CONTRACT HOURS ________

OTHER ____________

MOVE TO NEXT HOLE ____________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



Sample No.: 19, 20, 21, 22, 23

Depth in metres: 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

40.5 - 44.0 LOWER TILL ?
clast supported cobbly till.
matrix is beige silt - fine sand
clast composition is similar
to Miss. Gravel and >95% of
cobbles are Abitibi. Limonitic
weathering is present on some
clasts (5-10%).

44.0 - 46.5 BEDROCK

44.0 - 45.7 >95% massive
syngenetic, pyrite and
minor pyrhotite. Fracture
and infilled with <5%
quartz vein.

45.7 - 46.0 Milkly white quartz
vein and ground quartz
rock flour (~85%) with
massive and cubic
pyrite <15%.

46.0 - 46.5 Host bedrock
- ligh grey
- fine grained, sugary
texture.
- fractured
- thinly bedded with
black siltstone? (<5%).
- silicified + quartz
veining.

Greywacke

46.5 EOH

note: character samples
of fines:
44 - 44.4 m
44.4 - 45.1 m
45.1 - 46.5 m

R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 5 19 89

SHIFT HOURS
_____ TO _____

TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO CB-89-160 LOCATION Line 2E 20+50N ELEVATION 282 m

GEOLOGIST Turner Holmes DRILLER G. HowG BIT NO. CB70195 BIT FOOTAGE 34.5 - 52. m

MOVE TO HOLE 1:30 – 3:00

DRILL 3:00 - 4:00

MECHANICAL DOWN TIME

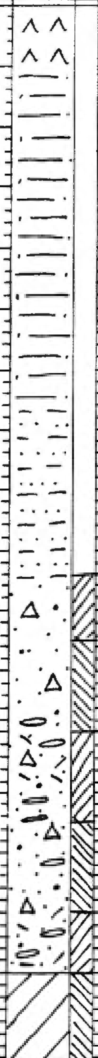
DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE to road 4:00 - 5:00

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–1				0 - 1.0 ORGANICS
1–9.5				1.0 - 9.5 OJIBWAY II SEDIMENTS 1.0 - 6.5 light beige-brown gritty clay, < 1% small pebbles. 6.5 - 9.5 light beige silt - fine sand (very little recovery).
9.5–16			01, 02, 03, 04, 05	9.5 - 16.0 MATHESON TILL 9.5 - 12.4 light beige silt - fine sand matrix supported cobbly till clast content 60% Abitibi (~ 40% metavolcanics, ~ 20% metasediments), 40% granitic. 12.4 - 13.0 fine grained sand - silt matrix containing ~ 10-20% grey gritty clay. No change in clast content. 13.0 - 16.0 Till becomes clast supported. clasts include mainly Abitibi > 75%, and granitic < 35%. Matrix is beige silt - fine sand with grey gritty clay.
16–17.5			06	16.0 - 17.5 BEDROCK - dark charcoal grey - black - fine grained - thinly laminated - no calcite or quartz veining - trace pyrite < .1% Black Siltstone
17.5				17.5 EOH

Depth scale: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20



R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 10 19 89

SHIFT HOURS
_____ TO _____

TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO CB-89-161 LOCATION LINE 88E 23+50N ELEVATION 286

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70205 BIT FOOTAGE 0-23 m

MOVE TO HOLE 10:30 - 10:45

DRILL 10:45 - 12:30

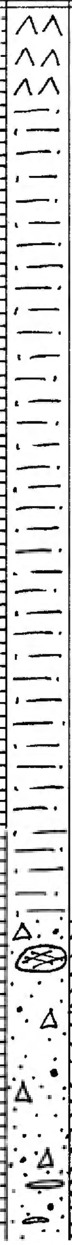
MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

NEW BIT

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20		15.0–20.0	01, 02, 03	0 - 1.5 ORGANICS 1.5 - 15.0 OJIBWAY II SEDIMENTS light grey, gritty clay with <1% small basalt and granite pebbles, after 6.0 m less gritty. 15.0 - 21.2 MATHESON TILL Matrix supported pebbly till matrix is light beige silt-fine sand. Clasts include ~65% Abitibi Belt (40% volcanics, 20% sediments), ~35% granite. <1% maroon ironstone (magnetic) observed. Minor grey clay coatings present on ~5% of clasts. 21.2 - 23.0 BEDROCK - dark grey to black - folliated, schist - fine grained - extensive Fe oxidation (magnetite present?) - sulphides <.1% (pyrite) - calcite disseminated (<5%) Metabasalt, 23.0 EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-161 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

MOVE TO HOLE ________

DRILL ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
			04							
21										
22			05							
23										
24										
25										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 6 19 89
SHIFT HOURS
_____ TO _____
TOTAL HOURS
_____
CONTRACT HOURS
_____

HOLE NO CB-89-162 LOCATION Line 2W 23+50N ELEVATION 282 m
GEOLOGIST Turner DRILLER G. Howe BIT NO. CB70195 BIT FOOTAGE 34.5
MOVE TO HOLE 7:00 - 7:45
DRILL 7:45 - 8:15
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 – 0.5 ORGANICS
				0.5 – 6.8 OJIBWAY II SEDIMENTS
				0.5 – 1.0 brown, gritty clay
				1.0 – 1.5 light beige-brown gritty clay grading into light grey gritty clay.
				1.5 – 6.8 light grey gritty clay, at ~3.5 m less grit in clay.
				6.8 – 8.7 MATHESON TILL
			01	Matrix supported cobbly till. Matrix is light grey-beige, silt fine sand. Clasts include ~60% Abitibi Belt (~40% metavolcanic and ~20% metasediment) and 40% granitic, no limestone observed.
			02	8.7 – 10.5 BEDROCK - light to medium grey - fine grained - thinly laminated with micaceous? parting planes - no sulphides or calcite observed Greywacke
				10.5 EOH

R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 10 1989

SHIFT HOURS

____ TO ____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-163 LOCATION LINE 94E 26+50N ELEVATION 287 m

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70205 BIT FOOTAGE 23 - 74m

MOVE TO HOLE 12:30 - 1:00

DRILL 1:00 - 4:00

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–4.4				0 - 4.4 ORGANICS
4.4–20				4.4 - 20.0 OJIBWAY II SEDIMENTS light grey, gritty clay with < 1% small basalt and granite pebbles. Grades into less gritty clay after 6.0 m.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-163 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

MOVE TO HOLE ________

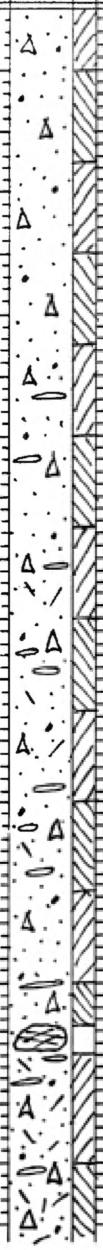
DRILL ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21–40			01–14	20.0 – 41.5 MATHESON TILL

Sample No.: 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14

Depth: 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40

20.0 – 41.5 MATHESON TILL

20.0-26. MATRix supported pebbly till
matrix beige silt - fine sand
clasts include 50-60% Abitibi
BELT (>50% volcanic and schist, < 10% sediments), 40-50% granite.

At 29.2 grey clay coatings appear
on clasts and as < 5% clay
lumps in matrix

26.0 - 36.7 MAtrix supported cobbly till
matrix and clast content
does not change.

36.7-37.2 Basalt Boulder, dark green,
fine grained, slightly foliated,
chloritized, trace pyrite <.1%.

37.2- 41.5 Grey clay lumps increase
from 5-15% to 30-50% of
matrix. Matrix is beige
Silt - fine sand. Abitibi clasts
increase to ~70% clast pos. Gradational
contact into grey, hard clay.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE __________ 19 __

HOLE NO CB-89-163 LOCATION __________ ELEVATION __________

GEOLOGIST __________ DRILLER __________ BIT NO. __________ BIT FOOTAGE __________

SHIFT HOURS __________ TO __________

MOVE TO HOLE __________

DRILL __________

TOTAL HOURS __________

MECHANICAL DOWN TIME __________

DRILLING PROBLEMS __________

CONTRACT HOURS __________

OTHER __________

MOVE TO NEXT HOLE __________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
41			14	41.5 - 42.7 MISSINAIBI SEDIMENTS grey, non gritty, hard clay. Possibly a rip-up clast?
42				
43				42.7 - 44.0 Missinaibi clay mixed with till ? Grey, gritty clay and beige, fine sand and small pebbles (basalt) < 5%. From 43.4 - 44.0 fine beige sand, slightly sorted
44			15	
45				
46			16	
47				44.0 - 48.5 LOWER TILL ? Grey gritty clay matrix (60-80%) with fine sand - silt (20-40%). clasts abundant >80% basalt, <20% granite.
48			17	
49			18	
50			19	48.5 - 49.3 SORTED SEDIMENTS 48.5 - 48.7 non gritty, light beige clay. 48.7 - 49.1 medium grained orange-beige sand, well sorted 49.1 - 49.2 light beige clay 49.2 - 49.3 fine beige sand.
51				
52				
53				
54				
55				
16				49.3 - 51.0 BEDROCK - medium to dark green - fine grained groundmass with phenocrysts - slightly foliated - no calcite dissemination - brecciated and infilled with quartz - no sulphides Mafic Volcanic
17				
18				
19				
20				

51.0 EOH

AV

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 6 19 89

SHIFT HOURS

____ TO ____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-164 LOCATION 0+00 4+00 N ELEVATION 283

GEOLOGIST TURNER DRILLER G HOWG BIT NO. CB70195 BIT FOOTAGE 45 - 88.5

MOVE TO HOLE 8:15 - 10:00

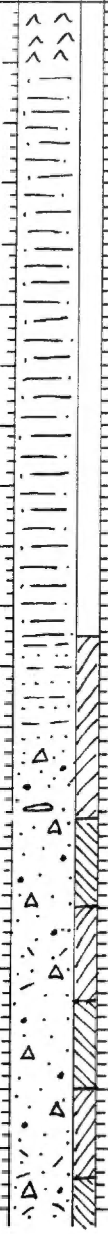
DRILL 10:00 - 1:00

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 - 1.0 ORGANICS
1				1.0 - 12.2 OJIBWAY II SEDIMENTS
				1.0 - 3.5 beige brown, gritty clay
2				3.5 - 10.5 soft light grey gritty clay < 1" pebbles. After 6.0 m very little grit.
3				
4				10.5 - 12.2 silt - beige, fine sand containing ≤ 2" clasts. Gradational contact into till.
5				
6				12.2 - 32.8 MATHESON TILL
7				
8				12.2 - 15.6 Matrix supported pebbly till matrix is light grey beige silt - fine sand (very sandy) clasts include ~ 50% Abitibi and 50% granitic, well rounded limestone < 1".
9				
10				
11				15.6 - 22.5 Grey gritty clay (5-10%) is encorporated in matrix. Clasts composition remains constant.
12			01	
13				
14			02	
15				
16			03	
17			04	
18				
19			05	
20			06	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS ______ TO ______

TOTAL HOURS ______

CONTRACT HOURS ______

HOLE NO CB-89-164 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

MOVE TO HOLE ________

DRILL ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	SAMPLE NO.	DESCRIPTIVE LOG
	06	22.5 - 23.5 Silt (no return)
21	07	23.5 - 24.0 fine grained beige sand (no clasts).
22–23	08	24.0 - 24.5 fine grained beige sand mixed with < 10% grey, gritty clay and pebbles. Clast composition ~ 60% Abitibi and 40% granitic.
24–26	09, 10	24.5 - 26.7 Gravel, ? Pebbly. Matrix fine-medium grained sand, beige. The clast content ~ 60% Abitibi, 40% granitic. ~ 20% of Abitibi clasts have limonitic weathering. Gradational contact from overlying sand.
27–32	11, 12, 13, 14	26.7 - 32.8 Till, matrix supported, pebbly. matrix is beige silt-fine sand containing < 10% grey gritty clay (appear as lumps on 10 mesh screen and on coatings on clasts). clasts are ~ 60/40 Abitibi/granitic increasing to 80/20 respectively by 31.5 m. (60% volcanic, 20% sed.). The grey gritty clay also increases to ~ 30% of matrix. It is encorporated from underlying Missinabi Clay.
33–40		32.8 - 40.8 MISSINABI SEDIMENTS medium grey, hard, non gritty clay. < 1% small basaltic or black siltstone pebbles observed.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE __________ 19 __

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-114 LOCATION ______ ELEVATION ______
GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______
MOVE TO HOLE ______
DRILL ______
MECHANICAL DOWN TIME ______
DRILLING PROBLEMS ______
OTHER ______
MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
41			15	40.8 - 41.8 MATRIX supported cobbly gravel or till ? matrix fine sand (med grey) clasts > 50% Abitibi (~60% black siltstone, 30% metavolcanic). < 10% granitic.
42–43			16	41.8 - 43.5 BEDROCK ~60% rock flour, 40% chips 41.8 - 42.8 - fine grained - black - thinly laminated - cubic pyrite < 1% - calcite vein < 1% Black siltstone 42.8 - 43.5 - fine grained - medium to dark charcoal grey - trace pyrite < 1% Greywacke Black siltstone interbedded with Greywacke 43.5 EOH. R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 10/11 1989

HOLE NO CB-89-165 LOCATION L98+00E; 25+50N ELEVATION 286

GEOLOGIST D. Holmes DRILLER G. Hans BIT NO. CB70205 BIT FOOTAGE 74.0 - 106

SHIFT HOURS ____ TO ____

MOVE TO HOLE Feb 10 4:00 - 4:30 PM

DRILL Feb 10 4:30 - 5:15 PM Feb 11 7:30 - 10:15 AM

TOTAL HOURS ____

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS ____

OTHER travel Feb 10 5:15 - 6:30 PM travel Feb 11 6:15 - 7:30

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–4				0 - 4.0 Organics (Peat)
4–17.6				4.0 - 17.6 OJIBWAY II SEDIMENTS - light grey colour, gritty clay, becomes softer downsection, very soft after 8.0 m
17.6–				17.6 - 31.2 MATHESON TILL - abrupt contact with overlying clay. 17.6-17.8 boulder - granite. 17.9-22.0 matrix supported till; fine beige silt and fine sand; cobble clasts approx. 50 to 60% volcanics/sediments 40 to 50% granitoid. with trace limestone and iron formation.
18–19.5			01	
19.5–20			02	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 10/19 89

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO CB-89-165 LOCATION __________ ELEVATION __________

GEOLOGIST __________ DRILLER __________ BIT NO. __________ BIT FOOTAGE __________

MOVE TO HOLE __________

DRILL __________

MECHANICAL DOWN TIME __________

DRILLING PROBLEMS __________

OTHER __________

MOVE TO NEXT HOLE __________

page 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			02	22.0 - 27.0 matrix supported till; fine grey sand-silt matrix with a clay-silt component between 25.0 and 25.4 and at 29.5;
21			03	cobble clast composition are approx 60% volcanics/sediments 40% granitoid with upto 2% ironformation from 25.4 to 27.0
22				
23			04	
24				
25			05	
26			06	27.0 - 27.4 boulder intermediate volcanic
27				27.4 - 31.2 matrix supported till similar to 22.0 to 27.0
28			07	
29			08	31.2 - 32.8 BEDROCK
30			09	- dark green, mottled white
31				- foliated
32			10 Bedrock	- fine grained approx 0.1mm
33				- predominant mafic mineral is green chlorite upto 50% of the rock
34				- 5-10% calcite veinlets
35				- 5% slow and fast reacting disseminated carbonate (to HCl)
36				- trace dissem. cubic pyrite
37				Mafic Volcanic
38				
39				32.8 EOH
40				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 6 19 89

HOLE NO CB-89-166 LOCATION 0+00 13+75 N ELEVATION 293 m

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70195 BIT FOOTAGE 88.5 - 97

SHIFT HOURS ____ TO ____

MOVE TO HOLE 1:00 - 2:30

DRILL 2:30 - 3:00

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–6				0 - 0.5 ORGANICS 0.5 - 6.0 OJIBWAY II SEDIMENTS 0.5 - 1.0 beige, brown gritty clay 1.0 - 6.0 light gray gritty clay.
6–6.6			01	6.0 - 6.6 MATHESON TILL Matrix supported pebbly till matrix light gray silt - fine sand. clasts include >75% Abitibi Belt (~50% metaseds, 25 metavolc.), <25% granitic, <1% limestone.
6.6–8.5			02	Note: sample 01 is undersize an attempt to get a larger sample by washing did not work.
				6.6 - 8.5 BEDROCK - black - fine grained - cubic pyrite <.1% - no quartz or calcite veining Black siltstone
				8.5 EOH R. Turner

Depth scale: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 11 19 89

SHIFT HOURS

____ TO ____

TOTAL HOURS

____

CONTRACT HOURS

____

HOLE NO CB-89-167 LOCATION L96+00E; 20+00N ELEVATION 284

GEOLOGIST D. Holmes DRILLER G. Howe BIT NO. CB70206 BIT FOOTAGE 0 - 34.E

MOVE TO HOLE 10:15 - 10:30 AM

DRILL 10:30 - 1:30 P.M

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

New Bit

page 1

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–3				0 - 3.0 Organics (peat)
3–13				3.0 - 13.0 OJIBWAY II SEDIMENTS 3.0-6.0 clay: grey, compact, slightly gritty, softer downsection 6.0 - 13.0 clay: grey, soft, non-gritty with beige silt varves
13–20			01, 02, 03, 04, 05	13.0 - 26.6 MATHESON TILL - abrupt contact with overlying clay 13.0 - 22.5 matrix supported till; fine grey sand-silt matrix; cobble clast compositions approx. 50% volcanics/sediments 50% granitoid

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 11 19 89
SHIFT HOURS
_____ TO _____
TOTAL HOURS
_____
CONTRACT HOURS
_____

HOLE NO CB-89-167 LOCATION _____ ELEVATION _____
GEOLOGIST _____ DRILLER _____ BIT NO. _____ BIT FOOTAGE _____
MOVE TO HOLE _____
DRILL _____
MECHANICAL DOWN TIME _____
DRILLING PROBLEMS _____
OTHER _____
MOVE TO NEXT HOLE _____

page 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21			05	22.5 - 26.6 matrix supported till similar to 13.0 - 22.5 with
22			06	occasional clay-silt component in matrix - increase after 25.0 m to compact clay-silt
23			07	till matrix
24				26.6 - 28.4 MISSINAIBI SEDIMENTS?
25			08	(or Missinaibi rip-up clast) gradational contact with overlying till
26			09	26.6 - 28.0 very compact grey clay, non-gritty with
27				rare pebbles
28				28.0 - 28.4 clay becomes gritty with approx 1% pebbles
29			10	28.4 - 32.6 LOWER TILL?
30				(or continuation of Matheson Till) matrix supported till
31			11	28.4 - 30.5 fine grey sand-silt matrix, cobble clast compositions approx. 50% volcanics/
32			12	sediments 50% granitoid
33			13 Bedrock	30.5 - 32.6 matrix supported till fine grey to grey-beige sand silt
34				and compact beige clay-silt matrix, cobble clast compositions
35				50-60% volcanics/sediments 40-50% granitoid with 2%
36				limonite stained clasts increasing downsection to 10% of the clasts
37				32.6 - 34.5 BEDROCK
38				- dark grey chips and light grey clay
39				- chips are very fine grained, (clean), well foliated
40				- predominant mafic mineral is chlorite

- 5% calcite veinlets
2-5% dissem. calcite
- < 1% quartz veinlets

34.5 EOH Greywacke

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 6 19 89

HOLE NO CB-89-168 LOCATION Line 4 E 16+50 N ELEVATION 289

GEOLOGIST Turner DRILLER G Howg BIT NO. CB70195 BIT FOOTAGE 97-121

SHIFT HOURS
______ TO ______

MOVE TO HOLE 3:00 - 3:30

DRILL 3:30 - 5:00

TOTAL HOURS
______

MECHANICAL DOWN TIME ______

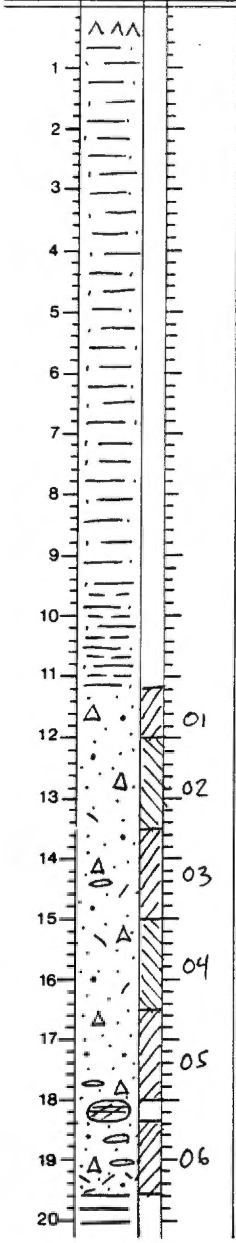
DRILLING PROBLEMS ______

CONTRACT HOURS
______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



0 - 0.5 ORGANICS

0.5 - 11.2 OJIBWAY II SEDIMENTS

0.5 - 6.0 light brown to beige gritty clay.

6.0 - 9.5 light grey, gritty clay

9.5 - 11.2 mostly silt mixed with soft, light grey, gritty clay.

11.2 - 19.6 MATHESON TILL

Matrix supported pebbly till. matrix is light grey-beige silt-fine sand. Grey gritty clay occurs as coatings on < 1% of the clasts. clasts include ~ 60% Abitibi Belt (meta sediments 40%, metavolcanics 20%), ~ 40% granitic, < 1% limestone and quartz.

At 18.0 m the till becomes cobbly and between 19.2 - 19.6 grey gritty clay increases to ~ 20% of matrix, (incorporated from underlying Missinaibi sediments).

19.6 - 23.4 MISSINAIBI SEDIMENTS

light - medium grey, non gritty, compacted clay.
A weathered greywacke dropstone occurs between 21 - 21.2 m.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 7 19 89

HOLE NO CB-89-168 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. CB70196 BIT FOOTAGE 0-3.5

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL 7:00 - 8:00

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21				23.4 - 26.0 LOWER TILL ?
22				Clast supported till, very little matrix - grey, silt - fine sand. Cobbles > 98% Abitibi Belt
23				(~60% black siltstone + greywacke, 40% basalt), < 2% granitic.
24			07	
25			08	Note: Samples 07-09 are mainly cuttings from various cobbles.
26			09	
27			10	26.0 - 27.5 BEDROCK - dark grey black - fine grained, massive, diabassic texture. - no sulphides observed - no disseminated calcite Basalt.
28				
29				
30				27.5 EOH R. Turner
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 7 19 89

HOLE NO CB-89-169 LOCATION Line 2E 17+00 N ELEVATION 291 m

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70196 BIT FOOTAGE 3.5-28

SHIFT HOURS

______ TO ______

MOVE TO HOLE 8:00 - 8:15

DRILL 8:15 - 9:15

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER

MOVE TO NEXT HOLE

Page 1 of 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0-1.3 ORGANICS
1				1.3-9.2 OJIBWAY II SEDIMENTS
				1.3-1.5 light beige, gritty clay
2				1.5-7.5 grades into light grey gritty clay, < 1" pebbles (basalt, granite, limestone) becomes very soft with less grit after 7.0 m.
3				
4				
5				7.5-9.2 silt and light beige fine sand.
6				
7				9.2-18.5 MATHESON TILL
8				Matrix supported cobbly till. Matrix is light grey silt-fine sand. Clasts include ~60% Abitibi Belt metavolcanics and metasediments, ~ 40% granitic, < 2% limestone.
9				
10			01	
11			02	14.9-15.6 20-30% grey gritty clay is encorporated into the matrix. grading into a thin grey, gritty clay lens between 15.2-15.6 m. (< 5% small basalt and granitic pebbles).
12				
13			03	
14			04	15.6-18.5 Cobbly till with grey gritty clay & fine sand matrix. Clasts are > 80% Abitibi Belt and < 20% granitic.
15				
16			05	
17			06	18.5-21.7 MISSINAIBI SEDIMENTS
18				medium grey, non-gritty, hard clay.
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

HOLE NO CB-89-169 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

SHIFT HOURS ________ TO ________

MOVE TO HOLE ________

DRILL ________

TOTAL HOURS ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

CONTRACT HOURS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21				21.7 - 23 LOWER TILL ? Clast supported cobbly till. Matrix includes grey gritty clay and fine sand. Clasts include > 95% Abitibi Belt (~75% sediments, 20% volcanic), < 5% granitic.
22			07	
23				
24			08	
25				23.0 - 24.5 BEDROCK - black - fine grained - thinly laminated, friable - no calcite or sulphide observed. Black Siltstone
26				
7				
8				
9				24.5 EOH R. Turner
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 7 19 89

SHIFT HOURS

_____ TO _____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-170 LOCATION Line 2E 20+75 N ELEVATION 285

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70196 BIT FOOTAGE 28-43.0

MOVE TO HOLE 9:15 - 9:45

DRILL 9:45 - 10:30

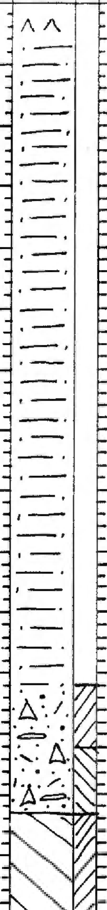
MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



Depth in metres: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

Sample no.: 01, 02, 03

0 - 0.5 ORGANICS

0.5 - 11.2 OJIBWAY II SEDIMENTS

0.5 - 1.5 light beige brown gritty clay, < 2% small basalt, limestone and granitic pebbles.

1.5 - 8.5 light grey - beige gritty clay.

8.5 - 11.2 clay becomes very soft, less grit.

11.2 - 13.3 MATHESON TILL

Matrix supported cobbly till. matrix is light grey - beige silt - fine sand with ~ 10% grey gritty clay. Clasts include ~ 50% Abitibi Belt and 50% granitic, < 1% limestone.

13.3 - 15.0 BEDROCK

- pale to medium greenish grey
- fine grained, chloritic
- < 5% disseminated calcite
- trace cubic pyrite < .1%

Bleached Basalt

15.0 EOH

R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 7 1989

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-171 LOCATION 0+00 17+50 N ELEVATION 292 m

GEOLOGIST TURNER DRILLER G HOWG BIT NO. CB70196 BIT FOOTAGE 43-72 m

MOVE TO HOLE 10:30 - 11:00

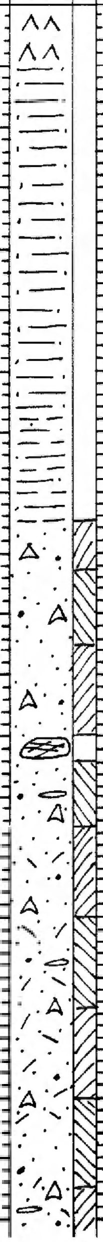
DRILL 11:00 - 1:30

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20			01, 02, 03, 04, 05, 06, 07, 08, 09	0 - 1.0 ORGANICS (forest litter and dark brown peat). 1.0 - 8.5 OJIBWAY II SEDIMENTS 1.0 - 2.5 beige gritty clay 2.5 - 6.8 grades into light grey, gritty clay becoming very soft after 4.5 m. 6.8 - 8.5 silt mixed with grey clay, very little return. 8.5 - 23.3 MATHESON TILL 8.5 - 13.0 Matrix supported pebbly till. Matrix is light beige silt-fine sand. Clasts include ~60% Abitibi Belt (40% metavolcanic, 20% sed.) and 40% granitic, < 1% limestone. 12.0 - 12.4 basalt boulder. 13.0 - 23.3 Grey gritty clay (< 5-10%) is incorporated into matrix. It occurs as clay lumps on the screen and as coatings on pebbles. An increase in Abitibi clasts are observed (~70%) granitics ~30%

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-171 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

MOVE TO HOLE ________

DRILL ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG

Depth scale: 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

09 — Till becomes cabbly after 20.0 m. The clast composition is similar to the interval (13.0 - 23.3 m).

10

11 — 22.5 - 23.3 Grey gritty clay fraction of the matrix increases to ~60% at 23.0 m encorporated from the underlying Missinaibi clay.

23.3 - 25.2 Missinaibi SEDIMENTS
grey, non-gritty, compact clay.

25.2 - 25.8 dark green basalt boulder

12

13

14

25.8 - 27.4 LOWER TILL ?
Matrix poor clast supported, cobbly till matrix is fine grey sand and minor silt. Cobbles > 95% Abitibi Belt (~50% metavolcanic and ~45% metasediments); < 5% granitic and quartz.

27.4 - 29.0 BEDROCK
- black
- fine grained, thinly laminated
- trace pyrite <.01% and quartz veining <1%
Black siltstone

finely interbedded with medium grey, fine grained greywacke.

note: samples 12 + 13 are mostly cutting from various cobbles.

29.0 EOH

R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

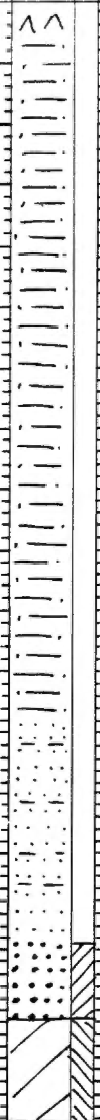
DATE Feb 7 1989

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-172 LOCATION LINE 4E 4+50N ELEVATION 285
GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70196 BIT FOOTAGE 72-90.5
MOVE TO HOLE 1:30 - 2:30
DRILL 2:30 - 3:00
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20			01, 02	0 - 0.5 ORGANICS 0.5 - 16.7 OJIBWAY II SEDIMENTS 0.5 - 1.5 beige-brown gritty clay 1.5 - 11.6 light grey gritty clay with <1% small basalt and granite pebbles. 11.6 - 15.5 silt and beige fine sand (no +10). 15.5 - 15.7 beige fine sand with minor pebbles (<10%). 15.7 - 16.7 Gravel, pebbly with a beige, medium sand, washed, matrix. Clasts include ~60 Abitibi (sediments 40% volcanics 20%), ~ 40 granite. 16.7 - 18.5 BEDROCK - black - fine grained, thinly laminated - cubic pyrite <1% - minor quartz veining <1%. at ~18.0 m a sulphide rich band (<5%) cubic pyrite (1-5mm). Black Siltstone 18.5 EOH R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 7 19 89

SHIFT HOURS ______ TO ______

TOTAL HOURS ______

CONTRACT HOURS ______

HOLE NO CB-89-173 LOCATION LINE 8E 4+50N ELEVATION 288 m

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70196 BIT FOOTAGE 90.5-110.5

MOVE TO HOLE 3:00 - 3:30

DRILL 3:30 - 4:30

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE 4:30 - 5:30 to road

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 - 1.0 ORGANICS
1				1.0 - 19.0 OJIBWAY II SEDIMENTS
2				1.0 - 1.5 beige gritty clay with < 1% small pebbles (basalt + granite)
3				1.5 - 12.7 light grey gritty clay, becomes soft and less gritty after 5.5 m.
4				
5				12.7 - 16.5 silt - fine beige sand with < 1% small basalt, granite and limestone pebbles.
6				
7				16.5 - 18.0 gradational contact from silt - fine beige sand to pebbly gravel. clast composition ~60 Abitibi, 40% granite and < 1% limestone.
8				
9				
10				
11				18.0 - 19.0 Cobbly gravel, very little matrix. clast are entirely Abitibi.
12				
13				
14				19.0 - 21.0 BEDROCK
15			01	19.0 - 19.7 (sample 03) - medium green-grey - fine grained, massive - diabasic texture - disseminated calcite < 5% Basalt becomes bleached at depth.
16				
17				
18			02	
19			03	19.7 - 21.0 (sample 04) - light grey - fine grained - disseminated calcite 5-10% - trace pyrite < .1% Bleached Basalt
20			04	

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-173 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

MOVE TO HOLE ________

DRILL ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG							
			04	21.0 EOH.							
21				R. Turner							
22											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 8 19 89

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-174 LOCATION Line 63 E 7+50 N ELEVATION 280

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70197 BIT FOOTAGE 0-28.5

MOVE TO HOLE 6:45 - 8:00

DRILL 8:00 - 9:30

MECHANICAL DOWN TIME ______

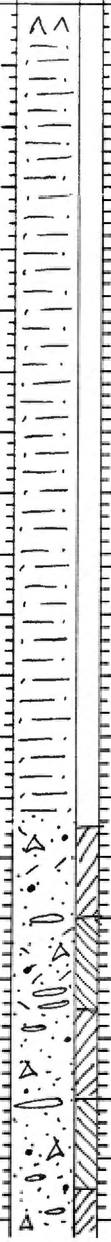
DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

 NEW BIT

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
				0 - 0.5 ORGANICS						
1				0.5 - 13.2 OJIBWAY II SEDIMENTS						
2				0.5 - 1.0 brown organic rich gritty clay; grades into light grey gritty clay						
3–5				1.0 - 13.2 light grey gritty clay becoming soft and less gritty after 3.0m. small limestone pebbles <1% observed.						
6–13				13.2 - 22.6 MATHESON TILL clasts supported cobbly till matrix is silt-fine beige sand with 5-25% grey gritty clay. Clasts include ~50% Abitibi volcanics and 50% granite. Limonitic weathering is present on ~20% of cobbles. Between 18 and 20 m orange-beige, calcite cemented, sand nodules <10% are present in matrix. The till is sourced from underlying Missinaibi gravel.						
14			01							
15–16			02							
17			03							
18–19			04							
20			05							



OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS ______ TO ______

TOTAL HOURS ______

CONTRACT HOURS ______

HOLE NO CB-89-174 LOCATION ____________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

MOVE TO HOLE ________

DRILL ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

OTHER ________

MOVE TO NEXT HOLE ________

Page 2 of 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21			05	22.6 - 26.8 MISSINAIBI SEDIMENTS gradational contact from HU
22			06	22.6 - 24.0 Gravel, pebbly with fine-medium grained, beige-orange sand matrix. clasts include ~70% Abitibi metavolcanics and metasediments (~40% of these have extensive limonitic weathering = ochre color), 30% granite.
23			07	
24				24.0 - 24.9 sand, fine-medium grained orange-beige sand, sorted.
25			08	
26			09	24.9 - 26.8 Gravel, pebbly with fine-medium sand matrix (beige-orange; color derived from limonitic weathering of cobbles)
27				
28			10	26.8 - 28.5 BEDROCK - black - aphanitic, massive - <10% disseminated calcite and <5% calcite vein infilling micro-brecciation. - no sulphides observed. Basalt
29				28.5 EOH
30				R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 8 1999

SHIFT HOURS
_____ TO _____

TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO CB-99-175 LOCATION L 70+00E ; 5+00N ELEVATION 281 m

GEOLOGIST R. TURNER DRILLER G. Howe BIT NO. CB70197 BIT FOOTAGE 28.5 - 61.5

MOVE TO HOLE 9:30 - 10:15 AM

DRILL 10:15 - 11:15 AM

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

page 1

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						
				0 - 1.0 No Return						
1				1.0 - 1.5 Organics						
2				1.5 - 30.9 OJIBWAY II SEDIMENTS						
3				1.5-18.0 clay - light grey colour, gritty down to 18 m with < 1% small pebbles - soft after 3.0 m						
4										
5										
6				18.0 - 30.9 clay - gray, non-gritty and soft glacial lacustrine clay. - clay becomes pebbly at 30.0 m with small mafic volcanic clasts approx 2 cm						
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 19 89

SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-175 LOCATION ______ ELEVATION ______
GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______
MOVE TO HOLE ______
DRILL ______
MECHANICAL DOWN TIME ______
DRILLING PROBLEMS ______
OTHER ______
MOVE TO NEXT HOLE ______

page 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21				30.9 - 31.2 MATHESON TILL
22				- Fine beige silt-sand matrix; clast compositions predominantly granitoid.
23				
24				31.2 - 33.0 BEDROCK
25				- dark green colour
26				- weakly foliated
27				- fine grained - diabasic texture
28				- predominant mafic mineral is chlorite
29				- trace pyrite <0.1%
30				- disseminated calcite <5% and vein calcite occurring
31			01	as small stringers and as infilling brecciation spaces
32			02 Bedrock	Basalt
33				
34				33.0 EOH
35				
36				
37				
38				
39				
40				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 19 81

SHIFT HOURS
_____ TO _____

TOTAL HOURS
_____

CONTRACT HOURS
_____

HOLE NO CB-39-176 LOCATION L 70+00E ; 7400N ELEVATION 277 m

GEOLOGIST R. Turner DRILLER G. Haug BIT NO. CB 70497 BIT FOOTAGE 0.5 - 9.0

MOVE TO HOLE 11:45 - 12:00

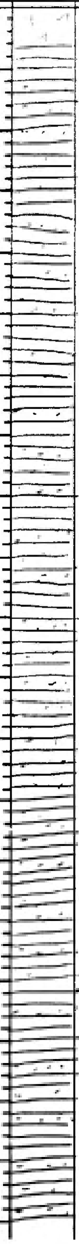
DRILL 12:00 - 1:15 PM

MECHANICAL DOWN TIME _____

DRILLING PROBLEMS _____

OTHER _____

MOVE TO NEXT HOLE _____

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG							
				0 - 0.5 Organics							
1											
2				0.5 - 27.6 OJIBWAY II SEDIMENTS							
3				0.5 - 20.0 clay ; grey-beige, gritty - grading into light grey colour gritty clay ~ 3.0 m - becomes soft after 4.5 m with up to 1% pebbles mostly limestone, grey sandstone and basalt.							
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 8 1989

HOLE NO CB 89-176 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

SHIFT HOURS ________ TO ________

MOVE TO HOLE ________

DRILL ________

TOTAL HOURS ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

CONTRACT HOURS ________

OTHER ________

MOVE TO NEXT HOLE ________

Page 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
20–27				20.0 - 26.9 clay grades into grey non-gritty soft glacial lacustrine clay < 1% pebbles 26.9 - 27.6 silt and fine beige sand < 5% clasts grading into till
28			01	27.6 - 29.3 MATHESON TILL cobble - clast supported till; . fine beige sand-silt matrix; clast compositions 50-60% Abitibi volcanic, 40-50% granitoid, < 2% limestone - many cobbles have limonitic weathering on surface.
29			02	
30			03 Bedrock	29.3 - 31.0 BEDROCK - pale - medium grey - aphanitic with pyroxene laths (< 3mm) altered to chlorite - disseminated calcite < 5% . calcite veins approx 10% - Intermediate Volcanic - Andesite
31–40				31.0 EOH.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 8 19 89

SHIFT HOURS
____ TO ____

TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO CB-89-177 LOCATION LINE 74 E 12 N ELEVATION 288 m

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70197 BIT FOOTAGE 92.5-107

MOVE TO HOLE 1:15 - 2:00

DRILL 2:00 - 2:45

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–11				0 - 0.5 ORGANICS 0.5 - 11.2 OJIBWAY II SEDIMENTS 0.5 - 1.5 light brown gritty clay, organic rich, 1.5 - 3.0 beige gritty clay grading into light grey gritty clay by 3.0 m. 3.0 - 11.2 light grey gritty clay with < 1" small basalt and granite pebbles. 11.2 - 13.0 MATHESON TILL Matrix supported pebbly till light grey silt - fine sand matrix. clasts include ~ 60/40 Abitibi Volcanics and granite. Minor limonitic stain on clasts noted.
12			01	13.0 - 14.5 BEDROCK
13			02	-medium green -fine grained
14			03	-chloritic, foliated (greenschist) -disseminated calcite < 5% (~14 m calcite vein intersected) -no sulphides observed Basalt
15–20				14.5 EOH R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 8 1989

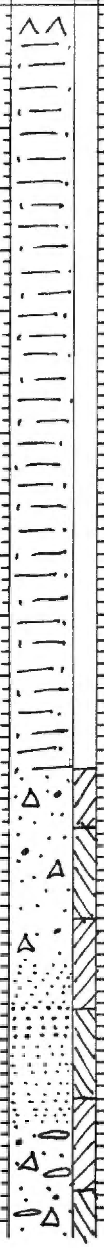
SHIFT HOURS
____ TO ____

TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO CB-89-178 LOCATION LINE 76+75E 10N ELEVATION 280m
GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70197 BIT FOOTAGE 107-136.5m
MOVE TO HOLE 2:45-3:00
DRILL 3:00-5:00
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



Depth (m): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

Sample No.: 01, 02, 03, 04, 05, 06

0 - 0.5 ORGANICS

0.5 - 12.5 OJIBWAY II SEDIMENTS

0.5 - 1.0 dark brown, organic rich gritty clay.

1.0 - 12.5 light beige-grey, gritty clay grading into very soft, light grey, gritty clay after 4.5m.

12.5 - 28.0 MATHESON TILL

12.5 - 15.8 Matrix supported pebbly till. Matrix is light beige silt-fine sand. Clasts include 50% Abitibi Belt metavolcanics, 50% granitic

15.8 - 18.4 SAND (gradational contact)

15.8 - 16.5 beige, fine sand, no clasts.

16.5 - 17.0 medium - coarse granular sand, very few small pebbles (<5%) composition similar to the till.

17.0 - 18.4 beige, fine sand; gradational contact with till.

18.4 - 28.0

Till becomes clast supported and cobbly. Matrix and clast components similar to 12.5-15.8 interval.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

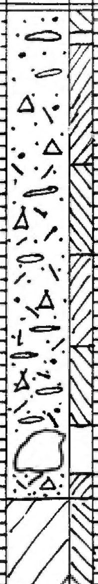
SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-17B LOCATION ________ ELEVATION ________
GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________
MOVE TO HOLE ________
DRILL ________
MECHANICAL DOWN TIME ________
DRILLING PROBLEMS ________
OTHER ________
MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21			07	21.8 - 28.0 grey gritty clay (5-10%) appears in the matrix as clay lumps on screen and coating pebbles. The proportion of Abitibi Belt cobbles (mainly bleached basalt) increases to ~ 5:1 compared to granitic cobbles after 24.0 m.
22				
23			08	
24				
25			09	26.8 - 27.6 bleached basalt boulder - light green - fine grained - <5% disseminated calcite
26			10	
27				
28			11	28 - 29.5 BEDROCK - black - fine grained - no calcite dissemination - no sulphides observed BASALT.
29			12	
30				29.5 EOH
11				R. Turner
12				
13				
14				
15				
16				
17				
18				
19				
20				



OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 9 1989

SHIFT HOURS ____ TO ____

TOTAL HOURS ____

CONTRACT HOURS ____

HOLE NO CB-89-179 LOCATION LINE 74 E 8+00N ELEVATION 275

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB 70204 BIT FOOTAGE 0-51

MOVE TO HOLE 7:00 - 7:30

DRILL 7:30 - 1:00

MECHANICAL DOWN TIME 8:45 - 10:15 fuel pump for compressor

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

NEW BIT

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG							
				0-0.5 ORGANICS							
1				0.5-25.5 OJIBWAY II SEDIMENTS							
2				0.5-1.0 light brown, organic rich, gritty clay.							
3				1.0-1.5 light grey-beige gritty clay.							
4											
5				1.5-23.4 light grey gritty clay, < 1" small basalt and granite pebbles. Becomes very soft and less gritty after 5.0 m.							
6											
7											
8				23.4-25.5 beige granular sand, sorted, with small Abitibi (70%) and granite (30) pebbles.							
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-179 LOCATION ____________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

MOVE TO HOLE ____________

DRILL ____________

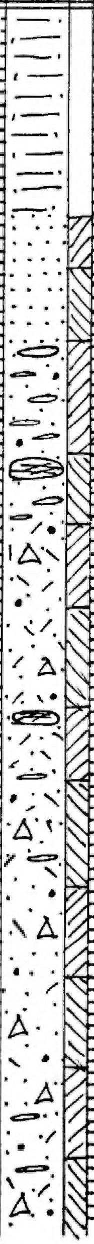
MECHANICAL DOWN TIME ____________

DRILLING PROBLEMS ____________

OTHER ____________

MOVE TO NEXT HOLE ____________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21				25.5 – 46.4 MATHESON TILL
22				25.6 – 28.4 clast supported cobbly till. Matrix light beige silt-fine sand. Clasts ~50-60% Abitibi Belt metavolcanics and metasediments, ~50% granite. Cobbles mainly 5:1 Abitibi volcanics and black siltstone to granite. Gradational contact with the overlying gravel.
23				
24			01	
25			02	
26				
27			03	28.4 – 40.0 matrix supported Grey gritty clay (<5-50% occurs in matrix as clay lumps on screen and clay coatings on clasts. Clasts ~70% Abitibi Belt (50% volcanics and 20% sediments), ~30% granite. Beige silt-fine sand matrix (as above). Calcite cemented, grey, sand nodules (<5%) are also present.
28			04	
29			05	
30				
31			06	
32			07	
33				
34			08	
35			09	
36				
37			10	
38			11	
39				
40			12	



OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

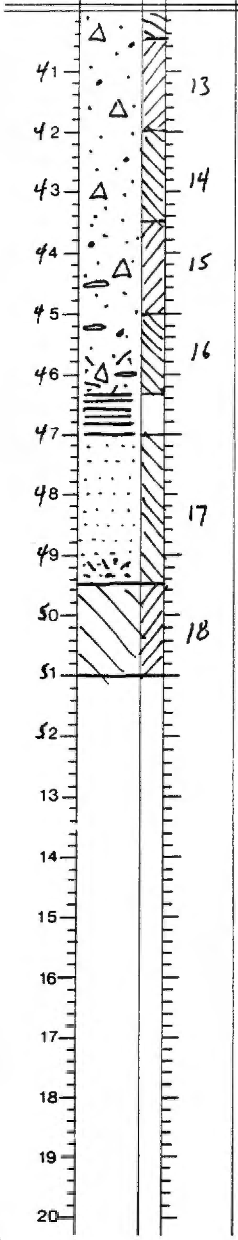
SHIFT HOURS
______ TO ______

TOTAL HOURS
______

CONTRACT HOURS
______

HOLE NO CB-89-179 LOCATION ______ ELEVATION ______
GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______
MOVE TO HOLE ______
DRILL ______
MECHANICAL DOWN TIME ______
DRILLING PROBLEMS ______
OTHER ______
MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



40.0 - 46.4 matrix supported pebbly till. matrix fine-med, beige sand. Clast composition similar to interval 28.4-40.0m. Between 45.5 - 46.4 10-30% grey clay is introduced to matrix; Derived from underlying sediments.

46.4 - 49.0 Missinaibi SEDIMENTS

46.4 - 47.0 grey, hard, non-gritty clay.

47.0 - 49.5 beige silt - fine sand with < 1% grey, very hard clay pellets and sand granules ~49.0 m small pebbles and grey clay pellets increases to ~20-30%.

49.5 - 51.0 BEDROCK

49.5 - 50.5 extensively weathered
- brown grey
- fine grained

50.5 - 51.0
- med grey
- fine grained to aphanitic
- disseminated and vein calcite < 5%
- no sulphides observed
- Intermediate Volcanic

Andesite ?

51.0 EOH

R. Turner

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 9/10 1989

SHIFT HOURS

_____ TO _____

TOTAL HOURS

_____

CONTRACT HOURS

_____

HOLE NO CB-89-180 LOCATION LINE 86E 24+75N ELEVATION 286

GEOLOGIST TURNER DRILLER G. HONG BIT NO. CB70204 BIT FOOTAGE 51-94S

MOVE TO HOLE 1:00 - 4:30

DRILL 4:30 - 5:15

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 - 1.0 ORGANICS
1				1.0 - 16.0 OJIBWAY II SEDIMENTS
2				1.0 - 1.5 organics mixed with grey gritty clay.
3				1.5 - 16.0 grey gritty clay with < 1% small basalt + granite pebbles
4				
5				
6				16.0 - 36.4 MATHESON TILL
7				16.0 - 26.0 Matrix supported pebbly till. Matrix is beige silt - fine sand and <5-10% grey, gritty clay. clasts include ~ 60% Abitibi Belt metavolcanics, ~ 40% granite, < 1% limestone.
8				
9				
10				
11				
12				
13				
14				
15				
16				
17			01	
18				
19			02	
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 10 19 89

HOLE NO CB-89-180 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL 7:30 - 10:30

TOTAL HOURS ______

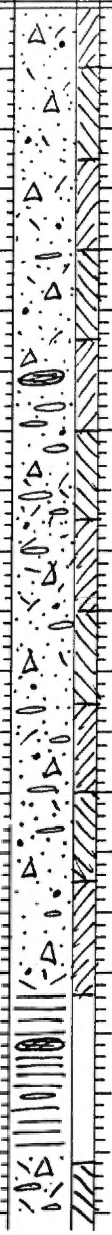
MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21–40			03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14	see below

26.0 - 36.4 MATRIX supported Cobbly till. Matrix is beige silt - fine sand with locally variable grey, gritty clay (5 - 50%).

28.2 - 30.0 grey, gritty clay increases from 5 to 50% and clay rich at 36.2 - 36.4. Clasts composition similar to interval 16 - 26. Cobbles 5:1 Abitibi metavolcanics to granite.

36.4 - 38.9 Missinaibi SEDIMENTS grey, compact, non-gritty, clay and basalt (dropstone?)

38.9 - 41.6 LOWER TILL?

38.9-40. clay rich cobbly till, clast supported. clasts include 80-90% Abitibi Belt (brown schist and basalt), < 10% granite. 40-41.6 matrix is mainly cuttings from various cobbles.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-180 LOCATION ________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

MOVE TO HOLE ________

DRILL ________

MECHANICAL DOWN TIME ________

DRILLING PROBLEMS ________

OTHER ________

MOVE TO NEXT HOLE ________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			14	
41			15	41.6 - 43.5 BEDROCK
				- medium to dark grey
42				- fine grained
			16	- foliated
43				- < 10% calcite veining & < 5% disseminated calcite
44				- no sulphides observed
45				- extensive Fe oxidation, dark orange-brown, and orange rock flour.
6				
7				Intermediate Metavolcanic schist
8				
9				43.5 EOH
10				R. Turner
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 12,13 19 89

SHIFT HOURS ______ TO ______

TOTAL HOURS ______

CONTRACT HOURS ______

HOLE NO CB-89-181 LOCATION LINE 72 E 23+50N ELEVATION 281

GEOLOGIST TURNER DRILLER J. HOWE BIT NO. C070247 BIT FOOTAGE 46.5 - 72

MOVE TO HOLE Feb 12 11:30 - 12:00

DRILL 12:00 - 12:45

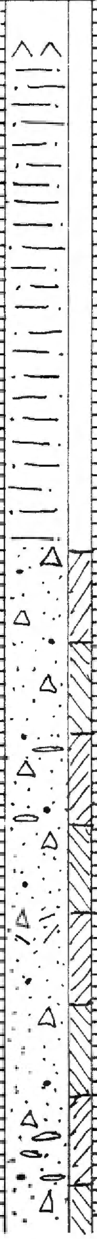
MECHANICAL DOWN TIME 12:45 to 2:00 (Feb 13) water pump.

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

Page 1 of 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1–20			01, 02, 03, 04, 05, 06, 07	

0-0.5 NO RETURN

0.5-1.0 ORGANICS

1.0 - 9.5 OJIBWAY II SEDIMENTS

1.0-5.5 light grey gritty clay, < 1% small basalt & granite pebbles.

5.5-9.5 light grey, softer and less gritty glacial lacustrine clay.

9.0 - 24.0 MATHESON TILL

9.0 - 18.0 Matrix supported pebbly till. Matrix is beige silt - fine sand. Clasts include ~60% Abitibi Belt (~40% basalt, 20% sediments); ~40% granite, < 1% limestone and maroon iron formation. Locally minor grey gritty clay occurs in Matrix (< 5%).

18.0 - 24.0 Matrix supported cobbly till. Matrix and clast pebble composition similar to above. Cobble composition 5:1 ratio of Abitibi volcanics And granite.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 13 19 89

HOLE NO CB-89-181 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL 2:00 - 4:45

TOTAL HOURS ______

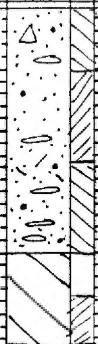
MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE 4:45 - 5:00

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1			08	24.0 - 25.5 BEDROCK
2			09	- medium to dark green, slightly chloritized.
3			10	- fine grained, diabassic texture
4				- disseminated calcite <5%, vein calcite <5%
5			11	- trace cubic pyrite <.1%
6				BASALT
7				25.5 EOH — note: thin till layer between 24.6-24.8 possibly crevass in bedrock.
8				R. Turner
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 11 1989

HOLE NO CB-89-182 LOCATION L 92100E ; 22+25N ELEVATION 287

GEOLOGIST D. Holmes DRILLER G. Hong BIT NO. CB70206 BIT FOOTAGE 47.2-67.7

SHIFT HOURS ______ TO ______

MOVE TO HOLE 3:00 - 3:15 PM

DRILL 3:15 - 4:15PM

TOTAL HOURS ______

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS ______

OTHER travel 5:45 - 6:15PM

MOVE TO NEXT HOLE 4:15 - 5:45PM

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–2.5				0-2.5 Organics (Peat)
2.5–13.2				2.5-13.2 OJIBWAY II SEDIMENTS 2.5-7.0 clay: grey, gritty, compact 7.0-13.2 clay: grey, non-gritty soft with subtle beige silt varves
13.2–18.5			01, 02, 03, 04	13.2-18.5 MATHESON TILL - abrupt contact with overlying clay fine grey sand-silt matrix; cobble clast compositions approx 50-60% volcanics/sediments 40-50% granitoid trace iron formation and limestone
18.5–20.5			05 Bedrock	18.5-20.5 BEDROCK - light to dark medium green - very fine grained ~ 0.1mm - Foliated - ochre colour along fractures - volcanic texture (porphyritic?) - predominant mafic mineral is green chlorite - quartz vein at 19.4m 1-2% calcite veinlets - 2-5% dissem. calcite Bleached Mafic Volcanic 20.5 EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 14 19 89

SHIFT HOURS

____ TO ____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-183 LOCATION LINE 68E 23+50N ELEVATION 277 m

GEOLOGIST TURNER DRILLER J. HOWG BIT NO. CB-70248 BIT FOOTAGE 0-27

MOVE TO HOLE

DRILL 8:00 - 10:15

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

New BIT

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 - 1.0 ORGANICS mixed with beige gritty clay.
				1.0 - 20.4 OJIBWAY II SEDIMENTS
				1.0 - 4.2 light beige gritty clay; < 1% small basalt, granite and limestone pebbles.
				4.2 - 20.4 light grey gritty clay mixed with silt and < 1% pebbles as above. Becomes less gritty after ~13.0 m.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ________ 19 __

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-183 LOCATION ______________ ELEVATION ________

GEOLOGIST ________ DRILLER ________ BIT NO. ________ BIT FOOTAGE ________

MOVE TO HOLE ______________

DRILL ______________

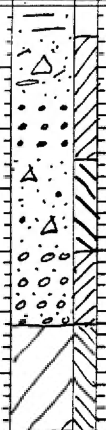
MECHANICAL DOWN TIME ______________

DRILLING PROBLEMS ______________

OTHER ______________

MOVE TO NEXT HOLE ______________

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21			01	
22				
23			02	
24				
25			03	
26			04	
27				
28				
29				
30				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				



20.4 - 25.2 MATHESON TILL & WASHED GRAVEL LENSES.

20.4 - 21.6 matrix supported pebbly till. matrix is light beige silt-fine sand. clasts ~ 60% Abitibi Belt meta-volcanics and metasediments; ~ 40% granite; < 1% limestone; < 1% iron formation.

21.6 - 22.2 Gravel, pebbly with beige coarse granular sand matrix. Clast composition similar to above till.

22.2 - 24.0 Till similar to interval between 20.4 - 21.6.

24.0 - 25.2 Gravel, cobbly with beige medium to coarse grained granular sand matrix. Clasts > 85% Abitibi volcanics, < 15% granite, < 1% limestone, < 1% Iron formation.

25.2 - 27.0 BEDROCK

2 lithologies
- medium grey
- fine grained
- < 5 - 10% disseminated calcite and small calcite veinlets
- no sulphides

Bleached Volcanic > 90%

- fine grained dark green basalt < 10%

note: hole was making water, contamination from overlying sediment downwashing into bedrock.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 11 19 89

SHIFT HOURS ______ TO ______

TOTAL HOURS ______

CONTRACT HOURS ______

HOLE NO CB-89-184 LOCATION L94+00E ; 21+25W ELEVATION 287

GEOLOGIST D. HOLMES DRILLER G. Houg BIT NO. CB70206 BIT FOOTAGE 343-47.2

MOVE TO HOLE 1:30-1:45 PM

DRILL 1:45 - 3:00 PM

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–3.0				0-3.0 Organics (Peat)
3.0–10.4				3.0-10.4 OJIBWAY II SEDIMENTS 3.0-6.0 clay: grey, slightly gritty, compact 6.0-10.4 clay: grey, non-gritty and soft with beige silt varves
10.4–11.2			01	10.4-11.2 MATHESON TILL - abrupt contact with overlying clay Fine grey sand-silt matrix; cobble clast compositions approx 60% volcanics/sediments 40% granitoid
11.2–13.0			02 Bedrock	11.2-13.0 BEDROCK - dark green, mottled white - Fine grained 0.1 to 0.2 mm - weakly foliated to moderate foliation - volcanic texture - predominant mafic mineral is green chlorite - 50% of rock 2% calcite veinlets 5-10% dissem. calcite < 1% Finely disseminated pyrite Mafic Volcanic

13.0 EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 14 19 89

SHIFT HOURS

_____ TO _____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-185 LOCATION LINE 69E 14+50N ELEVATION 281.

GEOLOGIST TURNER DRILLER J. HAWG BIT NO. CB70248 BIT FOOTAGE 27-49 m

MOVE TO HOLE 10:30 - 2:15

DRILL 2:15 - 3:30

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1				0 - 1.2 ORGANICS
2–16				1.2 - 16.8 OJIBWAY II SEDIMENTS light gray gritty clay with < 1% small pebbles (granite, basalt, limestone). Between 6.0 - 16.2 m clay is mixed with silt and fine sand (poor return). Pebbles and sand increases from 16.2 m and grades into till.
17			01	16.8 - 20.4 MATHESON TILL 16.8 - 19.9 Matrix supported pebbly till. Matrix is beige silt - fine sand (locally medium grained sand matrix). Clasts abundant; include: ~50% Abitibi Belt metavolcanics, ~45% granite, < 5% limestone.
18				19.0 - 19.9 beige silt - fine sand lens, very few pebbles < 5% (clast composition similar to above).
19			02	
20			03	19.9 - 20.4 Gradation contact to matrix supported pebbly till. Matrix is beige silt - fine sand. Clasts mainly Abitibi Belt metavolcanics > 80%; < 20% granite. Limonite staining observed on many clasts ~10-20%.

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE ______ 19 __

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CB-89-18S LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

MOVE TO HOLE ______

DRILL ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG							
			03								
21			04	20.4 - 22.0 BEDROCK - medium to dark green grey - fine grained - < 5% disseminated calcite and < 5% calcite veining. - no sulphides observed - extensive Fe oxidation occuring at 20.4m and 21.6m. Basalt							
22											
23											
4											
5											
6											
7											
8				22.0 EOH							
9				R. Turner							
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 14 1989 | HOLE NO CB-89-186 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______ | MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______ | MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______ | OTHER ______

MOVE TO NEXT HOLE ______

page 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21			07	19.5-24.8 matrix supported till. Fine grey sand silt and clay-silt matrix cobble clasts approximately
22			08	50-60% volcanics/sediments
23				40-50% granitoid,
24			09	approx. 1% of clasts are oxidized
25				
26			10 Bedrock	
27				24.8-26.5 BEDROCK
28				- grey colour, oxidized
29				ochre colour from 24.8 to 25.0 - beige gray at 26.2 m - foliated
30				- fine grained < 0.1 mm
31				- predominant matic mineral
32				~~50%~~ grey chlorite
33				1-2% calcite vein
34				5% disseminated fast and slow reacting carbonate (to HCl)
35				
36				trace disseminated pyrite cubes up to 5 mm
37				Greywacke
38				
39				26.5 EOH
40				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 14 19 89

SHIFT HOURS
_____ TO _____

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-186 LOCATION L66+00E; 16+00N ELEVATION 282

GEOLOGIST D. Holmes DRILLER G. Hong BIT NO. CB70209 BIT FOOTAGE 10.0-3

MOVE TO HOLE 2:15 - 2:30 PM

DRILL 2:30 - 4:15 PM

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE 4:15 -

Page 1

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 - 0.5 Organics
				0.5 - 11.0 OJIBWAY II SEDIMENTS
				0.5 - 2.5 clay beige slightly gritty, compact
				2.5 - 9.0 clay: grey slightly gritty compact softer downsection
				9.0 - 11.0 clay: grey non-gritty soft with beige silt varves
				11.0 - 24.8 MATHESON TILL
				- abrupt contact with overlying clay
11			01	11.0 - 12.5 matrix supported till; fine grey sand-silt matrix, cobble clast compositions 50% volcanics/sediments 50% granitoid, trace limestone
13			02	
14			03	12.5 - 13.0 matrix supported till sandy, fine and medium sand with clasts, composition still 50:50
16			04	
17			05	13.0 - 18.5 till similar to 11.0 to 12.5
19			06	18.5 - 19.5 clast supported till; fine grey sand-silt matrix, cobble clasts approx. 60% volcanics/sediments, 40% granitoid

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 14 1989

SHIFT HOURS ____ TO ____

TOTAL HOURS ____

CONTRACT HOURS ____

HOLE NO CB-89-187 LOCATION L64+00E; 17+00N ELEVATION 284 m

GEOLOGIST D. HOLMES DRILLER G. Kong BIT NO. CB70249 BIT FOOTAGE 0 -10.0

MOVE TO HOLE 1:00 - 1:15 PM

DRILL 1:15 - 2:15 PM

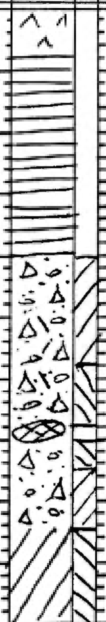
MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG



Sample no.: 01, 02, 02, 03, 04 Bedrock

Depth in metres: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

0 - 0.5 Organics

0.5 - 4.0 OJIBWAY II SEDIMENTS

0.5-0.6 dark brown clay, compact, organic rich

0.6-3.5 clay: grey, compact slightly gritty

3.5-4.0 clay: grey soft, non-gritty

4.0 - 8.5 MATHESON TILL

- abrupt contact with overlying clay

4.0-5.0 matrix supported till; fine grey sand-silt matrix; cobble clast composition approximately
50% volcanics/sediments
50% granitoid
<1% limestone

5.0-6.5 clay-rich till

6.5-6.8 till similar to 4.0 to 5.0

6.8-7.0 boulder mafic volcanic

7.0-8.5 matrix supported till; fine grey sand-silt matrix; cobble clasts approximately
60% volcanics/sediments
40% granitoid

8.5-10.0 BEDROCK

- grey colour, ochre colour chips from 8.5 to 8.8 and at 9.5, some grey clay after 9.5m
- foliated to schistose
- Fine grained
- predominant mafic mineral is grey chlorite
- trace cubic pyrite up to 0.5cm
1% calcite vein, 5-10% dissem. Fast and slow reacting carbonate

10.0 EOH Greywacke

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 14 1989

SHIFT HOURS

______ TO ______

TOTAL HOURS

CONTRACT HOURS

HOLE NO CB-89-188 LOCATION L 68E; 18+50N ELEVATION 279 m

GEOLOGIST D. Holmes DRILLER G. Hong BIT NO. CB70208 BIT FOOTAGE 59.5-107

MOVE TO HOLE 9:30 - 10:00 AM

DRILL 10:00 - 1:00 PM

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

page 1

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0-0.5 Organics
1				0.5-31.5 OJIBWAY II SEDIMENTS
2				0.5-1.5 clay: beige slightly gritty compact.
3				
4				1.5-5.0 clay: grey slightly gritty compact but softer downsection
5				
6				
7				5.0-30.2 clay: grey, non-gritty, soft with beige silt varves, a few pebbles at top of section
8				
9				
10				- very fine grey sand for 0.1 m at 12.0 m
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 14 1999

HOLE NO CB-99-188 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS ______ TO ______

MOVE TO HOLE ______

DRILL ______

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

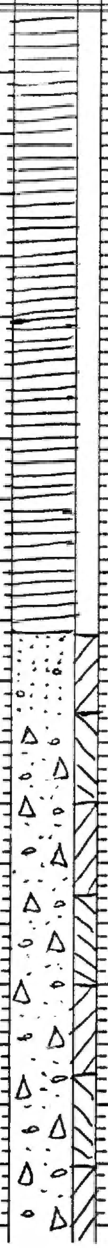
CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

Page 2

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
21				30.2 - 31.5 Fine grey sand pebbles and clay interbeds (possibly washed Matheson Till)
22				
23				
24				31.5 - 45.8 MATHESON TILL gradational contact
25				31.5-33.0 clast supported till Fine grey-beige sand-silt matrix; cobble clasts approx 50% volcanics/sediments 50% granitoid
26				
27				
28				33.0-34.5 sandy matrix supported fine grey beige to beige sand silt matrix, clasts 50-60% volcanics/sediments 40-50% granitoid
29				
30				
31			01	
32			02	34.5-39.5 clast supported till Fine and medium sand no silt clasts 60-70% volcanics 30-40% granitoid
33				
34			03	
35			04	Note: I think 31.5 to 39.5 is Matheson Till but it could be OJIBWAY II Sand and gravel. Below 39.5 is definately till.
36				
37			05	
38			06	
39				
40			07	



OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 14 19 89

HOLE NO CB-89-188 LOCATION ______ ELEVATION ______

GEOLOGIST ______ DRILLER ______ BIT NO. ______ BIT FOOTAGE ______

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

MOVE TO HOLE ______

DRILL ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
			07	39.5-42.5 matrix supported till; fine grey sand-silt matrix; cobble clasts approx. 60% volcanics/sediments 40% granitoid
41			08	
42				
43			09	
44			10	42.5-45.2 clay-silt component to matrix - gritty grey clay lumps - amount of clay increasing downsection.
45			11	
46				
47			12	45.2-45.8 till similar to 39.5 to 42.5
48				
49				45.8 - 47.5 BEDROCK
50				some contamination from overlying till
51				- grey and white
52				- foliated
53				- fine grained
54				- predominant matrix mineral chlorite.
55				< 1% dark green chlorite spots .5mm
56				2% calcite vein
57				2% dissem. calcite
58				Graywacke
59				47.5 EOH
60				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 17 1989

SHIFT HOURS
____ TO ____

TOTAL HOURS
____

CONTRACT HOURS
____

HOLE NO CB-89-189 LOCATION L 61+00E ; 17+50N ELEVATION 287
GEOLOGIST D. Holmes DRILLER G. Howe BIT NO. CB70203 BIT FOOTAGE 54.0-59.5
MOVE TO HOLE 8:00 - 8:45 AM
DRILL 8:45 - 9:30 AM
MECHANICAL DOWN TIME
DRILLING PROBLEMS
OTHER
MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0 - 0.5 Organics
1				0.5-1.5 OJIBWAY II SEDIMENTS - clay beige, gritty, compact
2			01	
3				1.5-3.5 MATHESON TILL
4			02 Bedrock	- matrix supported till; Fine beige sand-silt matrix; clast composition approx. 50% volcanics/sediments 50% granitoid
5				
6				
7				
8				
9				3.5 - 5.5 BEDROCK - light gray-green colour with >90% of chips oxidized ochre colour and also ochre clay - Foliated to schistose 1% quartz vein 5% disseminated calcite Weathered Graywacke
10				
11				
12				
13				
14				
15				
16				
17				5.5 EOH
18				
19				
20				

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 17 19 89

HOLE NO CB-89-190 LOCATION L 57+75E; 15N ELEVATION 255

GEOLOGIST D. Holmes DRILLER G. Howe BIT NO. CB70208 BIT FOOTAGE 47-54

SHIFT HOURS ____ TO ____

MOVE TO HOLE 7:00 - 7:30 AM

DRILL 7:30 - 8:00 AM

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER travel 6:30 - 7:00 AM

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–0.5				0-0.5 Organics
0.5–4.5				0.5-4.5 OJIBWAY II SEDIMENTS
				0.5-4.0 clay: grey slightly gritty, compact becoming softer downsection with increasing amount of grit, rare pebbles (< 1 per 0.5m)
				4.0-4.5 grey clay, non-gritty, soft
4.5–7.0			01 Bedrock	4.5-7.0 BEDROCK
				- light gray-green colour with >90% of chips oxidized ochre colour from 4.8 to 6.5m
				- Foliated to schistose.
				. very fine grained <0.1mm
				<1% dark chloritic spots
				approx 5% dissem. calcite
				Weathered Graywacke.
7.0				7.0 EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 13 19 89

SHIFT HOURS

_______ TO _______

TOTAL HOURS

____

CONTRACT HOURS

____

HOLE NO CB-89-191 LOCATION L32125E; 18150N ELEVATION 294 m

GEOLOGIST D. Holmes DRILLER G. Howe BIT NO. CB70207 BIT FOOTAGE 770 - 885

MOVE TO HOLE 7:00 - 7:15 AM

DRILL 7:15 - 9:00 AM

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER travel 6:15 - 7:00 AM

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1 – 20			01, 02, 03, 04, 05, 06 Bedrock	see below

0 - 0.2 Organics

0.2 - 2.6 OJIBWAY II SEDIMENTS

0.2-0.3 dark brown organic rich clay; very compact

0.3-2.6 clay: beige slightly gritty with a few pebbles compact

2.6 - 8.6 MATHESON TILL

- abrupt contact with overlying clay/silt ✓

2.5-5.6 clast supported till; Fine grey-beige sand-silt matrix; cobble clasts approx. 75 to 80% volcanics/sediments, 20% granitoid trace limestone and iron formation

5.6-5.8 boulder gabbro or coarse mafic volcanic

5.8-8.6 clast supported till; fine grey sand-silt matrix; clast composition approx. 75% volcanics/sediments 25% granitoid with trace limestone and <1% iron formation

8.6-11.0 BEDROCK (similar to Hole 121 bedrock)

- light grey coloured chips and clay
- Foliated to schistose structure
- very fine grained <0.1mm

~20% slow reacting carbonate (to HCl)

<5% calcite vein

0.5% dissem arsenopyrite; <0.5% pyrite

11.0 EOH Bleached Mafic Volcanic

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE Feb 13 19 89

SHIFT HOURS

______ TO ______

TOTAL HOURS

______

CONTRACT HOURS

______

HOLE NO CG-89-192 LOCATION LINE 33+00 E 7+20 N ELEVATION 289 m

GEOLOGIST TURNER DRILLER G. HOWG BIT NO. CB70208 BIT FOOTAGE 0-10.5

MOVE TO HOLE 9:00 - 9:15

DRILL 9:15 - 10:00

MECHANICAL DOWN TIME

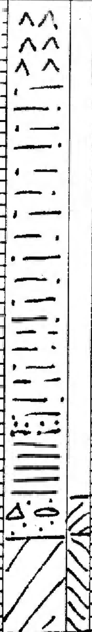
DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

New bit New sub

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG						



Sample 01 (approx. 8.3–8.7 m); Sample 02 (approx. 9.5–10 m)

0 - 1.2 ORGANICS

1.2 - 8.3 OJIBWAY II SEDIMENTS

1.2 - 5.3 light grey gritty clay with < 1" small basalt, granite & limestone pebbles

5.3 - 7.0 grey gritty clay mixed with silt (little return)

7.0 - 7.2 medium grey sand and pebbly gravel with ~30% limestone, 30% granite and 40% Abitibi clasts.

7.2 - 8.3 non gritty clay mixed with silt.

8.3 - 8.7 MATHESON TILL ?

clast supported till or possibly clast supported gravel. Matrix is fine - medium grained, grey sand. Minor, grey OJIBWAY clay (< 5%) observed at contact. clasts mainly Abitibi belt; 70-80% basalt and siltstone, 20-30% granite, < 5% limestone.

8.7 - 10.5 BEDROCK

- dark green, chloritized
- fine grained
- diabassic texture
- disseminated calcite > 10%, calcite vein < 5%.
- no sulphides observed

Basalt.

10.5 EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 13 1989

HOLE NO CB-89-193 LOCATION L31+00E ; 20+25N ELEVATION 290 m

GEOLOGIST D. Holmes DRILLER G. Houle BIT NO. CB.70.205 BIT FOOTAGE 10.5-15.5

SHIFT HOURS ______ TO ______

MOVE TO HOLE 10:00-10:15 AM

DRILL 10:15 - 11:00 AM

TOTAL HOURS ______

MECHANICAL DOWN TIME ______

DRILLING PROBLEMS ______

CONTRACT HOURS ______

OTHER ______

MOVE TO NEXT HOLE ______

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
				0-1.5 Organics
				1.5-3.4 OJIBWAY II SEDIMENTS
				1.5-3.0 clay: grey, slightly gritty, compact - with a few pebbles
			01 Bedrock	3.0-3.4 clay, grey, soft and non-gritty
				clay immediately overlies bedrock - no till
				3.4-5.0 BEDROCK
				- dark green, mottled white
				- foliated
				- fine grained 0.1 to 0.2 mm
				- volcanic texture
				> 50% green chlorite
				< 1% calcite vein
				> 10% dissaminated calcite
				Mafic Volcanic
				5.0 EOH

Depth scale: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 13 1989

HOLE NO CB-89-194 LOCATION L31+00E; 21+00N ELEVATION 291m

GEOLOGIST D. Howes DRILLER G. Howe BIT NO. CB70208 BIT FOOTAGE 15.5-29.0

SHIFT HOURS ____ TO ____

MOVE TO HOLE 11:00 - 11:15 AM

DRILL 11:15 - 1:30 PM

TOTAL HOURS ____

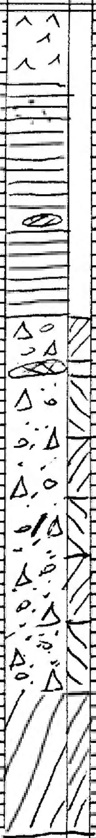
MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS ____

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–20		5.0–13.5	01, 02, 03, 04, 05, 06, 07 Bedrock	see below

0-1.0 Organics

1.0 - 5.0 OJIBWAY II SEDIMENTS

1.0-2.0 clay: grey, compact slightly gritty with a few pebbles

2.0-5.0 clay: grey, soft, non-gritty with subtle beige silt varves
- granite cobble at 3.5m

5.0 - 11.2 MATHESON TILL
- abrupt contact with overlying clay

5.0 - 5.8 clast supported till; fine grey sand-silt matrix; cobble clasts approx. 75% volcanics/sediments and 25% granitoid

5.8-6.0 boulder - mudstone

6.0 - 11.2 matrix supported till; fine grey sand-silt matrix; cobble clasts approx. 60% volcanics/sediments 40% granitoid, trace limestone
- clay-silt component to matrix at 9.5m

11.2 - 13.5 BEDROCK
- similar to Hole 191 bedrock
- light grey-green and mottled white
light grey clay at 13.0m
- foliated to schistose
- minor oxidized fractures
volcanic texture
fine grained < 0.1mm
up to 5% calcite veinlets, >10% dissem. carbonate - fast and slow reacting to HCl.
trace arsenopyrite
Bleached Mafic Volcanic

13.5 EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 13 1987

HOLE NO CB-89-195 LOCATION L3040DE ; 21+00N ELEVATION 290 m

GEOLOGIST D. Holmes DRILLER G. Hong BIT NO. CB70208 BIT FOOTAGE 29.0 – 35.0

SHIFT HOURS ____ TO ____

MOVE TO HOLE 1:30 – 1:45 PM

DRILL 1:45 – 2:45

TOTAL HOURS

MECHANICAL DOWN TIME

DRILLING PROBLEMS

CONTRACT HOURS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG	
0				0-0.2 Organics	Note: In-progress diamond drill hole 50 m north.
1				0.2-3.5 OJIBWAY II SEDIMENTS	
2				0.2-3.0 clay: beige compact, slightly gritty	
3				3.0-3.5 clay: grey, soft non-gritty	
4			01		
5			Bedrock	at 3.5 got ≤ 0.1 m of fine grey sand and a few pebbles → possibly till but too thin to log or sample - even by washing the hole	
8				3.5-6.0 BEDROCK	
9				- light grey green to grey colour	
10				- very fine grained, aphanitic to 0.1 mm	
11				- volcanic texture	
12				- partially silicified - very hard to drill	
13				- 1% calcite veinlets	
14				< 5% dissem. slow reacting carbonate (to HCl)	
15				- trace arsenopyrite dissem.	
16				< 1% dissem. pyrite	
17				Bleached silicified Mafic Volcanic	
19				6.0 EOH	
20					

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 13 1999

SHIFT HOURS ______ TO ______

TOTAL HOURS ______

CONTRACT HOURS ______

HOLE NO CB-99-196 LOCATION L28+50S, 21+00 N ELEVATION 288 m

GEOLOGIST D. Holmes DRILLER G. Howig BIT NO. L870208 BIT FOOTAGE 35.0 - 41.0

MOVE TO HOLE 2:45 - 3:00 PM

DRILL 3:00 - 3:45 PM

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER

MOVE TO NEXT HOLE

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
0–1				0-0.2 Organics
1				0.2-3.2 OJIBWAY II SEDIMENTS
2				clay: beige, slightly gritty, compact
3–4			01	3.2-4.0 MATHESON TILL - abrupt contact with overlying clay; clast supported till; cobble clasts compositions approx. 60% volcanics/sediments 40% granitoid. Note: Sample 01 is small.
5			02 Bedrock	
6				
10–17				4.0-6.0 BEDROCK - light grey colour to grey-green - well foliated - volcanic texture - <1% oxidized brown fractures (contains calcite) <1% calcite vein <5% dissem. carbonate slow reacting (to HCl) Bleached Mafic Volcanic
18				6.0 EOH

OVERBURDEN DRILLING MANAGEMENT LIMITED
REVERSE CIRCULATION DRILL HOLE LOG

DATE February 13 19 89

SHIFT HOURS ____ TO ____

TOTAL HOURS ____

CONTRACT HOURS ____

HOLE NO CB-89-197 LOCATION L 27+25 E ; 21N ELEVATION 289 m

GEOLOGIST D. Holmes DRILLER G. Howg BIT NO. CB70208 BIT FOOTAGE 410-47.0

MOVE TO HOLE 3:45 - 4:00 PM

DRILL 4:00 PM - 4:45 PM

MECHANICAL DOWN TIME

DRILLING PROBLEMS

OTHER Travel 6:00 - 6:15 PM

MOVE TO NEXT HOLE 4:45 - 6:00 PM

DEPTH IN METRES	GRAPHIC LOG	INTERVAL	SAMPLE NO.	DESCRIPTIVE LOG
1				0-0.2 Organics
				0.2-2.5 OJIBWAY II SEDIMENTS
2				0.2-0.3 dark brown compact organic-rich clay
3			01	0.3-2.5 beige clay, slightly gritty compact
4			02	
5			03 Bedrock	2.5-4.5 MATHESON TILL
6				- abrupt contact with overlying clay
7				clast supported till ;
8				Fine grey-beige sand-silt matrix : cobble clasts
9				composition approximately
10				60% volcanics/sediments 40% granitoid
11				BEDROCK
12				4.5-6.0 - light grey-green colour
				- foliated
13				- volcanic texture, porphyrytic
14				- grain size 0.1mm
15				- oxidized fracture at 5.8m contains calcite.
16				. 2% calcite vein
17				< 5% dissem. carbonate
18				trace dissem. pyrite
19				Bleached Mafic Volcanic
20				6.0 EOH

APPENDIX B

SAMPLE WEIGHTS - HEAVY MINERAL CIRCUIT

OVERBURDEN DRILLING MANAGEMENT LIMITED - LABORATORY SAMPLE

ABBREVIATIONS

DATA LOG

Clast:

Size of Clast:

G: Granules
P: Pebbles
C: Cobbles
BL: Boulder Chips
BK: Bedrock Chips

% Clast Composition:

V/S: Volcanics and Sediments
GR: Granitics
LS: Limestone
OT: Other Lithologies (Refer to Footnotes Below)
TR: Only Trace Present
NA NOT APPLICABLE

Matrix:

S/U: Sorted or Unsorted

SD:	Sand	Y:	Yes Fraction Present	
ST:	Silt	N:	Fraction Not Present	
CY:	Clay			

Colour:

B: Beige
GY: Grey
GB: Grey Beige
GN: Green
GG: Grey Green
BN: Brown
BK: Black
OC: Ochre
PK: Pink
OE: Orange

Class:

BLD: Boulder Chips
BDK: Bedrock Chips

GOLD LOG

Number of Grains:

T: Number Found on Shaking Table
P: Number Found After Panning

Thickness:

C: Calculated Thickness of Grain
M: Actual Measured Thickness of Grain

Footnotes:

A: Gritty Clay Lumps Present

B: Smooth Clay Lumps Present

C: Organics Present

D: Oxidized

CAMB1DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET) TABLE SPLIT	+10 CHIPS	TABLE FEED	WEIGHT (GRAMS DRY) TABLE CONC	M.I. LIGHTS	M. I. CONC CONC. TOTAL	NON MAG	MAG	AU NO. V.G.	CALC PPB	DESCRIPTION CLAST SIZE	% V/S	GR	LS	OT	MATRIX S/U	SD	ST	CY	COLOR SD	CY	CLASS
CB-89																						
01-01	7.9	0.6	7.3	118.6	80.6	38.0	22.8	15.2	1	44	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
01-02	8.1	0.4	7.7	183.8	145.2	38.6	22.8	15.8	1	127	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
02-01	8.2	0.3	7.9	216.3	171.7	44.6	24.8	19.8	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
02-02	7.4	0.6	6.8	256.2	213.8	42.4	25.3	17.1	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
02-03	7.6	0.4	7.2	241.5	199.6	41.9	24.8	17.1	1	86	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
02-04	6.7	0.6	6.1	207.9	167.6	40.3	24.4	15.9	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
02-05	6.4	0.4	6.0	216.7	180.9	35.8	16.3	19.5	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
02-06	7.7	0.2	7.5	217.4	177.4	40.0	21.7	18.3	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
02-07	6.0	0.2	5.8	187.1	158.3	28.8	17.8	11.0	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
03-01	8.1	0.7	7.4	293.2	244.2	49.0	33.4	15.6	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
03-02	8.0	0.2	7.8	178.2	115.2	63.0	26.4	36.6	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
03-03	8.1	0.6	7.5	202.4	162.5	39.9	25.5	14.4	1	15	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
03-04	8.5	0.7	7.8	191.0	152.5	38.5	24.2	14.3	1	258	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
03-05	8.8	0.4	8.4	238.3	189.6	48.7	34.4	14.3	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
01	7.5	0.6	6.9	196.2	160.2	36.0	20.9	15.1	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
04-02	4.6	0.4	4.2	125.4	106.6	18.8	12.2	6.6	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
05-01	8.5	1.2	7.3	211.3	173.1	38.2	24.0	14.2	1	27	P	75	25	NA	NA	U	Y	Y	Y	B	B	TILL
05-02	6.3	0.3	6.0	152.6	119.2	33.4	22.4	11.0	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
06-01	6.6	1.0	5.6	180.2	148.1	32.1	19.6	12.5	1	108	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
06-02	8.3	1.8	6.5	200.5	166.5	34.0	21.8	12.2	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
07-01	8.0	0.2	7.8	181.0	146.0	35.0	22.2	12.8	0	NA	C	80	20	NA	NA	U	Y	Y	Y	GNB	GB	TILL
08-01	6.9	0.6	6.3	165.0	133.5	31.5	19.2	12.3	1	53	C	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
10-01	6.9	0.3	6.6	149.3	114.3	35.0	20.4	14.6	3	178	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
11-01	7.2	0.1	7.1	170.7	133.8	36.9	22.7	14.2	7	156	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
11-02	6.8	0.2	6.6	182.9	102.2	80.7	20.2	60.5	1	18	C	98	2	NA	NA	U	Y	Y	Y	GB	GB	TILL
12-01	7.8	0.6	7.2	137.6	107.8	29.8	18.6	11.2	0	NA	P	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
12-02	4.8	0.1	4.7	173.5	157.7	15.8	10.5	5.3	0	NA	C	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
12-03	7.4	1.2	6.2	207.8	186.6	21.2	12.4	8.8	5	194	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
12-04	7.1	1.2	5.9	161.6	131.0	30.6	18.4	12.2	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
12-05	6.7	0.8	5.9	155.8	126.8	29.0	17.5	11.5	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
12-06	7.6	0.6	7.0	111.8	75.4	36.4	22.0	14.4	1	46	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
12-07	7.7	0.4	7.3	169.3	131.6	37.7	22.3	15.4	1	17	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
12-08	7.0	0.6	6.4	178.4	142.5	35.9	23.3	12.6	5	13	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
12-09	6.9	0.8	6.1	137.4	107.1	30.3	19.3	11.0	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
12-10	8.0	1.0	7.0	198.1	165.2	32.9	19.7	13.2	1	51	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
12A-01	5.8	0.6	5.2	156.4	128.6	27.8	17.5	10.3	1	11	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
12A-02	7.6	1.4	6.2	142.2	108.9	33.3	20.4	12.9	8	122	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
12A-03	7.7	0.8	6.9	147.1	110.8	36.3	21.8	14.5	4	110	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
12A-04	7.8	0.8	7.0	173.8	136.3	37.5	22.1	15.4	4	168	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
05	7.1	0.7	6.4	180.5	150.9	29.6	18.0	11.6	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
12A-06	7.0	0.4	6.6	169.8	147.7	22.1	12.5	9.6	0	NA	C	95	5	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
13-01	6.3	0.2	6.1	173.5	141.3	32.2	20.5	11.7	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
13-02	6.9	0.2	6.7	147.0	110.8	36.2	21.0	15.2	1	71	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
14-01	7.7	0.5	7.2	252.0	216.3	35.7	22.1	13.6	5	278	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
14-02	7.4	0.6	6.8	239.7	211.4	28.3	16.4	11.9	9	651	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL

CAMB1DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET)			WEIGHT (GRAMS DRY)					AU		DESCRIPTION											CLASS
						M. I. CONC					CLAST					MATRIX						
	TABLE SPLIT	+10 CHIPS	TABLE FEED	TABLE CONC	M.I. LIGHTS	CONC. TOTAL	NON MAG	MAG	NO. V.G.	CALC PPB	SIZE	% V/S	% GR	% LS	% OT	S/U	SD	ST	CY	COLOR SD	COLOR CY	
CB-89																						
14-03	7.6	0.8	6.8	153.9	133.3	20.6	11.3	9.3	1	33	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
15-01	7.4	0.4	7.0	189.7	153.1	36.6	21.6	15.0	1	17	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
15-02	6.5	0.2	6.3	252.1	219.4	32.7	18.5	14.2	7	179	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
15-03	7.9	0.2	7.7	165.6	130.5	35.1	19.8	15.3	6	837	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
15-04	7.1	0.4	6.7	214.8	175.7	39.1	21.6	17.5	1	17	C	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
15-05	7.4	0.4	7.0	209.9	161.2	48.7	33.8	14.9	0	NA	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
15-06	4.5	0.2	4.3	156.1	142.5	13.6	8.3	5.3	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
15-07	6.6	0.0	6.6	186.0	153.6	32.4	21.6	10.8	1	30	TR	NA	NA	NA	NA	U	Y	Y	Y	B	B	TILL
15-08	7.4	0.2	7.2	215.9	181.5	34.4	22.3	12.1	4	94	C	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
15-09	8.2	0.2	8.0	206.5	165.7	40.8	24.5	16.3	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
15-10	8.1	0.5	7.6	192.7	148.7	44.0	27.6	16.4	1	23	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
15-11	7.0	0.2	6.8	193.9	156.8	37.1	23.1	14.0	4	69	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
15-12	7.5	0.6	6.9	212.9	179.5	33.4	19.6	13.8	1	19	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
15-13	7.8	0.4	7.4	198.0	162.1	35.9	21.2	14.7	7	193	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
14	8.4	0.2	8.2	208.3	170.2	38.1	25.4	12.7	1	15	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
15-15	7.8	0.2	7.6	148.4	123.2	25.2	16.8	8.4	0	NA	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
15-16	8.3	0.4	7.9	164.9	126.4	38.5	21.6	16.9	1	47	C	90	10	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
15-17	8.0	0.6	7.4	164.0	128.3	35.7	19.4	16.3	3	85	C	90	10	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
15-18	8.4	0.3	8.1	177.2	132.1	45.1	26.0	19.1	1	82	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
16-01	7.5	0.9	6.6	174.8	144.5	30.3	18.3	12.0	1	82	P	79	20	1	NA	U	Y	Y	Y	B	B	TILL
16-02	9.0	1.4	7.6	178.7	135.7	43.0	25.4	17.6	4	158	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
16-03	8.7	0.8	7.9	178.1	137.2	40.9	24.0	16.9	1	42	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
17-01	7.5	0.4	7.1	219.0	182.2	36.8	23.7	13.1	5	146	P	79	20	1	NA	U	Y	Y	Y	B	B	TILL
17-02	8.2	0.4	7.8	166.9	132.2	34.7	20.4	14.3	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
18-01	8.2	0.6	7.6	180.8	140.5	40.3	23.5	16.8	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
19-01	7.1	0.0	7.1	171.5	137.3	34.2	22.6	11.6	4	99	TR	NA	NA	NA	NA	S	F	Y	Y	B	B	SAND
19-02	7.1	0.0	7.1	198.9	164.0	34.9	22.3	12.6	1	29	TR	NA	NA	NA	NA	S	F	Y	Y	B	B	SAND
19-03	7.3	0.0	7.3	235.4	196.0	39.4	24.9	14.5	3	101	TR	NA	NA	NA	NA	S	F	Y	Y	B	B	SAND
19-04	7.8	0.0	7.8	253.5	213.8	39.7	26.0	13.7	1	147	TR	NA	NA	NA	NA	S	M	Y	Y	B	B	SAND
19-05	7.8	0.5	7.3	283.4	226.1	57.3	41.7	15.6	0	NA	C	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
20-01	8.7	0.9	7.8	235.8	195.2	40.6	23.8	16.8	5	122	C	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
20-02	9.1	1.4	7.7	197.9	157.8	40.1	22.8	17.3	1	66	C	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
20-03	8.8	1.6	7.2	203.9	164.0	39.9	23.7	16.2	0	NA	C	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
20-04	8.8	1.4	7.4	274.4	233.4	41.0	23.3	17.7	0	NA	C	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
20-05	8.5	0.8	7.7	235.9	195.9	40.0	19.5	20.5	4	81	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
20-06	6.1	0.2	5.9	148.2	127.0	21.2	12.1	9.1	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
20-07	8.4	0.9	7.5	273.5	233.3	40.2	20.9	19.3	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
20-08	8.9	1.3	7.6	219.3	170.6	48.7	25.0	23.7	5	282	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
20-09	8.8	1.2	7.6	220.5	178.4	42.1	21.9	20.2	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
10	9.1	1.4	7.7	197.3	159.4	37.9	19.8	18.1	9	150	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
20-11	8.8	1.6	7.2	241.6	191.4	50.2	25.8	24.4	4	85	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
20-12	8.0	1.6	6.4	233.6	199.4	34.2	20.1	14.1	1	310	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
21-01	7.6	0.4	7.2	213.9	185.5	28.4	18.9	9.5	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
22-01	8.7	1.4	7.3	211.5	195.5	16.0	14.0	2.0	0	NA	P	70	25	5	NA	S	M,C	Y	Y	GB	GB	GRAVEL
22-02	8.6	1.8	6.8	217.1	197.1	20.0	13.0	7.0	0	NA	P	60	35	5	NA	S	M,C	Y	Y	GB	GB	GRAVEL

CAMB1DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET) TABLE SPLIT	+10 CHIPS	TABLE FEED	WEIGHT (GRAMS DRY) TABLE CONC	M.I. LIGHTS	M. I. CONC CONC. TOTAL	NON MAG	MAG	AU NO. V.G.	CALC PPB	DESCRIPTION CLAST SIZE	% V/S	GR	LS	OT	MATRIX S/U	SD	ST	CY	COLOR SD	CY	CLASS
CB-89																						
22-03	9.1	2.3	6.8	205.2	151.3	53.9	32.1	21.8	1	12	P,C	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
23-01	8.8	0.6	8.2	220.3	184.5	35.8	21.6	14.2	0	NA	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
24-01	9.3	1.8	7.5	240.2	205.9	34.3	20.0	14.3	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
24-02	9.1	2.0	7.1	179.0	140.0	39.0	23.2	15.8	6	179	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
24-03	9.0	2.3	6.7	211.4	168.0	43.4	24.8	18.6	1	86	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
24-04	8.8	1.2	7.6	253.3	216.5	36.8	22.7	14.1	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
24-05	7.3	2.4	4.9	252.5	230.4	22.1	12.7	9.4	5	176	P,C	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
25-01	7.8	0.2	7.6	277.0	245.9	31.1	18.0	13.1	1	52	C	75	25	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
26-01	9.0	1.4	7.6	202.3	158.6	43.7	25.7	18.0	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
27-01	6.5	0.5	6.0	328.0	301.8	26.2	15.7	10.5	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
27-02	6.2	1.3	4.9	250.0	193.8	56.2	38.2	18.0	1	5	P	60	40	NA	NA	U	Y	Y	Y	GY	GY	TILL
27-03	3.1	0.5	2.6	220.7	196.2	24.5	18.3	6.2	0	NA	C	95	5	NA	NA	U	Y	Y	Y	GY	GY	TILL
28-01	9.1	1.6	7.5	289.8	242.5	47.3	18.1	29.2	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
30-01	9.1	0.8	8.3	280.5	249.2	31.3	23.5	7.8	0	NA	P	60	30	10	NA	U	Y	Y	Y	B	B	TILL
30-02	8.7	0.6	8.1	259.7	229.9	29.8	22.2	7.6	0	NA	P	60	20	20	NA	U	Y	Y	Y	B	B	TILL
30-03	8.9	1.2	7.7	271.9	233.9	38.0	22.4	15.6	1	95	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
30-04	8.6	1.2	7.4	256.7	220.1	36.6	21.8	14.8	1	97	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
30-05	8.8	1.4	7.4	252.2	216.2	36.0	19.3	16.7	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
30-06	8.9	1.0	7.9	232.1	192.3	39.8	21.5	18.3	1	17	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
30-07	8.6	1.0	7.6	318.2	279.2	39.0	22.7	16.3	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
30-08	8.7	0.4	8.3	206.4	173.0	33.4	21.0	12.4	0	NA	C	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
31-01	8.3	0.5	7.8	219.0	194.8	24.2	13.2	11.0	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
31-02	8.0	0.4	7.6	175.0	145.7	29.3	17.6	11.7	0	NA	P	50	50	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
31-03	6.9	0.0	6.9	170.9	148.5	22.4	14.5	7.9	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
31-04	8.4	0.1	8.3	193.4	160.0	33.4	20.7	12.7	0	NA	P	20	80	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
31-05	8.5	2.0	6.5	285.4	247.6	37.8	21.6	16.2	4	137	P	100	TR	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
31-06	8.9	0.6	8.3	306.6	250.6	56.0	34.5	21.5	1	6	P	100	TR	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
32-01	9.6	2.3	7.3	284.2	210.3	73.9	36.0	37.9	12	611	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
32-02	8.8	1.4	7.4	267.7	212.3	55.4	33.0	22.4	2	91	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
32-03	8.0	0.6	7.4	247.1	195.0	52.1	30.2	21.9	1	33	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
32-04	8.9	0.7	8.2	225.3	197.6	27.7	16.5	11.2	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
32-05	8.8	0.1	8.7	255.2	230.0	25.2	18.0	7.2	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
32-06	9.3	1.6	7.7	241.9	199.9	42.0	26.4	15.6	1	57	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
32-07	9.0	1.3	7.7	322.4	282.5	39.9	24.1	15.8	4	234	P	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
32-08	9.0	1.2	7.8	218.7	187.2	31.5	17.6	13.9	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
32-09	9.0	1.2	7.8	207.2	170.3	36.9	22.1	14.8	1	17	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
32-10	9.1	1.2	7.9	243.4	208.5	34.9	20.0	14.9	4	161	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
32-11	8.5	1.6	6.9	238.3	206.3	32.0	19.3	12.7	2	72	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
32-12	6.2	0.6	5.6	129.0	106.7	22.3	14.7	7.6	1	102	P	90	10	NA	NA	U	Y	Y	Y	GB	GY	TILL
32-13	8.7	1.4	7.3	103.5	68.5	35.0	21.4	13.6	0	NA	P	100	TR	NA	NA	U	Y	Y	Y	GB	GY	TILL
32-14	9.0	0.9	8.1	236.2	188.5	47.7	25.9	21.8	1	365	P	80	20	NA	NA	U	Y	Y	Y	B	GB	TILL
32-15	9.2	1.3	7.9	351.9	318.8	33.1	16.3	16.8	2	189	P	90	10	NA	NA	U	Y	Y	Y	B	GB	TILL
32-16	9.0	1.4	7.6	298.6	268.0	30.6	15.6	15.0	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	GB	TILL
32-17	9.3	2.1	7.2	302.8	251.0	51.8	30.9	20.9	4	196	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
32-18	9.0	1.9	7.1	260.9	222.5	38.4	22.2	16.2	1	172	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL

CAMB1DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET) TABLE SPLIT	+10 CHIPS	TABLE FEED	WEIGHT (GRAMS DRY) TABLE CONC	M.I. LIGHTS	M. I. CONC CONC. TOTAL	NON MAG	MAG	AU NO. V.G.	CALC PPB	DESCRIPTION CLAST SIZE	% V/S	GR	LS	OT	MATRIX S/U	SD	ST	CY	COLOR SD	CY	CLASS
CB-89																						
33-01	8.3	0.5	7.8	285.9	260.0	25.9	14.6	11.3	6	152	P	60	40	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
33-02	8.6	0.5	8.1	206.3	179.6	26.7	19.2	7.5	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
34-01	9.0	1.7	7.3	267.4	232.6	34.8	17.8	17.0	0	NA	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
34-02	8.9	1.8	7.1	230.9	188.3	42.6	21.5	21.1	3	280	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
34-03	8.9	0.9	8.0	182.1	147.1	35.0	19.6	15.4	1	52	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
34-04	8.8	1.0	7.8	241.5	211.9	29.6	16.3	13.3	1	62	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
34-05	8.8	1.1	7.7	301.2	273.5	27.7	14.1	13.6	3	159	P	80	20	NA	NA	U	Y	Y	Y	GYB	GBY	TILL
34-06	8.0	1.4	6.6	280.5	257.2	23.3	12.7	10.6	6	352	P	70	30	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
34-07	8.7	1.1	7.6	281.4	249.8	31.6	18.0	13.6	5	220	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
34-08	8.9	1.1	7.8	381.9	350.6	31.3	16.4	14.9	1	23	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
34-09	9.2	1.1	8.1	263.7	237.4	26.3	12.9	13.4	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
34-10	9.0	1.1	7.9	279.5	244.2	35.3	19.7	15.6	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
34-11	8.5	0.6	7.9	302.5	271.5	31.0	16.2	14.8	1	236	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
34-12	8.5	0.9	7.6	279.3	246.3	33.0	18.7	14.3	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
-13	9.0	0.9	8.1	300.9	265.5	35.4	21.0	14.4	0	NA	P	60	40	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
34-14	9.1	1.1	8.0	306.5	270.7	35.8	20.3	15.5	0	NA	P	60	40	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
34-15	8.9	1.3	7.6	272.7	238.6	34.1	20.9	13.2	0	NA	P	60	40	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
34-16	8.8	1.2	7.6	226.3	197.0	29.3	16.8	12.5	0	NA	P	60	40	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
34-17	8.4	0.8	7.6	224.6	195.5	29.1	14.7	14.4	1	25	P	60	40	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
34-17	9.0	1.2	7.8	196.7	162.6	34.1	18.9	15.2	1	54	P	60	40	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
34-19	8.8	1.0	7.8	273.0	241.3	31.7	16.6	15.1	1	297	P	70	30	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
34-20	8.9	1.0	7.9	238.7	207.6	31.1	17.3	13.8	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
34-21	9.2	1.2	8.0	298.4	257.3	41.1	23.4	17.7	2	59	P	70	30	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
34-22	9.0	0.8	8.2	197.5	155.5	42.0	24.3	17.7	1	157	P	60	40	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
34-23	9.2	1.5	7.7	192.4	168.4	24.0	13.1	10.9	0	NA	P	65	35	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
34-24	9.0	0.5	8.5	176.8	145.0	31.8	18.4	13.4	1	20	P	70	30	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
34-25	8.8	2.3	6.5	332.9	297.9	35.0	20.5	14.5	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
34-26	8.7	0.5	8.2	337.2	302.2	35.0	17.6	17.4	4	1439	P	70	30	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
34-27	8.9	0.7	8.2	333.5	291.4	42.1	20.0	22.1	5	385	P	70	30	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
34-28	8.8	1.2	7.6	169.1	122.2	46.9	23.3	23.6	6	326	P	40	60	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
34-29	9.0	0.2	8.8	322.2	279.4	42.8	26.5	16.3	4	406	P	80	20	NA	NA	U	Y	Y	Y	GY	B	TILL
34-30	8.9	0.3	8.6	159.6	119.1	40.5	27.7	12.8	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GY	GYB	TILL
34-31	8.9	0.4	8.5	231.8	179.1	52.7	34.0	18.7	3	359	P	80	20	NA	NA	U	Y	Y	Y	GYB	B	TILL
34-32	9.2	2.0	7.2	327.8	281.4	46.4	30.0	16.4	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GYB	B	TILL
34-33	8.7	0.4	8.3	151.5	106.7	44.8	28.0	16.8	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GYB	B	TILL
34-34	8.9	1.0	7.9	305.5	254.0	51.5	33.2	18.3	2	132	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
34-35	8.7	1.8	6.9	337.3	295.4	41.9	29.1	12.8	6	364	P	75	25	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
34-36	9.5	2.6	6.9	154.5	112.7	41.8	30.4	11.4	0	NA	P	75	25	NA	NA	S	C	Y	N	GYB	NA	GRAVEL
35-01	7.6	0.7	6.9	193.4	163.3	30.1	17.8	12.3	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GYB	GB	TILL
02	8.2	0.6	7.6	240.2	204.4	35.8	20.5	15.3	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
35-03	8.5	1.0	7.5	266.6	234.9	31.7	17.6	14.1	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
35-04	8.2	0.5	7.7	318.7	281.8	36.9	20.2	16.7	1	50	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
35-05	7.9	0.7	7.2	348.1	309.4	38.7	22.0	16.7	1	46	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
35-06	8.4	0.8	7.6	245.5	214.4	31.1	17.1	14.0	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
35-07	4.2	0.6	3.6	383.1	344.6	38.5	20.8	17.7	2	45639	P	95	5	NA	NA	S	C	Y	Y	GG	GY	SAND/BDK

CAMB1DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET)			WEIGHT (GRAMS DRY)					AU		DESCRIPTION											CLASS
						M. I. CONC					CLAST					MATRIX						
	TABLE SPLIT	+10 CHIPS	TABLE FEED	TABLE CONC	M.I. LIGHTS	CONC. TOTAL	NON MAG	MAG	NO. V.G.	CALC PPB	SIZE	% V/S	% GR	% LS	% OT	S/U	SD	ST	CY	COLOR SD	COLOR CY	
CB-89																						
36-01	9.1	1.2	7.9	298.4	260.1	38.3	22.6	15.7	1	28	P	70	30	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
37-01	8.0	1.2	6.8	199.0	160.9	38.1	24.4	13.7	3	347	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
37-02	6.4	1.2	5.2	163.3	137.2	26.1	16.3	9.8	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
38-01	7.9	0.7	7.2	308.2	297.9	10.3	6.8	3.5	0	NA	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
38-02	7.8	0.8	7.0	184.1	145.8	38.3	22.8	15.5	5	212	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
38-03	9.5	2.6	6.9	203.0	161.4	41.6	24.6	17.0	1	41	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
38-04	8.5	1.6	6.9	188.6	146.5	42.1	23.2	18.9	0	NA	P	95	5	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
38-05	9.1	1.3	7.8	201.4	158.5	42.9	25.3	17.6	1	25	P	90	10	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
38-06	8.2	0.3	7.9	242.1	207.1	35.0	18.8	16.2	4	141	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
38-07	9.2	1.9	7.3	274.6	225.5	49.1	28.5	20.6	2	196	P	90	10	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
38-08	9.3	2.1	7.2	190.0	146.7	43.3	25.6	17.7	1	8	P	95	5	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
38-09	8.2	1.3	6.9	196.8	161.4	35.4	20.7	14.7	1	18	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
38-10	8.3	1.7	6.6	226.1	189.5	36.6	19.9	16.7	2	701	P	95	5	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
[illegible]-11	8.7	1.0	7.7	250.9	205.6	45.3	23.9	21.4	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
12	8.8	1.2	7.6	215.0	176.6	38.4	22.7	15.7	0	NA	P	95	5	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
38-13	8.5	1.0	7.5	317.0	275.8	41.2	24.5	16.7	5	84	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
38-14	8.6	0.2	8.4	289.1	234.9	54.2	36.7	17.5	4	74	P	95	5	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
39-01	7.0	0.8	6.2	209.6	195.0	14.6	9.7	4.9	0	NA	P	70	20	10	NA	S	M,C	Y	Y	GB	GY	GRAVEL
39-02	7.7	0.4	7.3	206.7	172.0	34.7	21.8	12.9	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
39A-01	7.3	0.2	7.1	205.4	171.4	34.0	21.6	12.4	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
39A-02	7.0	0.4	6.6	187.0	149.5	37.5	25.2	12.3	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
39A-03	8.2	0.4	7.8	293.2	251.3	41.9	26.5	15.4	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
39A-04	8.0	0.3	7.7	304.4	259.6	44.8	30.2	14.6	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
39A-05	8.3	0.3	8.0	283.6	244.6	39.0	26.1	12.9	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
39A-06	8.4	0.4	8.0	235.1	197.6	37.5	24.0	13.5	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
39A-07	8.1	0.2	7.9	287.4	248.5	38.9	25.7	13.2	1	58	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
40-01	8.4	0.6	7.8	379.7	325.2	54.5	31.8	22.7	6	782	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
40-02	7.8	1.8	6.0	270.5	229.7	40.8	23.8	17.0	1	62	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
40-03	8.6	2.0	6.6	370.6	322.0	48.6	29.0	19.6	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
40-04	9.3	1.3	8.0	583.9	416.5	167.4	83.4	84.0	7	386	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
40-05	7.9	2.2	5.7	178.5	134.5	44.0	16.4	27.6	1	39	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
40-06	7.3	0.8	6.5	240.8	200.2	40.6	21.2	19.4	1	100	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
40-07	8.8	1.0	7.8	194.8	156.6	38.2	19.0	19.2	1	20	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
40-08	8.6	1.1	7.5	267.4	237.3	30.1	14.6	15.5	1	44	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
40-09	8.7	1.5	7.2	187.2	145.0	42.2	19.3	22.9	3	49	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
40-10	9.3	3.8	5.5	397.2	358.6	38.6	19.7	18.9	5	108	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
40-11	9.4	2.8	6.6	216.3	182.2	34.1	17.9	16.2	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
40-12	8.7	0.8	7.9	268.7	231.3	37.4	20.8	16.6	2	35	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
[illegible]-13	9.1	2.5	6.6	339.8	296.3	43.5	24.6	18.9	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
14	9.2	1.3	7.9	277.1	235.5	41.6	24.7	16.9	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
40-15	8.9	1.8	7.1	376.7	335.8	40.9	23.9	17.0	1	3	P	85	15	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
40-16	8.8	0.5	8.3	248.8	208.0	40.8	24.2	16.6	1	62	P	90	10	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
40-17	8.7	1.8	6.9	258.3	212.9	45.4	31.2	14.2	2	546	P	75	25	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
40-18	9.3	1.5	7.8	198.8	144.1	54.7	33.6	21.1	7	1251	P	90	10	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
40-19	9.2	1.9	7.3	441.3	388.6	52.7	32.2	20.5	4	90	P	70	30	NA	NA	U	Y	Y	Y	GYB	GYB	TILL

CAMB1DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET)			WEIGHT (GRAMS DRY)					AU		DESCRIPTION											CLASS
						M. I. CONC					CLAST					MATRIX						
	TABLE SPLIT	+10 CHIPS	TABLE FEED	TABLE CONC	M.I. LIGHTS	CONC. TOTAL	NON MAG	MAG	NO. V.G.	CALC PPB	SIZE	% V/S	% GR	% LS	% OT	S/U	SD	ST	CY	COLOR SD	COLOR CY	
CB-89																						
40-20	9.2	1.0	8.2	304.8	228.3	76.5	44.8	31.7	11	1321	P	85	15	NA	NA	U	Y	Y	Y	GY	GY	TILL
41-01	6.2	0.6	5.6	212.8	186.9	25.9	16.7	9.2	2	23	P	85	15	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
42-01	8.4	0.0	8.4	358.3	308.0	50.3	31.9	18.4	8	375	TR	NA	NA	NA	NA	S	F	N	N	GYB	NA	SAND
42-02	7.3	0.9	6.4	226.3	186.2	40.1	27.7	12.4	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
42-03	9.1	1.4	7.7	278.9	202.5	76.4	49.0	27.4	12	1191	P	60	40	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
42-04	9.0	1.1	7.9	407.8	311.9	95.9	69.0	26.9	15	1365	P	95	5	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
43-01	7.3	1.0	6.3	244.3	215.5	28.8	18.0	10.8	0	NA	P	60	20	20	NA	U	Y	Y	Y	B	B	TILL
43-02	9.0	0.8	8.2	242.8	203.8	39.0	24.5	14.5	3	72	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
43-03	8.8	0.4	8.4	289.1	252.3	36.8	22.5	14.3	1	17	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
43-04	8.8	0.4	8.4	330.5	282.3	48.2	29.9	18.3	3	633	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
43-05	8.7	0.5	8.2	296.0	254.2	41.8	26.9	14.9	6	531	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
44-01	9.3	1.8	7.5	202.2	155.5	46.7	27.2	19.5	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
45-01	9.0	1.4	7.6	227.9	191.3	36.6	23.2	13.4	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
45-02	8.8	0.7	8.1	239.8	204.0	35.8	21.4	14.4	1	179	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
03	8.9	0.6	8.3	257.8	225.2	32.6	20.6	12.0	1	103	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
45-04	8.7	1.0	7.7	250.9	213.6	37.3	25.5	11.8	2	18	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
46-01	8.6	0.7	7.9	198.2	158.7	39.5	22.5	17.0	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
46-02	9.2	1.6	7.6	209.5	166.6	42.9	24.5	18.4	1	26	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
46-03	9.1	1.3	7.8	196.1	152.4	43.7	27.0	16.7	6	381	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
46-04	8.4	1.4	7.0	240.2	211.4	28.8	18.2	10.6	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
46-05	8.5	0.9	7.6	206.6	167.1	39.5	26.5	13.0	2	94	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
46-06	9.0	1.0	8.0	165.6	129.6	36.0	19.4	16.6	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
46-07	8.0	0.4	7.6	295.9	252.9	43.0	29.8	13.2	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
47-01	8.2	0.6	7.6	266.3	238.1	28.2	15.3	12.9	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
47-02	8.2	0.9	7.3	265.2	234.3	30.9	16.2	14.7	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
47-03	8.0	0.4	7.6	252.0	213.9	38.1	22.0	16.1	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
47-04	8.2	0.4	7.8	274.7	234.8	39.9	25.6	14.3	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
47-05	4.9	0.2	4.7	214.7	202.4	12.3	8.8	3.5	0	NA	P	95	5	NA	NA	U	Y	Y	Y	GB	GNB	TILL
48-01	8.3	0.0	8.3	331.0	294.0	37.0	23.8	13.2	0	NA	TR	NA	NA	NA	NA	S	F,M	Y	Y	B	B	SAND
48-02	8.5	0.0	8.5	297.9	252.8	45.1	30.7	14.4	0	NA	TR	NA	NA	NA	NA	S	M	Y	Y	B	B	SAND
48-03	8.5	0.0	8.5	235.5	202.4	33.1	21.3	11.8	0	NA	TR	NA	NA	NA	NA	S	M	Y	Y	B	B	SAND
48-04	8.6	0.0	8.6	274.6	236.4	38.2	24.7	13.5	1	8	TR	NA	NA	NA	NA	S	C	Y	Y	B	B	SAND
48-05	8.3	0.3	8.0	172.7	156.2	16.5	9.6	6.9	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
48-06	8.6	0.1	8.5	333.8	302.9	30.9	19.4	11.5	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
48-07	8.6	0.4	8.2	327.1	301.0	26.1	16.8	9.3	0	NA	P	75	25	NA	NA	U	Y	Y	Y	B	B	TILL
48-08	8.5	0.6	7.9	308.3	273.6	34.7	20.8	13.9	2	67	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
48-09	8.5	1.1	7.4	329.8	290.3	39.5	23.1	16.4	4	286	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
48-10	8.7	1.6	7.1	220.7	177.6	43.1	23.2	19.9	4	167	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
48-11	8.7	1.2	7.5	302.5	246.8	55.7	30.6	25.1	1	6	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
12	9.1	1.3	7.8	253.2	202.3	50.9	27.8	23.1	1	36	P	75	25	NA	NA	U	Y	Y	Y	B	B	TILL
48-13	8.5	1.1	7.4	245.2	208.6	36.6	21.2	15.4	0	NA	P,C	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
48-14	9.0	1.3	7.7	220.7	180.3	40.4	24.5	15.9	0	NA	C	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
48-15	8.7	0.3	8.4	285.8	228.6	57.2	37.8	19.4	0	NA	P	80	20	NA	NA	S	M,F	Y	Y	B	GB	SAND
48-16	9.1	0.4	8.7	274.4	223.6	50.8	33.8	17.0	2	190	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
48-17	8.8	0.6	8.2	329.5	276.6	52.9	33.1	19.8	1	19	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL

CAMB1DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET)			WEIGHT (GRAMS DRY)					AU		DESCRIPTION												CLASS
						M. I. CONC					CLAST					MATRIX							
	TABLE SPLIT	+10 CHIPS	TABLE FEED	TABLE CONC	M.I. LIGHTS	CONC. TOTAL	NON MAG	MAG	NO. V.G.	CALC PPB	SIZE	% V/S	% GR	% LS	% OT	S/U	SD	ST	CY	COLOR SD	COLOR CY	
CB-89																						
49-01	8.2	0.3	7.9	216.4	172.0	44.4	30.9	13.5	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
49-02	8.4	0.2	8.2	323.3	279.6	43.7	30.8	12.9	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL

CAMB2DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET)			WEIGHT (GRAMS DRY)					AU		DESCRIPTION											CLASS
						M. I. CONC					CLAST					MATRIX						
	TABLE SPLIT	+10 CHIPS	TABLE FEED	TABLE CONC	M.I. LIGHTS	CONC. TOTAL	NON MAG	MAG	NO. V.G.	CALC PPB	SIZE	%				S/U	SD	ST	CY	COLOR		
												V/S	GR	LS	OT					SD	CY	
CB-89																						
49-03	7.7	0.8	6.9	202.1	167.4	34.7	22.2	12.5	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
49-04	7.8	0.7	7.1	206.0	173.2	32.8	20.4	12.4	2	548	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
49-05	8.1	0.5	7.6	284.0	239.8	44.2	26.9	17.3	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
49-06	8.2	0.6	7.6	249.6	209.2	40.4	23.8	16.6	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
49-07	8.2	0.4	7.8	288.9	250.4	38.5	22.1	16.4	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
49-08	7.2	0.2	7.0	267.2	232.2	35.0	21.3	13.7	3	57	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
49-09	8.0	0.6	7.4	265.1	231.9	33.2	19.5	13.7	3	106	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
49-10	7.2	0.4	6.8	223.3	190.3	33.0	19.8	13.2	2	197	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
49-11	5.9	0.5	5.4	243.8	216.2	27.6	17.4	10.2	0	NA	P	95	5	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
50-01	8.8	0.0	8.8	240.3	206.0	34.3	22.3	12.0	0	NA	TR	NA	NA	NA	NA	S	M	Y	Y	B	B	SAND
50-02	8.0	0.0	8.0	251.0	224.7	26.3	18.3	8.0	0	NA	TR	NA	NA	NA	NA	S	M	Y	Y	B	B	SAND
50-03	8.0	0.2	7.8	246.9	234.2	12.7	8.4	4.3	0	NA	P	70	30	NA	NA	S	C	Y	Y	B	B	SAND
50-04	8.2	0.2	8.0	231.8	211.9	19.9	13.3	6.6	0	NA	P	70	30	NA	NA	S	C	Y	Y	B	B	SAND
50-05	7.7	0.0	7.7	243.7	213.7	30.0	19.6	10.4	0	NA	TR	NA	NA	NA	NA	S	F,M	Y	Y	GB	GB	SAND
50-06	8.4	0.3	8.1	247.9	223.8	24.1	15.8	8.3	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
50-07	8.4	0.5	7.9	220.3	176.7	43.6	26.2	17.4	7	444	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
50-08	7.8	0.7	7.1	146.4	104.7	41.7	26.3	15.4	9	168	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
50-09	7.5	0.4	7.1	172.4	135.8	36.6	23.0	13.6	7	233	C	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
50-10	8.4	0.1	8.3	218.7	175.4	43.3	30.6	12.7	3	23	P	80	20	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
50-11	6.0	0.9	5.1	188.4	165.4	23.0	14.0	9.0	1	27	C	90	10	NA	NA	U	Y	Y	Y	GG	GG	TILL
50-12	7.8	1.2	6.6	271.1	229.2	41.9	33.8	8.1	1	11	C	90	10	NA	NA	U	Y	Y	Y	GG	GG	TILL
50-13	7.4	0.9	6.5	179.0	121.4	57.6	42.8	14.8	2	1	C	90	10	NA	NA	U	Y	Y	Y	GG	GG	TILL
50-14	8.5	0.6	7.9	311.6	262.4	49.2	37.7	11.5	1	1	C	95	5	NA	NA	U	Y	Y	Y	GG	GG	TILL
51-01	7.6	0.0	7.6	268.8	242.9	25.9	15.8	10.1	0	NA	TR	NA	NA	NA	NA	S	F	N	N	B	NA	SAND
51-02	6.2	0.0	6.2	296.5	275.6	20.9	13.7	7.2	0	NA	TR	NA	NA	NA	NA	S	M,C	N	N	B	NA	SAND
51-03	7.9	2.5	5.4	110.2	100.5	9.7	6.2	3.5	0	NA	P	60	40	NA	NA	S	C	N	N	GYB	NA	GRAVEL
51-04	7.2	3.3	3.9	277.7	263.6	14.1	8.3	5.8	0	NA	P	60	40	NA	NA	S	C	N	N	GYB	NA	GRAVEL
52-01	8.0	0.9	7.1	0.0	239.1	0.0	26.2	15.1	2	63	P	80	20	NA	NA	U	Y	Y	Y	B	GB	TILL
52-02	7.6	1.1	6.5	0.0	146.3	0.0	21.2	13.6	4	272	P	80	20	NA	NA	U	Y	Y	Y	B	GB	TILL
52-03	7.3	0.6	6.7	0.0	149.5	0.0	22.1	13.6	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
52-04	7.8	0.7	7.1	0.0	159.0	0.0	24.0	15.2	3	81	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
52-05	7.7	0.8	6.9	0.0	151.6	0.0	23.3	15.0	1	212	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
52-06	7.4	0.8	6.6	0.0	176.3	0.0	22.0	14.9	1	96	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
53-01	6.3	0.1	6.2	228.5	191.9	36.6	21.7	14.9	1	9	P	95	5	NA	NA	U	Y	Y	Y	B	B	TILL
53-02	8.3	0.7	7.6	361.1	281.1	80.0	30.6	49.4	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
53-03	7.6	0.8	6.8	312.5	258.1	54.4	21.1	33.3	0	NA	P	98	2	NA	NA	U	Y	Y	Y	GY	GY	TILL
53-04	7.8	0.4	7.4	225.4	186.4	39.0	18.5	20.5	0	NA	P	99	1	NA	NA	U	Y	Y	Y	GB	GB	TILL
53-05	7.8	0.3	7.5	242.1	197.8	44.3	22.7	21.6	0	NA	P	99	1	NA	NA	U	Y	Y	Y	GB	GB	TILL
53-06	7.4	0.3	7.1	237.1	206.4	30.7	17.4	13.3	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
53-07	6.7	0.4	6.3	231.4	190.6	40.8	28.3	12.5	1	23	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
54-01	7.3	0.9	6.4	206.0	170.3	35.7	21.5	14.2	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
54-02	7.6	0.8	6.8	173.7	140.7	33.0	19.8	13.2	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
54-03	7.3	0.6	6.7	228.5	194.9	33.6	20.7	12.9	1	72	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
54-04	7.3	0.8	6.5	185.3	151.2	34.1	21.5	12.6	4	172	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
54-05	7.1	0.2	6.9	252.0	225.2	26.8	16.9	9.9	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL

CAMB2DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET) TABLE SPLIT	+10 CHIPS	TABLE FEED	WEIGHT (GRAMS DRY) TABLE CONC	M.I. LIGHTS	M. I. CONC CONC. TOTAL	NON MAG	MAG	AU NO. V.G.	CALC PPB	DESCRIPTION CLAST SIZE	% V/S	GR	LS	OT	MATRIX S/U	SD	ST	CY	COLOR SD	COLOR CY	CLASS
CB-89																						
54-06	6.5	0.4	6.1	256.5	221.0	35.5	21.7	13.8	1	30	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
54-07	7.2	0.4	6.8	265.6	231.7	33.9	19.3	14.6	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
54-08	6.6	0.4	6.2	240.5	203.1	37.4	27.1	10.3	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
54-09	6.6	0.3	6.3	230.5	187.2	43.3	26.4	16.9	1	57	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
54-10	7.6	0.4	7.2	317.4	276.8	40.6	25.9	14.7	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
54-11	7.5	0.6	6.9	267.2	234.8	32.4	20.0	12.4	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
54-12	7.4	0.2	7.2	197.1	164.7	32.4	21.9	10.5	1	353	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
54-13	8.0	0.4	7.6	213.6	177.5	36.1	22.2	13.9	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
54-14	7.4	0.6	6.8	184.3	147.7	36.6	22.0	14.6	3	842	P	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
54-15	7.4	0.1	7.3	205.2	163.7	41.5	28.6	12.9	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GYB	GY	TILL
54-16	6.6	0.6	6.0	255.0	208.1	46.9	31.1	15.8	6	200	P	99	1	NA	NA	U	Y	Y	Y	GY	GY	TILL
56-01	8.5	0.9	7.6	281.3	255.3	26.0	14.1	11.9	1	72	P	95	5	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
56-02	8.0	0.4	7.6	137.3	93.3	44.0	25.3	18.7	2	128	P	95	5	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
56-03	7.6	0.5	7.1	263.9	214.1	49.8	25.4	24.4	7	179	P	95	5	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
56-04	7.9	0.3	7.6	364.5	327.2	37.3	22.0	15.3	1	96	P	95	5	NA	NA	U	Y	Y	Y	B	GYB	TILL
56-05	8.0	0.1	7.9	289.0	254.1	34.9	18.3	16.6	1	116	P	80	20	NA	NA	U	Y	Y	Y	B	GYB	TILL
56-06	8.1	0.5	7.6	237.5	208.8	28.7	19.0	9.7	0	NA	P	99	1	NA	NA	U	Y	Y	Y	B	GYB	TILL
56-07	7.9	0.5	7.4	206.5	159.8	46.7	26.3	20.4	1	360	P	99	1	NA	NA	U	Y	Y	Y	B	GYB	TILL
56-08	8.0	0.2	7.8	300.6	252.5	48.1	28.9	19.2	1	100	P	99	1	NA	NA	U	Y	Y	Y	B	GYB	TILL
56-09	7.4	0.2	7.2	337.2	290.0	47.2	29.4	17.8	1	72	P	99	1	NA	NA	U	Y	Y	Y	B	GYB	TILL
56-10	7.6	0.7	6.9	228.9	199.7	29.2	16.6	12.6	0	NA	P	95	5	NA	NA	U	Y	Y	Y	B	GYB	TILL
56-11	8.2	0.2	8.0	342.8	297.8	45.0	30.9	14.1	0	NA	P	99	1	NA	NA	U	Y	Y	Y	B	GYB	TILL
56-12	8.7	0.4	8.3	209.6	171.3	38.3	25.1	13.2	2	23	P	100	0	NA	NA	U	Y	Y	Y	B	GYB	TILL
57-01	5.6	0.3	5.3	275.0	247.8	27.2	17.6	9.6	0	NA	P	95	5	NA	NA	U	Y	Y	Y	B	B	TILL
57-02	5.4	0.3	5.1	226.9	199.0	27.9	16.9	11.0	0	NA	P	95	5	NA	NA	U	Y	Y	Y	B	B	TILL
57-03	6.9	0.3	6.6	199.4	174.6	24.8	13.6	11.2	0	NA	P	95	5	NA	NA	U	Y	Y	Y	B	B	TILL
57-04	7.5	0.4	7.1	249.9	223.6	26.3	14.8	11.5	0	NA	P	95	5	NA	NA	U	Y	Y	Y	B	B	TILL
57-05	8.0	0.2	7.8	236.6	190.3	46.3	24.8	21.5	0	NA	P	95	5	NA	NA	U	Y	Y	Y	B	B	TILL
57-06	6.9	0.3	6.6	224.6	194.4	30.2	18.2	12.0	0	NA	P	98	2	NA	NA	U	Y	Y	Y	GB	GB	TILL
57-07	8.4	0.8	7.6	303.6	253.9	49.7	33.1	16.6	1	149	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
57-08	5.0	0.6	4.4	131.3	105.1	26.2	17.0	9.2	3	108	P	95	5	NA	NA	U	Y	Y	Y	GY	GY	TILL
58-01	5.8	0.5	5.3	268.2	253.6	14.6	9.7	4.9	0	NA	C	95	5	NA	NA	U	Y	Y	Y	GY	GY	TILL
59-01	8.3	0.4	7.9	167.4	126.3	41.1	25.6	15.5	1	992	C	50	50	NA	NA	U	Y	Y	Y	GB	GB	TILL
59-02	8.6	0.2	8.4	190.9	154.4	36.5	21.2	15.3	1	622	P	50	50	NA	NA	U	Y	Y	Y	GB	GB	TILL
59-03	7.6	0.4	7.2	163.8	131.8	32.0	19.4	12.6	1	52	C	60	40	NA	NA	U	Y	Y	Y	GB	GB	TILL
60-01	8.2	0.8	7.4	216.1	187.1	29.0	18.6	10.4	3	94	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
61-01	3.2	0.2	3.0	125.8	112.6	13.2	8.6	4.6	1	174	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
61-02	8.5	0.5	8.0	293.5	271.0	22.5	13.2	9.3	1	28	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
62-01	7.7	1.0	6.7	264.2	249.6	14.6	11.1	3.5	0	NA	C	80	10	10	NA	U	Y	Y	Y	GYB	GYB	TILL
63-01	7.8	0.8	7.0	264.8	230.4	34.4	19.6	14.8	0	NA	P	60	40	NA	NA	U	Y	Y	Y	GB	GB	TILL
63-02	7.9	0.5	7.4	379.0	343.2	35.8	21.3	14.5	0	NA	P	60	40	NA	NA	U	Y	Y	Y	GY	GY	TILL
63-03	5.3	0.4	4.9	324.2	296.7	27.5	17.0	10.5	0	NA	P	40	60	NA	NA	U	Y	Y	Y	GB	GB	TILL
63-04	8.2	0.5	7.7	246.9	210.3	36.6	20.7	15.9	0	NA	P	40	60	NA	NA	U	Y	Y	Y	GB	GB	TILL
63-05	7.6	0.7	6.9	354.4	319.7	34.7	19.9	14.8	0	NA	P	60	40	NA	NA	U	Y	Y	Y	GB	GB	TILL
63-06	7.7	0.6	7.1	267.7	233.6	34.1	18.9	15.2	0	NA	P	50	50	NA	NA	U	Y	Y	Y	GB	GB	TILL

CAMB2DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET) TABLE SPLIT	+10 CHIPS	TABLE FEED	WEIGHT (GRAMS DRY) TABLE CONC	M.I. LIGHTS	M. I. CONC CONC. TOTAL	NON MAG	MAG	AU NO. V.G.	CALC PPB	DESCRIPTION CLAST SIZE	% V/S	GR	LS	OT	MATRIX S/U	SD	ST	CY	COLOR SD	CY	CLASS
CB-89																						
63-07	6.2	0.7	5.5	358.5	323.2	35.3	16.7	18.6	1	593	P	60	40	NA	NA	U	Y	Y	Y	GB	GB	TILL
63-08	7.9	0.5	7.4	408.9	366.8	42.1	22.2	19.9	0	NA	P	50	50	NA	NA	U	Y	Y	Y	GB	GB	TILL
63-09	8.3	0.4	7.9	375.3	338.0	37.3	19.3	18.0	1	78	P	60	40	NA	NA	U	Y	Y	Y	GB	GB	TILL
63-10	5.8	0.3	5.5	331.2	301.3	29.9	16.1	13.8	0	NA	P	60	40	NA	NA	U	Y	Y	Y	GB	GB	TILL
64-01	6.2	0.4	5.8	398.4	382.6	15.8	10.5	5.3	1	276	P	60	40	TR	NA	U	Y	Y	Y	GYB	GYB	TILL
64-02	5.6	0.6	5.0	349.2	309.5	39.7	34.3	5.4	1	109	C	90	10	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
65-01	7.5	1.0	6.5	212.0	180.9	31.1	17.3	13.8	3	317	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
65-02	4.5	0.3	4.2	246.3	201.4	44.9	16.3	28.6	0	NA	P	50	50	NA	NA	U	Y	Y	Y	GB	GB	TILL
65-03	7.4	1.0	6.4	384.1	314.4	69.7	25.8	43.9	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
65-04	7.2	0.5	6.7	379.6	338.2	41.4	25.7	15.7	0	NA	P	40	60	NA	NA	U	Y	Y	Y	GB	GB	TILL
66-01	7.8	0.6	7.2	226.1	200.5	25.6	13.9	11.7	1	27	C	95	5	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
66-02	8.4	0.8	7.6	262.6	224.3	38.3	21.4	16.9	0	NA	C	95	5	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
66-03	8.5	0.9	7.6	269.3	234.4	34.9	19.6	15.3	0	NA	C	90	10	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
66-04	8.6	1.3	7.3	409.8	382.4	27.4	13.8	13.6	0	NA	C	90	10	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
66-05	8.8	1.0	7.8	269.8	232.2	37.6	21.2	16.4	1	100	P	60	40	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
66-06	8.9	0.8	8.1	262.6	230.9	31.7	15.8	15.9	4	594	C	70	30	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
66-07	9.0	1.1	7.9	241.8	204.3	37.5	21.4	16.1	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
66-08	8.9	0.8	8.1	307.3	267.9	39.4	21.9	17.5	1	175	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
66-09	8.4	0.5	7.9	238.4	201.0	37.4	21.0	16.4	0	NA	P	50	50	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
66-10	8.3	0.9	7.4	156.3	115.6	40.7	24.0	16.7	0	NA	C	60	40	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
66-11	6.6	0.3	6.3	146.9	120.2	26.7	15.9	10.8	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
66-12	9.2	0.6	8.6	227.2	196.0	31.2	18.3	12.9	0	NA	C	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
66-13	9.1	1.0	8.1	243.0	210.0	33.0	19.1	13.9	0	NA	C	90	10	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
66-14	8.5	1.7	6.8	180.4	145.7	34.7	19.7	15.0	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
66-15	8.3	0.5	7.8	169.3	132.1	37.2	21.3	15.9	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
66-16	8.8	0.5	8.3	385.0	339.0	46.0	28.3	17.7	0	NA	P	60	40	NA	NA	U	Y	Y	Y	GBY	GBY	TILL
66-17	9.4	0.7	8.7	395.0	348.8	46.2	26.6	19.6	0	NA	P	60	40	NA	NA	U	Y	Y	Y	GBY	GBY	TILL
66-18	8.7	0.6	8.1	309.5	270.8	38.7	23.1	15.6	4	340	P	60	40	NA	NA	U	Y	Y	Y	GBY	GBY	TILL
66-19	8.6	0.8	7.8	265.4	228.0	37.4	22.0	15.4	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GBY	GBY	TILL
66-20	8.7	0.7	8.0	295.8	264.2	31.6	16.8	14.8	5	575	P	50	20	NA	NA	U	Y	Y	Y	GBY	GBY	TILL
66-21	8.9	1.0	7.9	309.0	284.9	24.1	11.8	12.3	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GBY	GBY	TILL
66-22	9.0	0.5	8.5	328.9	291.3	37.6	20.7	16.9	2	98	P	70	30	NA	NA	U	Y	Y	Y	GBY	GBY	TILL
66-23	8.7	0.6	8.1	383.8	345.6	38.2	22.0	16.2	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GBY	GBY	TILL
66-24	9.1	0.5	8.6	299.4	262.5	36.9	20.5	16.4	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GBY	GBY	TILL
66-25	8.8	1.0	7.8	216.1	186.8	29.3	15.3	14.0	2	54	P	60	40	NA	NA	U	Y	Y	Y	GBY	GBY	TILL
66-26	8.9	0.5	8.4	283.7	250.0	33.7	19.0	14.7	2	131	P	50	50	NA	NA	U	Y	Y	Y	GBY	GBY	TILL
66-27	8.8	0.5	8.3	357.5	321.3	36.2	21.3	14.9	2	10	P	80	20	NA	NA	U	Y	Y	Y	GBY	GBY	TILL
66-28	8.9	0.4	8.5	335.3	276.7	58.6	44.2	14.4	2	42	P	90	10	NA	NA	U	Y	Y	Y	GBY	GBY	TILL
66-29	9.2	1.0	8.2	287.3	248.7	38.6	24.0	14.6	4	406	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
66-30	8.8	0.4	8.4	251.1	223.2	27.9	17.5	10.4	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
66-31	8.8	1.0	7.8	231.8	207.7	24.1	14.2	9.9	3	3076	P	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
66-32	8.6	0.1	8.5	320.4	290.2	30.2	20.0	10.2	2	28	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
66-33	9.3	0.6	8.7	292.8	238.6	54.2	32.6	21.6	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
66-34	8.9	0.7	8.2	302.6	250.0	52.6	34.2	18.4	4	286	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
66-35	9.0	0.6	8.4	279.8	225.3	54.5	28.3	26.2	7	17443	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL

CAMB2DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET) TABLE SPLIT	+10 CHIPS	TABLE FEED	WEIGHT (GRAMS DRY) TABLE CONC	M.I. LIGHTS	M. I. CONC CONC. TOTAL	NON MAG	MAG	AU NO. V.G.	CALC PPB	DESCRIPTION CLAST SIZE	% V/S	GR	LS	OT	MATRIX S/U	SD	ST	CY	COLOR SD	CY	CLASS
CB-89																						
66-36	9.1	0.5	8.6	300.6	229.8	70.8	45.8	25.0	3	16	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
66-37	8.0	0.6	7.4	260.0	206.8	53.2	34.2	19.0	3	5	P	90	10	NA	NA	U	Y	Y	Y	GN	GN	TILL
67-01	6.5	1.0	5.5	239.8	207.9	31.9	18.8	13.1	0	NA	P	60	40	NA	NA	U	Y	Y	Y	GB	GB	TILL
67-02	7.6	0.6	7.0	212.1	173.4	38.7	20.7	18.0	5	86	P	60	40	NA	NA	U	Y	Y	Y	GB	GB	TILL
67-03	7.8	0.8	7.0	250.2	218.9	31.3	15.6	15.7	2	431	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
67-04	7.7	0.2	7.5	284.1	249.8	34.3	18.8	15.5	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
67-05	6.4	0.5	5.9	254.5	229.4	25.1	13.6	11.5	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	GB	TILL
67-06	7.2	0.5	6.7	291.3	256.7	34.6	19.1	15.5	0	NA	P	60	40	NA	NA	U	Y	Y	Y	B	GB	TILL
67-07	6.5	0.3	6.2	180.3	156.9	23.4	13.1	10.3	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	GB	TILL
67-08	5.8	0.3	5.5	197.3	172.6	24.7	14.3	10.4	0	NA	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
67-09	8.1	0.6	7.5	242.4	208.1	34.3	18.4	15.9	1	421	P	85	15	NA	NA	U	Y	Y	Y	B	GB	TILL
67-10	6.3	0.3	6.0	190.6	159.3	31.3	16.4	14.9	0	NA	P	85	15	NA	NA	U	Y	Y	Y	B	GB	TILL
67-11	8.1	0.8	7.3	286.8	250.7	36.1	20.3	15.8	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
67-12	1.8	0.2	1.6	66.4	58.2	8.2	5.7	2.5	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
68-01	8.6	0.6	8.0	240.1	197.6	42.5	24.1	18.4	1	42	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
68-02	8.8	0.9	7.9	237.3	198.8	38.5	20.7	17.8	6	2729	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
68-03	8.8	1.4	7.4	267.7	225.4	42.3	24.7	17.6	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
68-04	8.8	1.0	7.8	307.5	259.6	47.9	27.6	20.3	1	37	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
68-05	8.6	0.4	8.2	223.7	184.0	39.7	22.0	17.7	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
68-06	8.3	0.9	7.4	214.4	178.4	36.0	20.1	15.9	1	75	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
68-07	8.6	1.0	7.6	200.5	162.9	37.6	19.9	17.7	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
68-08	7.6	0.8	6.8	179.7	141.3	38.4	22.0	16.4	2	63	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
68-09	8.7	0.9	7.8	268.7	217.8	50.9	31.1	19.8	5	460	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
68-10	8.9	0.6	8.3	218.6	182.6	36.0	23.8	12.2	1	16	P	70	30	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
68-11	8.8	0.6	8.2	201.6	163.0	38.6	21.4	17.2	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
68-12	7.6	0.7	6.9	191.5	156.4	35.1	21.1	14.0	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
68-13	8.5	0.8	7.7	229.9	181.6	48.3	26.9	21.4	1	38	P	80	20	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
68-14	7.9	0.8	7.1	187.6	144.0	43.6	26.8	16.8	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
68-15	8.8	0.9	7.9	220.1	164.1	56.0	27.5	28.5	2	60	P	70	30	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
68-16	8.8	0.4	8.4	245.5	186.6	58.9	32.4	26.5	4	287	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
68-17	8.7	0.4	8.3	265.2	209.1	56.1	26.5	29.6	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
68-18	8.3	0.8	7.5	152.9	113.9	39.0	21.6	17.4	1	98	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
68-19	8.7	0.7	8.0	261.4	186.9	74.5	24.8	49.7	6	125	P	90	10	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
68-20	8.5	0.6	7.9	251.5	183.4	68.1	44.6	23.5	2	111	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
69-01,02	7.4	0.5	6.9	372.8	295.6	77.2	40.1	37.1	6	377	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
69-03	7.3	0.6	6.7	213.7	180.4	33.3	18.1	15.2	1	11	P	70	30	NA	NA	U	Y	Y	Y	B	GB	TILL
69-04	8.2	0.5	7.7	182.9	145.7	37.2	21.8	15.4	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GY	GY	TILL
69-05	7.4	0.4	7.0	175.3	143.2	32.1	16.8	15.3	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
69-06	7.6	0.4	7.2	232.3	200.5	31.8	17.5	14.3	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
69-07	7.5	0.4	7.1	211.9	187.3	24.6	13.6	11.0	1	14	P	98	2	NA	NA	U	Y	Y	Y	B	GB	TILL
69-08	8.0	0.6	7.4	391.5	335.7	55.8	32.4	23.4	1	3	P	99	1	NA	NA	U	Y	Y	Y	GB	GB	TILL
69-09	8.3	0.6	7.7	276.8	244.2	32.6	18.6	14.0	0	NA	BL	99	1	NA	NA	U	Y	Y	Y	GY	GY	TILL&BLD
69-10	2.9	0.3	2.6	90.9	77.4	13.5	10.3	3.2	0	NA	P	100	TR	B	NA	U	Y	Y	Y	GY	GY	TILL
69-11	7.0	0.6	6.4	136.7	98.2	38.5	19.7	18.8	0	NA	P	99	1	NA	NA	U	Y	Y	Y	GY	GY	TILL
69-12	7.9	0.8	7.1	159.6	102.0	57.6	24.2	33.4	0	NA	P	99	1	NA	NA	U	Y	Y	Y	GY	GY	TILL

CAMB2DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET) TABLE SPLIT	+10 CHIPS	TABLE FEED	WEIGHT (GRAMS DRY) TABLE CONC	M.I. LIGHTS	M. I. CONC CONC. TOTAL	NON MAG	MAG	AU NO. V.G.	CALC PPB	DESCRIPTION CLAST SIZE	% V/S	GR	LS	OT	MATRIX S/U	SD	ST	CY	COLOR SD	CY	CLASS
CB-89																						
69-13	7.8	0.9	6.9	153.8	111.1	42.7	22.7	20.0	1	169	P	70	30	NA	NA	U	Y	Y	Y	GY	GY	TILL
69-14	7.2	0.9	6.3	192.9	156.9	36.0	18.4	17.6	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GY	GY	TILL
69-15	8.7	0.4	8.3	217.8	179.0	38.8	20.0	18.8	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GY	GY	TILL
69-16	7.3	0.6	6.7	220.6	164.3	56.3	31.3	25.0	3	18	P	75	25	NA	NA	U	Y	Y	Y	GYN	GN	TILL
69-17	5.8	1.1	4.7	122.1	89.4	32.7	25.4	7.3	3	8	P	98	2	NA	NA	U	Y	Y	Y	GY	GN	TILL
70-01	6.7	0.4	6.3	165.2	135.0	30.2	17.3	12.9	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
70-02	7.9	0.4	7.5	251.9	218.9	33.0	18.1	14.9	1	21	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
70-03	8.5	0.6	7.9	191.6	150.3	41.3	26.6	14.7	5	123	P	80	20	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
70-04	8.1	0.6	7.5	193.7	149.7	44.0	23.7	20.3	1	90	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
70-05	8.0	0.3	7.7	217.1	182.5	34.6	18.5	16.1	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
70-06	8.5	0.5	8.0	247.8	198.7	49.1	22.8	26.3	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
70-07	6.5	0.0	6.5	204.0	168.9	35.1	22.1	13.0	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	B	B	TILL
70-08	8.0	0.3	7.7	231.9	198.3	33.6	18.6	15.0	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
70-09	8.9	0.5	8.4	211.6	180.6	31.0	17.0	14.0	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
70-10	7.8	0.6	7.2	200.3	173.2	27.1	13.3	13.8	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GY	GY	TILL
71-01	7.3	0.3	7.0	166.7	125.8	40.9	25.2	15.7	0	NA	P	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
71-02	8.4	0.7	7.7	201.9	152.9	49.0	29.6	19.4	0	NA	P	65	35	NA	NA	U	Y	Y	Y	B	B	TILL
71-03	7.9	0.3	7.6	203.4	160.8	42.6	23.2	19.4	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
71-04	8.4	0.5	7.9	214.2	168.6	45.6	22.1	23.5	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
71-05	8.5	0.4	8.1	207.5	161.1	46.4	24.4	22.0	0	NA	P	50	50	NA	NA	U	Y	Y	Y	B	B	TILL
71-06	7.7	0.4	7.3	240.3	203.8	36.5	22.6	13.9	1	94	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
71-07	8.3	0.2	8.1	231.3	192.2	39.1	23.0	16.1	1	16	P	85	15	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
71-08	8.2	0.1	8.1	160.0	121.7	38.3	22.3	16.0	1	67	P	50	50	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
71-09	4.3	0.0	4.3	117.6	100.3	17.3	11.0	6.3	3	202	TR	NA	NA	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
71-10	8.6	0.2	8.4	288.9	239.0	49.9	31.0	18.9	0	NA	P	95	5	NA	NA	U	Y	Y	Y	GY	GB	TILL
71-11	8.4	0.6	7.8	300.3	249.1	51.2	32.5	18.7	1	31	P	95	5	NA	NA	U	Y	Y	Y	GY	GY	TILL
72-01	8.9	1.0	7.9	213.7	188.9	24.8	12.6	12.2	2	1125	P	90	10	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
72-02	8.4	1.0	7.4	190.0	160.1	29.9	15.5	14.4	0	NA	P	60	40	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
72-03	8.5	0.7	7.8	271.1	245.5	25.6	13.4	12.2	4	124	P	60	40	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
72-04	7.8	0.1	7.7	220.7	193.4	27.3	15.3	12.0	2	54	P	60	40	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
72-05	8.8	0.7	8.1	235.6	205.7	29.9	15.8	14.1	1	12	P	65	35	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
72-06	6.8	0.5	6.3	171.6	150.1	21.5	11.4	10.1	0	NA	P	50	50	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
72-07	8.9	0.8	8.1	239.4	211.8	27.6	14.9	12.7	3	216	P	60	40	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
72-08	8.2	1.0	7.2	286.9	245.7	41.2	20.5	20.7	1	18	P	55	45	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
72-09	9.3	0.9	8.4	305.9	269.1	36.8	19.9	16.9	6	221	P	70	30	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
72-10	7.8	0.8	7.0	284.8	261.3	23.5	12.6	10.9	2	82	P	70	30	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
72-11	8.7	0.7	8.0	304.9	277.2	27.7	14.9	12.8	10	1060	P	85	15	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
72-12	7.8	0.7	7.1	283.9	246.2	37.7	24.0	13.7	7	89	P	90	10	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
72-13	8.9	0.6	8.3	434.5	395.2	39.3	21.6	17.7	1	17	P	70	30	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
72-14	8.9	0.5	8.4	292.4	261.8	30.6	16.6	14.0	2	122	P	70	30	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
72-15	8.1	0.5	7.6	291.4	264.4	27.0	14.5	12.5	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
72-16	7.5	0.8	6.7	193.5	167.5	26.0	16.4	9.6	3	33	P	70	30	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
73-01	8.9	0.4	8.5	276.0	221.9	54.1	23.8	30.3	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
73-02	8.8	0.6	8.2	366.5	308.1	58.4	39.3	19.1	1	9	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
73-03	8.7	0.6	8.1	400.3	361.1	39.2	22.3	16.9	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL

CAMB2DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET)			WEIGHT (GRAMS DRY)					AU		DESCRIPTION					MATRIX						CLASS
						M. I. CONC					CLAST											
	TABLE SPLIT	+10 CHIPS	TABLE FEED	TABLE CONC	M.I. LIGHTS	CONC. TOTAL	NON MAG	MAG	NO. V.G.	CALC PPB	SIZE	% V/S	GR	LS	OT	S/U	SD	ST	CY	COLOR SD	COLOR CY	
CB-89																						
73-04	8.3	0.7	7.6	198.2	164.9	33.3	19.8	13.5	0	NA	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
73-05	8.1	0.9	7.2	213.2	176.7	36.5	22.4	14.1	1	29	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
73-06	6.0	0.2	5.8	185.0	156.7	28.3	16.8	11.5	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GN	GN	TILL
74-01	9.8	1.4	8.4	221.0	189.6	31.4	13.7	17.7	1	155	P	70	30	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
74-02	9.1	2.0	7.1	249.2	215.9	33.3	19.1	14.2	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
74-03	8.7	1.0	7.7	198.6	164.0	34.6	19.1	15.5	1	111	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
74-04	9.3	0.2	9.1	316.5	269.9	46.6	22.5	24.1	1	9	P	90	10	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
74-05	9.0	1.5	7.5	213.7	175.9	37.8	17.8	20.0	0	NA	P	85	15	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
74-06	8.9	0.9	8.0	256.4	213.2	43.2	24.8	18.4	1	26	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
74-07	9.1	1.4	7.7	192.2	157.5	34.7	19.1	15.6	1	200	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
74-08	7.7	0.6	7.1	201.0	147.8	53.2	21.7	31.5	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
74-09	8.5	1.1	7.4	158.9	129.4	29.5	16.6	12.9	0	NA	P	60	40	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
74-10	9.1	0.6	8.5	161.8	136.5	25.3	14.8	10.5	0	NA	P	60	40	NA	B	U	Y	Y	Y	GYB	GYB	TILL
74-11	8.8	0.6	8.2	166.0	137.0	29.0	16.1	12.9	0	NA	P	60	40	NA	B	U	Y	Y	Y	GYB	GYB	TILL
74-12	8.9	1.0	7.9	121.0	90.3	30.7	17.2	13.5	1	663	P	60	40	NA	B	U	Y	Y	Y	GYB	GYB	TILL
74-13	8.8	1.0	7.8	145.8	110.6	35.2	20.5	14.7	1	141	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
74-14	8.6	0.5	8.1	131.5	94.8	36.7	22.9	13.8	0	NA	P	95	5	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
74-15	9.2	0.8	8.4	235.9	190.1	45.8	22.9	22.9	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
74-16	9.4	1.5	7.9	302.0	260.7	41.3	23.1	18.2	6	152	P	95	5	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
74-17	9.0	0.6	8.4	257.6	215.2	42.4	24.7	17.7	1	1	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
74-18	9.4	1.4	8.0	232.3	191.3	41.0	24.4	16.6	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
74-19	7.5	1.0	6.5	235.2	203.1	32.1	19.8	12.3	1	4	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
74-20	6.7	1.5	5.2	187.5	157.1	30.4	17.6	12.8	0	NA	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
74-21	9.1	0.8	8.3	355.4	317.0	38.4	21.4	17.0	5	100	P	95	5	NA	B	U	Y	Y	Y	GB	GB	TILL
74-22	9.2	1.0	8.2	260.1	225.8	34.3	18.8	15.5	2	58	P	80	20	NA	B	U	Y	Y	Y	GB	GB	TILL
74-23	7.3	0.3	7.0	295.4	258.3	37.1	21.8	15.3	3	42	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
74-24	7.7	0.8	6.9	293.3	259.2	34.1	19.4	14.7	1	4	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
74-25	6.3	0.7	7.6	308.3	278.8	29.5	16.9	12.6	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
74-26	8.1	0.5	7.6	308.5	271.1	37.4	25.7	11.7	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GY	GY	TILL
74-27	8.2	0.7	7.5	250.3	227.3	23.0	13.0	10.0	2	64	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
74-28	8.2	0.5	7.7	294.8	244.4	50.4	36.0	14.4	2	28	P	95	5	NA	NA	U	Y	Y	Y	GY	GY	TILL
74-29	7.7	0.8	6.9	269.6	168.9	100.7	91.4	9.3	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GY	GY	TILL
75-01	8.8	0.4	8.4	344.7	294.6	50.1	27.1	23.0	1	14	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
75-02	8.5	0.6	7.9	252.9	203.0	49.9	29.5	20.4	1	51	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
75-03	8.8	0.6	8.2	287.4	242.3	45.1	27.2	17.9	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
75-04	9.4	0.6	8.8	270.0	215.2	54.8	25.3	29.5	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
75-05	9.1	0.3	8.8	224.8	180.2	44.6	27.8	16.8	1	278	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
75-06	9.1	0.6	8.5	211.0	170.8	40.2	25.1	15.1	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
75-07	7.8	1.1	6.7	271.6	226.0	45.6	16.9	28.7	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
76-01	8.7	0.5	8.2	202.0	169.1	32.9	18.3	14.6	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
76-02	8.0	0.8	7.2	136.3	104.7	31.6	17.4	14.2	1	5	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
76-03	8.9	1.2	7.7	191.9	155.3	36.6	19.6	17.0	5	75	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
76-04	8.8	1.4	7.4	221.8	185.1	36.7	21.3	15.4	3	51	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
76-05	8.5	1.1	7.4	204.8	171.1	33.7	17.6	16.1	7	119	P	90	10	NA	NA	U	Y	Y	Y	B	GYB	TILL
76-06	8.8	0.5	8.3	232.3	200.3	32.0	17.5	14.5	7	134	P	90	10	NA	NA	U	Y	Y	Y	B	GYB	TILL

CAMB2DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET) TABLE SPLIT	+10 CHIPS	TABLE FEED	WEIGHT (GRAMS DRY) TABLE CONC	M.I. LIGHTS	M. I. CONC CONC. TOTAL	NON MAG	MAG	AU NO. V.G.	CALC PPB	DESCRIPTION CLAST SIZE	% V/S	GR	LS	OT	MATRIX S/U	SD	ST	CY	COLOR SD	CY	CLASS
CB-89																						
76-07	8.6	0.8	7.8	148.3	110.7	37.6	22.8	14.8	0	NA	P	85	15	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
76-08	8.3	0.4	7.9	157.2	120.7	36.5	21.5	15.0	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
76-09	8.6	0.3	8.3	183.9	131.0	52.9	29.8	23.1	0	NA	P	85	15	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
76-10	9.1	0.5	8.6	173.6	137.4	36.2	21.5	14.7	0	NA	P	90	5	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
76-11	8.7	2.4	6.3	195.3	154.7	40.6	20.8	19.8	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
76-12	8.1	2.1	6.0	292.3	246.7	45.6	28.2	17.4	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
76-13	8.5	0.2	8.3	187.7	153.6	34.1	18.3	15.8	0	NA	P	70	30	NA	NA	S	F	Y	N	B	NA	SAND
76-14	8.4	0.0	8.4	126.2	97.7	28.5	17.8	10.7	0	NA	TR	NA	NA	NA	NA	S	F	Y	N	B	NA	SAND
76-15	8.6	1.6	7.0	192.9	154.2	38.7	20.7	18.0	0	NA	P	65	35	NA	NA	U	Y	Y	Y	B	B	TILL
76-16	8.2	0.0	8.2	217.0	186.1	30.9	16.5	14.4	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
76-17	8.1	0.4	7.7	187.6	146.2	41.4	24.1	17.3	0	NA	P	35	65	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
76-18	7.9	0.4	7.5	189.0	161.9	27.1	14.6	12.5	0	NA	P	35	65	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
76-19	8.6	0.7	7.9	275.0	246.4	28.6	15.9	12.7	0	NA	P	60	40	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
76-20	8.5	0.8	7.7	233.8	197.0	36.8	20.6	16.2	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
76-21	8.7	0.4	8.3	141.3	100.9	40.4	22.6	17.8	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
76-22	8.7	1.0	7.7	218.7	177.3	41.4	24.7	16.7	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
76-23	8.8	0.8	8.0	170.4	123.7	46.7	30.4	16.3	2	70	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
76-24	8.7	0.7	8.0	249.5	208.9	40.6	23.4	17.2	4	406	P	70	30	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
76-25	8.6	0.8	7.8	224.4	184.2	40.2	23.2	17.0	4	381	P	90	10	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
76-26	8.0	0.2	7.8	183.9	144.8	39.1	23.1	16.0	2	126	P	80	20	NA	NA	U	Y	Y	Y	GY	GY	TILL
76-27	8.4	0.3	8.1	339.3	303.0	36.3	24.4	11.9	4	25	P	95	5	NA	B	U	Y	Y	Y	GY	GY	TILL
76-28	8.2	0.0	8.2	236.6	196.1	40.5	28.9	11.6	0	NA	TR	NA	NA	NA	NA	S	F	N	Y	GY	GY	SAND
76-29	8.3	0.3	8.0	327.3	292.8	34.5	23.1	11.4	1	4	P	70	30	NA	B	U	Y	Y	Y	GYB	GYB	TILL
76-30	8.8	0.4	8.4	309.8	271.4	38.4	25.4	13.0	0	NA	P	60	40	NA	A	U	Y	Y	Y	GYB	GYB	TILL
76-31	8.3	1.0	7.3	209.5	173.8	35.7	19.1	16.6	4	73	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
76-32	7.0	0.4	6.6	305.7	261.8	43.9	28.4	15.5	5	418	P	50	50	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
76-33	8.5	0.1	8.4	222.6	169.6	53.0	29.8	23.2	3	31	P	40	60	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
77-01	5.8	0.6	5.2	189.6	162.4	27.2	14.9	12.3	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GY	GN	TILL
77-02	9.1	1.2	7.9	282.4	205.0	77.4	37.5	39.9	0	NA	P.C	90	10	NA	NA	U	Y	Y	Y	GY	GN	TILL
77-03	8.2	0.3	7.9	347.2	267.9	79.3	50.5	28.8	0	NA	C	95	5	NA	NA	U	Y	Y	Y	GB	GN	TILL
78-01	8.3	1.8	6.5	257.6	209.7	47.9	26.6	21.3	4	162	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
78-02	8.9	1.8	7.1	304.9	265.5	39.4	21.2	18.2	2	101	P	60	40	NA	NA	U	Y	Y	Y	GB	GB	TILL
78-03	7.9	1.2	6.7	249.6	211.9	37.7	21.8	15.9	3	47	P	75	25	NA	NA	U	Y	Y	Y	GB	GB	TILL
78-04	8.3	1.5	6.8	244.3	213.4	30.9	17.7	13.2	1	5	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
78-05	8.1	1.0	7.1	329.6	300.6	29.0	15.3	13.7	0	NA	P	50	50	NA	NA	U	Y	Y	Y	GB	GB	TILL & BLD
78-06	8.4	1.5	6.9	289.7	262.6	27.1	15.0	12.1	4	292	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
78-07	7.1	0.5	6.6	398.7	357.4	41.3	25.7	15.6	3	29	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL & BLD
78-08	8.1	1.0	7.1	310.7	277.0	33.7	19.2	14.5	1	1298	P	95	5	NA	B	U	Y	Y	Y	GB	GB	TILL
78-09	8.2	1.0	7.2	278.9	251.5	27.4	16.2	11.2	1	23	P	90	10	NA	B	U	Y	Y	Y	GB	GB	TILL
78-10	8.6	1.0	7.6	329.7	304.7	25.0	14.5	10.5	6	127	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
78-11	8.4	0.8	7.6	319.5	299.1	20.4	11.9	8.5	2	38	P	90	10	NA	B	U	Y	Y	Y	GB	GB	TILL
78-12	8.9	0.4	8.5	195.8	168.3	27.5	17.2	10.3	2	16	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
78-13	7.4	0.1	7.3	150.9	132.5	18.4	12.3	6.1	0	NA	P	55	45	NA	NA	S	F.M	NA	NA	GB	NA	SAND
78-14	8.2	0.3	7.9	154.1	138.6	15.5	10.2	5.3	0	NA	P	70	30	NA	NA	S	F.M	NA	NA	GB	NA	SAND
78-15	7.6	0.6	7.0	282.5	257.4	25.1	14.2	10.9	0	NA	P	60	40	NA	NA	U	Y	Y	Y	GB	GB	TILL

CAMB2DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET) TABLE SPLIT	+10 CHIPS	TABLE FEED	WEIGHT (GRAMS DRY) TABLE CONC	M.I. LIGHTS	M. I. CONC: CONC. TOTAL	NON MAG	MAG	AU NO. V.G.	CALC PPB	DESCRIPTION CLAST SIZE	% V/S	GR	LS	OT	MATRIX S/U	SD	ST	CY	COLOR SD	CY	CLASS
CB-89																						
78-16	8.0	1.4	6.6	224.3	197.1	27.2	14.4	12.8	2	39	P	60	40	NA	NA	U	Y	Y	Y	GB	GB	TILL
78-17	8.0	0.7	7.3	251.9	215.9	36.0	22.3	13.7	1	9	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
78-18	9.3	1.2	8.1	232.9	196.6	36.3	20.1	16.2	0	NA	P	95	5	NA	NA	U	Y	Y	Y	GY	GY	TILL
78-19	8.3	0.8	7.5	240.5	194.5	46.0	31.1	14.9	1	6	P	98	2	NA	NA	U	Y	Y	Y	GB	GB	TILL
78-20	8.9	1.0	7.9	333.9	289.0	44.9	24.6	20.3	6	504	P	98	2	NA	NA	U	Y	Y	Y	GY	GY	TILL
78-21	8.6	0.5	8.1	280.0	241.0	39.0	23.6	15.4	3	88	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
78-22	8.8	0.8	8.0	306.6	260.6	46.0	29.5	16.5	4	338	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
78-23	8.9	1.9	7.0	262.2	199.2	63.0	34.9	28.1	0	NA	P	70	30	NA	NA	S	C	Y	NA	GB	NA	GRAVEL
78-24	9.2	2.9	6.3	253.7	215.1	38.6	22.6	16.0	1	66	P	80	20	NA	NA	S	C	NA	NA	GB	NA	GRAVEL
78-25	8.6	2.0	6.6	244.4	202.8	41.6	26.9	14.7	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GY	GY	TILL
78-26	8.3	1.2	7.1	290.4	264.7	25.7	17.5	8.2	2	43	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
78-27	8.5	0.5	8.0	285.2	233.2	52.0	36.7	15.3	9	122	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
78-28	7.1	1.0	6.1	232.0	191.9	40.1	28.0	12.1	2	89	P	100		NA	NA	U	Y	Y	Y	GB	GB	TILL & BDK

CAMB3DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET) TABLE SPLIT	+10 CHIPS	TABLE FEED	WEIGHT (GRAMS DRY) TABLE CONC	M.I. LIGHTS	M. I. CONC CONC. TOTAL	NON MAG	MAG	AU NO. V.G.	CALC PPB	DESCRIPTION CLAST SIZE	% V/S	GR	LS	OT	MATRIX S/U	SD	ST	CY	COLOR SD	CY	CLASS
CB-89																						
79-01	6.8	1.0	5.8	188.6	167.7	20.9	14.8	6.1	0	NA	P	30	40	30	NA	S	C	Y	Y	B	B	GRAVEL
79-02	8.8	0.4	8.4	255.1	213.0	42.1	26.8	15.3	1	14	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
79-03	8.8	0.2	8.6	336.9	299.9	37.0	25.2	11.8	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
79-04	9.4	0.9	8.5	405.5	310.0	95.5	51.4	44.1	0	NA	C	90	10	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
79-05	9.1	0.6	8.5	301.6	243.5	58.1	35.5	22.6	0	NA	C	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
79-06	8.5	0.6	7.9	355.0	290.1	64.9	35.4	29.5	1	60	C	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
80-01	8.3	1.1	7.2	344.4	304.9	39.5	22.7	16.8	1	28	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
80-02	8.4	1.5	6.9	308.4	271.4	37.0	20.9	16.1	3	389	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
80-03	7.8	1.5	6.3	282.1	247.5	34.6	20.0	14.6	2	210	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
80-04	9.1	1.5	7.6	302.0	258.3	43.7	25.6	18.1	3	37	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL & BLD
80-05	8.8	0.8	8.0	227.6	189.4	38.2	22.9	15.3	4	614	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
80-06	9.2	0.0	9.2	237.2	194.1	43.1	25.4	17.7	1	25	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
80-07	8.9	1.3	7.6	238.2	202.3	35.9	21.0	14.9	1	31	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
80-08	8.8	1.5	7.3	318.4	279.0	39.4	23.0	16.4	1	28	P	75	25	NA	NA	U	Y	Y	Y	GB	GB	TILL
80-09	8.5	1.1	7.4	236.6	204.8	31.8	18.2	13.6	1	117	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
80-10	8.0	1.0	7.0	296.4	264.9	31.5	18.5	13.0	1	55	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
80-11	9.1	1.4	7.7	328.6	278.5	50.1	23.8	26.3	1	63	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
80-12	7.6	1.5	6.1	224.1	186.9	37.2	22.7	14.5	2	10	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
80-13	7.5	1.5	6.0	146.9	115.8	31.1	19.0	12.1	2	0	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
80-14	8.0	3.0	5.0	250.4	210.1	40.3	24.3	16.0	1	42	P	80	20	NA	NA	U	Y	Y	Y	GY	GY	TILL
80-15	8.0	1.3	6.7	211.1	172.1	39.0	24.9	14.1	0	NA	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
80-16	8.4	0.7	7.7	232.5	193.5	39.0	25.8	13.2	2	107	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
80-17	8.6	1.5	7.1	248.3	211.5	36.8	23.8	13.0	5	318	P	65	35	NA	NA	U	Y	Y	Y	GB	GB	TILL
80-18	9.3	1.8	7.5	152.8	117.3	35.5	21.4	14.1	2	447	P	65	35	NA	NA	U	Y	Y	Y	GB	GB	TILL
80-19	8.8	1.5	7.3	265.2	232.6	32.6	20.0	12.6	0	NA	P	65	35	NA	NA	U	Y	Y	Y	GB	GB	TILL
80-20	8.5	1.6	6.9	151.7	118.7	33.0	19.5	13.5	4	226	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
80-21	8.4	1.5	6.9	219.1	184.7	34.4	20.5	13.9	1	104	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
80-22	8.0	0.3	7.7	148.5	108.6	39.9	27.9	12.0	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
80-23	7.9	0.1	7.8	325.1	277.0	48.1	35.6	12.5	1	10	P	100	0	NA	NA	S	M	Y	Y	GY	GY	SAND
80-24	9.1	2.2	6.9	271.9	221.1	50.8	38.0	12.8	2	10	P	99	1	NA	NA	U	Y	Y	Y	GY	GY	TILL
81-01	8.7	0.4	8.3	251.2	210.1	41.1	25.3	15.8	3	18	P	90	10	NA	NA	U	Y	Y	Y	B	GYB	TILL
81-02	7.8	0.5	7.3	210.4	173.4	37.0	21.9	15.1	5	260	P	70	30	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
81-03	8.9	0.5	8.4	198.5	160.1	38.4	22.3	16.1	5	127	P	80	20	NA	NA	U	Y	Y	Y	B	GB	TILL
81-04	8.8	0.3	8.5	210.9	172.1	38.8	23.3	15.5	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	GB	TILL
81-05	5.8	0.0	5.8	227.7	210.7	17.0	13.0	4.0	0	NA	TR	100	NA	NA	NA	U	Y	Y	Y	GY	GB	TILL
81-06	7.8	1.2	6.6	309.7	196.2	113.5	40.4	73.1	6	31	P	99	1	NA	NA	U	Y	Y	Y	GY	GB	TILL
81-07	8.1	1.0	7.1	275.6	185.6	90.0	38.8	51.2	5	565	P	100	NA	NA	NA	U	Y	Y	Y	GY	GB	TILL
82-01	8.6	1.4	7.2	262.3	220.8	41.5	25.3	16.2	2	109	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
82-02	7.7	1.0	6.7	280.0	245.1	34.9	20.4	14.5	3	81	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
82-03	7.6	1.2	6.4	208.7	178.4	30.3	17.2	13.1	2	22	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
82-04	7.8	1.0	6.8	244.6	214.5	30.1	17.7	12.4	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
82-05	8.3	1.0	7.3	275.2	234.3	40.9	23.9	17.0	2	2	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
82-06	7.4	1.2	6.2	218.7	185.5	33.2	20.6	12.6	2	13	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
82-07	7.7	0.8	6.9	220.1	188.5	31.6	19.7	11.9	2	2	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
82-08	8.2	1.8	6.4	255.8	218.4	37.4	23.4	14.0	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL

CAMB3DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET) TABLE SPLIT	+10 CHIPS	TABLE FEED	WEIGHT (GRAMS DRY) TABLE CONC	M.I. LIGHTS	M. I. CONC CONC. TOTAL	NON MAG	MAG	AU NO. V.G.	CALC PPB	DESCRIPTION CLAST SIZE	% V/S	GR	LS	OT	MATRIX S/U	SD	ST	CY	COLOR SD	CY	CLASS
CB-89																						
82-09	7.7	0.8	6.9	261.3	224.2	37.1	22.7	14.4	4	382	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
82-10	8.7	1.7	7.0	278.0	242.1	35.9	21.4	14.5	1	30	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
82-11	8.1	1.5	6.6	267.4	229.7	37.7	23.3	14.4	1	16	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
82-12	7.5	0.6	6.9	248.3	211.0	37.3	22.6	14.7	1	342	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
82-13	8.4	0.8	7.6	305.6	260.5	45.1	29.9	15.2	1	21	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
82-14	7.5	1.1	6.4	187.5	149.6	37.9	24.9	13.0	1	0	P	80	20	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
82-15	8.0	1.0	7.0	238.9	208.4	30.5	20.0	10.5	0	NA	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
82-16	8.0	0.5	7.5	231.0	194.0	37.0	22.8	14.2	1	4	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
82-17	8.8	1.0	7.8	212.3	168.1	44.2	28.5	15.7	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
82-18	9.2	1.4	7.8	247.1	197.2	49.9	29.7	20.2	2	68	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
82-19	8.2	0.2	8.0	269.3	227.5	41.8	27.6	14.2	1	37	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
82-20	8.3	1.0	7.3	209.4	175.8	33.6	21.9	11.7	2	7	P	90	10	NA	NA	U	Y	Y	Y	B	GY	TILL
82-21	8.8	0.4	8.4	266.0	223.9	42.1	27.1	15.0	1	7	P	80	20	NA	NA	U	Y	Y	Y	B	GY	TILL
82-22	8.4	1.0	7.4	229.1	190.4	38.7	23.4	15.3	1	16	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
82-23	7.9	0.8	7.1	305.2	249.3	55.9	40.4	15.5	1	53	P	80	20	NA	NA	U	Y	Y	Y	GG	GG	TILL
83-01	5.5	0.6	4.9	154.1	122.1	32.0	19.9	12.1	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	GB	TILL
83-02	8.7	1.3	7.4	159.4	120.0	39.4	20.2	19.2	1	18	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
83-03	7.6	0.6	7.0	187.8	144.9	42.9	25.6	17.3	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
83-04	8.7	0.7	8.0	200.9	158.8	42.1	23.4	18.7	0	NA	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
83-05	8.4	0.8	7.6	194.0	149.8	44.2	23.8	20.4	0	NA	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
83-06	9.1	0.8	8.3	187.6	146.5	41.1	22.4	18.7	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
83-07	8.7	0.7	8.0	294.6	250.7	43.9	23.6	20.3	1	27	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
83-08	10.4	1.0	9.4	258.7	210.3	48.4	26.7	21.7	8	236	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
83-09	8.2	0.8	7.4	244.6	207.3	37.3	17.9	19.4	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
83-10	8.4	0.5	7.9	189.3	156.9	32.4	16.9	15.5	0	NA	P	50	50	NA	NA	U	Y	Y	Y	B	B	TILL
83-11	8.1	1.1	7.0	101.1	72.8	28.3	14.6	13.7	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
83-12	8.3	0.4	7.9	156.8	128.8	28.0	14.5	13.5	0	NA	P	95	5	NA	NA	U	Y	Y	Y	GB	GY	TILL
84-01	7.6	0.8	6.8	156.5	121.6	34.9	20.5	14.4	1	1	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
84-02	7.6	0.6	7.0	160.9	118.3	42.6	24.4	18.2	1	61	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
84-03	7.9	0.5	7.4	219.4	181.0	38.4	23.3	15.1	5	87	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
84-04	8.2	0.7	7.5	220.7	149.3	71.4	40.0	31.4	7	163	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
84-05	7.1	0.8	6.3	217.6	143.3	74.3	36.6	37.7	3	132	P	80	20	NA	NA	U	Y	Y	Y	B	GNB	TILL
84-06	7.7	0.7	7.0	219.9	154.7	65.2	33.9	31.3	6	366	C,P	80	20	NA	NA	U	Y	Y	Y	B	GNB	TILL
84-07	8.1	0.7	7.4	285.5	163.1	122.4	63.7	58.7	13	774	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
84-08	7.4	0.5	6.9	219.7	131.1	88.6	45.1	43.5	7	356	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
84-09	8.6	1.0	7.6	207.5	150.3	57.2	31.2	26.0	10	1388	P,C	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
84-10	7.7	0.4	7.3	211.5	150.7	60.8	32.3	28.5	4	119	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
84-11	8.1	0.4	7.7	316.0	256.9	59.1	31.3	27.8	5	367	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
84-12	6.8	0.3	6.5	215.4	179.5	35.9	21.9	14.0	2	50	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
84-13	8.4	0.2	8.2	345.6	297.7	47.9	31.4	16.5	1	3	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
84-14	7.7	0.4	7.3	242.5	203.2	39.3	24.1	15.2	2	16	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
84-15	8.2	0.8	7.4	406.9	349.2	57.7	32.9	24.8	4	125	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
84-16	8.3	1.1	7.2	237.7	178.0	59.7	31.1	28.6	3	45	P	90	10	NA	NA	S	M,C	Y	Y	GB	GB	GRAVEL
84-17	8.0	0.4	7.6	256.0	221.8	34.2	21.8	12.4	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
84-18	8.1	0.2	7.9	258.1	220.5	37.6	22.8	14.8	1	8	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL

CAMB3DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET)			WEIGHT (GRAMS DRY)					AU		DESCRIPTION											CLASS
						M. I. CONC					CLAST					MATRIX						
	TABLE SPLIT	+10 CHIPS	TABLE FEED	TABLE CONC	M.I. LIGHTS	CONC. TOTAL	NON MAG	MAG	NO. V.G.	CALC PPB	SIZE	% V/S	% GR	% LS	% OT	S/U	SD	ST	CY	COLOR SD	COLOR CY	
CB-89																						
84-19	7.6	0.2	7.4	260.2	222.2	38.0	24.7	13.3	2	163	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
84-20	7.7	0.3	7.4	307.5	267.0	40.5	26.6	13.9	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
84-21	8.0	0.2	7.8	247.2	207.0	40.2	26.6	13.6	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
84-22	6.9	0.2	6.7	218.5	184.8	33.7	22.0	11.7	5	2597	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
84-23	7.4	0.0	7.4	186.6	154.8	31.8	20.3	11.5	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	B	B	TILL
84-24	7.8	0.0	7.8	230.1	182.0	48.1	30.2	17.9	2	83	TR	NA	NA	NA	NA	S	F,M	Y	Y	B	B	SAND
84-25	6.8	0.0	6.8	229.9	184.1	45.8	33.2	12.6	1	11	TR	NA	NA	NA	NA	S	F,M	Y	Y	B	B	SAND
84-26	6.8	0.0	6.8	211.9	167.3	44.6	31.8	12.8	0	NA	TR	NA	NA	NA	NA	S	F,M	Y	Y	B	B	SAND
84-27	8.2	0.0	8.2	245.1	202.2	42.9	31.3	11.6	1	12	TR	NA	NA	NA	NA	S	M	Y	Y	B	B	SAND
84-28	8.6	0.4	8.2	232.0	196.0	36.0	26.3	9.7	0	NA	P	90	10	NA	NA	S	C	Y	Y	GNB	GNB	GRAVEL
84-29	8.6	2.0	6.6	188.3	154.1	34.2	24.4	9.8	0	NA	P	90	10	NA	NA	S	C	Y	Y	GNB	GNB	GRAVEL
84-30	8.1	0.2	7.9	309.4	254.7	54.7	40.7	14.0	1	25	P	90	10	NA	NA	S	M	Y	Y	GB	GB	SAND
84-31	8.0	0.6	7.4	237.8	208.2	29.6	21.9	7.7	2	183	P	90	10	NA	NA	S	C	Y	Y	GB	GB	GRAVEL
84-32	8.0	0.9	7.1	324.1	243.7	80.4	72.6	7.8	1	21	P	90	10	NA	NA	S	C	Y	Y	GB	GB	GRAVEL
84-33	8.6	0.6	8.0	253.7	50.1	203.6	191.6	12.0	0	NA	P	95	5	NA	NA	S	C	Y	Y	B	B	GRAVEL
85-01	8.4	0.6	7.8	186.9	152.8	34.1	19.7	14.4	1	147	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
85-02	8.3	0.4	7.9	161.8	128.8	33.0	18.7	14.3	0	NA	P	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
85-03	8.9	1.0	7.9	199.5	164.8	34.7	20.5	14.2	0	NA	P	50	50	NA	NA	U	Y	Y	Y	B	B	TILL
85-04	9.0	0.5	8.5	204.3	161.1	43.2	23.8	19.4	1	1047	P	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
85-05	8.9	0.5	8.4	228.0	185.7	42.3	22.9	19.4	1	16	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
85-06	8.9	0.7	8.2	197.3	153.3	44.0	25.8	18.2	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
85-07	9.0	1.0	8.0	166.6	125.4	41.2	22.0	19.2	4	64	P	65	35	NA	NA	U	Y	Y	Y	B	B	TILL
85-08	9.1	0.5	8.6	227.4	183.3	44.1	25.0	19.1	0	NA	P	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
85-09	9.3	0.8	8.5	242.5	192.9	49.6	26.4	23.2	0	NA	P	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
85-10	8.5	0.8	7.7	239.8	194.8	45.0	26.3	18.7	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
86-01	7.6	0.2	7.4	331.5	274.1	57.4	34.7	22.7	4	83	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
86-02	8.0	0.0	8.0	291.3	240.9	50.4	32.7	17.7	3	12	TR	NA	NA	NA	NA	U	Y	Y	Y	B	B	TILL
86-03	6.9	0.3	6.6	300.1	263.0	37.1	25.1	12.0	3	200	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
86-04	7.6	0.4	7.2	257.0	223.2	33.8	21.4	12.4	1	17	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
86-05	7.8	0.6	7.2	251.1	214.5	36.6	23.2	13.4	4	189	P	75	25	NA	NA	U	Y	Y	Y	B	B	TILL
86-06	7.3	0.4	6.9	186.2	159.2	27.0	18.1	8.9	4	194	P	75	25	NA	NA	U	Y	Y	Y	B	B	TILL
86-07	7.5	0.0	7.5	202.9	159.2	43.7	30.6	13.1	7	404	TR	NA	NA	NA	NA	S	M	Y	Y	B	B	SAND
86-08	7.5	0.0	7.5	260.4	217.4	43.0	30.9	12.1	1	6	TR	NA	NA	NA	NA	S	M	Y	Y	B	B	SAND
86-09	8.2	0.1	8.1	284.8	235.2	49.6	35.6	14.0	6	25	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
86-10	7.6	0.6	7.0	241.1	192.3	48.8	39.8	9.0	4	50	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
87-01	8.7	0.6	8.1	244.1	208.0	36.1	15.7	20.4	0	NA	P	95	5	NA	NA	U	Y	Y	Y	GY	GY	TILL
87-02	9.1	1.2	7.9	284.4	195.2	89.2	41.0	48.2	7	1107	P	99	1	NA	NA	U	Y	Y	Y	GY	GY	TILL
88-01	8.0	0.5	7.5	321.4	263.1	58.3	34.8	23.5	8	150	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
88-02	7.6	0.4	7.2	257.9	216.8	41.1	25.4	15.7	3	30	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
88-03	8.6	0.6	8.0	248.4	210.9	37.5	23.0	14.5	3	26	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
88-04	7.8	0.0	7.8	216.7	174.9	41.8	31.4	10.4	3	11	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
89-01	5.6	0.1	5.5	236.1	213.9	22.2	15.5	6.7	0	NA	P	99	1	NA	NA	U	Y	Y	Y	GY	GY	TILL
90-01	7.7	0.4	7.3	208.0	174.6	33.4	20.6	12.8	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
90-02	8.3	0.5	7.8	288.7	242.9	45.8	28.3	17.5	2	136	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
90-03	7.0	0.8	6.2	192.2	161.1	31.1	19.9	11.2	3	19	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL

CAMB3DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET) TABLE SPLIT	+10 CHIPS	TABLE FEED	WEIGHT (GRAMS DRY) TABLE CONC	M.I. LIGHTS	M. I. CONC CONC. TOTAL	NON MAG	MAG	AU NO. V.G.	CALC PPB	DESCRIPTION CLAST SIZE	% V/S	GR	LS	OT	MATRIX S/U	SD	ST	CY	COLOR SD	CY	CLASS
CB-89																						
90-04	8.2	0.4	7.8	317.7	275.1	42.6	24.4	18.2	1	15	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
90-05	8.6	0.5	8.1	275.5	231.0	44.5	25.8	18.7	2	15	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
90-06	8.0	0.3	7.7	264.1	226.4	37.7	21.9	15.8	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
90-07	7.4	0.2	7.2	307.6	260.3	47.3	27.0	20.3	2	21	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
90-08	7.3	0.4	6.9	261.5	228.2	33.3	20.2	13.1	3	69	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
90-09	8.3	0.3	8.0	413.9	372.1	41.8	25.9	15.9	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
90-10	8.6	0.2	8.4	325.3	270.1	55.2	32.1	23.1	2	177	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
90-11	7.8	0.2	7.6	271.2	231.9	39.3	23.8	15.5	1	27	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
91-01	9.0	0.6	8.4	215.2	179.3	35.9	20.8	15.1	3	67	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
91-02	9.1	0.9	8.2	219.3	182.5	36.8	21.9	14.9	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
91-03	8.8	0.5	8.3	225.4	191.1	34.3	18.2	16.1	1	210	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
91-04	8.5	0.5	8.0	162.1	122.6	39.5	21.5	18.0	2	18	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
91-05	9.0	1.5	7.5	449.0	317.1	131.9	82.1	49.8	3	6	P	100	NA	NA	NA	U	Y	Y	Y	GY	GY	TILL
92-01	7.8	0.0	7.8	254.5	213.2	41.3	28.7	12.6	3	72	TR	NA	NA	NA	NA	U	Y	Y	Y	B	B	TILL
92-02	7.0	0.2	6.8	244.3	212.1	32.2	19.0	13.2	3	34	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
92-03	6.9	0.2	6.7	223.5	196.3	27.2	16.3	10.9	3	40	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
92-04	8.4	0.8	7.6	298.1	264.1	34.0	19.3	14.7	2	29	P,C	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
92-05	8.0	0.4	7.6	269.6	238.0	31.6	18.6	13.0	1	34	C	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
92-06	8.7	0.4	8.3	245.6	206.9	38.7	23.1	15.6	1	124	C	90	10	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
92-07	8.5	0.4	8.1	342.6	283.4	59.2	36.9	22.3	1	86	C	90	10	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
92-08	8.3	0.2	8.1	270.5	232.4	38.1	20.3	17.8	4	77	C	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
93-01	4.1	0.2	3.9	202.4	182.3	20.1	13.0	7.1	1	6	P	90	10	NA	NA	U	Y	Y	Y	GY	GY	TILL
93-02	8.6	0.7	7.9	205.6	170.1	35.5	20.6	14.9	3	14	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
93-03	8.9	0.9	8.0	260.0	224.0	36.0	20.2	15.8	1	10	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
94-01	8.7	0.2	8.5	167.4	130.5	36.9	20.3	16.6	1	9	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
94-02	7.2	0.6	6.6	192.6	174.0	18.6	10.0	8.6	1	19	P	70	29	1	NA	U	Y	Y	Y	B	B	TILL
94-03	7.9	0.7	7.2	207.2	185.6	21.6	10.6	11.0	2	473	P	70	29	1	NA	U	Y	Y	Y	B	B	TILL
94-04	9.1	0.5	8.6	351.0	320.7	30.3	18.7	11.6	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
94-05	8.1	0.6	7.5	267.8	247.9	19.9	9.7	10.2	2	163	P,C	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
94-06	8.3	0.8	7.5	315.5	281.4	34.1	18.5	15.6	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
94-07	8.2	0.6	7.6	182.5	151.3	31.2	18.8	12.4	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
94-08	7.3	0.2	7.1	223.5	204.0	19.5	12.2	7.3	2	83	P	80	20	NA	NA	S	F	Y	Y	GB	GB	SAND
94-09	7.0	0.2	6.8	260.0	239.5	20.5	12.7	7.8	1	6	P	80	20	NA	NA	S	F	Y	Y	GB	GB	SAND
94-10	6.9	0.2	6.7	211.2	184.3	26.9	15.7	11.2	2	88	P	80	20	NA	NA	S	F	Y	Y	GB	GB	SAND
94-11	7.3	0.3	7.0	208.6	181.4	27.2	15.2	12.0	6	171	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
94-12	7.3	0.2	7.1	163.9	142.0	21.9	11.9	10.0	2	180	P	80	20	NA	NA	S	M,F	Y	Y	GB	GB	SAND
94-13	7.1	0.3	6.8	172.6	151.4	21.2	11.9	9.3	3	155	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
94-14	7.4	0.4	7.0	218.8	174.3	44.5	26.7	17.8	1	24	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
94-15	8.5	0.3	8.2	190.1	147.3	42.8	24.8	18.0	2	62	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
94-16	8.5	0.9	7.6	198.3	158.6	39.7	24.0	15.7	4	74	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
94-17	6.6	0.4	6.2	176.0	142.8	33.2	21.1	12.1	4	84	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
94-18	7.5	0.2	7.3	199.1	161.3	37.8	23.1	14.7	4	56	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
94-19	6.9	0.2	6.7	197.9	163.4	34.5	20.9	13.6	2	132	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
94-20	7.2	0.4	6.8	206.9	172.6	34.3	20.4	13.9	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
94-21	8.0	0.4	7.6	214.9	175.5	39.4	23.3	16.1	6	263	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL

CAMB3DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET) TABLE SPLIT	+10 CHIPS	TABLE FEED	WEIGHT (GRAMS DRY) TABLE CONC	M.I. LIGHTS	M. I. CONC CONC. TOTAL	NON MAG	MAG	AU NO. V.G.	CALC PPB	DESCRIPTION CLAST SIZE	% V/S	GR	LS	OT	MATRIX S/U	SD	ST	CY	COLOR SD	CY	CLASS
CB-89																						
94-22	8.0	0.4	7.6	190.4	153.3	37.1	21.5	15.6	2	389	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
94-23	7.7	0.8	6.9	206.8	170.2	36.6	21.3	15.3	3	79	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
94-24	6.7	0.6	6.1	178.0	145.2	32.8	19.0	13.8	3	34	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
94-25	7.9	0.4	7.5	189.8	144.3	45.5	28.2	17.3	3	59	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
94-26	7.7	0.8	6.9	158.3	122.2	36.1	22.7	13.4	1	8	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
94-27	7.8	0.5	7.3	278.2	240.7	37.5	22.8	14.7	1	16	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
94-28	8.4	0.3	8.1	211.1	170.5	40.6	27.3	13.3	2	31	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
94-29	8.8	0.6	8.2	298.5	255.0	43.5	28.7	14.8	3	33	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
94-30	7.5	0.2	7.3	266.5	221.7	44.8	31.0	13.8	1	21	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
94-31	7.2	0.0	7.2	106.3	69.8	36.5	27.7	8.8	4	60	TR	NA	NA	NA	NA	S	M	Y	Y	B	B	SAND
94-32	7.4	0.0	7.4	166.1	130.6	35.5	27.1	8.4	5	168	TR	NA	NA	NA	NA	S	F	Y	Y	B	B	SAND
94-33	7.1	0.0	7.1	131.2	98.5	32.7	25.0	7.7	0	NA	TR	NA	NA	NA	NA	S	M	Y	Y	B	B	SAND
95-01	1.6	0.0	1.6	64.3	56.0	8.3	4.4	3.9	0	NA	BK	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BEDROCK
96-01	6.8	0.2	6.6	203.0	169.0	34.0	21.8	12.2	2	540	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
96-02	8.5	0.6	7.9	174.7	134.0	40.7	26.2	14.5	2	95	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
96-03	7.2	0.3	6.9	173.6	136.5	37.1	24.1	13.0	2	31	C	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
96-04	6.1	0.0	6.1	123.7	96.7	27.0	15.8	11.2	1	41	TR	NA	NA	NA	NA	S	F	Y	Y	B	B	SAND
96-05	6.9	0.0	6.9	131.9	93.1	38.8	27.5	11.3	1	14	TR	NA	NA	NA	NA	S	M	Y	Y	B	B	SAND
96-06	7.1	0.1	7.0	214.6	179.8	34.8	20.4	14.4	1	9	C,P	80	20	NA	NA	S	M	Y	Y	B	B	SAND
96-07	7.9	0.3	7.6	273.2	225.2	48.0	33.1	14.9	1	2	C	50	50	NA	NA	U	Y	Y	Y	B	B	TILL
96-08	7.1	0.4	6.7	220.3	176.9	43.4	28.3	15.1	3	16	C	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
96-09	7.6	0.5	7.1	172.2	129.3	42.9	24.8	18.1	2	76	C	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
96-10	7.0	0.5	6.5	177.6	139.9	37.7	22.6	15.1	0	NA	C	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
96-11	7.5	0.2	7.3	145.4	116.4	29.0	17.2	11.8	2	22	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
96-12	8.4	0.5	7.9	129.8	91.5	38.3	25.9	12.4	1	7	C	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
96-13	7.6	0.2	7.4	141.7	109.3	32.4	20.1	12.3	1	106	C	80	20	NA	NA	S	M	Y	Y	GB	GB	SAND
96-14	7.6	0.1	7.5	161.4	129.4	32.0	20.0	12.0	5	31	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
96-15	7.8	0.5	7.3	198.2	174.4	23.8	13.2	10.6	6	319	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
96-16	7.3	0.4	6.9	178.4	150.3	28.1	16.2	11.9	2	40	C	50	50	NA	NA	U	Y	Y	Y	GB	GB	TILL
96-17	7.8	0.5	7.3	150.7	122.1	28.6	17.9	10.7	0	NA	P	70	30	NA	NA	S	M	Y	Y	GY	GY	SAND
96-18	7.9	0.1	7.8	269.8	249.3	20.5	11.5	9.0	2	72	P	90	10	NA	NA	U	Y	Y	Y	GY	GY	TILL
96-19	7.5	0.8	6.7	314.9	290.2	24.7	12.7	12.0	0	NA	C	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
96-20	7.2	1.0	6.2	167.6	156.8	10.8	5.3	5.5	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
96-21	6.7	0.5	6.2	249.4	221.6	27.8	17.4	10.4	0	NA	P	20	80	NA	NA	U	Y	Y	Y	GB	GB	TILL
96-22	6.1	0.3	5.8	162.0	125.5	36.5	23.9	12.6	7	55	P	10	90	NA	NA	U	Y	Y	Y	GB	GB	TILL
96-23	6.6	0.1	6.5	259.9	225.0	34.9	24.1	10.8	2	35	P	70	30	NA	NA	S	F,M	Y	Y	GB	NA	SAND
96-24	6.0	0.6	5.4	191.6	171.4	20.2	14.3	5.9	0	NA	C	80	20	NA	NA	S	F,M	Y	Y	GB	NA	SAND
96-25	6.1	0.1	6.0	215.1	186.7	28.4	19.8	8.6	2	5	P	80	20	NA	NA	S	F,M	Y	Y	GB	NA	SAND
96-26	6.0	0.1	5.9	207.9	176.3	31.6	24.4	7.2	0	NA	P	80	20	NA	NA	S	F,M	Y	Y	GB	NA	SAND
96-27	6.6	0.2	6.4	243.8	215.6	28.2	20.3	7.9	0	NA	P	80	20	NA	NA	S	F,M	Y	NA	GB	NA	SAND
96-28	6.8	0.2	6.6	182.6	149.3	33.3	23.1	10.2	0	NA	P	20	80	NA	NA	S	F,M	Y	NA	GB	NA	SAND
96-29	6.4	0.4	6.0	285.2	252.5	32.7	22.2	10.5	0	NA	P	60	40	NA	NA	S	F,M	Y	NA	GB	NA	SAND
96-30	7.2	0.3	6.9	196.6	162.2	34.4	22.6	11.8	0	NA	P	50	50	NA	NA	U	Y	Y	Y	GB	GB	TILL
96-31	6.6	0.1	6.5	279.9	243.5	36.4	22.6	13.8	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
96-32	7.2	0.2	7.0	286.8	239.9	46.9	34.1	12.8	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL

CAMB3DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET) TABLE SPLIT	+10 CHIPS	TABLE FEED	WEIGHT (GRAMS DRY) TABLE CONC	M.I. LIGHTS	M. I. CONC CONC. TOTAL	NON MAG	MAG	AU NO. V.G.	CALC PPB	DESCRIPTION CLAST SIZE	% V/S	GR	LS	OT	MATRIX S/U	SD	ST	CY	COLOR SD	CY	CLASS
CB-89																						
96-33	6.7	0.4	6.3	209.4	174.0	35.4	22.1	13.3	0	NA	P	60	40	NA	NA	U	Y	Y	Y	GB	GB	TILL
96-34	6.8	0.3	6.5	327.4	288.2	39.2	26.3	12.9	3	40	P	50	50	NA	NA	U	Y	Y	Y	GB	GB	TILL
96-35	7.3	0.3	7.0	212.2	171.5	40.7	26.6	14.1	1	7	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
96-36	7.6	0.6	7.0	246.3	192.5	53.8	35.7	18.1	1	1	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
96-37	7.0	0.8	6.2	251.5	201.5	50.0	34.7	15.3	4	368	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
96-38	8.0	1.0	7.0	241.8	187.3	54.5	38.6	15.9	3	33	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
96-39	7.8	2.0	5.8	374.4	337.1	37.3	29.3	8.0	3	27	C	90	10	NA	NA	S	C	Y	NA	GB	NA	GRAVEL
97-01	8.8	0.4	8.4	230.4	180.0	50.4	24.8	25.6	5	239	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
97-02	8.5	0.3	8.2	358.1	304.5	53.6	28.6	25.0	1	35	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
97-03	8.3	0.5	7.8	380.4	336.2	44.2	26.7	17.5	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
98-01	5.7	0.7	5.0	372.0	330.2	41.8	33.7	8.1	0	NA	C	99	1	NA	NA	U	Y	Y	Y	GB	GB	TILL & BDK
99-01	7.0	0.5	6.5	327.8	284.6	43.2	27.9	15.3	1	13	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
100-01	8.0	1.5	6.5	216.7	169.1	47.6	29.3	18.3	0	NA	P	95	5	NA	NA	S	C	Y	NA	GB	NA	GRAVEL
100-02	6.6	0.3	6.3	193.1	157.8	35.3	22.7	12.6	2	12	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
100-03	5.5	0.5	5.0	123.2	98.2	25.0	15.7	9.3	1	5	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
100-04	7.2	0.8	6.4	147.3	119.3	28.0	14.9	13.1	2	43	C	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
100-05	6.7	0.4	6.3	118.6	83.9	34.7	20.3	14.4	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
100-06	8.0	0.8	7.2	208.1	167.6	40.5	24.4	16.1	4	8	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
100-07	7.6	0.8	6.8	146.9	119.5	27.4	20.2	7.2	0	NA	C	100	NA	NA	NA	U	Y	Y	Y	B	B	TILL
100-08	6.9	0.4	6.5	140.8	109.9	30.9	19.1	11.8	3	64	C	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
100-09	7.2	0.1	7.1	82.4	49.4	33.0	22.4	10.6	4	46	P	60	40	NA	NA	S	M	Y	Y	B	B	SAND
100-10	7.0	0.0	7.0	115.0	74.2	40.8	28.7	12.1	3	49	TR	NA	NA	NA	NA	S	M	Y	Y	B	B	SAND
100-11	8.1	0.3	7.8	240.4	191.1	49.3	37.8	11.5	3	162	C	100	NA	NA	NA	U	Y	Y	Y	B	B	TILL
101-01	9.3	1.1	8.2	365.8	308.0	57.8	36.4	21.4	1	58	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
101-02	8.9	0.7	8.2	331.2	279.8	51.4	32.9	18.5	3	41	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
101-03	8.8	0.6	8.2	260.7	214.7	46.0	28.3	17.7	0	NA	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
101-04	8.8	0.4	8.4	245.8	204.6	41.2	25.1	16.1	0	NA	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
101-05	9.2	0.6	8.6	405.8	346.3	59.5	29.7	29.8	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL & BDL
101-06	7.1	0.5	6.6	279.0	250.2	28.8	18.2	10.6	4	81	P	80	20	NA	A	U	Y	Y	Y	GB	GB	TILL
101-07	9.2	1.0	8.2	258.8	208.0	50.8	31.6	19.2	0	NA	P	95	5	NA	A	U	Y	Y	Y	GB	GB	TILL
101-08	8.2	1.7	6.5	222.7	170.5	52.2	38.2	14.0	7	1282	P	80	20	NA	A	U	Y	Y	Y	B	B	TILL
101-09	8.9	0.8	8.1	207.9	159.0	48.9	32.5	16.4	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
101-10	8.1	0.7	7.4	213.9	167.9	46.0	31.5	14.5	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
101-11	6.3	0.2	6.1	192.9	153.8	39.1	26.3	12.8	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL & BDK
102-01	7.7	1.1	6.6	99.9	58.0	41.9	26.5	15.4	0	NA	C	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
102-02	7.2	0.8	6.4	153.7	112.0	41.7	26.3	15.4	4	53	C	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
102-03	7.1	0.7	6.4	180.6	138.6	42.0	25.5	16.5	2	3	C	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
102-04	7.6	1.6	6.0	121.8	89.2	32.6	20.1	12.5	1	19	C	85	13	2	NA	U	Y	Y	Y	B	B	TILL
102-05	7.1	0.7	6.4	187.6	146.4	41.2	25.4	15.8	0	NA	C	90	8	2	NA	U	Y	Y	Y	B	B	TILL
102-06	7.9	0.2	7.7	117.4	85.7	31.7	19.3	12.4	2	[illegible]	P	60	35	5	NA	S	M	Y	Y	B	B	SAND
102-07	8.0	0.3	7.7	305.2	277.8	27.4	20.2	7.2	0	NA	P	30	70	NA	NA	S	M	Y	Y	B	B	SAND
102-08	8.9	1.8	7.1	273.0	198.5	74.5	47.6	26.9	3	116	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
102-09	8.8	3.0	5.8	111.6	75.4	36.2	20.7	15.5	2	72	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
102-10	7.3	0.9	6.4	128.4	91.1	37.3	22.7	14.6	1	28	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
102-11	6.8	1.0	5.8	196.1	158.1	38.0	23.2	14.8	0	NA	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL

CAMB3DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET) TABLE SPLIT	+10 CHIPS	TABLE FEED	WEIGHT (GRAMS DRY) TABLE CONC	M.I. LIGHTS	M. I. CONC CONC. TOTAL	NON MAG	MAG	AU NO. V.G.	CALC PPB	DESCRIPTION CLAST SIZE	% V/S	GR	LS	OT	MATRIX S/U	SD	ST	CY	COLOR SD	CY	CLASS
CB-89																						
102-12	6.6	0.5	6.1	206.1	168.5	37.6	24.0	13.6	2	64	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
102-13	7.2	0.7	6.5	162.6	128.9	33.7	21.4	12.3	2	117	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
102-14	7.1	0.3	6.8	134.2	95.7	38.5	25.4	13.1	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
102-15	7.1	0.4	6.7	174.0	135.7	38.3	25.1	13.2	3	30	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
102-16	7.3	1.2	6.1	230.5	193.9	36.6	22.2	14.4	2	25	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
103-01	8.3	0.5	7.8	284.0	229.4	54.6	34.5	20.1	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
103-02	8.0	0.8	7.2	321.1	286.8	34.3	20.7	13.6	5	130	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
103-03	5.5	1.0	4.5	319.3	297.1	22.2	14.9	7.3	6	439	P	80	20	NA	A	U	Y	Y	Y	B	B	TILL
103-04	8.5	1.6	6.9	334.2	298.5	35.7	24.0	11.7	1	3	P	80	20	NA	A	U	Y	Y	Y	B	B	TILL
103-05	9.0	1.1	7.9	200.7	151.2	49.5	27.4	22.1	6	438	P	80	20	NA	NA	S	Y	NA	NA	B	NA	GRAVEL
103-06	8.9	1.1	7.8	289.7	230.9	58.8	34.5	24.3	5	267	P	70	30	NA	NA	U	C	Y	Y	GB	GB	TILL
104-01	6.5	0.5	6.0	156.7	135.6	21.1	14.7	6.4	2	210	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
104-02	7.6	0.6	7.0	245.2	203.6	41.6	27.2	14.4	0	NA	C	80	20	NA	NA	S	M	Y	Y	B	B	SAND
104-03	8.1	0.7	7.4	118.4	84.4	34.0	21.5	12.5	4	22	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
104-04	6.1	0.5	5.6	118.5	88.1	30.4	19.7	10.7	2	42	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
104-05	7.6	0.9	6.7	134.9	105.4	29.5	17.2	12.3	2	234	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
104-06	6.9	0.7	6.2	106.5	77.3	29.2	18.6	10.6	3	244	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
104-07	8.0	0.7	7.3	165.7	131.0	34.7	18.3	16.4	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
104-08	7.8	0.6	7.2	111.5	84.0	27.5	15.8	11.7	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
104-09	7.3	0.5	6.8	175.9	141.9	34.0	20.3	13.7	7	28	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
104-10	6.9	1.0	5.9	142.6	114.8	27.8	15.7	12.1	2	677	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
104-11	7.9	0.9	7.0	173.5	161.3	12.2	6.7	5.5	1	56	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
104-12	7.4	0.6	6.8	180.5	147.7	32.8	19.0	13.8	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
104-13	8.0	0.9	7.1	261.8	228.7	33.1	18.9	14.2	3	14	P	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
104-14	7.8	0.8	7.0	167.1	132.9	34.2	19.9	14.3	1	1	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
104-15	7.8	1.3	6.5	163.3	121.1	42.2	22.0	20.2	1	1	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
104-16	7.7	0.8	6.9	187.0	146.1	40.9	20.4	20.5	3	68	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
104-17	7.7	0.8	6.9	175.6	141.6	34.0	21.4	12.6	3	56	P	95	5	NA	NA	U	Y	Y	Y	B	B	TILL
105-01	8.8	0.6	8.2	249.2	201.6	47.6	28.9	18.7	0	NA	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
105-02	8.7	0.6	8.1	224.2	173.8	50.4	28.5	21.9	0	NA	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
105-03	4.1	0.1	4.0	141.7	122.5	19.2	12.7	6.5	0	NA	P	100	NA	NA	NA	S	M	Y	Y	B	B	SAND
106-01	8.3	1.3	7.0	131.6	101.0	30.6	17.8	12.8	2	661	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
106-02	7.6	1.0	6.6	182.8	152.9	29.9	18.2	11.7	2	1	P	75	20	5	NA	U	Y	Y	Y	B	B	TILL
106-03	7.6	0.5	7.1	177.0	152.2	24.8	13.2	11.6	2	30	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
106-04	7.3	0.7	6.6	198.9	173.5	25.4	14.7	10.7	5	120	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
106-05	7.9	0.8	7.1	156.1	130.6	25.5	13.7	11.8	1	74	P	40	60	NA	NA	U	Y	Y	Y	B	B	TILL
106-06	7.5	0.9	6.6	174.4	150.6	23.8	13.0	10.8	1	6	P	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
106-07	8.2	1.1	7.1	136.2	110.6	25.6	13.3	12.3	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
106-08	7.8	0.6	7.2	133.4	108.2	25.2	14.2	11.0	2	71	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
106-09	7.8	0.7	7.1	149.7	129.8	19.9	9.9	10.0	2	105	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
106-10	8.0	0.7	7.3	197.5	162.3	35.2	19.2	16.0	3	49	C	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
106-11	8.3	0.4	7.9	131.5	94.9	36.6	20.5	16.1	5	81	C	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
106-12	8.2	0.3	7.9	232.2	205.8	26.4	12.5	13.9	3	476	C	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
106-13	8.3	0.7	7.6	190.2	152.9	37.3	21.6	15.7	1	30	P	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
106-14	8.6	1.1	7.5	212.9	165.3	47.6	29.3	18.3	2	220	C	80	20	NA	NA	U	Y	Y	Y	B	B	TILL

CAMB4DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET) TABLE SPLIT	+10 CHIPS	TABLE FEED	WEIGHT (GRAMS DRY) TABLE CONC	M.I. LIGHTS	M. I. CONC CONC. TOTAL	NON MAG	MAG	AU NO. V.G.	CALC PPB	DESCRIPTION CLAST SIZE	% V/S	GR	LS	OT	MATRIX S/U	SD	ST	CY	COLOR SD	CY	CLASS
CB-89																						
107-01	9.0	0.5	8.5	207.0	159.1	47.9	26.6	21.3	1	7	P	98	2	NA	NA	U	Y	Y	Y	GB	GB	TILL
107-02	9.0	0.6	8.4	250.5	200.6	49.9	29.1	20.8	0	NA	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
107-03	9.4	0.7	8.7	272.0	217.8	54.2	32.9	21.3	1	65	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
107-04	7.2	0.6	6.6	189.6	145.5	44.1	28.1	16.0	1	613	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
107-05	8.7	0.7	8.0	326.3	280.1	46.2	27.4	18.8	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
107-06	8.8	0.6	8.2	247.0	201.1	45.9	26.6	19.3	2	123	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
107-07	9.1	0.8	8.3	229.9	185.8	44.1	24.8	19.3	1	60	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
107-08	9.1	0.6	8.5	199.0	136.4	62.6	32.5	30.1	1	46	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
107-09	4.7	0.2	4.5	213.1	188.6	24.5	14.4	10.1	1	13	P	98	2	NA	NA	U	Y	Y	Y	GY	GY	TILL
108-01	8.7	0.9	7.8	196.1	158.6	37.5	22.3	15.2	1	9	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
108-02	8.2	0.8	7.4	237.9	205.3	32.6	19.1	13.5	3	31	P	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
108-03	8.2	0.9	7.3	272.4	235.6	36.8	22.8	14.0	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
108-04	8.1	1.3	6.8	270.6	173.8	96.8	71.4	25.4	8	572	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
109-01	9.0	0.5	8.5	246.1	225.4	20.7	12.1	8.6	5	236	P	55	45	5	NA	U	Y	Y	Y	B	B	TILL
109-02	9.4	1.1	8.3	293.1	240.2	52.9	32.7	20.2	15	86	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
109-03	8.3	0.9	7.4	189.9	144.0	45.9	26.9	19.0	16	1383	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
109-04	9.2	0.5	8.7	280.6	241.0	39.6	22.6	17.0	6	160	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
109-05	8.8	0.5	8.3	283.9	234.6	49.3	28.8	20.5	15	116	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
109-06	8.5	0.5	8.0	191.3	151.0	40.3	24.0	16.3	1	8	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
109-07	8.7	0.4	8.3	257.7	215.1	42.6	22.8	19.8	5	13	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
109-08	8.9	0.5	8.4	237.8	192.1	45.7	23.1	22.6	5	145	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
109-09	8.4	0.3	8.1	315.0	272.5	42.5	23.8	18.7	6	246	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
109-10	9.1	0.7	8.4	286.9	237.1	49.8	25.3	24.5	5	113	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
109-11	9.3	0.5	8.8	361.5	307.7	53.8	29.2	24.6	4	163	P	90	10	NA	NA	U	Y	Y	Y	GY	GY	TILL
109-12	8.9	0.7	8.2	280.3	205.7	74.6	36.2	38.4	9	276	P	95	5	NA	NA	U	Y	Y	Y	GY	GY	TILL
110-01	7.9	0.0	7.9	162.2	128.3	33.9	21.9	12.0	1	17	TR	NA	NA	NA	NA	S	F	Y	N	B	NA	SAND
110-02	6.9	0.0	6.9	113.0	88.5	24.5	15.3	9.2	0	NA	TR	NA	NA	NA	NA	S	F	Y	N	B	NA	SAND
110-03	7.1	0.0	7.1	114.2	87.5	26.7	16.3	10.4	4	120	TR	NA	NA	NA	NA	S	F	Y	N	B	NA	SAND
110-04	8.0	0.0	8.0	212.0	188.5	23.5	15.5	8.0	1	5	TR	NA	NA	NA	NA	S	F	Y	N	B	NA	SAND
110-05	7.8	0.0	7.8	251.6	222.4	29.2	16.9	12.3	0	NA	TR	NA	NA	NA	NA	S	F	Y	N	B	NA	SAND
110-06	8.4	0.0	8.4	281.9	246.0	35.9	21.8	14.1	0	NA	TR	NA	NA	NA	NA	S	F	Y	N	B	NA	SAND
110-07	7.6	0.0	7.6	145.9	114.1	31.8	22.7	9.1	1	127	TR	NA	NA	NA	NA	S	F	Y	N	B	GYB	SAND
110-08	8.4	1.3	7.1	262.5	216.4	46.1	28.3	17.8	2	37	P	80	20	NA	NA	U	Y	Y	Y	GYB	GYB	TILL
110-09	8.3	1.5	6.8	213.9	158.8	55.1	30.5	24.6	2	1139	P	75	25	NA	NA	U	Y	Y	Y	GB	GB	TILL
110-10	7.5	0.5	7.0	454.3	394.1	60.2	36.7	23.5	0	NA	C	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL & BDK
112-01	7.8	0.6	7.2	293.2	258.9	34.3	21.5	12.8	6	90	C	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
112-02	7.7	0.0	7.7	372.0	331.4	40.6	27.6	13.0	0	NA	TR	NA	NA	NA	NA	S	F	N	N	GB	NA	SAND
112-03	8.6	1.0	7.6	304.4	231.7	72.7	43.4	29.3	9	368	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
112-04	8.4	1.4	7.0	304.0	231.0	73.0	43.8	29.2	7	2487	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
112-05	8.2	1.3	6.9	255.9	213.7	42.2	25.7	16.5	6	2114	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
112-06	7.7	0.7	7.0	382.8	337.1	45.7	28.0	17.7	1	7	C	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
112-07	8.5	1.1	7.4	411.2	373.1	38.1	23.1	15.0	0	NA	C	50	45	5	NA	U	Y	Y	Y	B	B	TILL
112-08	8.0	1.2	6.8	325.5	290.3	35.2	23.0	12.2	0	NA	C	50	50	TR	NA	U	Y	Y	Y	B	B	TILL
112-09	8.3	1.4	6.9	358.0	321.8	36.2	22.0	14.2	0	NA	C	50	50	TR	NA	U	Y	Y	Y	GB	GB	TILL
112-10	2.1	0.1	2.0	64.3	55.2	9.1	6.6	2.5	0	NA	C	65	35	NA	NA	U	Y	Y	Y	GB	GB	TILL

CAMB4DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET)			WEIGHT (GRAMS DRY)					AU		DESCRIPTION											CLASS
						M. I. CONC					CLAST					MATRIX						
	TABLE SPLIT	+10 CHIPS	TABLE FEED	TABLE CONC	M.I. LIGHTS	CONC. TOTAL	NON MAG	MAG	NO. V.G.	CALC PPB	SIZE	% V/S	% GR	% LS	% OT	S/U	SD	ST	CY	COLOR SD	COLOR CY	
CB-89																						
113-01	4.3	0.6	3.7	258.0	247.4	10.6	7.0	3.6	1	303	P	40	40	20	NA	S	C	Y	Y	B	B	SAND
113-02	8.5	1.0	7.5	250.9	215.8	35.1	20.5	14.6	1	49	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
114-01	8.0	0.8	7.2	307.5	273.7	33.8	19.8	14.0	0	NA	C	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
114-02	8.3	1.2	7.1	225.8	188.1	37.7	22.5	15.2	1	170	C	65	35	TR	NA	U	Y	Y	Y	B	B	TILL
114-03	8.1	1.1	7.0	232.6	194.7	37.9	21.4	16.5	1	17	C	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
114-04	8.3	1.5	6.8	250.4	204.2	46.2	25.8	20.4	1	1103	C	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
114-05	7.7	0.5	7.2	216.4	175.7	40.7	26.5	14.2	1	80	C	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
114-06	7.2	0.4	6.8	191.6	158.3	33.3	21.0	12.3	0	NA	C	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
114-07	8.4	0.3	8.1	279.2	235.8	43.4	28.2	15.2	0	NA	C	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
114-08	8.0	0.3	7.7	267.4	225.6	41.8	25.3	16.5	3	23	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL & BLD
114-09	7.9	0.8	7.1	288.4	244.6	43.8	24.1	19.7	6	172	C	65	35	NA	NA	U	Y	Y	Y	GB	GB	TILL
114-10	7.9	0.5	7.4	354.7	307.9	46.8	29.0	17.8	4	39	C	65	35	NA	NA	U	Y	Y	Y	GB	GB	TILL
114-11	8.2	1.7	6.5	223.9	182.7	41.2	25.7	15.5	3	82	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
114-12	8.1	0.5	7.6	372.0	336.6	35.4	21.7	13.7	5	338	C	60	40	NA	NA	U	Y	Y	Y	GB	GB	TILL
114-13	8.4	1.5	6.9	272.5	241.8	30.7	19.0	11.7	1	20	C	60	40	TR	NA	U	Y	Y	Y	GB	GB	TILL
114-14	7.3	0.5	6.8	291.1	262.8	28.3	16.8	11.5	6	917	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
115-01	7.6	1.0	6.6	229.8	199.4	30.4	18.4	12.0	0	NA	P	70	25	5	NA	U	Y	Y	Y	B	B	TILL
116-01	8.0	0.0	8.0	192.5	167.6	24.9	15.3	9.6	1	42	TR	NA	NA	A	NA	S	F	N	N	GB	NA	SAND
116-02	8.2	0.0	8.2	331.5	285.2	46.3	32.3	14.0	1	31	TR	NA	NA	A	NA	S	F	N	N	GB	NA	SAND
116-03	8.2	0.0	8.2	289.8	242.3	47.5	32.0	15.5	0	NA	TR	NA	NA	A	NA	S	F	N	N	GB	NA	SAND
116-04	8.3	0.0	8.3	221.9	181.3	40.6	29.4	11.2	1	263	TR	NA	NA	A	NA	S	F	N	N	GB	NA	SAND
116-05	7.4	4.0	3.4	239.1	204.8	34.3	23.2	11.1	0	NA	C	63	35	NA	NA	U	Y	Y	Y	GB	GB	TILL
116-06	7.8	0.4	7.4	355.9	311.7	44.2	28.4	15.8	0	NA	C	60	40	NA	NA	U	Y	Y	Y	GB	GB	TILL
116-07	7.6	0.2	7.4	324.1	272.7	51.4	34.4	17.0	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
116-08	8.7	0.2	8.5	304.6	251.6	53.0	33.5	19.5	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
116-09	7.8	0.4	7.4	325.9	264.5	61.4	43.5	17.9	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
116-10	8.2	0.6	7.6	163.2	120.2	43.0	24.3	18.7	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GY	TILL
116-11	8.1	0.3	7.8	236.9	197.7	39.2	24.0	15.2	0	NA	P	98	2	NA	A	U	Y	Y	Y	GB	GY	TILL
116-12	8.0	0.3	7.7	297.7	251.6	46.1	29.9	16.2	1	34	P	99	1	NA	NA	U	Y	Y	Y	GB	GY	TILL
116-13	7.5	0.3	7.2	171.1	141.3	29.8	18.0	11.8	0	NA	P	99	1	NA	A	U	Y	Y	Y	GB	GY	TILL
116-14	8.1	1.3	6.8	242.3	186.9	55.4	45.5	9.9	2	30	P	100	NA	NA	NA	U	Y	Y	Y	GY	GY	TILL
116-15	8.5	2.2	6.3	290.9	207.1	83.8	69.0	14.8	2	19	P	85	15	NA	NA	U	Y	Y	Y	GY	GY	TILL
116-16	8.7	0.7	8.0	304.6	235.9	68.7	51.5	17.2	7	47	P	90	10	NA	NA	U	Y	Y	Y	GY	GY	TILL
116-17	9.1	0.3	8.8	274.7	234.7	40.0	27.8	12.2	6	128	P	90	10	NA	NA	U	Y	Y	Y	GY	GY	TILL
117-01	4.7	0.5	4.2	154.7	137.3	17.4	10.9	6.5	7	202	P	60	40	TR	NA	U	Y	Y	Y	B	B	TILL
117-02	7.5	0.7	6.8	239.8	208.3	31.5	18.6	12.9	8	214	P	70	30	TR	NA	U	Y	Y	Y	B	B	TILL
117-03	5.9	0.5	5.4	240.8	198.7	42.1	17.3	24.8	5	51	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
117-04	8.7	0.8	7.9	214.8	143.8	71.0	57.5	13.5	6	6	P	95	5	NA	NA	U	Y	Y	Y	GN	GN	TILL
118-01	7.6	0.0	7.6	155.3	122.1	33.2	22.5	10.7	1	94	TR	NA	NA	NA	NA	S	F,M	Y	Y	GB	NA	SAND
118-02	8.3	0.3	8.0	233.6	205.5	28.1	18.1	10.0	0	NA	P	60	40	NA	NA	U	Y	Y	Y	GB	GB	TILL
118-03	8.3	0.9	7.4	215.2	187.1	28.1	17.8	10.3	0	NA	P	60	40	NA	NA	U	Y	Y	Y	GB	GB	TILL
118-04	8.1	0.6	7.5	378.6	329.6	49.0	29.6	19.4	7	118	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
118-05	8.4	0.9	7.5	259.8	196.5	63.3	39.4	23.9	9	549	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
118-06	8.5	0.9	7.6	221.5	176.1	45.4	29.6	15.8	6	1095	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
118-07	8.2	0.4	7.8	240.7	207.2	33.5	16.4	17.1	1	39	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL

CAMB4DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET) TABLE SPLIT	+10 CHIPS	TABLE FEED	WEIGHT (GRAMS DRY) TABLE CONC	M.I. LIGHTS	M. I. CONC CONC. TOTAL	NON MAG	MAG	AU NO. V.G.	CALC PPB	DESCRIPTION CLAST SIZE	% V/S	GR	LS	OT	MATRIX S/U	SD	ST	CY	COLOR SD	COLOR CY	CLASS
CB-89																						
118-08	8.5	0.5	8.0	330.2	299.6	30.6	18.4	12.2	0	NA	P	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
118-09	3.4	0.5	2.9	284.3	275.0	9.3	7.2	2.1	0	NA	BL	100	NA	NA	NA	S	Y	Y	Y	BK	GY	BLD
118-10	8.3	0.9	7.4	287.0	266.6	20.4	18.2	2.2	1	1	C	100	NA	NA	NA	U	Y	Y	Y	GY	GY	TILL
119-01	8.2	0.9	7.3	237.6	185.8	51.8	29.7	22.1	4	71	P	80	10	10	NA	U	Y	Y	Y	GB	GB	TILL
120-01	8.0	0.2	7.8	323.2	306.6	16.6	10.4	6.2	0	NA	P	50	50	NA	NA	U	Y	Y	Y	GB	GB	TILL
120-02	8.0	0.0	8.0	262.8	243.3	19.5	12.7	6.8	0	NA	TR	NA	NA	NA	NA	S	F,M	Y	Y	GB	NA	SAND
120-03	8.5	0.7	7.8	237.6	170.9	66.7	36.5	30.2	8	171	C	75	25	NA	NA	U	Y	Y	Y	GB	GB	TILL
120-04	7.8	0.8	7.0	403.3	350.1	53.2	29.1	24.1	4	388	C	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
121-01	6.2	1.0	5.2	166.4	144.1	22.3	14.0	8.3	7	114	P	80	15	5	NA	U	Y	Y	Y	GB	GB	TILL
121-02	6.4	0.9	5.5	267.1	183.7	83.4	72.7	10.7	1	1	C	95	5	NA	NA	U	Y	Y	Y	GN	GN	TILL & BDK
122-01	7.8	1	6.8	309.1	273.8	35.3	19	16.3	6	707	C	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
122-02	2.9	0.3	2.6	221.2	198.1	23.1	13.6	9.5	0	NA	C	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
123-01	9.3	1.2	8.1	359.3	324.3	35.0	24.4	10.6	3	10	C	98	2	NA	NA	U	Y	Y	Y	GB	GB	TILL
123-02	9.0	1.6	7.4	187.0	118.6	68.4	37.9	30.5	6	57	C	100	NA	NA	NA	U	Y	Y	Y	GY	GY	TILL
123-03	8.8	2.2	6.6	248.1	166.2	81.9	51.1	30.8	2	277	C	100	NA	NA	NA	U	Y	Y	Y	GY	NA	GRAVEL
123-04	9.5	2.3	7.2	213.3	142.5	70.8	37.3	33.5	2	11	C	100	NA	NA	NA	U	Y	Y	Y	GY	GY	TILL
123-05	8.8	1.6	7.2	342.0	251.9	90.1	49.0	41.1	6	198	C	98	2	NA	NA	U	Y	Y	Y	GY	GY	TILL
124-01	7.3	0.6	6.7	193.3	161.9	31.4	17.4	14.0	6	250	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
124-02	8.7	0.9	7.8	253.8	198.1	55.7	29.0	26.7	1	99	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
124-03	7.9	0.9	7.0	276.8	243.3	33.5	18.0	15.5	1	52	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
124-04	8.6	1.6	7.0	237.4	206.9	30.5	16.4	14.1	0	NA	C	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
124-05	7.7	0.8	6.9	277.7	215.4	62.3	22.9	39.4	1	93	C	75	25	NA	NA	U	Y	Y	Y	GB	GB	TILL
124-06	8.0	0.3	7.7	539.4	170.8	368.6	23.0	345.6	0	NA	C	99	1	NA	NA	U	Y	Y	Y	GY	GY	TILL
125-01	8.8	0.8	8.0	372.7	321.6	51.1	30.8	20.3	6	210	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
125-02	9.1	1.2	7.9	209.9	165.3	44.6	27.7	16.9	0	NA	P	80	17	3	NA	U	Y	Y	Y	GB	GB	TILL
125-03	8.9	1.0	7.9	306.9	266.6	40.3	23.7	16.6	1	356	P	80	20	TR	NA	U	Y	Y	Y	GB	GB	TILL
126-01	8.3	0.8	7.5	286.0	237.5	48.5	24.6	23.9	2	1565	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
126-02	7.8	1.0	6.8	328.4	264.0	64.4	31.8	32.6	11	733	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
126-03	7.6	0.6	7.0	311.6	248.8	62.8	34.1	28.7	15	2302	P	95	5	NA	NA	U	Y	Y	Y	GB	GY	TILL
127-01	8.8	1.5	7.3	222.7	176.6	46.1	25.8	20.3	8	132	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
127-02	9.1	1.0	8.1	329.5	278.0	51.5	30.3	21.2	1	50	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
127-03	8.7	0.9	7.8	280.5	229.6	50.9	29.2	21.7	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
127-04	8.4	0.6	7.8	415.9	380.8	35.1	21.9	13.2	0	NA	P	60	40	NA	NA	U	Y	Y	Y	B	GB	TILL
127-05	8.6	0.5	8.1	211.2	177.4	33.8	20.9	12.9	0	NA	P	60	40	NA	NA	U	Y	Y	Y	B	GB	TILL
127-06	9.1	0.5	8.6	277.0	244.0	33.0	17.8	15.2	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
127-07	9.2	0.3	8.9	327.2	292.0	35.2	19.3	15.9	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
127-08	9.0	0.4	8.6	264.9	227.6	37.3	23.3	14.0	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
127-09	9.0	0.4	8.6	273.0	205.9	67.1	35.0	32.1	1	61	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
127-10	8.9	0.2	8.7	220.4	176.5	43.9	27.7	16.2	3	104	P	80	20	NA	NA	U	Y	Y	Y	B	GB	TILL
127-11	8.9	0.4	8.5	300.3	257.6	42.7	24.2	18.5	1	62	P	80	20	NA	TR	U	Y	Y	Y	B	GY	TILL
127-12	9.0	0.4	8.6	284.8	241.9	42.9	22.0	20.9	4	3233	P	80	20	NA	NA	U	Y	Y	Y	B	GY	TILL
127-13	8.6	0.8	7.8	197.5	160.9	36.6	19.4	17.2	1	149	P	70	30	NA	NA	U	Y	Y	Y	B	GY	TILL
127-14	8.3	0.1	8.2	283.3	240.1	43.2	25.1	18.1	1	197	P	70	30	NA	NA	U	Y	Y	Y	B	GY	TILL
127-15	8.1	0.4	7.7	171.3	137.9	33.4	18.4	15.0	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	GY	TILL
127-16	8.5	0.3	8.2	215.0	176.3	38.7	21.8	16.9	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	GY	TILL

CAMB4DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET)			WEIGHT (GRAMS DRY)					AU		DESCRIPTION											CLASS
						M. I. CONC					CLAST					MATRIX						
	TABLE SPLIT	+10 CHIPS	TABLE FEED	TABLE CONC	M.I. LIGHTS	CONC. TOTAL	NON MAG	MAG	NO. V.G.	CALC PPB	SIZE	% V/S	% GR	% LS	% OT	S/U	SD	ST	CY	COLOR SD	COLOR CY	
CB-89																						
127-17	9.3	0.4	8.9	214.9	177.2	37.7	19.4	18.3	0	NA	P	70	30	TR	NA	U	Y	Y	Y	B	GY	TILL
127-18	9.0	0.4	8.6	192.3	160.3	32.0	17.0	15.0	5	298	P	70	30	TR	NA	U	Y	Y	Y	B	GY	TILL
127-19	8.7	0.7	8.0	187.0	153.6	33.4	17.6	15.8	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	GY	TILL
127-20	8.4	0.6	7.8	218.4	184.8	33.6	17.9	15.7	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	GY	TILL
127-21	9.0	0.2	8.8	224.8	185.6	39.2	21.4	17.8	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	GY	TILL
127-22	9.1	0.4	8.7	288.1	233.7	54.4	29.8	24.6	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	GY	TILL
127-23	8.9	0.4	8.5	323.9	278.9	45.0	27.7	17.3	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
127-24	8.7	1.8	6.9	204.9	158.0	46.9	29.3	17.6	1	13	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
127-25	9.0	0.7	8.3	240.1	187.5	52.6	36.5	16.1	3	262	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
127-26	9.0	0.5	8.5	339.8	301.2	38.6	23.5	15.1	1	163	P	80	20	NA	A	U	Y	Y	Y	GB	GB	TILL
127-27	8.1	0.0	8.1	262.6	228.1	34.5	22.9	11.6	0	NA	TR	NA	NA	NA	A	U	Y	Y	Y	GB	GB	TILL
127-28	8.0	0.2	7.8	295.0	263.3	31.7	21.0	10.7	0	NA	P	80	20	NA	A	U	Y	Y	Y	GB	GB	TILL
127-29	8.1	0.0	8.1	323.2	297.3	25.9	17.1	8.8	0	NA	TR	NA	NA	NA	A	U	Y	Y	Y	GB	GB	TILL
127-30	7.5	0.1	7.4	305.2	269.8	35.4	24.0	11.4	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
127-31	8.5	0.3	8.2	227.5	185.2	42.3	31.5	10.8	2	567	C	100	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
127-32	8.6	0.8	7.8	221.2	173.8	47.4	33.2	14.2	1	45	C	100	NA	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
127-33	9.1	1.2	7.9	211.0	142.3	68.7	45.5	23.2	5	11247	P	100	NA	NA	NA	S	C	NA	NA	GN	NA	GRAVEL
127-34	9.7	0.5	9.2	212.2	159.6	52.6	34.9	17.7	1	6	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
127-35	9.4	1.0	8.4	375.8	314.9	60.9	37.7	23.2	5	228	P	90	10	NA	NA	S	C	Y	NA	GN	NA	GRAVEL
128-01	7.2	0.2	7.0	214.8	193.7	21.1	12.5	8.6	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
128-02	7.6	0.1	7.5	238.9	219.0	19.9	12.1	7.8	0	NA	P	80	20	NA	NA	S	F	Y	Y	GB	GB	SAND
128-03	7.2	0.7	6.5	264.1	231.4	32.7	18.2	14.5	1	56	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
128-04	8.5	0.6	7.9	297.1	241.5	55.6	31.7	23.9	1	1040	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
128-05	8.0	0.2	7.8	262.0	230.9	31.1	13.1	18.0	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
128-06	8.4	0.4	8.0	210.6	173.4	37.2	20.9	16.3	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
128-07	7.7	0.6	7.1	207.6	172.9	34.7	20.7	14.0	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
128-08	8.0	0.6	7.4	265.9	229.3	36.6	22.1	14.5	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
128-09	7.6	0.4	7.2	153.6	121.0	32.6	19.2	13.4	0	NA	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
128-10	8.5	0.3	8.2	275.3	242.1	33.2	19.9	13.3	3	177	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
128-11	8.3	0.5	7.8	277.0	244.5	32.5	17.9	14.6	0	NA	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
128-12	8.3	0.6	7.7	372.2	331.5	40.7	23.8	16.9	18	704	P	95	5	NA	A	U	Y	Y	Y	GB	GB	TILL
128-13	8.0	0.7	7.3	259.8	228.5	31.3	17.8	13.5	1	21	P	90	10	NA	A	U	Y	Y	Y	GB	GB	TILL
128-14	7.7	0.7	7.0	257.5	228.9	28.6	16.6	12.0	7	76	P	90	10	NA	A	U	Y	Y	Y	GB	GB	TILL
128-15	8.2	1.3	6.9	296.0	262.3	33.7	18.1	15.6	0	NA	P	100	NA	NA	A	U	Y	Y	Y	GB	GB	TILL
128-16	8.7	1.8	6.9	315.2	275.6	39.6	26.3	13.3	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
128-17	7.9	0.8	7.1	222.6	195.6	27.0	16.5	10.5	1	23	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
128-18	7.0	1.0	6.0	192.7	164.1	28.6	20.1	8.5	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
129-01	5.8	0.2	5.6	193.3	169.5	23.8	14.0	9.8	0	NA	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
129-02	9.0	0.4	8.6	246.3	210.5	35.8	19.4	16.4	0	NA	C	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
129-03	8.9	0.4	8.5	206.8	170.9	35.9	19.7	16.2	0	NA	C	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
129-04	8.9	0.2	8.7	209.8	178.0	31.8	16.8	15.0	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
129-05	9.0	0.5	8.5	252.3	213.6	38.7	22.5	16.2	1	219	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
129-06	8.3	0.2	8.1	250.4	215.8	34.6	21.5	13.1	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GB	GY	TILL
129-07	8.5	0.3	8.2	228.8	199.8	29.0	18.1	10.9	1	35	P	70	30	NA	A	U	Y	Y	Y	GB	GY	TILL
129-08	7.0	0.3	6.7	289.3	265.6	23.7	15.5	8.2	0	NA	P	90	10	NA	A	U	Y	Y	Y	GB	GY	TILL

CAMB4DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET) TABLE SPLIT	+10 CHIPS	TABLE FEED	WEIGHT (GRAMS DRY) TABLE CONC	M.I. LIGHTS	M. I. CONC CONC. TOTAL	NON MAG	MAG	AU NO. V.G.	CALC PPB	DESCRIPTION CLAST SIZE	% V/S	GR	LS	OT	MATRIX S/U	SD	ST	CY	COLOR SD	CY	CLASS
CB-89																						
129-09	6.1	0.2	5.9	188.0	164.5	23.5	15.6	7.9	0	NA	P	80	20	NA	A	U	Y	Y	Y	GB	GY	TILL
129-10	9.0	0.2	8.8	165.2	141.2	24.0	13.7	10.3	0	NA	P	80	20	NA	A	U	Y	Y	Y	GB	GY	TILL
129-11	8.5	0.1	8.4	221.6	196.6	25.0	14.7	10.3	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
129-12	8.4	0.5	7.9	325.2	296.8	28.4	17.4	11.0	0	NA	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
129-13	9.0	0.7	8.3	330.2	299.8	30.4	19.4	11.0	0	NA	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
129-14	9.1	0.5	8.6	303.2	265.0	38.2	23.5	14.7	0	NA	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
129-15	9.1	0.5	8.6	254.1	208.1	46.0	29.1	16.9	0	NA	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
129-16	9.0	0.8	8.2	399.0	345.3	53.7	34.0	19.7	1	19	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
129-17	9.1	0.2	8.9	227.2	185.7	41.5	24.4	17.1	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
129-18	8.9	0.8	8.1	279.2	248.7	30.5	18.4	12.1	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
129-19	8.7	0.3	8.4	320.8	283.9	36.9	24.0	12.9	0	NA	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
129-20	8.7	0.7	8.0	201.5	169.8	31.7	19.6	12.1	5	623	P	95	5	NA	A	U	Y	Y	Y	GB	GB	TILL
130-01	8.5	0.7	7.8	429.5	403.2	26.3	15.6	10.7	0	NA	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
130-02	8.5	0.2	8.3	232.2	210.1	22.1	13.3	8.8	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
130-03	8.5	0.5	8.0	243.6	214.8	28.8	16.8	12.0	1	565	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
130-04	8.9	0.7	8.2	243.8	200.6	43.2	25.2	18.0	5	335	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
130-05	8.4	1.4	7.0	287.4	237.2	50.2	27.7	22.5	5	147	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
130-06	7.8	0.5	7.3	265.7	232.9	32.8	19.9	12.9	1	19	P	95	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
130-07	5.9	0.5	5.4	216.0	193.0	23.0	16.1	6.9	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GY	GY	TILL
131-01	8.3	1.4	6.9	180.2	146.4	33.8	20.9	12.9	1	102	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
131-02	8.6	1.4	7.2	237.0	190.5	46.5	26.4	20.1	0	NA	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
131-03	8.7	1.2	7.5	219.2	181.0	38.2	23.7	14.5	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
131-04	8.7	0.4	8.3	319.6	276.2	43.4	26.3	17.1	0	NA	P	75	25	NA	NA	U	Y	Y	Y	GB	GB	TILL
131-05	8.3	0.5	7.8	294.5	247.8	46.7	28.6	18.1	1	173	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
131-06	8.7	0.3	8.4	258.9	202.6	56.3	36.9	19.4	0	NA	P	75	25	NA	NA	U	Y	Y	Y	GB	GB	TILL
131-07	8.6	0.2	8.4	266.8	218.2	48.6	31.7	16.9	1	91	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
131-08	8.1	0.4	7.7	314.9	275.5	39.4	25.0	14.4	0	NA	P	85	15	NA	A	U	Y	Y	Y	GB	GB	TILL
131-09	8.6	1.3	7.3	377.7	332.8	44.9	29.6	15.3	0	NA	P	85	15	NA	A	U	Y	Y	Y	GB	GY	TILL
131-10	8.4	0.8	7.6	319.8	291.0	28.8	18.6	10.2	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
131-11	8.4	0.6	7.8	342.1	305.0	37.1	24.0	13.1	0	NA	P	90	10	NA	NA	U	F	Y	Y	GB	GB	TILL
131-12	8.5	0.4	8.1	220.9	187.6	33.3	23.8	9.5	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
132-01	7.7	0.0	7.7	180.0	151.7	28.3	16.6	11.7	1	174	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
132-02	8.6	0.3	8.3	252.4	210.9	41.5	24.6	16.9	0	NA	C	50	50	NA	NA	U	Y	Y	Y	GB	GB	TILL
132-03	8.5	0.5	8.0	255.4	216.1	39.3	23.8	15.5	1	63	C	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
132-04	8.1	0.5	7.6	220.3	185.4	34.9	24.4	10.5	2	133	C	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
132-05	8.2	0.9	7.3	236.7	194.0	42.7	30.5	12.2	3	15	C	95	5	NA	NA	U	Y	Y	Y	GY	GY	TILL
133-01	7.6	0.7	6.9	251.3	217.7	33.6	21.0	12.6	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
133-02	6.7	0.4	6.3	177.1	147.7	29.4	17.4	12.0	1	220	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
133-03	7.9	1.2	6.7	174.3	141.5	32.8	18.0	14.8	1	118	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
133-04	8.3	0.8	7.5	195.1	159.9	35.2	19.4	15.8	8	823	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
133-05	8.3	1.0	7.3	253.4	219.6	33.8	19.9	13.9	1	19	P	80	20	NA	NA	S	F	Y	Y	B	B	SAND
133-06	8.4	0.4	8.0	204.3	166.5	37.8	23.0	14.8	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL & SAN
133-07	8.7	0.8	7.9	190.0	158.9	31.1	17.6	13.5	1	121	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
133-08	8.3	0.6	7.7	171.4	144.1	27.3	16.7	10.6	1	90	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
133-09	8.3	0.4	7.9	243.4	209.0	34.4	19.3	15.1	4	169	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL

CAMB4DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET)			WEIGHT (GRAMS DRY)					AU		DESCRIPTION											CLASS
						M. I. CONC					CLAST					MATRIX						
	TABLE SPLIT	+10 CHIPS	TABLE FEED	TABLE CONC	M.I. LIGHTS	CONC. TOTAL	NON MAG	MAG	NO. V.G.	CALC PPB	SIZE	% V/S	GR	LS	OT	S/U	SD	ST	CY	COLOR SD	CY	
CB-89																						
133-10	8.3	0.6	7.7	242.8	202.4	40.4	24.2	16.2	1	8	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
133-11	8.0	0.9	7.1	203.1	165.1	38.0	23.9	14.1	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
133-12	7.6	0.4	7.2	212.4	173.0	39.4	25.7	13.7	5	612	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
133-13	7.8	0.2	7.6	157.6	119.7	37.9	23.8	14.1	1	16	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
133-14	6.2	0.3	5.9	198.7	164.3	34.4	23.3	11.1	0	NA	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
133-15	8.3	0.4	7.9	226.9	184.5	42.4	26.2	16.2	0	NA	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
133-16	7.5	0.6	6.9	212.2	177.9	34.3	21.8	12.5	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
133-17	8.2	0.2	8.0	208.5	175.5	33.0	21.1	11.9	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
133-18	7.8	0.3	7.5	241.5	203.3	38.2	23.4	14.8	0	NA	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
133-19	8.0	0.3	7.7	255.2	232.7	22.5	12.8	9.7	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
133-20	8.1	0.4	7.7	176.0	142.6	33.4	21.4	12.0	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
133-21	8.0	0.4	7.6	248.3	219.9	28.4	18.1	10.3	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
133-22	8.3	0.6	7.7	243.4	205.7	37.7	23.6	14.1	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
133-23	8.0	0.5	7.5	286.0	245.2	40.8	26.7	14.1	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
133-24	8.7	0.4	8.3	285.3	234.4	50.9	31.8	19.1	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
133-25	9.1	1.6	7.5	241.9	225.1	16.8	10.8	6.0	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
133-26	8.6	0.8	7.8	249.2	205.1	44.1	31.9	12.2	0	NA	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
133-27	8.2	0.2	8.0	242.8	207.8	35.0	26.2	8.8	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
133-28	8.2	0.4	7.8	141.4	115.1	26.3	17.8	8.5	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
133-29	7.5	0.0	7.5	211.8	171.2	40.6	29.8	10.8	0	NA	TR	NA	NA	NA	NA	S	F	Y	Y	B	B	SAND
133-30	7.3	0.0	7.3	214.2	178.6	35.6	26.5	9.1	0	NA	TR	NA	NA	NA	NA	S	F	Y	Y	GB	NA	SAND
134-01	8.2	0.6	7.6	233.9	196.4	37.5	23.6	13.9	0	NA	C	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
134-02	8.7	0.4	8.3	302.1	260.6	41.5	25.8	15.7	0	NA	P	75	25	NA	NA	U	Y	Y	Y	GB	GB	TILL
134-03	8.2	0.0	8.2	225.8	185.6	40.2	25.8	14.4	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	GB	GB	TILL
134-04	7.4	0.3	7.1	211.6	172.7	38.9	23.6	15.3	5	216	C	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
134-05	8.6	0.5	8.1	227.7	192.2	35.5	20.8	14.7	5	80	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
134-06	8:4	0.4	8.0	310.6	285.7	24.9	15.2	9.7	3	169	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
134-07	8.8	0.4	8.4	235.1	204.2	30.9	18.8	12.1	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
134-08	8.3	0.5	7.8	195.4	152.7	42.7	26.9	15.8	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
135-01	8.8	1.0	7.8	263.1	217.3	45.8	27.2	18.6	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
135-02	8.0	0.6	7.4	306.8	265.9	40.9	23.9	17.0	1	721	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
135-03	8.5	0.8	7.7	220.8	192.7	28.1	16.0	12.1	1	94	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
135-04	9.3	2.2	7.1	316.3	270.1	46.2	23.4	22.8	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
135-05	7.8	0.4	7.4	290.8	260.3	30.5	17.9	12.6	1	84	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
135-06	8.5	0.4	8.1	162.6	131.3	31.3	16.2	15.1	1	93	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
135-07	8.1	0.4	7.7	282.3	248.5	33.8	18.0	15.8	1	56	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
135-08	8.4	0.5	7.9	260.4	229.7	30.7	17.3	13.4	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
136-01	6.5	0.0	6.5	152.0	132.0	20.0	13.1	6.9	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	B	B	TILL
136-02	6.5	0.2	6.3	250.6	214.6	36.0	23.6	12.4	1	43	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
136-03	8.2	0.3	7.9	249.5	208.3	41.2	26.5	14.7	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
136-04	8.1	0.4	7.7	225.7	187.3	38.4	23.7	14.7	1	208	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
136-05	7.5	0.4	7.1	207.4	172.1	35.3	22.5	12.8	1	129	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
136-06	7.3	0.5	6.8	192.9	159.0	33.9	21.5	12.4	4	312	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
136-07	8.6	0.8	7.8	282.6	246.9	35.7	21.2	14.5	1	180	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
136-08	7.6	0.7	6.9	185.2	152.4	32.8	21.1	11.7	1	1	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL

CAMB4DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET) TABLE SPLIT	+10 CHIPS	TABLE FEED	WEIGHT (GRAMS DRY) TABLE CONC	M.I. LIGHTS	M. I. CONC CONC. TOTAL	NON MAG	MAG	AU NO. V.G.	CALC PPB	DESCRIPTION CLAST SIZE	% V/S	GR	LS	OT	MATRIX S/U	SD	ST	CY	COLOR SD	CY	CLASS
CB-89																						
136-09	9.0	1.0	8.0	266.7	234.3	32.4	20.1	12.3	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
137-01	8.7	1.4	7.3	249.1	207.1	42.0	30.0	12.0	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
137-02	8.9	1.2	7.7	148.1	116.9	31.2	18.6	12.6	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
137-03	8.3	1.2	7.1	199.6	170.0	29.6	17.2	12.4	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
137-04	8.4	0.9	7.5	199.4	169.0	30.4	17.5	12.9	0	NA	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
137-05	8.4	0.7	7.7	262.2	226.5	35.7	20.5	15.2	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
137-06	8.5	0.4	8.1	318.2	283.9	34.3	18.8	15.5	0	NA	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
137-07	8.5	1.0	7.5	215.0	184.2	30.8	17.0	13.8	4	253	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
137-08	8.6	0.8	7.8	218.8	184.5	34.3	17.6	16.7	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
137-09	6.3	1.0	5.3	228.6	210.6	18.0	11.1	6.9	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
137-10	8.9	0.7	8.2	271.4	233.5	37.9	23.7	14.2	6	402	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
137-11	9.0	1.4	7.6	229.1	193.4	35.7	22.9	12.8	1	28	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
137-12	6.2	0.6	5.6	188.3	158.4	29.9	19.4	10.5	1	149	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
137-13	9.0	1.2	7.8	372.9	329.4	43.5	27.5	16.0	2	216	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
137-14	9.2	0.8	8.4	292.9	251.8	41.1	24.6	16.5	1	41	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
137-15	8.1	0.8	7.3	257.6	224.5	33.1	20.1	13.0	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
137-16	8.0	1.2	6.8	209.6	181.3	28.3	17.5	10.8	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
137-17	6.6	1.3	5.3	133.1	115.9	17.2	11.8	5.4	0	NA	P	70	30	NA	NA	S	M/C	Y	Y	B	B	GRAVEL
137-18	8.7	2.2	6.5	257.0	234.8	22.2	16.3	5.9	0	NA	P	70	30	NA	NA	S	M/C	Y	Y	B	B	GRAVEL
137-19	8.9	1.6	7.3	274.5	239.1	35.4	24.9	10.5	4	342	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
137-20	8.6	0.4	8.2	245.8	211.2	34.6	23.5	11.1	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
137-21	8.4	1.0	7.4	218.1	186.0	32.1	22.4	9.7	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
137-22	8.5	0.8	7.7	225.2	185.2	40.0	28.3	11.7	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
137-23	8.9	3.4	5.5	188.7	155.0	33.7	26.2	7.5	3	132	P	80	20	NA	NA	S	C	Y	Y	GNB	GNB	GRAVEL
137-24	7.6	1.0	6.6	210.8	176.2	34.6	26.0	8.6	2	32	C	80	20	NA	NA	S	C	Y	Y	GN	GN	GRAVEL
138-01	8.0	0.3	7.7	233.3	201.6	31.7	19.4	12.3	6	469	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
139-01	8.4	0.8	7.6	299.6	252.8	46.8	27.5	19.3	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
139-02	8.8	1.9	6.9	261.2	225.8	35.4	22.0	13.4	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
139-03	9.0	1.7	7.3	235.6	199.3	36.3	21.1	15.2	1	181	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
139-04	8.7	1.1	7.6	333.2	285.6	47.6	28.0	19.6	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
139-05	8.6	0.8	7.8	311.2	266.9	44.3	26.3	18.0	1	110	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
139-06	8.8	1.0	7.8	261.5	220.6	40.9	24.1	16.8	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
139-07	8.3	1.0	7.3	194.3	162.7	31.6	18.2	13.4	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
139-08	8.5	0.8	7.7	222.0	183.4	38.6	22.7	15.9	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
139-09	6.6	0.7	5.9	216.6	188.6	28.0	16.5	11.5	2	1433	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
139-10	8.5	0.8	7.7	230.9	193.7	37.2	23.3	13.9	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
139-11	7.4	0.6	6.8	238.9	209.6	29.3	17.8	11.5	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
139-12	8.7	0.6	8.1	244.0	217.0	27.0	16.7	10.3	1	38	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
139-13	7.5	0.3	7.2	303.6	268.3	35.3	21.4	13.9	1	749	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
139-14	8.5	0.8	7.7	262.1	223.2	38.9	23.0	15.9	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
139-15	8.7	0.6	8.1	213.2	179.8	33.4	19.1	14.3	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
139-16	8.6	0.6	8.0	258.8	215.5	43.3	27.4	15.9	1	37	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
139-17	8.6	0.7	7.9	277.5	228.6	48.9	30.6	18.3	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
139-18	9.3	1.5	7.8	297.7	254.0	43.7	28.4	15.3	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
139-19	9.1	1.5	7.6	288.5	236.2	52.3	34.0	18.3	0	NA	C,P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL

CAMB4DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET) TABLE SPLIT	WEIGHT (KG.WET) +10 CHIPS	WEIGHT (KG.WET) TABLE FEED	WEIGHT (GRAMS DRY) TABLE CONC	WEIGHT (GRAMS DRY) M.I. LIGHTS	M. I. CONC CONC. TOTAL	M. I. CONC NON MAG	M. I. CONC MAG	AU NO. V.G.	AU CALC PPB	CLAST SIZE	CLAST % V/S	CLAST % GR	CLAST % LS	CLAST % OT	MATRIX S/U	MATRIX SD	MATRIX ST	MATRIX CY	MATRIX COLOR SD	MATRIX COLOR CY	CLASS
CB-89																						
139-20	9.0	0.9	8.1	206.3	161.7	44.6	27.9	16.7	1	671	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
139-21	8.3	1.7	6.6	207.9	173.2	34.7	22.2	12.5	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
139-22	8.7	1.3	7.4	280.0	244.9	35.1	23.0	12.1	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
139-23	7.9	1.0	6.9	258.2	224.1	34.1	21.1	13.0	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
139-24	8.0	1.2	6.8	240.0	209.1	30.9	19.9	11.0	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
139-25	8.5	1.5	7.0	280.8	250.2	30.6	20.7	9.9	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
139-26	8.6	1.6	7.0	278.6	252.9	25.7	17.8	7.9	0	NA	C	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
139-27	8.1	1.3	6.8	219.3	194.0	25.3	19.0	6.3	0	NA	C	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
139-28	8.2	1.1	7.1	236.3	205.5	30.8	22.2	8.6	1	1	C	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
139-29	8.4	2.8	5.6	203.8	163.0	40.8	31.3	9.5	0	NA	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
139-30	8.7	4.0	4.7	241.3	162.7	78.6	66.9	11.7	2	12	C,P	85	15	NA	NA	S	M,C	Y	Y	GNB	GNB	GRAVEL
140-01	8.4	0.8	7.6	281.1	249.0	32.1	19.4	12.7	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
140-02	8.4	0.4	8.0	213.9	177.0	36.9	22.3	14.6	4	66	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
140-03	8.3	0.4	7.9	234.2	199.8	34.4	19.9	14.5	1	573	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
140-04	8.3	0.4	7.9	297.8	243.2	54.6	33.1	21.5	13	701	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
140-05	8.2	0.9	7.3	267.0	224.0	43.0	24.2	18.8	15	350	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
140-06	8.1	0.8	7.3	303.7	262.4	41.3	24.6	16.7	8	119	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
140-07	8.3	0.2	8.1	217.0	182.6	34.4	20.8	13.6	8	144	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
140-08	8.0	0.4	7.6	194.6	163.7	30.9	18.4	12.5	2	39	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
140-09	7.1	0.3	6.8	225.9	192.1	33.8	20.0	13.8	1	32	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
140-10	7.7	0.6	7.1	295.1	239.4	55.7	36.1	19.6	4	224	C	90	10	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
141-01	8.5	1.8	6.7	221.8	187.4	34.4	21.6	12.8	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
141-02	8.4	1.6	6.8	193.0	159.0	34.0	21.6	12.4	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
141-03	8.9	1.3	7.6	125.1	87.6	37.5	24.2	13.3	3	84	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
141-04	8.8	0.9	7.9	234.4	194.8	39.6	24.0	15.6	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
141-05	8.9	1.0	7.9	265.0	229.8	35.2	21.5	13.7	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
141-06	7.8	1.2	6.6	218.9	173.6	45.3	30.8	14.5	1	704	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
141-07	8.8	1.0	7.8	254.5	224.9	29.6	16.1	13.5	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
141-08	7.8	1.1	6.7	215.1	192.5	22.6	13.4	9.2	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
141-09	7.8	0.8	7.0	254.1	233.2	20.9	10.7	10.2	0	NA	P	50	50	NA	NA	U	Y	Y	Y	GB	GB	TILL
141-10	9.1	2.5	6.6	265.4	232.0	33.4	18.8	14.6	4	943	P	50	50	NA	NA	U	Y	Y	Y	GB	GY	TILL
141-11	8.8	0.9	7.9	189.5	159.0	30.5	19.2	11.3	1	1	P	65	35	NA	NA	U	Y	Y	Y	GB	GB	TILL
141-12	8.9	1.0	7.9	277.6	241.2	36.4	21.2	15.2	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
141-13	8.6	1.1	7.5	210.2	184.7	25.5	14.8	10.7	3	169	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
141-14	8.2	0.8	7.4	283.6	258.3	25.3	14.5	10.8	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
141-15	8.8	0.6	8.2	280.2	250.3	29.9	17.2	12.7	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
141-16	8.5	0.6	7.9	296.3	262.0	34.3	20.0	14.3	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
141-17	8.5	0.3	8.2	224.6	189.0	35.6	20.8	14.8	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
141-18	8.2	0.3	7.9	233.4	204.9	28.5	17.1	11.4	0	NA	P	95	5	NA	A	U	Y	Y	Y	GB	GB	TILL
141-19	8.5	0.6	7.9	301.7	271.1	30.6	18.3	12.3	1	4	P	90	10	NA	A	U	Y	Y	Y	GB	GB	TILL
141-20	8.5	1.0	7.5	197.3	172.2	25.1	16.5	8.6	0	NA	P	90	10	NA	A	U	Y	Y	Y	GB	GB	TILL

CAMB5DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET) TABLE SPLIT	+10 CHIPS	TABLE FEED	WEIGHT (GRAMS DRY) TABLE CONC	M.I. LIGHTS	M. I. CONC CONC. TOTAL	NON MAG	MAG	AU NO. V.G.	CALC PPB	DESCRIPTION CLAST SIZE	% V/S	GR	LS	OT	MATRIX S/U	SD	ST	CY	COLOR SD	COLOR CY	CLASS
CB-89																						
141-21	8.6	1.1	7.5	173.2	149.5	23.7	15.0	8.7	1	13	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
141-22	8.4	0.9	7.5	233.4	217.3	16.1	10.2	5.9	0	NA	C	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
141-23	8.4	1.7	6.7	208.3	186.6	21.7	14.0	7.7	0	NA	C	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
141-24	8.2	0.8	7.4	191.0	170.0	21.0	14.1	6.9	0	NA	C	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
142-01	6.8	0.4	6.4	249.5	229.0	20.5	11.9	8.6	0	NA	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
142-02	8.9	0.9	8.0	271.6	216.2	55.4	33.0	22.4	6	721	P	90	10	NA	NA	U	Y	Y	Y	GNB	GNB	TILL
143-01	8.0	0.6	7.4	117.9	85.8	32.1	18.7	13.4	1	9141	C	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
143-02	7.4	0.4	7.0	141.0	118.1	22.9	15.2	7.7	0	NA	C	75	25	NA	NA	S	F/M	Y	Y	GB	GB	SAND
143-03	7.9	0.9	7.0	135.5	113.1	22.4	14.0	8.4	1	6	C	65	35	NA	NA	U	Y	Y	Y	GB	GB	TILL
143-04	8.6	1.2	7.4	117.7	101.3	16.4	8.9	7.5	0	NA	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
143-05	8.0	1.5	6.5	126.6	111.8	14.8	7.7	7.1	0	NA	C	65	35	NA	NA	U	Y	Y	Y	GB	GB	TILL
143-06	8.4	0.9	7.5	252.7	231.0	21.7	10.7	11.0	1	350	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
143-07	8.4	1.2	7.2	241.2	209.3	31.9	19.0	12.9	6	115	C	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
143-08	8.5	1.2	7.3	241.7	208.5	33.2	19.2	14.0	0	NA	C	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
143-09	8.5	0.8	7.7	365.9	326.7	39.2	20.3	18.9	0	NA	C	75	25	NA	NA	U	Y	Y	Y	GB	GB	TILL
143-10	7.7	0.7	7.0	308.9	274.8	34.1	20.0	14.1	6	110	C	75	25	NA	NA	U	Y	Y	Y	GB	GB	TILL
143-11	8.2	0.9	7.3	275.1	247.8	27.3	14.8	12.5	1	259	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
143-12	8.3	1.4	6.9	199.9	161.6	38.3	22.8	15.5	2	234	C	75	25	NA	NA	U	Y	Y	Y	GB	GB	TILL
143-13	7.0	0.0	7.0	190.4	173.7	16.7	11.4	5.3	0	NA	TR	NA	NA	NA	NA	S	M	N	N	GB	NA	SAND
143-14	8.2	0.0	8.2	165.5	132.2	33.3	23.5	9.8	0	NA	TR	NA	NA	NA	NA	S	F	N	N	GB	NA	SAND
143-15	8.0	0.0	8.0	255.6	212.8	42.8	30.1	12.7	1	6	TR	NA	NA	NA	NA	S	F	N	N	GB	NA	SAND
143-16	7.7	0.0	7.7	160.6	116.6	44.0	29.7	14.3	0	NA	TR	NA	NA	NA	NA	S	F/M	N	N	GB	NA	SAND
143-17	7.7	0.0	7.7	220.5	172.5	48.0	32.9	15.1	0	NA	TR	NA	NA	NA	NA	S	F	N	N	GB	NA	SAND
143-18	8.5	0.0	8.5	156.2	112.3	43.9	30.0	13.9	1	12	TR	NA	NA	NA	NA	S	F	N	N	GB	NA	SAND
144-01	8.6	0.3	8.3	257.7	216.1	41.6	26.5	15.1	1	38	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
144-02	9.1	0.6	8.5	307.7	260.6	47.1	29.2	17.9	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
144-03	9.0	0.7	8.3	264.9	224.3	40.6	24.8	15.8	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
144-04	8.5	0.8	7.7	256.0	205.7	50.3	26.9	23.4	8	255	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
144-05	9.0	1.4	7.6	327.3	257.3	70.0	34.8	35.2	8	241	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
144-06	8.8	0.8	8.0	338.3	273.7	64.6	36.2	28.4	4	52	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
145-01	8.6	1.1	7.5	175.6	143.1	32.5	19.0	13.5	0	NA	C	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
145-02	8.6	1.6	7.0	185.3	153.3	32.0	18.7	13.3	0	NA	C	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
145-03	8.3	1.5	6.8	170.0	141.9	28.1	16.4	11.7	5	131	C	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
145-04	8.7	1.6	7.1	238.4	207.7	30.7	18.8	11.9	5	64	C	95	5	NA	NA	U	Y	Y	Y	B	B	TILL
145-05	8.5	2.0	6.5	169.7	145.2	24.5	14.8	9.7	0	NA	C	95	5	NA	NA	U	Y	Y	Y	B	B	TILL
145-06	9.1	1.6	7.5	433.4	400.6	32.8	21.3	11.5	0	NA	C	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
145-07	8.6	1.5	7.1	267.7	239.5	28.2	14.6	13.6	1	198	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
145-08	8.6	1.6	7.0	252.7	220.1	32.6	18.9	13.7	0	NA	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
145-09	8.7	1.8	6.9	294.4	261.0	33.4	19.2	14.2	5	202	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
145-10	8.1	1.1	7.0	288.3	253.7	34.6	21.2	13.4	0	NA	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
145-11	7.5	1.4	6.1	239.1	211.4	27.7	16.8	10.9	0	NA	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
145-12	8.5	1.4	7.1	249.5	223.3	26.2	17.1	9.1	1	5	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
145-13	8.2	1.4	6.8	189.7	154.3	35.4	23.0	12.4	1	215	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
145-14	8.3	1.4	6.9	291.2	258.6	32.6	19.5	13.1	0	NA	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
146-01	8.5	0.7	7.8	254.3	199.9	54.4	33.9	20.5	1	2	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL

CAMB5DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET)			WEIGHT (GRAMS DRY)					AU		DESCRIPTION											CLASS
						M. I. CONC					CLAST					MATRIX						
	TABLE SPLIT	+10 CHIPS	TABLE FEED	TABLE CONC	M.I. LIGHTS	CONC. TOTAL	NON MAG	MAG	NO. V.G.	CALC PPB	SIZE	% V/S	GR	LS	OT	S/U	SD	ST	CY	COLOR SD	CY	
CB-89																						
146-02	8.9	0.4	8.5	284.2	232.2	52.0	32.3	19.7	4	27	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
146-03	8.4	0.5	7.9	256.2	211.2	45.0	28.3	16.7	1	7	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
146-04	8.0	0.3	7.7	199.8	168.5	31.3	20.7	10.6	0	NA	C	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
147-01	8.0	1.6	6.4	230.8	209.2	21.6	12.4	9.2	0	NA	C	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
148-01	9.1	0.8	8.3	297.5	248.5	49.0	28.2	20.8	1	175	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
148-02	8.4	0.6	7.8	269.8	216.2	53.6	31.6	22.0	1	32	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
149-01	8.6	2.6	6.0	215.9	190.2	25.7	14.7	11.0	0	NA	C	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
149-02	8.6	2.5	6.1	176.7	148.7	28.0	16.4	11.6	0	NA	C	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
149-03	8.7	1.6	7.1	191.2	162.1	29.1	15.7	13.4	0	NA	C	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
149-04	7.8	1.3	6.5	144.2	118.6	25.6	15.3	10.3	0	NA	C	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
149-05	8.2	1.4	6.8	107.0	79.1	27.9	17.0	10.9	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
150-01	8.2	0.8	7.4	269.1	227.8	41.3	24.6	16.7	10	333	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
150-02	9.1	1.1	8.0	248.5	212.4	36.1	21.1	15.0	1	4	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
150-03	8.5	0.6	7.9	197.8	156.7	41.1	25.4	15.7	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
150-04	8.2	0.8	7.4	235.2	202.1	33.1	20.2	12.9	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
150-05	8.4	0.4	8.0	211.7	175.8	35.9	22.5	13.4	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
150-06	8.4	0.8	7.6	252.3	216.4	35.9	23.6	12.3	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
150-07	7.3	1.0	6.3	38.4	1.0	37.4	22.8	14.6	1	339	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
151-01	7.9	0.8	7.1	195.6	162.3	33.3	16.8	16.5	0	NA	C	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
151-02	7.0	0.4	6.6	154.1	122.7	31.4	18.1	13.3	0	NA	C	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
152-01	7.7	1.8	5.9	134.3	112.7	21.6	14.2	7.4	0	NA	P,C	100	TR	NA	NA	S	C	Y	Y	GY	GY	GRAVEL
152-02	3.3	0.4	2.9	106.1	87.5	18.6	11.4	7.2	0	NA	P,C	100	TR	NA	NA	S	C	Y	Y	GY	GY	GRAVEL
154-01	5.4	0.6	4.8	236.0	204.9	31.1	18.3	12.8	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
154-02	8.5	0.8	7.7	289.9	236.3	53.6	32.3	21.3	2	18	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
154-03	8.1	1.2	6.9	277.8	227.2	50.6	29.6	21.0	3	85	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
154-04	8.4	1.0	7.4	309.6	254.6	55.0	32.4	22.6	1	66	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
154-05	8.0	0.8	7.2	248.3	205.0	43.3	24.3	19.0	5	1382	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
154-06	7.1	0.8	6.3	212.1	169.1	43.0	24.6	18.4	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
154-07	8.9	0.8	8.1	322.3	263.1	59.2	35.7	23.5	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
154-08	8.8	1.0	7.8	287.3	228.2	59.1	33.8	25.3	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
154-09	8.7	0.8	7.9	284.1	224.7	59.4	32.0	27.4	1	242	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
155-01	8.1	0.8	7.3	354.3	312.4	41.9	25.3	16.6	3	30	C	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
155-02	5.9	0.3	5.6	155.7	124.2	31.5	21.0	10.5	0	NA	C	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
155-03	6.8	0.3	6.5	290.9	253.2	37.7	23.5	14.2	6	521	C	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
155-04	8.1	1.0	7.1	268.8	241.6	27.2	17.8	9.4	0	NA	C	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
155-05	7.5	0.6	6.9	234.8	201.8	33.0	20.1	12.9	0	NA	C	60	40	NA	NA	U	Y	Y	Y	GB	GB	TILL
155-06	6.2	0.1	6.1	258.1	239.6	18.5	11.3	7.2	1	33	C	60	40	NA	NA	U	Y	Y	Y	GB	GB	TILL
155-07	7.6	0.5	7.1	200.4	147.1	53.3	21.3	32.0	11	149	C	70	30	NA	NA	U	Y	Y	Y	B	GB	TILL
155-08	8.2	0.1	8.1	327.1	270.1	57.0	34.1	22.9	2	50	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
156-01	8.2	0.4	7.8	244.5	193.0	51.5	36.7	14.8	5	66	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
156-02	9.1	2.3	6.8	294.3	252.2	42.1	25.4	16.7	1	59	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
156-03	8.8	1.5	7.3	328.6	282.1	46.5	27.2	19.3	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
156-04	7.7	0.0	7.7	305.5	253.3	52.2	33.6	18.6	0	NA	TR	NA	NA	NA	NA	S	F,M	Y	Y	B	B	SAND
156-05	9.2	0.4	8.8	329.7	266.6	63.1	38.4	24.7	0	NA	P	60	20	NA	NA	U	Y	Y	Y	B	B	TILL
156-06	9.3	1.4	7.9	314.3	267.6	46.7	0.0	46.7	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL

CAMB5DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET)			WEIGHT (GRAMS DRY)					AU		DESCRIPTION											CLASS
					M. I. CONC						CLAST					MATRIX						
	TABLE SPLIT	+10 CHIPS	TABLE FEED	TABLE CONC	M.I. LIGHTS	CONC. TOTAL	NON MAG	MAG	NO. V.G.	CALC PPB	SIZE	% V/S	GR	LS	OT	S/U	SD	ST	CY	COLOR SD	CY	
CB-89																						
156-07	7.8	1.4	6.4	175.4	132.1	43.3	27.2	16.1	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
156-08	7.4	0.8	6.6	214.4	167.8	46.6	31.0	15.6	0	NA	P	70	30	NA	NA	S	M,C	Y	Y	B	B	GRAVEL
156-09	8.4	1.2	7.2	320.1	270.3	49.8	31.6	18.2	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
156-10	7.6	1.6	6.0	244.2	209.0	35.2	21.4	13.8	4	159	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
157-01	9.0	2.1	6.9	307.1	266.2	40.9	25.4	15.5	0	NA	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
157-02	8.1	0.7	7.4	245.6	206.5	39.1	23.1	16.0	0	NA	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
157-03	7.7	1.0	6.7	233.6	211.8	21.8	12.6	9.2	0	NA	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
157-04	7.9	0.8	7.1	186.6	160.9	25.7	14.5	11.2	0	NA	C	60	40	NA	NA	U	Y	Y	Y	B	GB	TILL
157-05	7.9	0.6	7.3	191.1	169.8	21.3	12.3	9.0	1	122	C	65	35	NA	A	U	Y	Y	Y	B	GY	TILL
157-06	7.1	0.0	7.1	155.1	130.4	24.7	14.8	9.9	5	353	TR	NA	NA	NA	A	U	Y	Y	Y	B	GY	TILL
157-07	8.2	0.1	8.1	190.3	159.1	31.2	18.1	13.1	1	56	C	60	40	NA	A	U	Y	Y	Y	B	GY	TILL
157-08	7.6	0.3	7.3	174.2	147.4	26.8	13.9	12.9	0	NA	C	60	40	NA	A	U	Y	Y	Y	B	GY	TILL
157-09	8.2	0.8	7.4	148.4	113.2	35.2	19.6	15.6	12	336	C	80	20	NA	A	U	Y	Y	Y	GB	GB	TILL
157-10	7.4	0.6	6.8	130.8	99.8	31.0	17.2	13.8	0	NA	C	80	20	NA	A	U	Y	Y	Y	GB	GB	TILL
157-11	8.0	0.6	7.4	140.7	103.8	36.9	22.7	14.2	0	NA	C	90	10	NA	A	U	Y	Y	Y	GB	GB	TILL
157-12	8.0	0.9	7.1	138.9	104.0	34.9	20.0	14.9	1	75	C	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
157-13	7.9	0.4	7.5	132.5	99.8	32.7	19.3	13.4	0	NA	C	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
157-14	7.8	1.8	6.0	147.4	113.4	34.0	22.1	11.9	5	239	C	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
157-15	8.4	2.1	6.3	143.2	112.6	30.6	18.4	12.2	1	258	C	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
157-16	6.2	0.7	5.5	160.8	127.8	33.0	18.2	14.8	4	6993	C	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
158-01	8.8	0.9	7.9	327.9	289.9	38.0	23.6	14.4	0	NA	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
158-02	9.2	0.6	8.6	287.9	226.9	61.0	34.9	26.1	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
159-01	8.2	1.7	6.5	138.7	105.6	33.1	19.5	13.6	6	309	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
159-02	8.1	1.4	6.7	161.0	130.0	31.0	18.1	12.9	5	559	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
159-03	7.6	0.8	6.8	121.0	86.9	34.1	19.9	14.2	1	1623	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
159-04	8.4	1.1	7.3	148.9	116.4	32.5	19.0	13.5	1	34	C	90	10	NA	A	U	Y	Y	Y	B	B	TILL
159-05	7.6	2.1	5.5	132.3	110.5	21.8	13.0	8.8	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
159-06	7.6	2.0	5.6	190.7	175.9	14.8	8.4	6.4	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
159-07	7.9	2.1	5.8	105.2	87.1	18.1	11.5	6.6	1	130	P	70	30	NA	A	U	Y	Y	Y	GB	GB	TILL
159-08	8.3	2.0	6.3	107.9	89.5	18.4	11.9	6.5	0	NA	P	70	30	NA	A	U	Y	Y	Y	GB	GB	TILL
159-09	8.2	1.0	7.2	147.4	126.0	21.4	14.8	6.6	0	NA	P	65	35	NA	NA	U	Y	Y	Y	GB	GB	TILL
159-10	7.9	1.1	6.8	133.5	86.3	47.2	25.5	21.7	0	NA	P	65	35	NA	NA	U	Y	Y	Y	GB	GB	TILL
159-11	7.1	1.2	5.9	110.2	95.7	14.5	7.2	7.3	0	NA	P	70	30	TR	NA	U	Y	Y	Y	GB	GB	TILL
159-12	7.9	0.8	7.1	188.4	148.1	40.3	22.2	18.1	0	NA	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
159-13	7.7	0.2	7.5	101.6	77.5	24.1	13.0	11.1	0	NA	C	60	40	NA	B	U	Y	Y	Y	B	B	TILL
159-14	7.3	0.4	6.9	160.4	140.6	19.8	11.1	8.7	1	91	C	70	30	NA	A	U	Y	Y	Y	B	B	TILL
159-15	8.1	1.1	7.0	138.3	112.3	26.0	14.3	11.7	0	NA	C	80	20	NA	A	U	Y	Y	Y	B	B	TILL
159-16	8.3	2.1	6.2	195.6	163.5	32.1	16.7	15.4	1	127	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
159-17	8.2	2.2	6.0	196.8	167.9	28.9	12.1	16.8	0	NA	P	85	15	NA	A	U	Y	Y	Y	B	B	TILL
159-18	8.8	2.1	6.7	126.5	97.9	28.6	12.6	16.0	0	NA	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
159-19	8.0	1.3	6.7	132.7	111.6	21.1	11.5	9.6	5	2330	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
159-20	7.6	1.1	6.5	182.5	160.7	21.8	11.8	10.0	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
159-21	7.7	0.2	7.5	118.4	96.9	21.5	11.7	9.8	0	NA	C	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
159-22	8.7	0.2	8.5	151.7	118.3	33.4	21.8	11.6	0	NA	C	80	20	TR	NA	U	Y	Y	Y	GB	GB	TILL
160-01	9.1	1.0	8.1	351.0	278.0	73.0	42.4	30.6	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL

CAMB5DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET)			WEIGHT (GRAMS DRY)					AU		DESCRIPTION											CLASS
						M. I. CONC					CLAST					MATRIX						
	TABLE SPLIT	+10 CHIPS	TABLE FEED	TABLE CONC	M.I. LIGHTS	CONC. TOTAL	NON MAG	MAG	NO. V.G.	CALC PPB	SIZE	% V/S	% GR	% LS	% OT	S/U	SD	ST	CY	COLOR SD	COLOR CY	
CB-89																						
160-02	8.8	1.8	7.0	347.8	282.7	65.1	35.5	29.6	4	273	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
160-03	8.4	0.5	7.9	263.0	219.1	43.9	26.8	17.1	0	NA	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
160-04	8.3	0.3	8.0	358.4	309.9	48.5	29.9	18.6	1	34	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
160-05	7.3	0.5	6.8	199.1	162.8	36.3	22.4	13.9	1	9	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
161-01	8.8	0.7	8.1	201.6	161.2	40.4	21.0	19.4	1	138	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
161-02	8.9	0.7	8.2	214.2	151.8	62.4	27.3	35.1	0	NA	P	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
161-03	8.4	0.5	7.9	237.8	200.3	37.5	24.9	12.6	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
161-04	8.9	0.8	8.1	216.7	176.7	40.0	22.9	17.1	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
162-01	9.1	1.9	7.2	353.1	305.1	48.0	27.5	20.5	5	778	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
163-01	8.2	0.7	7.5	158.6	116.2	42.4	24.4	18.0	1	202	P	75	25	NA	NA	U	Y	Y	Y	B	B	TILL
163-02	8.4	0.8	7.6	148.7	107.3	41.4	23.4	18.0	13	472	P	75	25	NA	NA	U	Y	Y	Y	B	B	TILL
163-03	8.2	0.5	7.7	133.7	100.5	33.2	18.3	14.9	8	140	C	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
163-04	5.3	0.4	7.9	146.1	119.5	26.6	14.9	11.7	0	NA	C	75	25	NA	NA	U	Y	Y	Y	B	B	TILL
163-05	8.6	0.8	7.8	163.7	134.4	29.3	15.6	13.7	0	NA	C	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
163-06	8.5	0.6	7.9	152.7	115.6	37.1	21.5	15.6	1	2	C	75	25	NA	NA	U	Y	Y	Y	B	B	TILL
163-07	8.4	0.5	7.9	190.3	156.2	34.1	19.5	14.6	1	148	C	75	25	NA	NA	U	Y	Y	Y	B	B	TILL
163-08	8.1	0.6	7.5	217.0	172.6	44.4	22.4	22.0	5	3268	C	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
163-09	8.3	0.6	7.7	170.9	131.3	39.6	21.4	18.2	0	NA	C	75	25	NA	NA	U	Y	Y	Y	B	B	TILL
163-10	8.3	0.6	7.7	212.4	165.6	46.8	27.6	19.2	8	52	C	75	25	NA	NA	U	Y	Y	Y	GB	GB	TILL
163-11	8.5	0.4	8.1	173.2	140.9	32.3	19.1	13.2	1	53	C	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
163-12	6.8	0.2	6.6	163.1	117.5	45.6	27.2	18.4	9	102	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
163-13	8.4	0.5	7.9	182.3	149.9	32.4	18.4	14.0	8	138	C	85	15	NA	A	U	Y	Y	Y	GB	GB	TILL
163-14	8.0	0.8	7.2	210.8	163.5	47.3	27.9	19.4	1	23	C	50	50	NA	NA	U	Y	Y	Y	GB	GB	TILL
163-15	8.9	0.4	8.5	160.0	120.0	40.0	23.8	16.2	7	129	C	60	40	NA	A	U	Y	Y	Y	GB	GB	TILL
163-16	8.6	0.3	8.3	185.1	151.7	33.4	19.9	13.5	1	1154	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
163-17	8.4	0.9	7.5	174.1	135.2	38.9	22.9	16.0	0	NA	C	80	20	NA	A	U	Y	Y	Y	B	B	TILL
163-18	8.6	0.2	8.4	182.2	151.1	31.1	17.2	13.9	7	222	C	50	50	NA	NA	U	Y	Y	Y	B	B	TILL
164-01	8.4	1.0	7.4	237.3	199.1	38.2	20.9	17.3	4	89	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
164-02	8.7	0.1	8.6	264.2	228.7	35.5	20.9	14.6	3	409	P	75	25	NA	NA	U	Y	Y	Y	GB	GB	TILL
164-03	8.0	0.9	7.1	202.0	169.8	32.2	17.9	14.3	3	786	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
164-04	8.0	0.9	7.1	279.2	249.8	29.4	17.1	12.3	6	239	P	75	25	NA	NA	U	Y	Y	Y	GB	GB	TILL
164-05	8.3	0.8	7.5	191.0	161.9	29.1	16.7	12.4	2	101	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
164-06	8.4	1.2	7.2	217.8	187.8	30.0	16.7	13.3	2	27	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
164-07	8.4	0.3	8.1	195.9	160.3	35.6	20.2	15.4	0	NA	P	75	25	NA	NA	U	Y	Y	Y	B	B	TILL
164-08	8.1	0.2	7.9	210.7	187.1	23.6	14.4	9.2	1	201	P	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
164-09	8.1	0.5	7.6	232.4	198.7	33.7	18.0	15.7	1	5	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
164-10	8.7	0.6	8.1	193.8	167.2	26.6	14.6	12.0	0	NA	C	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
164-11	8.8	1.0	7.8	345.6	309.2	36.4	22.3	14.1	1	29	C	75	25	NA	NA	U	Y	Y	Y	B	B	TILL
164-12	8.9	0.8	8.1	302.3	261.0	41.3	25.7	15.6	0	NA	P	75	25	NA	NA	U	Y	Y	Y	B	B	TILL
164-13	7.8	0.2	7.6	210.9	172.6	38.3	26.9	11.4	3	75	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
164-14	8.4	0.3	8.1	374.3	337.1	37.2	24.7	12.5	1	86	P	65	35	NA	A	U	Y	Y	Y	B	B	TILL
164-15	9.4	2.0	7.4	263.3	219.7	43.6	28.1	15.5	3	139	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
165-01	8.1	0.6	7.5	169.0	127.6	41.4	23.3	18.1	4	308	C	75	25	NA	NA	U	Y	Y	Y	B	B	TILL
165-02	7.4	0.5	6.9	236.5	202.7	33.8	18.7	15.1	0	NA	C	75	25	NA	NA	U	Y	Y	Y	B	B	TILL
165-03	8.8	1.7	7.1	204.9	174.9	30.0	16.6	13.4	4	162	C	75	25	NA	NA	U	Y	Y	Y	B	B	TILL

CAMB5DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET)			WEIGHT (GRAMS DRY)					AU		DESCRIPTION											CLASS
						M. I. CONC					CLAST					MATRIX						
	TABLE SPLIT	+10 CHIPS	TABLE FEED	TABLE CONC	M.I. LIGHTS	CONC. TOTAL	NON MAG	MAG	NO. V.G.	CALC PPB	SIZE	% V/S	% GR	% LS	% OT	S/U	SD	ST	CY	COLOR SD	COLOR CY	
CB-89																						
165-04	9.0	1.6	7.4	168.0	125.9	42.1	22.3	19.8	1	1449	C	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
165-05	8.8	1.1	7.7	156.3	118.5	37.8	21.2	16.6	6	780	C	60	40	NA	NA	U	Y	Y	Y	GB	GB	TILL
165-06	7.4	0.9	6.5	135.2	98.7	36.5	18.5	18.0	0	NA	C	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
165-07	8.4	0.6	7.8	159.0	124.3	34.7	19.9	14.8	3	39	C	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
165-08	8.6	1.2	7.4	156.5	121.9	34.6	19.4	15.2	1	197	C	75	25	TR	NA	U	Y	Y	Y	B	B	TILL
165-09	8.5	0.9	7.6	188.2	150.5	37.7	20.6	17.1	0	NA	C	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
166-01	3.4	0.5	2.9	106.9	92.6	14.3	8.5	5.8	0	NA	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
167-01	8.6	1.2	7.4	166.4	132.0	34.4	19.7	14.7	0	NA	C	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
167-02	8.6	1.3	7.3	171.8	131.5	40.3	19.9	20.4	0	NA	C	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
167-03	8.3	1.3	7.0	180.3	147.5	32.8	17.9	14.9	0	NA	C	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
167-04	8.7	2.3	6.4	196.9	164.4	32.5	19.3	13.2	1	19	C	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
167-05	8.7	1.5	7.2	157.3	129.2	28.1	15.4	12.7	1	188	C	65	35	NA	NA	U	Y	Y	Y	B	B	TILL
167-06	8.7	0.9	7.8	187.5	152.6	34.9	19.0	15.9	0	NA	C	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
167-07	8.4	1.3	7.1	128.4	102.3	26.1	13.7	12.4	0	NA	C	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
167-08	8.5	1.1	7.4	239.9	199.2	40.7	18.9	21.8	1	54	C	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
167-09	4.8	0.3	4.5	135.9	111.2	24.7	13.6	11.1	0	NA	P	70	30	NA	A	U	Y	Y	Y	GB	GB	TILL
167-10	9.0	1.5	7.5	174.2	146.1	28.1	14.7	13.4	5	252	C	65	35	NA	NA	U	Y	Y	Y	GB	GB	TILL
167-11	8.5	2.2	6.3	110.6	83.6	27.0	14.3	12.7	0	NA	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
167-12	8.9	1.8	7.1	106.0	80.0	26.0	14.6	11.4	0	NA	C	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
168-01	7.2	0.5	6.7	147.7	118.3	29.4	17.2	12.2	1	168	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
168-02	8.3	0.6	7.7	248.0	219.9	28.1	16.9	11.2	0	NA	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
168-03	8.8	0.8	8.0	209.7	175.1	34.6	20.5	14.1	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
168-04	8.2	0.7	7.5	175.2	143.1	32.1	19.0	13.1	1	152	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
168-05	8.2	0.7	7.5	249.1	216.8	32.3	18.8	13.5	1	10	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
168-06	8.8	1.0	7.8	250.8	217.1	33.7	20.5	13.2	0	NA	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
168-07	6.3	1.1	5.2	275.2	225.2	50.0	33.0	17.0	2	155	C,P	95	5	NA	NA	U	Y	Y	Y	GY	GB	TILL
168-08	8.6	1.5	7.1	215.6	152.9	62.7	39.3	23.4	2	31	C	95	5	NA	NA	U	Y	Y	Y	GN	GN	TILL
168-09	5.1	0.0	5.1	228.6	173.1	55.5	39.7	15.8	1	5	TR	NA	NA	NA	NA	U	Y	Y	Y	GY	GY	TILL
169-01	8.8	0.6	8.2	281.4	238.7	42.7	29.2	13.5	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
169-02	8.8	0.8	6.0	305.8	262.1	43.7	28.4	15.3	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
169-03	8.4	1.0	7.4	238.3	201.6	36.7	22.7	14.0	1	93	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
169-04	8.8	0.6	8.2	299.8	253.3	46.5	30.4	16.1	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
169-05	5.3	0.6	4.7	163.5	141.9	21.6	13.8	7.8	0	NA	C	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
169-06	8.8	0.6	8.2	246.8	206.7	40.1	25.0	15.1	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
169-07	8.7	1.1	7.6	309.4	246.2	63.2	35.2	28.0	0	NA	C	100	TR	NA	NA	U	Y	Y	Y	GN	GN	TILL
170-01	8.0	0.9	7.1	289.2	246.6	42.6	26.5	16.1	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
170-02	8.7	0.1	8.6	261.2	228.6	32.6	17.7	14.9	3	132	C	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
171-01	8.0	0.5	7.5	151.0	117.0	34.0	19.9	14.1	0	NA	C	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
171-02	8.8	0.9	7.9	167.8	133.6	34.2	19.0	15.2	1	53	C	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
171-03	9.0	1.3	7.7	192.1	152.2	39.9	22.2	17.7	9	225	C	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
171-04	9.0	1.5	7.5	180.0	138.5	41.5	23.6	17.9	12	752	C	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
171-05	8.7	1.1	7.6	153.7	115.7	38.0	19.4	18.6	8	200	C	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
171-06	7.3	0.4	6.9	205.0	168.9	36.1	19.1	17.0	9	78	C	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
171-07	7.4	0.4	7.0	184.5	160.2	24.3	13.7	10.6	8	165	C	95	5	NA	NA	U	Y	Y	Y	B	B	TILL
171-08	8.4	0.8	7.6	188.0	155.2	32.8	19.2	13.6	0	NA	C	85	15	NA	A	U	Y	Y	Y	GB	GB	TILL

CAMB5DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET) TABLE SPLIT	+10 CHIPS	TABLE FEED	WEIGHT (GRAMS DRY) TABLE CONC	M.I. LIGHTS	M. I. CONC CONC. TOTAL	NON MAG	MAG	AU NO. V.G.	CALC PPB	DESCRIPTION CLAST SIZE	% V/S	GR	LS	OT	MATRIX S/U	SD	ST	CY	COLOR SD	CY	CLASS
CB-89																						
171-09	8.6	0.8	7.8	181.8	144.5	37.3	21.5	15.8	0	NA	C	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
171-10	8.3	1.4	6.9	140.1	108.6	31.5	15.6	15.9	0	NA	C	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
171-11	6.7	0.7	6.0	140.0	113.4	26.6	14.2	12.4	0	NA	C	50	50	NA	A	U	Y	Y	Y	B	GB	TILL
171-12	8.6	1.6	7.0	172.1	132.8	39.3	27.0	12.3	3	117	C	98	2	NA	NA	S	M	Y	Y	GY	GY	GRAVEL
171-13	3.2	0.4	2.8	160.2	136.8	23.4	18.8	4.6	3	22	C	100	TR	NA	NA	S	C	Y	Y	GY	GY	GRAVEL
172-01	8.7	0.3	8.4	139.7	96.3	43.4	24.7	18.7	0	NA	C	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
173-01	7.7	0.0	7.7	183.7	152.5	31.2	18.5	12.7	0	NA	TR	NA	NA	NA	NA	S	F	Y	Y	B	B	SAND
173-02	8.9	1.1	7.8	184.1	139.2	44.9	29.9	15.0	7	292	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
174-01	9.0	0.5	8.5	247.5	221.0	26.5	13.1	13.4	2	190	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
174-02	9.0	0.9	8.1	329.0	304.7	24.3	12.9	11.4	1	15	P	85	15	NA	A	U	Y	Y	Y	GB	GB	TILL
174-03	8.6	0.2	8.4	338.5	301.3	37.2	19.8	17.4	5	280	P	80	20	NA	NA	U	C	NA	NA	B	NA	TILL
174-04	8.3	0.2	8.1	296.4	267.3	29.1	18.2	10.9	1	631	P	90	10	NA	NA	U	C	NA	NA	B	NA	TILL
174-05	8.5	1.0	7.5	305.1	266.0	39.1	23.0	16.1	5	1036	P	95	15	NA	NA	U	C	NA	NA	B	NA	TILL
174-06	8.5	1.2	7.3	353.4	304.9	48.5	25.4	23.1	8	468	P	90	10	NA	NA	S	C	NA	NA	B	NA	GRAVEL
174-07	7.8	1.5	6.3	303.8	263.3	40.5	21.7	18.8	4	1313	P	90	10	NA	NA	S	C	NA	NA	B	NA	GRAVEL
174-08	8.8	0.6	8.2	280.8	248.9	31.9	18.4	13.5	4	255	P	85	15	NA	NA	S	C	NA	NA	B	NA	GRAVEL
174-09	8.8	0.5	8.3	200.3	164.2	36.1	22.1	14.0	5	1107	P	80	20	NA	NA	S	C	NA	NA	B	NA	GRAVEL
175-01	6.1	0.3	5.8	205.8	189.5	16.3	9.4	6.9	0	NA	C	95	5	NA	NA	U	Y	Y	Y	GY	GY	TILL
176-01	8.3	0.8	7.5	227.3	188.7	38.6	24.1	14.5	4	100	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
176-02	8.1	1.0	7.1	265.0	204.4	60.6	43.9	16.7	2	477	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
177-01	6.1	0.8	5.3	151.3	126.1	25.2	13.7	11.5	5	130	C	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
177-02	7.5	0.8	6.7	253.0	209.1	43.9	27.2	16.7	1	106	C	65	35	NA	NA	U	Y	Y	Y	B	B	TILL
178-01	8.6	1.1	7.5	247.4	205.0	42.4	24.0	18.4	3	422	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
178-02	8.7	1.5	7.2	248.2	207.1	41.1	24.0	17.1	1	63	P	80	20	NA	NA	U	Y	Y	Y	B	GB	TILL
178-03	7.9	1.0	6.9	222.0	183.2	38.8	22.0	16.8	5	395	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
178-04	8.1	0.6	7.5	203.8	149.0	54.8	30.1	24.7	1	12	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
178-05	7.8	0.5	7.3	223.4	191.6	31.8	20.2	11.6	1	142	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
178-06	8.4	0.0	8.4	268.6	230.5	38.1	24.2	13.9	0	NA	TR	NA	NA	NA	NA	U	Y	Y	Y	B	B	TILL
178-07	8.1	0.3	7.8	201.0	149.3	51.7	31.0	20.7	0	NA	P	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
178-08	7.7	0.4	7.3	176.0	140.9	35.1	19.0	16.1	2	113	C	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
178-09	8.1	0.5	7.6	264.7	221.8	42.9	20.4	22.5	1	31	P	75	25	NA	NA	U	Y	Y	Y	GB	GB	TILL
178-10	7.6	0.4	7.2	153.4	119.9	33.5	18.7	14.8	0	NA	P	80	20	NA	A	U	Y	Y	Y	GB	GB	TILL
178-11	1.7	0.3	1.4	111.4	73.5	37.9	36.0	1.9	0	NA	P	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
179-01	8.8	1.7	7.1	223.0	182.7	40.3	21.9	18.4	1	17	C	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
179-02	8.9	1.5	7.4	240.5	214.6	25.9	13.7	12.2	5	201	C	65	35	NA	NA	U	Y	Y	Y	B	B	TILL
179-03	8.9	0.5	8.4	333.6	166.4	167.2	16.9	150.3	6	201	C	80	20	NA	NA	U	Y	Y	Y	B	GY	TILL
179-04	6.4	0.5	5.9	183.7	93.7	90.0	16.1	73.9	8	207	C	90	10	NA	NA	U	Y	Y	Y	B	GY	TILL
179-05	4.3	0.4	3.9	101.5	84.6	16.9	10.3	6.6	0	NA	C	60	40	NA	A	U	Y	Y	Y	B	GB	TILL
179-06	8.3	0.4	7.9	183.9	158.7	25.2	13.4	11.8	8	712	C	60	40	NA	A	U	Y	Y	Y	B	GB	TILL
179-07	8.3	0.3	8.0	175.7	139.5	36.2	21.5	14.7	0	NA	C	65	35	NA	NA	U	Y	Y	Y	B	B	TILL
179-08	8.8	0.5	8.3	184.8	152.0	32.8	19.0	13.8	13	134	C	70	30	NA	A	U	Y	Y	Y	B	B	TILL
179-09	8.5	0.7	7.8	154.3	124.8	29.5	16.6	12.9	2	129	C	65	35	NA	NA	U	Y	Y	Y	B	B	TILL
180-01	8.1	0.7	7.4	152.1	117.5	34.6	19.3	15.3	4	134	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
180-02	8.1	0.4	7.7	233.5	193.7	39.8	23.4	16.4	5	119	C	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
180-03	8.4	0.1	8.3	131.1	98.6	32.5	18.3	14.2	0	NA	C	50	50	NA	NA	U	Y	Y	Y	B	GB	TILL

CAMBSDAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET) TABLE SPLIT	+10 CHIPS	TABLE FEED	WEIGHT (GRAMS DRY) TABLE CONC	M.I. LIGHTS	M. I. CONC CONC. TOTAL	NON MAG	MAG	AU NO. V.G.	CALC PPB	DESCRIPTION CLAST SIZE	% V/S	GR	LS	OT	MATRIX S/U	SD	ST	CY	COLOR SD	CY	CLASS
CB-89																						
180-04	8.5	0.3	8.2	161.8	124.1	37.7	21.9	15.8	0	NA	C	60	40	NA	NA	U	Y	Y	Y	B	GB	TILL
180-05	5.2	0.2	5.0	224.3	196.8	27.5	16.3	11.2	0	NA	C	60	40	NA	NA	U	Y	Y	Y	B	GB	TILL
180-06	8.6	0.4	8.2	188.3	143.9	44.4	23.9	20.5	0	NA	C	55	45	NA	NA	U	Y	Y	Y	B	GB	TILL
180-07	8.2	0.5	7.7	184.6	145.0	39.6	24.0	15.6	2	668	C	55	45	NA	NA	U	Y	Y	Y	B	GB	TILL
180-08	8.1	0.3	7.8	142.9	108.5	34.4	20.8	13.6	2	402	P	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
180-09	8.1	0.7	7.4	146.4	118.7	27.7	15.2	12.5	0	NA	P	85	15	NA	NA	U	Y	Y	Y	B	GB	TILL
180-10	8.7	0.8	7.9	192.1	155.3	36.8	21.1	15.7	1	48	C	90	10	NA	NA	U	Y	Y	Y	B	GB	TILL
180-11	8.1	0.4	7.7	135.9	92.7	43.2	27.5	15.7	1	37	C	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
180-12	8.9	0.7	8.2	99.1	48.7	50.4	30.3	20.1	2	76	C	75	25	NA	NA	U	Y	Y	Y	B	GB	TILL
180-13	8.9	1.0	7.9	213.7	158.9	54.8	32.0	22.8	1	47	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
180-14	8.4	1.2	7.2	247.4	213.7	33.7	18.3	15.4	0	NA	C	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
180-15	7.5	0.7	6.8	131.6	93.8	37.8	18.0	19.8	0	NA	C	85	15	NA	NA	U	Y	Y	Y	B	B	TILL
181-01	7.8	0.3	7.5	149.0	120.5	28.5	15.1	13.4	0	NA	C	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
181-02	7.6	0.3	7.3	145.3	126.0	19.3	11.1	8.2	0	NA	C	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
181-03	8.3	0.3	8.0	238.7	207.8	30.9	16.9	14.0	1	22	C	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
181-04	8.1	0.5	7.6	218.7	185.3	33.4	19.6	13.8	0	NA	C	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
181-05	8.6	0.6	8.0	177.6	146.8	30.8	15.1	15.7	0	NA	C	65	35	NA	NA	U	Y	Y	Y	B	B	TILL
181-06	8.4	0.5	7.9	218.6	181.4	37.2	20.9	16.3	0	NA	C	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
181-07	8.2	0.5	7.7	209.8	177.9	31.9	17.6	14.3	0	NA	C	60	40	NA	NA	U	Y	Y	Y	GB	GB	TILL
181-08	8.5	0.4	8.1	207.5	173.7	33.8	19.0	14.8	3	527	C	70	30	NA	NA	U	Y	Y	Y	GB	GB	TILL
181-09	8.3	0.4	7.9	159.8	126.5	33.3	18.3	15.0	1	82	C	70	3	NA	NA	U	Y	Y	Y	GB	GB	TILL
181-10	7.7	0.3	7.4	170.9	140.5	30.4	16.7	13.7	0	NA	C	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
182-01	8.5	1.5	7.0	188.2	152.3	35.9	19.2	16.7	0	NA	C,BL	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
182-02	8.7	1.9	6.8	188.2	153.0	35.2	19.5	15.7	1	19	C	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
182-03	8.8	1.1	7.7	262.3	219.8	42.5	25.0	17.5	0	NA	C	75	25	NA	NA	U	Y	Y	Y	B	GB	TILL
182-04	8.6	0.8	7.8	285.9	246.4	39.5	24.6	14.9	1	1	C	40	60	NA	NA	U	Y	Y	Y	B	GB	TILL
183-01	7.9	0.4	7.5	193.6	163.8	29.8	16.3	13.5	0	NA	C	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
183-02	8.1	0.4	7.7	276.1	247.1	29.0	15.1	13.9	1	5	C	70	30	NA	NA	U	Y	Y	Y	B	B	TILL
183-03	7.9	1.0	6.9	249.9	199.4	50.5	28.9	21.6	0	NA	C	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
184-01	8.7	1.3	7.4	171.7	129.5	42.2	22.2	20.0	1	46	C	75	25	NA	NA	U	Y	Y	Y	B	GB	TILL
185-01	7.9	1.2	6.7	181.4	143.3	38.1	20.4	17.7	1	74	C	70	30	TR	NA	U	Y	Y	Y	B	B	TILL
185-02	7.1	0.9	6.2	164.9	129.0	35.9	20.8	15.1	10	302	C	70	30	TR	NA	U	Y	Y	Y	B	B	TILL
185-03	8.3	0.5	7.8	183.5	144.1	39.4	22.5	16.9	7	323	C	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
186-01	8.7	1.1	7.6	250.8	218.4	32.4	17.6	14.8	0	NA	C	70	30	NA	NA	U	Y	Y	Y	B	GB	TILL
186-02	8.3	1.6	6.7	199.1	175.0	24.1	13.5	10.6	1	1846	C	60	40	NA	NA	U	Y	Y	Y	B	GB	TILL
186-03	8.4	1.2	7.2	307.7	276.0	31.7	16.9	14.8	0	NA	C	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
186-04	8.5	1.7	6.8	157.4	126.7	30.7	19.0	11.7	0	NA	C	65	35	NA	NA	U	Y	Y	Y	B	B	TILL
186-05	8.6	0.5	8.1	236.8	188.3	48.5	28.0	20.5	1	36	C	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
186-06	8.5	0.8	7.7	212.3	183.8	28.5	16.3	12.2	0	NA	C	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
186-07	8.5	1.2	7.3	246.5	206.8	39.7	21.7	18.0	1	9	P	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
186-08	8.6	1.2	7.4	227.9	192.5	35.4	20.0	15.4	2	219	C	85	15	NA	NA	U	Y	Y	Y	GB	GB	TILL
186-09	8.5	0.8	7.7	233.5	199.0	34.5	15.9	18.6	1	64	P	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
187-01	9.1	1.7	7.4	171.8	136.6	35.2	21.0	14.2	0	NA	C	50	30	20	A	U	Y	Y	Y	GB	GB	TILL
187-02	8.7	0.7	8.0	218.8	189.6	29.2	17.8	11.4	0	NA	C	75	25	TR	A	U	Y	Y	Y	B	B	TILL
187-03	8.5	1.1	7.4	196.7	162.6	34.1	16.5	17.6	0	NA	C	80	20	NA	NA	U	Y	Y	Y	B	B	TILL

CAMB5DAT.WR1

OVERBURDEN DRILLING MANAGEMENT LIMITED

LABORATORY SAMPLE LOG

SAMPLE NO.	WEIGHT (KG.WET)			WEIGHT (GRAMS DRY)					AU		DESCRIPTION											CLASS
						M. I. CONC					CLAST					MATRIX						
	TABLE SPLIT	+10 CHIPS	TABLE FEED	TABLE CONC	M.I. LIGHTS	CONC. TOTAL	NON MAG	MAG	NO. V.G.	CALC PPB	SIZE	% V/S	GR	LS	OT	S/U	SD	ST	CY	COLOR SD	CY	
CB-89																						
188-01	8.6	0.3	8.3	290.7	262.7	28.0	16.7	11.3	1	463	C	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
188-02	8.9	2.3	6.6	326.7	298.5	28.2	17.9	10.3	0	NA	P	75	25	NA	NA	U	Y	Y	Y	GB	GB	TILL
188-03	8.5	0.6	7.9	214.3	193.1	21.2	13.9	7.3	0	NA	P	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
188-04	8.8	2.4	6.4	198.7	170.4	28.3	17.4	10.9	0	NA	P	85	15	NA	NA	S	M,C	Y	NA	GB	NA	GRAVEL
188-05	8.1	3.0	5.1	174.7	147.6	27.1	17.3	9.8	0	NA	P	85	15	NA	NA	S	M,C	Y	NA	GB	NA	GRAVEL
188-06	8.9	3.0	5.9	360.5	329.4	31.1	18.6	12.5	1	730	P	85	15	NA	NA	S	C	Y	NA	GB	NA	GRAVEL
188-07	8.8	1.9	6.9	207.5	171.4	36.1	20.8	15.3	2	367	P	80	20	NA	NA	S	M,C	Y	NA	GB	NA	GRAVEL
188-08	8.5	1.7	6.8	214.9	181.0	33.9	20.2	13.7	0	NA	C	80	20	NA	NA	U	Y	Y	Y	GB	GB	TILL
188-09	8.6	0.8	7.8	258.0	224.8	33.2	17.6	15.6	1	85	C	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
188-10	6.4	0.6	5.8	166.0	138.4	27.6	13.9	13.7	0	NA	C	95	5	NA	NA	U	Y	Y	Y	GB	GB	TILL
188-11	8.0	0.8	7.2	177.3	151.2	26.1	13.8	12.3	0	NA	C	90	10	NA	NA	U	Y	Y	Y	GB	GB	TILL
189-01	7.7	0.5	7.2	124.5	98.6	25.9	15.4	10.5	0	NA	C	60	40	TR	NA	U	Y	Y	Y	B	B	TILL
191-01	8.6	1.9	6.7	279.3	228.5	50.8	28.4	22.4	3	404	P	75	25	NA	NA	U	Y	Y	Y	B	B	TILL
191-02	8.3	1.1	7.2	226.0	184.1	41.9	24.5	17.4	2	27	P	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
191-03	7.6	1.0	6.6	131.4	94.3	37.1	19.1	18.0	0	NA	P	90	10	NA	NA	U	Y	Y	Y	B	B	TILL
191-04	9.0	1.9	7.1	142.5	95.2	47.3	23.4	23.9	6	189	P	60	40	NA	NA	U	Y	Y	Y	B	B	TILL
191-05	8.7	1.1	7.6	174.3	133.9	40.4	21.4	19.0	0	NA	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
192-01	6.9	0.8	6.1	256.0	233.1	22.9	13.6	9.3	0	NA	P	75	20	5	NA	U	Y	Y	Y	GB	GB	TILL
194-01	6.2	0.7	5.5	146.1	121.5	24.6	15.3	9.3	5	103	C	85	10	5	NA	U	Y	Y	Y	B	B	TILL
194-02	8.2	1.0	7.2	146.4	108.2	38.2	22.6	15.6	3	250	P	70	28	2	NA	U	Y	Y	Y	B	B	TILL
194-03	8.4	1.8	6.6	175.4	145.0	30.4	18.1	12.3	8	274	P	60	35	5	NA	U	Y	Y	Y	B	B	TILL
194-04	8.4	1.8	6.6	332.9	300.6	32.3	19.9	12.4	2	94	P	70	20	10	NA	U	Y	Y	Y	B	B	TILL
194-05	7.5	0.9	6.6	154.3	117.6	36.7	20.7	16.0	2	27	P	80	20	NA	NA	U	Y	Y	Y	B	B	TILL
194-06	8.3	1.5	6.8	316.8	273.6	43.2	26.2	17.0	3	33	P	73	25	2	NA	U	Y	Y	Y	B	B	TILL
196-01	4.3	0.7	3.6	187.1	158.9	28.2	18.3	9.9	3	76	P	40	35	25	C	U	Y	Y	Y	B	B	TILL
197-01	8.2	0.6	7.6	298.4	265.4	33.0	20.2	12.8	2	77	P	55	40	5	NA	U	Y	Y	Y	B	B	TILL
197-02	4.1	0.4	3.7	104.4	87.1	17.3	11.1	6.2	1	7	P	55	45	NA	NA	U	Y	Y	Y	GB	GB	TILL

APPENDIX C

GOLD GRAIN COUNTS AND CALCULATED VISIBLE GOLD ASSAYS

GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
01-01	N	75 X 100	18 C	1						1			
										1	22.8	44	
01-02	Y	125 X 125	25 C			1				1			
										1	22.8	127	
02-01	N	NO VISIBLE GOLD											
02-02	N	NO VISIBLE GOLD											
02-03	N	100 X 125	22 C	1						1			
										1	24.8	86	
02-04	N	NO VISIBLE GOLD											
02-05	N	NO VISIBLE GOLD											
02-06	N	NO VISIBLE GOLD											
02-07	N	NO VISIBLE GOLD											
03-01	N	NO VISIBLE GOLD											
03-02	N	NO VISIBLE GOLD											
03-03	N	50 X 75	13 C	1						1			
										1	25.5	15	
03-04	N	150 X 175	31 C	1						1			
										1	24.2	258	
03-05	N	NO VISIBLE GOLD											
04-01	N	NO VISIBLE GOLD											
04-02	N	NO VISIBLE GOLD											
05-01	N	75 X 75	15 C	1						1			
										1	24.0	27	

GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
05-02	N	NO VISIBLE GOLD											
06-01	N	100 X 125	22 C	1						1			
										1	19.6	108	
06-02	N	NO VISIBLE GOLD											
07-01	N	NO VISIBLE GOLD											
08-01	N	75 X 100	18 C	1						1			
										1	19.2	53	
10-01	Y	50 X 75	13 C	1	1					2			EST. 3% PYRITE
		125 X 125	25 C			1				1			1 GRAINS 50X75 NATIVE COPPER
										3	20.4	178	
11-01	Y	50 X 50	10 C		1	1	2			4			EST. 2% PYRITE
		75 X 75	15 C		2					2			
		75 X 125	20 C			1				1			
										7	22.7	156	
11-02	~~Y~~ N	50 X 75	13 C	1						1			
										1	20.2	18	
12-01	N	NO VISIBLE GOLD											
12-02	N	NO VISIBLE GOLD											
12-03	Y	25 X 50	8 C		2					2			EST. 3% PYRITE
		50 X 75	13 C	1	1					2			
		100 X 100	20 C			1				1			
										5	12.4	194	
12-04	N	NO VISIBLE GOLD											
12-05	N	NO VISIBLE GOLD											
12-06	N	75 X 100	18 C	1						1			

GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										1	22.0	46	
12-07	N	50 X 75	13 C	1						1			
										1	22.3	17	
12-08	Y	25 X 25	5 C	1	1					2			EST. 2% PYRITE
		25 X 50	8 C	1	2					3			
										5	23.3	13	
12-09	N	NO VISIBLE GOLD											
12-10	N	75 X 100	18 C	1						1			
										1	19.7	51	
12A-01	N	50 X 50	10 C			1				1			
										1	17.5	11	
12A-02	Y	25 X 50	8 C		2					2			EST. 3% PYRITE
		50 X 50	10 C	1	2					3			
		50 X 75	13 C	1			1			2			
		75 X 100	18 C	1						1			
										8	20.4	122	
12A-03	Y	50 X 50	10 C		1		1			2			EST. 2% PYRITE
		75 X 100	18 C	2						2			
										4	21.8	110	
12A-04	Y	50 X 50	10 C		1					1			EST. 5% PYRITE
		50 X 125	18 C		1	1				2			
		100 X 100	20 C	1						1			
										4	22.1	168	
12A-05	N	NO VISIBLE GOLD											
12A-06	N	NO VISIBLE GOLD											
13-01	N	NO VISIBLE GOLD											

GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
13-02	N	75 X 125	20 C	1						1			
										1	21.0	71	
14-01	Y	50 X 75	13 C	1	1					2			EST. 3% PYRITE
		75 X 100	18 C	1						1			TRACE GLOBULAR MARCASITE
		100 X 100	20 C	1						1			
		100 X 150	25 C				1			1			
										5	22.1	278	
14-02	Y	25 X 50	8 C		2					2			EST. 2% PYRITE
		50 X 50	10 C		1		1			2			
		50 X 75	13 C		1					1			
		50 X 125	18 C		1					1			
		75 X 100	18 C		1					1			
		75 X 125	20 C	1						1			
		75 X 250	31 C			1				1			
										9	16.4	651	
14-03	N	50 X 75	13 C	1						1			
										1	11.3	33	
15-01	N	50 X 75	13 C	1						1			
										1	21.6	17	
15-02	Y	25 X 50	8 C		1					1			EST. 3% PYRITE
		50 X 50	10 C		1					1			
		50 X 75	13 C	1					1	2			
		75 X 75	15 C	2						2			
		75 X 100	18 C			1				1			
										7	18.5	179	
15-03	Y	50 X 50	10 C		1		1			2			EST. 2% PYRITE
		100 X 125	22 C		1					1			
		100 X 150	25 C	1						1			
		100 X 200	29 C	1						1			
		150 X 175	31 C	1						1			
										6	19.8	837	

GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
15-04	N	50 X 75	13 C	1						1			
										1	21.6	17	
15-05	N	NO VISIBLE GOLD											
15-06	N	NO VISIBLE GOLD											
15-07	N	50 X 100	15 C	1						1			
										1	21.6	30	
15-08	Y	25 X 25	5 C		1					1			EST. 2% PYRITE
		50 X 50	10 C		1					1			TRACE GLOBULAR MARCASITE
		50 X 75	13 C	1						1			
		100 X 100	20 C	1						1			
										4	22.3	94	
15-09	N	NO VISIBLE GOLD											
15-10	N	50 X 100	15 C	1						1			
										1	27.6	23	
15-11	Y	25 X 25	5 C						1	1			EST. 1% PYRITE
		50 X 50	10 C	1						1			
		50 X 75	13 C		1					1			
		50 X 125	18 C			1				1			
										4	23.1	69	
15-12	N	50 X 75	13 C	1						1			
										1	19.6	19	
15-13	Y	25 X 25	5 C		2					2			EST. 1% PYRITE
		25 X 50	8 C		1					1			
		50 X 50	10 C						1	1			
		50 X 100	15 C						1	1			
		50 X 125	18 C					1		1			
		100 X 125	22 C			1				1			
										7	21.2	193	

GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
15-14	N	50 X 75	13 C	1						1			
										1	25.4	15	
15-15	N	NO VISIBLE GOLD											
15-16	N	75 X 100	18 C			1				1			
										1	21.6	47	
15-17	%Y	50 X 75	13 C			1				1			EST. 15% PYRITE
		75 X 75	15 C	2						2			TRACE GLOBULAR MARCASITE
										3	19.4	85	
15-18	N	75 X 150	22 C	1						1			
										1	26.0	82	
16-01	N	100 X 100	20 C	1						1			
										1	18.3	82	
16-02	Y	50 X 75	13 C	2	1					3			EST. 10% PYRITE
		125 X 125	25 C	1						1			
										4	25.4	158	
16-03	N	75 X 100	18 C	1						1			
										1	24.0	42	
17-01	Y	50 X 50	10 C		1					1			EST. 5% PYRITE
		50 X 75	13 C		2					2			
		75 X 100	18 C			1				1			
		75 X 125	20 C			1				1			
										5	23.7	146	
17-02	N	NO VISIBLE GOLD											
18-01	N	NO VISIBLE GOLD											
19-01	Y	25 X 25	5 C		1					1			TRACE PYRITE

GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
		50 X 50	10 C	1						1			
		75 X 100	18 C	1		1				2			
										4	22.6	99	
19-02	N	75 X 75	15 C	1						1			
										1	22.3	29	
19-03	Y	50 X 75	13 C	1						1			TRACE PYRITE
		50 X 100	15 C	1						1			
		75 X 125	20 C			1				1			
										3	24.9	101	
19-04	N	125 X 150	27 C	1						1			
										1	26.0	147	
19-05	N	NO VISIBLE GOLD											
20-01	Y	50 X 50	10 C		2					2			EST. 3% PYRITE
		50 X 75	13 C				1			1			
		50 X 100	15 C	1						1			
		100 X 100	20 C	1						1			
										5	23.8	122	
20-02	N	75 X 125	20 C	1						1			
										1	22.8	66	
20-03	N	NO VISIBLE GOLD											
20-04	N	NO VISIBLE GOLD											
20-05	Y	25 X 75	10 C						1	1			EST. 15% PYRITE
		50 X 50	10 C	1			1			2			
		75 X 100	18 C	1						1			
										4	19.5	81	
20-06	N	NO VISIBLE GOLD											
20-07	N	NO VISIBLE GOLD											

GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
20-08	Y	25 X 50	8 C		1					1			EST. 1% PYRITE
		50 X 100	15 C				1			1			
		75 X 100	18 C				1			1			
		75 X 125	20 C			1				1			
		125 X 150	27 C	1						1			
										5	25.0	282	
20-09	N	NO VISIBLE GOLD											
20-10	Y	25 X 25	5 C						1	1			EST. 1% PYRITE
		25 X 50	8 C		1					1			
		50 X 50	10 C		3					3			
		50 X 75	13 C	1						1			
		50 X 100	15 C	1						1			
		75 X 75	15 C		1		1			2			
										9	19.8	150	
20-11	Y	25 X 25	5 C						2	2			EST. 1% PYRITE
		50 X 100	15 C			1				1			
		75 X 125	20 C	1						1			
										4	25.8	85	
20-12	N	125 X 200	31 C			1				1			
										1	20.1	310	
21-01	N	NO VISIBLE GOLD											
22-01	N	NO VISIBLE GOLD											
22-02	N	NO VISIBLE GOLD											
22-03	N	50 X 75	13 C	1						1			
										1	32.1	12	
23-01	N	NO VISIBLE GOLD											
24-01	N	NO VISIBLE GOLD											
24-02	Y	25 X 50	8 C		1					1			EST. 15% PYRITE

GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
		50 X 50	10 C		1					1			
		50 X 75	13 C		1		1			2			
		75 X 150	22 C	1						1			
		150 X 25	18 C	1						1			
										6	23.2	179	
24-03	N	100 X 125	22 C			1				1			
										1	24.8	86	
24-04	N	NO VISIBLE GOLD											
24-05	Y	25 X 25	5 C		1					1			EST. 30% PYRITE
		50 X 50	10 C		1					1			
		50 X 75	13 C				1			1			
		75 X 75	15 C				1			1			
		75 X 100	18 C				1			1			
										5	12.7	176	
25-01	Y	50 X 50	50 M		1					1			EST. 15% PYRITE 10 GRAINS OF GALENA
										1	18.0	52	
26-01	N	NO VISIBLE GOLD											
27-01	N	NO VISIBLE GOLD											
27-02	Y	50 X 50	10 C		1					1			EST. 70% PYRITE 3% ARSENOPYRITE
										1	38.2	5	
27-03	Y	NO VISIBLE GOLD											EST. 50% PYRITE 1% ARSENOFYRITE
28-01	N	NO VISIBLE GOLD											
30-01	N	NO VISIBLE GOLD											
30-02	N	NO VISIBLE GOLD											
30-03	N	100 X 125	22 C	1						1			
										1	22.4	95	

GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
30-04	N	75 X 150	22 C	1						1			
										1	21.8	97	
30-05	N	NO VISIBLE GOLD											
30-06	N	50 X 75	13 C	1						1			
										1	21.5	17	
30-07	N	NO VISIBLE GOLD											
30-08	N	NO VISIBLE GOLD											
31-01	N	NO VISIBLE GOLD											
31-02	N	NO VISIBLE GOLD											
31-03	N	NO VISIBLE GOLD											
31-04	N	NO VISIBLE GOLD											
31-05	Y	25 X 50	8 C		1					1			EST. 50% PYRITE
		50 X 75	13 C		1					1			1% ARSENOPYRITE
		75 X 100	18 C		1					1			
		75 X 125	20 C		1					1			
										4	21.6	137	
31-06	N	50 X 50	10 C	1						1			
										1	34.5	6	
32-01	Y	25 X 50	8 C		2					2			EST. 25% PYRITE
		50 X 50	10 C		1					1			PHOTOMICROGRAPH AVAILABLE
		50 X 75	13 C		3					3			REFERENCE # 21
		75 X 100	18 C	1		1			2	4			
		100 X 150	25 C	1						1			
		200 X 225	40 C			1				1			
										12	36.0	611	
32-02	Y	75 X 125	20 C	2						2			EST. 20% PYRITE
										2	33.0	91	

GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
32-03	N	75 X 100	18 C	1						1			
										1	30.2	33	
32-04	N	NO VISIBLE GOLD											
32-05	N	NO VISIBLE GOLD											
32-06	N	75 X 125	20 C	1						1			
										1	26.4	57	
32-07	Y	50 X 75	13 C				1			1			EST. 1% PYRITE
		75 X 100	18 C			1				1			
		75 X 150	22 C	2						2			
										4	24.1	234	
32-08	N	NO VISIBLE GOLD											
32-09	N	50 X 75	13 C			1				1			
										1	22.1	17	
32-10	Y	25 X 50	8 C	1						1			EST. 2% PYRITE
		50 X 75	13 C	1						1			
		75 X 75	15 C	1						1			
		75 X 150	22 C	1						1			
										4	20.0	161	
32-11	Y	50 X 75	13 C	1						1			EST. 1% PYRITE
		75 X 100	18 C	1						1			
										2	19.3	72	
32-12	Y	75 X 125	20 C	1						1			EST. 10% PYRITE
										1	14.7	102	
32-13	N	NO VISIBLE GOLD											
32-14	N	175 X 200	36 C	1						1			

GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										1	25.9	365	
32-15	Y	50 X 50	10 C	1						1			EST. 1% PYRITE
		125 X 125	25 C	1						1			
										2	16.3	189	
32-16	N	NO VISIBLE GOLD											
32-17	Y	25 X 25	5 C		1					1			EST. 0.75% PYRITE
		25 X 50	8 C		1					1			
		50 X 175	22 C	1						1			
		100 X 175	27 C	1						1			
										4	30.9	196	
32-18	N	125 X 150	27 C	1						1			
										1	22.2	172	
33-01	Y	25 X 25	5 C		1					1			EST. 3% PYRITE
		25 X 50	8 C		2					2			5 GRAINS ARSENOPYRITE
		50 X 75	13 C	1						1			
		50 X 100	15 C		1					1			
		75 X 100	18 C	1						1			
										6	14.6	152	
33-02	Y	NO VISIBLE GOLD											EST. 20% PYRITE
34-01	N	NO VISIBLE GOLD											
34-02	Y	25 X 50	8 C		1					1			EST. 20% PYRITE
		50 X 175	22 C	1						1			1% ARSENOPYRITE
		100 X 175	27 C	1						1			
										3	21.5	280	
34-03	N	75 X 100	18 C	1						1			
										1	19.6	52	
34-04	N	75 X 100	18 C	1						1			
										1	16.3	62	

GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
34-05	Y	50 X 75	13 C			1		1		2			EST. 15% PYRITE
		75 X 125	20 C				1			1			100 GRAINS ARSENOPYRITE
										3	14.1	159	
34-06	Y	25 X 25	5 C		1					1			EST. 15% PYRITE
		25 X 50	8 C		2					2			50 GRAINS ARSENOPYRITE
		50 X 75	13 C				1			1			
		75 X 100	18 C		1					1			
		100 X 150	25 C			1				1			
										6	12.7	352	
34-07	Y	25 X 50	8 C						1	1			EST. 15% PYRITE
		50 X 75	13 C		1		1			2			50 GRAINS ARSENOPYRITE
		75 X 100	18 C		1					1			
		100 X 125	22 C				1			1			
										5	18.0	220	
34-08	N	50 X 75	13 C	1						1			
										1	16.4	23	
34-09	N	NO VISIBLE GOLD											
34-10	N	NO VISIBLE GOLD											
34-11	N	125 X 150	27 C	1						1			
										1	16.2	236	
34-12	N	NO VISIBLE GOLD											
34-13	N	NO VISIBLE GOLD											
34-14	N	NO VISIBLE GOLD											
34-15	N	NO VISIBLE GOLD											
34-16	N	NO VISIBLE GOLD											
34-17	N	50 X 75	13 C	1						1			

GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										1	14.7	25	
34-18	N	75 X 100	18 C	1						1			
										1	18.9	54	
34-19	N	150 X 150	29 C	1						1			
										1	16.6	297	
34-20	N	NO VISIBLE GOLD											
34-21	Y	50 X 75	13 C		1					1			EST. 15% PYRITE
		75 X 100	18 C		1					1			50 GRAINS ARSENOPYRITE
										2	23.4	59	
34-22	N	125 X 150	27 C	1						1			
										1	24.3	157	
34-23	N	NO VISIBLE GOLD											
34-24	N	50 X 75	13 C	1						1			
										1	18.4	20	
34-25	N	NO VISIBLE GOLD											
34-26	Y	25 X 100	13 C	1						1			EST. 10% PYRITE
		50 X 75	13 C	1						1			
		100 X 150	25 C		1					1			
		200 X 300	46 C	1						1			
										4	17.6	1439	
34-27	Y	50 X 50	10 C	1						1			EST. 1% PYRITE
		50 X 75	13 C	1						1			
		75 X 150	22 C		1					1			
		100 X 125	22 C	1						1			
		125 X 125	25 C	1						1			
										5	20.0	385	
34-28	Y	25 X 75	10 C	1						1			EST. 0.2% PYRITE

GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
		50 X 100	15 C	1						1			
		75 X 100	18 C	1						1			
		75 X 125	20 C	1						1			
		100 X 125	22 C	1	1					2			
										6	23.3	326	
34-29	Y	75 X 100	18 C	2	1					3			EST. 0.2% PYRITE
		125 X 225	34 C	1						1			
										4	26.5	406	
34-30	N	NO VISIBLE GOLD											
34-31	Y	50 X 100	15 C	1						1			EST. 4% PYRITE
		125 X 150	27 C	1						1			10 GRAINS ARSENOPYRITE
		150 X 200	34 C	1						1			
										3	34.0	359	
34-32	N	NO VISIBLE GOLD											
34-33	N	NO VISIBLE GOLD											
34-34	Y	50 X 125	50 M				1			1			EST. 15% PYRITE
		75 X 125	20 C	1						1			50 GRAINS ARSENOPYRITE
										2	33.2	132	
34-35	Y	25 X 75	10 C		1					1			EST. 15% PYRITE
		50 X 75	13 C		1					1			50 GRAINS ARSENOPYRITE
		75 X 75	15 C	1	1					2			
		75 X 100	18 C		1					1			
		125 X 225	34 C	1						1			
										6	29.1	364	
34-36	Y	NO VISIBLE GOLD											EST. 30% PYRITE 30 GRAINS ARSENOPYRITE
35-01	N	NO VISIBLE GOLD											
35-02	N	NO VISIBLE GOLD											
35-03	N	NO VISIBLE GOLD											

GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
35-04	N	75 X 100	18 C	1						1			
										1	20.2	50	
35-05	N	75 X 100	18 C	1						1			
										1	22.0	46	
35-06	N	NO VISIBLE GOLD											
35-07	Y	50 X 125	18 C		1					1			EST. 50% PYRITE
		500 X 1200	175 M	1						1			
										2	20.8	45639	
36-01	N	75 X 75	15 C	1						1			
										1	22.6	28	
37-01	Y	25 X 50	8 C		1					1			EST. 3% PYRITE
		50 X 100	15 C	1						1			
		175 X 175	34 C			1				1			
										3	24.4	347	
37-02	N	NO VISIBLE GOLD											
38-01	N	NO VISIBLE GOLD											
38-02	Y	25 X 25	5 C	1						1			EST. 5% PYRITE
		50 X 100	15 C	1	1					2			50 GRAINS ARSENOPYRITE
		75 X 75	15 C	1						1			
		100 X 150	25 C	1						1			
										5	22.8	212	
38-03	N	75 X 100	18 C	1						1			
										1	24.6	41	
38-04	N	NO VISIBLE GOLD											
38-05	N	50 X 100	15 C	1						1			
										1	25.3	25	

GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
38-06	Y	25 X 50	8 C	1					1	2			EST. 5% PYRITE
		50 X 75	13 C		1					1			100 GRAINS ARSENOPYRITE
		75 X 150	22 C	1						1			
										4	18.8	141	
38-07	Y	50 X 100	15 C	1						1			EST. 2% PYRITE
		125 X 175	29 C	1						1			
										2	28.5	196	
38-08	N	50 X 50	10 C	1						1			
										1	25.6	8	
38-09	N	50 X 75	13 C	1						1			
										1	20.7	18	
38-10	Y	50 X 75	13 C	1						1			EST. 5% PYRITE
		200 X 225	40 C	1						1			10 GRAINS ARSENOPYRITE
										2	19.9	701	
38-11	N	NO VISIBLE GOLD											
38-12	N	NO VISIBLE GOLD											
38-13	Y	25 X 25	5 C	1						1			EST. 1% PYRITE
		50 X 50	10 C	1	1					2			1 GRAIN COPPER
		75 X 75	15 C	1						1			
		75 X 100	18 C	1						1			
										5	24.5	84	
38-14	Y	50 X 50	10 C	1						1			EST. 25% PYRITE
		50 X 75	13 C		1					1			
		50 X 100	15 C	1						1			
		100 X 100	20 C	1						1			
										4	36.7	74	
39-01	N	NO VISIBLE GOLD											

GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
39-02	N	NO VISIBLE GOLD											
39A-01	N	NO VISIBLE GOLD											
39A-02	N	NO VISIBLE GOLD											
39A-03	N	NO VISIBLE GOLD											
39A-04	N	NO VISIBLE GOLD											
39A-05	N	NO VISIBLE GOLD											
39A-06	N	NO VISIBLE GOLD											
39A-07	N	100 X 100	20 C			1				1			
										1	25.7	58	
40-01	Y	25 X 75	10 C		1					1			EST. 25% PYRITE
		50 X 75	13 C		1					1			10 ARSENOPYRITE GRAINS
		75 X 100	18 C		1					1			
		75 X 225	75 M	1						1			
		125 X 125	25 C	1						1			
		125 X 225	34 C	1						1			
										6	31.8	782	
40-02	Y	50 X 75	50 C	1						1			
										1	23.8	62	
40-03	N	NO VISIBLE GOLD											
40-04	Y	50 X 75	13 C	1						1			EST. 4% PYRITE
		75 X 75	15 C	1						1			30 GRAINS ARSENOPYRITE
		75 X 100	18 C	1						1			10 GRAINS GALENA
		100 X 150	25 C		1					1			
		100 X 225	50 M	1						1			
		125 X 150	27 C		1					1			
		150 X 275	40 C	1						1			
										7	83.4	386	
40-05	Y	75 X 75	15 C	1						1			EST. 25% PYRITE, 10 GRAINS GALENA 30 GRAINS ARSENOPYRITE

GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	P	IRREGULAR T	P	DELICATE T	P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										1	16.4	39	
40-06	N	75 X 150	22 C	1						1			
										1	21.2	100	
40-07	N	50 X 75	13 C	1						1			
										1	19.0	20	
40-08	N	75 X 75	15 C	1						1			
										1	14.6	44	
40-09	Y	25 X 75	10 C	1						1			EST. 4% PYRITE
		50 X 75	13 C	1	1					2			30 GRAINS ARSENOPYRITE
										3	19.3	49	
40-10	Y	25 X 25	5 C		1					1			EST. 10% PYRITE
		25 X 50	8 C		1					1			20 GRAINS OF ARSENOPYRITE
		50 X 75	13 C		1					1			3 GRAINS OF NATIVE COPPER
		75 X 75	15 C		1					1			
		75 X 100	18 C	1						1			
										5	19.7	108	
40-11	N	NO VISIBLE GOLD											
40-12	Y	25 X 50	8 C		1					1			EST. 4% PYRITE
		75 X 75	15 C		1					1			10 GRAINS GALENA
													1 GRAINS OF NATIVE COPPER
										2	20.8	35	
40-13	N	NO VISIBLE GOLD											
40-14	N	NO VISIBLE GOLD											
40-15	N	25 X 50	8 C	1						1			
										1	23.9	3	
40-16	N	75 X 125	20 C	1						1			
										1	24.2	62	

GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
40-17	Y	75 X 100	18 C	1						1			EST. 6% PYRITE
		200 X 250	42 C	1						1			10 GRAINS ARSENOPYRITE
										2	31.2	546	
40-18	Y	25 X 25	5 C	1						1			EST. 5% PYRITE
		50 X 50	10 C	1						1			10 GRAINS ARSENOPYRITE
		50 X 75	13 C	1						1			
		100 X 125	22 C	1						1			
		100 X 275	36 C	1						1			
		150 X 150	29 C	1						1			
		250 X 275	48 C	1						1			
										7	33.6	1251	
40-19	Y	50 X 75	13 C	1			1			2			EST. 30% PYRITE
		75 X 75	15 C		1					1			10 GRAINS ARSENOPYRITE
		75 X 125	20 C	1						1			
										4	32.2	90	
40-20	Y	25 X 25	5 C		1					1			EST. 60% PYRITE
		50 X 50	50 M				1			1			100 ARSENOPYRITE CRYSTALS
		50 X 75	13 C	1						1			PHOTOMICROGRAPH AVAILABLE
		50 X 100	15 C	1						1			REFERENCE #158
		50 X 150	20 C	1						1			
		75 X 75	15 C	1						1			
		75 X 100	18 C	1						1			
		100 X 125	22 C	1						1			
		125 X 175	29 C	1						1			
		150 X 325	50 M	1						1			
		225 X 300	50 C	1						1			
										11	44.8	1321	
41-01	Y	50 X 50	10 C		2					2			EST. 30% PYRITE
										2	16.7	23	
42-01	Y	25 X 50	8 C		1					1			EST. 1% PYRITE
		50 X 50	10 C		3					3			
		75 X 75	15 C	1						1			
		75 X 100	50 C		2					2			
		150 X 150	29 C	1						1			

GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	P	IRREGULAR T	P	DELICATE T	P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										8	31.9	375	
42-02	N	NO VISIBLE GOLD											
42-03	Y	25 X 25	5 C				1			1			EST. 70% PYRITE
		25 X 75	10 C		1					1			100 ARSENOPYRITE CRYSTALS
		50 X 50	10 C		1					1			PHOTOMICROGRAPH AVAILABLE
		50 X 100	15 C	1						1			REFERENCE #158
		75 X 75	15 C	1						1			
		75 X 100	18 C	1						1			
		100 X 125	22 C	3		1				4			
		175 X 375	50 C	1						1			
		200 X 275	44 C	1						1			
										12	49.0	1191	
42-04	Y	50 X 50	10 C	1	3					4			EST. 70% PYRITE
		50 X 75	13 C		3					3			100 ARSENOPYRITE CRYSTALS
		75 X 100	18 C		1					1			PHOTOMICROGRAPH AVAILABLE
		100 X 100	20 C	1						1			REFERENCE #158
		100 X 125	22 C	1						1			
		100 X 150	25 C	1						1			
		125 X 150	27 C	1						1			
		125 X 225	34 C	1						1			
		250 X 325	52 C	1						1			
		225 X 400	56 C	1						1			
										15	69.0	1365	
43-01	N	NO VISIBLE GOLD											
43-02	Y	50 X 75	13 C	1	1					2			EST. 3% PYRITE
		75 X 100	18 C	1						1			
										3	24.5	72	
43-03	N	50 X 75	13 C	1						1			
										1	22.5	17	
43-04	Y	25 X 25	5 C		1					1			EST. 5% PYRITE
		125 X 125	25 C	1						1			
		150 X 300	42 C	1						1			

GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										3	29.9	633	
43-05	Y	25 X 50	8 C		1					1			EST. 10% PYRITE
		25 X 75	10 C						1	1			
		50 X 100	15 C		1					1			
		50 X 125	18 C				1			1			
		125 X 125	25 C	1						1			
		150 X 225	36 C	1						1			
										6	26.9	531	
44-01	N	NO VISIBLE GOLD											
45-01	N	NO VISIBLE GOLD											
45-02	N	125 X 150	27 C	1						1			
										1	21.4	179	
45-03	N	100 X 125	22 C	1						1			
										1	20.6	103	
45-04	Y	25 X 50	8 C	1						1			EST. 4% PYRITE
		50 X 75	13 C	1						1			10 GRAINS ARSENOPYRITE
										2	25.5	18	
46-01	N	NO VISIBLE GOLD											
46-02	N	75 X 75	15 C	1						1			
										1	24.5	26	
46-03	Y	50 X 100	15 C	1	1					2			EST. 7% PYRITE
		75 X 75	15 C	1	1					2			
		75 X 125	20 C	1						1			
		125 X 200	31 C	1						1			
										6	27.0	381	
46-04	N	NO VISIBLE GOLD											
46-05	Y	50 X 75	13 C				1			1			EST. 3% PYRITE
		100 X 125	22 C					1		1			

GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										2	26.5	94	
46-06	N	NO VISIBLE GOLD											
46-07	N	NO VISIBLE GOLD											
47-01	N	NO VISIBLE GOLD											
47-02	N	NO VISIBLE GOLD											
47-03	N	NO VISIBLE GOLD											
47-04	N	NO VISIBLE GOLD											
47-05	N	NO VISIBLE GOLD											
48-01	N	NO VISIBLE GOLD											
48-02	N	NO VISIBLE GOLD											
48-03	N	NO VISIBLE GOLD											
48-04	N	50 X 50	10 C	1						1			
										1	24.7	8	
48-05	N	NO VISIBLE GOLD											
48-06	N	NO VISIBLE GOLD											
48-07	N	NO VISIBLE GOLD											
48-08	Y	50 X 75	13 C	1						1			EST. 1% PYRITE
		75 X 100	18 C	1						1			
										2	20.8	67	
48-09	Y	25 X 50	8 C		1		1			2			EST. 1% PYRITE
		75 X 125	20 C			1				1			
		125 X 175	29 C			1				1			
										4	23.1	286	
48-10	Y	50 X 75	13 C	1	1					2			EST. 3% PYRITE

GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
		75 X 100	18 C		1					1			
		100 X 125	22 C			1				1			
										4	23.2	167	
48-11	N	50 X 50	10 C	1						1			
										1	30.6	6	
48-12	Y	75 X 100	18 C	1						1			
										1	27.8	36	
48-13	N	NO VISIBLE GOLD											
48-14	N	NO VISIBLE GOLD											
48-15	N	NO VISIBLE GOLD											
48-16	Y	75 X 125	20 C	1						1			EST. 1% PYRITE
		125 X 175	29 C	1						1			
										2	33.8	190	
48-17	N	75 X 75	15 C	1						1			
										1	33.1	19	
49-01	N	NO VISIBLE GOLD											
49-02	N	NO VISIBLE GOLD											

CAMB2GLD.WR1

GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
49-03	N	NO VISIBLE GOLD											
49-04	Y	150 X 150	29 C				1			1			EST. 3% PYRITE
		150 X 175	31 C				1			1			
										2	20.4	548	
49-05	N	NO VISIBLE GOLD											
49-06	N	NO VISIBLE GOLD											
49-07	N	NO VISIBLE GOLD											
49-08	Y	50 X 50	10 C	1						1			EST. 3% PYRITE
		50 X 75	13 C				1			1			
		75 X 75	15 C	1						1			
										3	21.3	56.61913	
49-09	Y	50 X 50	10 C	1						1			EST. 3% PYRITE
		50 X 75	13 C				1			1			
		75 X 125	20 C				1			1			
										3	19.5	106	
49-10	Y	25 X 50	8 C	1						1			EST. 3% PYRITE
		125 X 150	27 C	1						1			
										2	19.8	197	
49-11	N	NO VISIBLE GOLD											
50-01	N	NO VISIBLE GOLD											
50-02	N	NO VISIBLE GOLD											
50-03	N	NO VISIBLE GOLD											
50-04	N	NO VISIBLE GOLD											
50-05	N	NO VISIBLE GOLD											
50-06	N	NO VISIBLE GOLD											
50-07	Y	25 X 50	8 C		2					2			EST. 10% PYRITE

CAMB2GLD.WR1

GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

				NUMBER OF GRAINS									
				ABRADED		IRREGULAR		DELICATE		TOTAL	NON MAG	CALC V.G. ASSAY	
SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	T	P	T	P	T	P		GMS	PPB	REMARKS
CB-89													
		50 X 50	10 C		2					2			
		75 X 100	18 C	1						1			
		100 X 225	31 C			1				1			
		125 X 150	27 C	1						1			
										7	26.2	444	
50-08	Y	25 X 25	5 C		1					1			EST. 5% PYRITE
		50 X 50	10 C		2					2			
		50 X 75	13 C	1	2				1	4			
		75 X 100	18 C		1					1			
		75 X 125	20 C	1						1			
										9	26.3	168	
50-09	Y	25 X 25	5 C		1					1			EST. 7% PYRITE
		50 X 50	10 C	1	1					2			
		50 X 75	13 C		2		1			3			
		100 X 175	27 C	1						1			
										7	23.0	233	
50-10	Y	25 X 25	5 C						2	2			EST. 35% PYRITE
		50 X 100	15 C		1					1			
										3	30.6	23	
50-11	Y	50 X 75	13 C		1					1			EST. 35% PYRITE
										1	14.0	27	
50-12	Y	50 X 75	13 C		1					1			EST. 40% PYRITE 1 GRAIN NATIVE COPPER
										1	33.8	11	
50-13	Y	25 X 25	5 C		1				1	2			EST. 40% PYRITE
										2	42.8	1	
50-14	Y	25 X 25	5 C		1					1			EST. 40% PYRITE
										1	37.7	1	
51-01	N	NO VISIBLE GOLD											

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
51-02	N	NO VISIBLE GOLD											
51-03	N	NO VISIBLE GOLD											
51-04	N	NO VISIBLE GOLD											
52-01	Y	75 X 75	15 X C			1				1			EST. 15% PYRITE
		75 X 100	18 X C	1						1			
										2	26.2	63	
52-02	Y	25 X 50	8 X C				1			1			EST. 10% PYRITE
		50 X 75	13 X C	1	1					2			
		125 X 175	29 X C	1						1			
										4	21.2	272	
52-03	N	NO VISIBLE GOLD											
52-04	Y	25 X 50	8 X C		1					1			EST. 10% PYRITE
		50 X 75	13 X C	1						1			
		75 X 125	20 X C	1						1			
										3	24.0	81	
52-05	N	100 X 200	29 X C			1				1			
										1	23.3	212	
52-06	N	100 X 125	22 X C			1				1			
										1	22.0	96	
53-01	N	50 X 50	10 C	1						1			
										1	21.7	9	
53-02	N	NO VISIBLE GOLD											
53-03	N	NO VISIBLE GOLD											
53-04	N	NO VISIBLE GOLD											
53-05	N	NO VISIBLE GOLD											

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GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
53-06	N	NO VISIBLE GOLD											
53-07	N	50 X 100	15 C	1						1			
										1	28.3	23	
54-01	N	NO VISIBLE GOLD											
54-02	N	NO VISIBLE GOLD											
54-03	N	75 X 125	20 C			1				1			
										1	20.7	72	
54-04	Y	50 X 50	10 C	1						1			EST. 7% PYRITE
		50 X 75	13 C						1	1			
		75 X 100	18 C					1		1			
		75 X 150	22 C			1				1			
										4	21.5	172	
54-05	N	NO VISIBLE GOLD											
54-06	N	75 X 75	15 C	1						1			
										1	21.7	30	
54-07	N	NO VISIBLE GOLD											
54-08	N	NO VISIBLE GOLD											
54-09	N	75 X 125	20 C	1						1			
										1	26.4	57	
54-10	N	NO VISIBLE GOLD											
54-11	N	NO VISIBLE GOLD											
54-12	N	175 X 175	34 C	1						1			
										1	21.9	353	
54-13	N	NO VISIBLE GOLD											

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GOLD CLASSIFICATION
===================

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
54-14	Y	50 X 75	13 C		1					1			EST. 1% PYRITE
		100 X 125	22 C	1						1			
		200 X 250	42 C	1						1			
										3	22.0	842	
54-15	N	NO VISIBLE GOLD											
54-16	Y	50 X 50	10 C		1					1			EST. 15% PYRITE
		50 X 75	13 C		1					1			50 ARSENOPYRITE CRYSTALS
		75 X 75	15 C	1	1					2			
		75 X 100	50 C				1			1			
		100 X 100	20 C	1						1			
										6	31.1	200	
56-01	Y	75 X 100	18 C	1						1			EST. 15% PYRITE
										1	14.1	72	
56-02	Y	50 X 75	13 C		1					1			EST. 15% PYRITE
		75 X 100	50 M		1					1			
										2	25.3	128	
56-03	Y	25 X 50	8 C		1					1			EST. 25% PYRITE
		50 X 50	25 M		1		1			2			50 ARSENOPYRITE CRYSTALS
		50 X 50	10 C		2					2			
		75 X 100	18 C				1			1			
		100 X 125	22 C	1						1			
										7	25.4	179	
56-04	N	75 X 150	22 C	1						1			
										1	22.0	96	
56-05	N	100 X 125	22 C	1						1			
										1	18.3	116	
56-06	N	NO VISIBLE GOLD											
56-07	N	150 X 225	36 C	1						1			

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GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										1	26.3	360	
56-08	N	100 X 150	25 C	1						1			
										1	28.9	100	
56-09	N	100 X 125	22 C	1						1			
										1	29.4	72	
56-10	N	NO VISIBLE GOLD											
56-11	N	NO VISIBLE GOLD											
56-12	Y	50 X 50	10 C	1						1			EST. 2% PYRITE
		50 X 75	13 C	1						1			50 ARSENOPYRITE CRYSTALS
										2	25.1	23	
57-01	N	NO VISIBLE GOLD											
57-02	N	NO VISIBLE GOLD											
57-03	N	NO VISIBLE GOLD											
57-04	N	NO VISIBLE GOLD											
57-05	N	NO VISIBLE GOLD											
57-06	N	NO VISIBLE GOLD											
57-07	N	125 X 175	29 C	1						1			
										1	33.1	149	
57-08	Y	50 X 50	10 C		1					1			EST. 40% PYRITE
		50 X 100	15 C				1			1			30 GRAINS ARSENOPYRITE
		50 X 125	18 C		1					1			
										3	17.0	108	
58-01	N	NO VISIBLE GOLD											
59-01	N	175 X 250	75 M	1						1			

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	P	IRREGULAR T	P	DELICATE T	P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										1	25.6	992	
59-02	N	150 X 225	50 C			1				1			
										1	21.2	622	
59-03	N	75 X 100	18 C	1						1			
										1	19.4	52	
60-01	Y	50 X 75	13 C	1	1					2			EST. 15% PYRITE
		75 X 100	18 C	1						1			50 GRAINS ARSENOPYRITE
										3	18.6	94	
61-01	N	75 X 125	20 C	1						1			
										1	8.6	174	
61-02	N	50 X 75	13 C	1						1			
										1	13.2	28	
62-01	N	NO VISIBLE GOLD											
63-01	N	NO VISIBLE GOLD											
63-02	N	NO VISIBLE GOLD											
63-03	N	NO VISIBLE GOLD											
63-04	N	NO VISIBLE GOLD											
63-05	N	NO VISIBLE GOLD											
63-06	N	NO VISIBLE GOLD											
63-07	N	150 X 175	50 M	1						1			
										1	16.7	593	
63-08	N	NO VISIBLE GOLD											

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
63-09	N	100 X 100	20 C	1						1			
										1	19.3	78	
63-10	Y	NO VISIBLE GOLD											EST. 50% PYRITE
64-01	N	100 X 150	25 C	1						1			
										1	10.5	276	
64-02	Y	100 X 100	50 M	1						1			EST. 75% PYRITE 10 GRAINS ARSENOPYRITE
										1	34.3	109	
65-01	Y	50 X 75	13 C	1			1			2			EST. 2% PYRITE 10 GRAINS ARSENOPYRITE
		100 X 125	50 M	1						1			
										3	17.3	317	
65-02	N	NO VISIBLE GOLD											
65-03	N	NO VISIBLE GOLD											
65-04	N	NO VISIBLE GOLD											
66-01	N	50 X 75	13 C	1						1			
										1	13.9	27	
66-02	N	NO VISIBLE GOLD											
66-03	N	NO VISIBLE GOLD											
66-04	N	NO VISIBLE GOLD											
66-05	N	75 X 150	22 C	1						1			
										1	21.2	100	
66-06	Y	50 X 175	50 M		1					1			EST. 2% PYRITE
		75 X 100	18 C	1						1			
		100 X 100	20 C	1						1			
		100 X 125	22 C	1						1			
										4	15.8	594	

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
66-07	N	NO VISIBLE GOLD											
66-08	N	75 X 200	27 C	1						1			
										1	21.9	175	
66-09	N	NO VISIBLE GOLD											
66-10	N	NO VISIBLE GOLD											
66-11	N	NO VISIBLE GOLD											
66-12	N	NO VISIBLE GOLD											
66-13	N	NO VISIBLE GOLD											
66-14	N	NO VISIBLE GOLD											
66-15	N	NO VISIBLE GOLD											
66-16	N	NO VISIBLE GOLD											
66-17	N	NO VISIBLE GOLD											
66-18	Y	25 X 75	10 C	1						1			EST. 4% PYRITE
		50 X 50	10 C	1						1			
		50 X 75	13 C	1						1			
		100 X 175	50 M	1						1			
										4	23.1	340	
66-19	N	NO VISIBLE GOLD											
66-20	Y	50 X 125	18 C	1						1			EST. 5% PYRITE
		75 X 75	15 C		1					1			
		75 X 100	15 C	1						1			
		100 X 100	20 C	1						1			
		125 X 125	50 M	1						1			
										5	16.8	575	
66-21	N	NO VISIBLE GOLD											
66-22	Y	75 X 100	18 C	2						2			EST. 3% PYRITE

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										2	20.7	98	
66-23	N	NO VISIBLE GOLD											
66-24	N	NO VISIBLE GOLD											
66-25	Y	50 X 50	10 C	1						1			EST. 3% PYRITE
		75 X 75	15 C	1						1			
										2	15.3	54	
66-26	Y	50 X 75	13 C	1						1			EST. 1% PYRITE
		100 X 125	22 C	1						1			
										2	19.0	131	
66-27	Y	25 X 25	5 C		1					1			EST. 15% PYRITE
		50 X 50	10 C		1					1			
										2	21.3	10	
66-28	Y	50 X 75	13 C	1						1			EST. 70% PYRITE
		100 X 100	20 C	1						1			
										2	44.2	42	
66-29	Y	25 X 25	5 C		1					1			EST. 2% PYRITE
		25 X 50	8 C		1					1			
		50 X 50	10 C	1						1			
		125 X 250	36 C	1						1			
										4	24.0	406	
66-30	N	NO VISIBLE GOLD											
66-31	Y	75 X 75	15 C		1					1			EST. 0.5% PYRITE
		75 X 150	22 C	1						1			
		250 X 375	56 C	1						1			
										3	14.2	3076	
66-32	Y	50 X 50	10 C	1						1			EST. 1% PYRITE
		50 X 75	13 C	1						1			

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GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										2	20.0	28	
66-33	N	NO VISIBLE GOLD											
66-34	Y	50 X 75	13 C		1					1			EST. 5% PYRITE
		50 X 100	15 C				1			1			
		125 X 150	27 C	1						1			
		125 X 175	29 C	1						1			
										4	34.2	286	
66-35	Y	25 X 50	8 C		3					3			EST. 5% PYRITE
		25 X 75	10 C		1					1			
		125 X 200	31 C	2						2			
		700 X 875	103 C	1						1			
										7	28.3	17443	
66-36	Y	25 X 25	5 C		1					1			EST. 30% PYRITE
		25 X 50	8 C		1					1			
		50 X 100	15 C		1					1			
										3	45.8	16	
66-37	Y	25 X 25	5 C		1					1			EST. 45% PYRITE
		25 X 50	8 C		2					2			
										3	34.2	5	
67-01	N	NO VISIBLE GOLD											
67-02	Y	25 X 25	5 C		2					2			EST. 30% PYRITE
		25 X 50	8 C		1					1			30 GRAINS ARSENOPYRITE
		50 X 100	15 C		1					1			100 GRAINS GALENA
		75 X 100	18 C		1					1			
										5	20.7	86	
67-03	Y	100 X 150	25 C	1						1			EST. 3% PYRITE
		125 X 150	27 C	1						1			30 GRAINS OF ARSENOPYRITE
										2	15.6	431	
67-04	N	NO VISIBLE GOLD											

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GOLD CLASSIFICATION
===================

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
67-05	N	NO VISIBLE GOLD											
67-06	N	NO VISIBLE GOLD											
67-07	N	NO VISIBLE GOLD											
67-08	N	NO VISIBLE GOLD											
67-09	N	150 X 200	34 C	1						1			
										1	18.4	421	
67-10	N	NO VISIBLE GOLD											
67-11	N	NO VISIBLE GOLD											
67-12	N	NO VISIBLE GOLD											
68-01	N	75 X 100	18 C	1						1			
										1	24.1	42	
68-02	Y	25 X 75	10 C				1			1			EST. 10% PYRITE
		50 X 75	13 C				1			1			
		50 X 100	15 C			1				1			
		75 X 75	15 C		1					1			
		125 X 150	27 C	1						1			
		275 X 400	59 C	1						1			
										6	20.7	2729	
68-03	N	NO VISIBLE GOLD											
68-04	N	75 X 100	18 C	1						1			
										1	27.6	37	
68-05	N	NO VISIBLE GOLD											
68-06	N	75 X 125	20 C	1						1			
										1	20.1	75	
68-07	N	NO VISIBLE GOLD											

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
68-08	Y	50 X 75	13 C		1					1			EST. 10% PYRITE
		75 X 100	18 C					1		1			TRACE ARSENOPYRITE
										2	22.0	63	
68-09	Y	25 X 50	8 C		2					2			EST. 5% PYRITE
		50 X 50	10 C						1	1			TRACE ARSENOPYRITE
		50 X 75	13 C	1						1			
		125 X 300	40 C	1						1			
										5	31.1	460	
68-10	N	50 X 75	13 C	1						1			
										1	23.8	16	
68-11	N	NO VISIBLE GOLD											
68-12	N	NO VISIBLE GOLD											
68-13	N	75 X 100	18 C	1						1			
										1	26.9	38	
68-14	N	NO VISIBLE GOLD											
68-15	Y	50 X 100	15 C	1						1			EST. 20% PYRITE
		75 X 100	18 C	1						1			
										2	27.5	60	
68-16	Y	50 X 50	10 C		1					1			EST. 5% PYRITE
		50 X 75	13 C			1				1			
		75 X 100	18 C	1						1			
		150 X 200	34 C				1			1			
										4	32.4	287	
68-17	N	NO VISIBLE GOLD											
68-18	N	75 X 150	22 C			1				1			
										1	21.6	98	
68-19	Y	25 X 25	5 C				1			1			EST. 15% PYRITE

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

				NUMBER OF GRAINS									
				ABRADED		IRREGULAR		DELICATE		TOTAL	NON MAG	CALC V.G. ASSAY	
SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	T	P	T	P	T	P		GMS	PPB	REMARKS
CB-89													
		50 X 50	10 C		1					1			
		50 X 75	13 C		1		1			2			
		75 X 75	15 C		1					1			
		75 X 125	20 C		1					1			
										6	24.8	125	
68-20	Y	25 X 25	5 C		1					1			EST. 75% PYRITE
		150 X 150	29 C		1					1			
										2	44.6	111	
69-01,02	Y	25 X 50	8 C		1					1			EST. 5% PYRITE
		50 X 50	10 C	1						1			20 GRAINS ARSENOPYRITE
		50 X 75	13 C		1					1			
		75 X 150	22 C	1						1			
		100 X 150	25 C	1						1			
		175 X 200	36 C	1						1			
										6	40.1	377	
69-03	N	50 X 50	10 C	1						1			
										1	18.1	11	
69-04	N	NO VISIBLE GOLD											
69-05	N	NO VISIBLE GOLD											
69-06	N	NO VISIBLE GOLD											
69-07	N	50 X 50	10 C	1						1			
										1	13.6	14	
69-08	N	25 X 50	8 C	1						1			
										1	32.4	3	
69-09	N	NO VISIBLE GOLD											
69-10	Y	NO VISIBLE GOLD											EST. 50% PYRITE
69-11	Y	NO VISIBLE GOLD											EST. 50% PYRITE

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
69-12	N	NO VISIBLE GOLD											
69-13	N	125 X 150	27 C	1						1			
										1	22.7	169	
69-14	N	NO VISIBLE GOLD											
69-15	N	NO VISIBLE GOLD											
69-16	N	25 X 75	10 C	1						1			EST. 10% PYRITE
		50 X 50	10 C		2					2			2 GRAINS NATIVE COPPER
										3	31.3	18	
69-17	Y	50 X 50	10 C		2		1			3			EST. 40% PYRITE
										3	25.4	8	
70-01	N	NO VISIBLE GOLD											
70-02	N	50 X 75	13 C	1						1			
										1	18.1	21	
70-03	Y	50 X 75	13 C	1	2					3			EST. 25% PYRITE
		75 X 75	15 C			1				1			
		100 X 100	20 C		1					1			
										5	26.6	123	
70-04	N	75 X 150	22 C	1						1			
										1	23.7	90	
70-05	N	NO VISIBLE GOLD											
70-06	N	NO VISIBLE GOLD											
70-07	N	NO VISIBLE GOLD											
70-08	N	NO VISIBLE GOLD											
70-09	N	NO VISIBLE GOLD											

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
70-10	N	NO VISIBLE GOLD											
71-01	N	NO VISIBLE GOLD											
71-02	N	NO VISIBLE GOLD											
71-03	N	NO VISIBLE GOLD											
71-04	N	NO VISIBLE GOLD											
71-05	N	NO VISIBLE GOLD											
71-06	N	100 X 125	22 C	1						1			
										1	22.6	94	
71-07	N	50 X 75	13 C	1						1			
										1	23.0	16	
71-08	N	100 X 100	20 C	1						1			
										1	22.3	67	
71-09	Y	25 X 50	8 C		1					1			EST. 2% PYRITE
		50 X 100	15 C	1						1			
		75 X 125	20 C	1						1			
										3	11.0	202	
71-10	N	NO VISIBLE GOLD											
71-11	N	75 X 100	18 C	1						1			
										1	32.5	31	
72-01	Y	125 X 150	50 M	2						2			EST. 5% PYRITE 30 GRAINS ARSENOPYRITE
										2	12.6	1125	
72-02	N	NO VISIBLE GOLD											
72-03	Y	25 X 50	8 C		1					1			EST. 7% PYRITE
		50 X 50	10 C	1						1			
		50 X 75	13 C		1					1			

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
				NUMBER OF GRAINS									
CB-89													
		75 X 100	18 C	1						1			
										4	13.4	124	
72-04	Y	50 X 50	10 C	1						1			EST. 15% PYRITE
		75 X 75	15 C	1						1			
										2	15.3	54	
72-05	N	25 X 75	10 C	1						1			
										1	15.8	12	
72-06	N	NO VISIBLE GOLD											
72-07	Y	25 X 50	8 C	1						1			EST. 7% PYRITE
		75 X 100	18 C	1						1			
		100 X 125	22 C	1						1			
										3	14.9	216	
72-08	N	25 X 100	13 C	1						1			
										1	20.5	18	
72-09	Y	25 X 25	5 C		1					1			EST. 10 GRIANS GALENA
		25 X 50	8 C	1						1			
		25 X 75	10 C	1						1			
		50 X 50	10 C		1					1			
		75 X 100	18 C	1						1			
		100 X 150	25 C	1						1			
										6	19.9	221	
72-10	Y	25 X 25	5 C		1					1			EST. 4% PYRITE
		75 X 100	18 C					1		1			
										2	12.6	82	
72-11	Y	25 X 25	5 C	1	1					2			EST. 10% PYRITE
		25 X 75	10 C		2					2			10 GRAINS ARSENOPYRITE
		50 X 50	10 C	1	1					2			
		50 X 75	13 C		1					1			
		100 X 125	22 C	1						1			
		100 X 125	50 M	1						1			

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GOLD CLASSIFICATION
====================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
		125 X 225	34 C	1						1			
										10	14.9	1060	
72-12	Y	25 X 25	5 C	1						1			EST. 3% PRYRITE
		25 X 50	8 C		1		1			2			10 GRAINS ARSENOPYRITE
		25 X 75	10 C	1						1			
		50 X 75	13 C	2						2			
		75 X 100	18 C	1						1			
										7	24.0	89	
72-13	Y	50 X 75	13 C	1						1			
										1	21.6	17	
72-14	Y	75 X 100	18 C	2						2			EST. 4% PYRITE
		X	0 C							0			10 GRAINS OF ARSENOPYRITE
										2	16.6	122	
72-15	N	NO VISIBLE GOLD											
72-16	Y	25 X 50	8 C	1		1				2			EST. 15% PYRITE
		50 X 75	13 C						1	1			20 GRAINS ARSENOPYIRTE
										3	16.4	33	
73-01	N	NO VISIBLE GOLD											
73-02	N	50 X 75	13 C	1						1			
										1	39.3	9	
73-03	N	NO VISIBLE GOLD											
73-04	N	NO VISIBLE GOLD											
73-05	Y	75 X 75	15 C			1				1			
										1	22.4	29	
73-06	N	NO VISIBLE GOLD											
74-01	N	75 X 150	22 C	1						1			

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GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										1	13.7	155	
74-02	N	NO VISIBLE GOLD											
74-03	N	75 X 150	22 C	1						1			
										1	19.1	111	
74-04	N	50 X 50	10 C	1						1			
										1	22.5	9	
74-05	N	NO VISIBLE GOLD											
74-06	N	50 X 100	15 C	1						1			
										1	24.8	26	
74-07	N	125 X 150	27 C	1						1			
										1	19.1	200	
74-08	N	NO VISIBLE GOLD											
74-09	N	NO VISIBLE GOLD											
74-10	N	NO VISIBLE GOLD											
74-11	N	NO VISIBLE GOLD											
74-12	N	175 X 225	38 C	1						1			
										1	17.2	663	
74-13	N	100 X 150	25 C			1				1			
										1	20.5	141	
74-14	N	NO VISIBLE GOLD											
74-15	N	NO VISIBLE GOLD											
74-16	Y	25 X 50	8 C		1					1			EST. 3% PYRITE
		25 X 75	10 C		1					1			

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GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
		25 X 100	13 C		1					1			
		50 X 75	13 C		2					2			
		75 X 75	50 M		1					1			
										6	23.1	152	
74-17	Y	25 X 25	5 C				1			1			EST. 0.2% PYRITE
										1	24.7	1	
74-18	Y	NO VISIBLE GOLD											EST. 2% PYRITE 10 GRAINS ARSENOPYRITE
74-19	Y	25 X 50	8 C		1					1			EST. 0.5% PYRITE
										1	19.8	4	
74-20	Y	NO VISIBLE GOLD											EST. 3% PYRITE
74-21	Y	25 X 25	5 C		1					1			EST. 1% PYRITE
		25 X 50	8 C		1					1			
		50 X 75	13 C		1					1			
		50 X 100	15 C		1					1			
		75 X 100	18 C		1					1			
										5	21.4	100	
74-22	Y	25 X 50	8 C		1					1			EST. 2% PYRITE
		75 X 100	18 C		1					1			
										2	18.8	58	
74-23	Y	25 X 50	8 C		1					1			EST. 3% PYRITE 20 GRAINS ARSENOPYRITE
		25 X 75	10 C		1					1			
		50 X 100	15 C		1					1			
										3	21.8	42	
74-24	Y	25 X 50	8 C		1					1			EST. 1% PYRITE
										1	19.4	4	
74-25	Y	NO VISIBLE GOLD											EST. 3% PYRITE 10 GRAINS ARSENOPYRITE
74-26	Y	NO VISIBLE GOLD											EST. 2% PYRITE

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
74-27	Y	50 X 50	10 C						1	1			EST. 2% PYRITE
		50 X 100	15 C		1					1			
										2	13.0	64	
74-28	Y	75 X 100	18 C		1					1			EST. 4% PYRITE
		75 X 125	20 C		1					1			100 GRAINS OF ARSENOPYRITE
										2	36.0	28	
74-29	Y	NO VISIBLE GOLD											EST. 20% PYRITE 100 GRAINS OF ARSENOPYRITE
75-01	N	50 X 75	13 C			1				1			
										1	27.1	14	
75-02	N	75 X 125	20 C	1						1			
										1	29.5	51	
75-03	N	NO VISIBLE GOLD											
75-04	N	NO VISIBLE GOLD											
75-05	N	150 X 200	34 C			1				1			
										1	27.8	278	
75-06	N	NO VISIBLE GOLD											
75-07	N	NO VISIBLE GOLD											
76-01	Y	NO VISIBLE GOLD											EST. 0.5% PYRITE 10 GRAINS OF ARSENOPYRITE
76-02	Y	50 X 75	8 C		1					1			EST. 1% PYRITE 10 GRAINS OF ARSENOPYRITE
										1	17.4	5	
76-03	Y	25 X 50	8 C		1					1			EST. 0.5% PYRITE 10 GRAINS OF ARSENOPYRITE
		25 X 75	10 C		1					1			
		50 X 50	10 C		1					1			
		50 X 75	13 C		1					1			
		50 X 100	15 C				1			1			
										5	19.6	75	

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GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
76-04	Y	25 X 50	8 C		1					1			EST. 3% PYRITE
		50 X 75	13 C		1					1			
		75 X 75	15 C		1					1			
										3	21.3	51	
76-05	Y	25 X 25	5 C		3					3			EST. 0.5% PYRITE
		50 X 75	13 C		2					2			
		75 X 75	15 C		2					2			
										7	17.6	119	
76-06	Y	25 X 25	5 C		2					2			EST. 3% PYRITE
		25 X 50	8 C		1					1			
		50 X 50	10 C		1					1			
		50 X 75	13 C		1					1			
		50 X 100	15 C		1					1			
		75 X 100	18 C		1					1			
										7	17.5	134	
76-07	~~Y~~ N	NO VISIBLE GOLD											BRASS LEACH.
76-08	~~Y~~ N	NO VISIBLE GOLD											BRASS LEACH.
76-09	~~Y~~ N	NO VISIBLE GOLD											BRASS LEACH.
76-10	~~Y~~ N	NO VISIBLE GOLD											BRASS LEACH.
76-11	~~Y~~ N	NO VISIBLE GOLD											BRASS LEACH.
76-12	~~Y~~ N	NO VISIBLE GOLD											BRASS LEACH.
76-13	~~Y~~ N	NO VISIBLE GOLD											BRASS LEACH.
76-14	~~Y~~ N	NO VISIBLE GOLD											BRASS LEACH.
76-15	~~Y~~ N	NO VISIBLE GOLD											BRASS LEACH.
76-16	~~Y~~ N	NO VISIBLE GOLD											BRASS LEACH.
76-17	~~Y~~ N	NO VISIBLE GOLD											BRASS LEACH.
76-18	~~Y~~ N	NO VISIBLE GOLD											BRASS LEACH.

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GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
76-19	N	NO VISIBLE GOLD											BRASS LEACH.
76-20	N	NO VISIBLE GOLD											BRASS LEACH.
76-21	N	NO VISIBLE GOLD											BRASS LEACH.
76-22	N	NO VISIBLE GOLD											BRASS LEACH.
76-23	Y	50 X 100	15 C		1					1			EST. 1% PYRITE
		75 X 125	20 C		1					1			
										2	30.4	70	
76-24	Y	25 X 50	8 C		1					1			EST. 1.5% PYRITE
		50 X 50	10 C		1					1			
		75 X 125	20 C		1					1			
		150 X 200	34 C		1					1			
										4	23.4	406	
76-25	Y	25 X 50	8 C		1					1			EST. 3% PYRITE
		50 X 75	13 C		1					1			
		50 X 100	15 C		1					1			
		150 X 200	34 C		1					1			
										4	23.2	381	
76-26	Y	25 X 50	5 C		1					1			EST. 2% PYRITE
		100 X 150	25 C		1					1			10 GRAINS OF ARSENOPYRITE
										2	23.1	126	
76-27	Y	25 X 50	8 C		3					3			EST. 0.1% PYRITE
		50 X 75	13 C		1					1			
										4	24.4	25	
76-28	Y	NO VISIBLE GOLD											EST. 0.1% PYRITE
76-29	Y	25 X 50	8 C		1					1			EST. 0.5% PYRITE
										1	23.1	4	

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
76-30	Y	NO VISIBLE GOLD											EST. 0.2% PYRITE
76-31	Y	25 X 25	5 C						1	1			EST. 0.7% PYRITE
		25 X 50	8 C		1					1			
		50 X 100	15 C		1					1			
		75 X 75	15 C		1					1			BRASS LEACH. GOLD TO FOLLOW
										4	19.1	73	
76-32	Y	25 X 25	5 C		1					1			EST. 0.1% PYRITE
		50 X 50	10 C		1					1			
		100 X 150	25 C		1					1			
		100 X 175	27 C		1					1			
		125 X 175	29 C		1					1			
										5	28.4	418	
76-33	Y	25 X 50	8 C				1			1			EST. 1% PYRITE
		50 X 50	10 C				1			1			
		75 X 75	15 C		1					1			
										3	29.8	31	
77-01	N	NO VISIBLE GOLD											
77-02	N	NO VISIBLE GOLD											
77-03	N	NO VISIBLE GOLD											
78-01	Y	25 X 25	5 C		1					1			EST. 5% PYRITE
		50 X 75	13 C		1					1			10 GRAINS OF ARSENOPYRITE
		50 X 125	18 C		1					1			
		100 X 150	25 C		1					1			
										4	26.6	162	
78-02	Y	25 X 25	5 C						1	1			EST. 3% PYRITE
		75 X 150	22 C		1					1			5 GRAINS OF ARSENOPYRITE
										2	21.2	101	
78-03	Y	50 X 50	10 C		2					2			EST. 1% PYRITE
		75 X 75	15 C		1					1			
										3	21.8	47	

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
78-04	Y	25 X 50	8 C		1					1			EST. 0.5% PYRITE
										1	17.7	5	
78-05	Y	NO VISIBLE GOLD											EST. 1% PYRITE
78-06	Y	50 X 75	13 C						1	1			EST. 2% PYRITE
		50 X 125	18 C				1			1			
		75 X 125	20 C		1		1			2			
										4	15.0	292	
78-07	Y	50 X 50	10 C		2					2			EST. 0.5% PYRITE
		50 X 75	13 C		1					1			
										3	25.7	29	
78-08	Y	225 X 300	48 C		1					1			EST. 1% PYRITE
										1	19.2	1298	
78-09	Y	50 X 75	13 C		1					1			EST. 2% PYRITE
										1	16.2	23	
78-10	Y	25 X 50	8 C				1			1			EST. 0.5% PYRITE
		50 X 50	10 C		2					2			
		50 X 75	13 C		2					2			
		75 X 75	15 C		1					1			
										6	14.5	127	
78-11	Y	25 X 50	8 C		1					1			EST. 0.5% PYRITE
		50 X 75	13 C		1					1			
										2	11.9	38	
78-12	Y	25 X 50	8 C		1					1			EST. 0.25% PYRITE
		50 X 50	10 C		1					1			
										2	17.2	16	
78-13	Y	NO VISIBLE GOLD											EST. 0.25% PYRITE

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
78-14	Y	NO VISIBLE GOLD											EST. 0.5% PYRITE
78-15	Y	NO VISIBLE GOLD											EST. 2% PYRITE
78-16	Y	50 X 50	10 C		1					1			EST. 3% PYRITE
		50 X 75	13 C		1					1			
										2	14.4	39	
78-17	Y	50 X 50	10 C		1					1			EST. 3% PYRITE
										1	22.3	9	
78-18	Y	NO VISIBLE GOLD											EST. 1% PYRITE
78-19	Y	50 X 50	10 C		1					1			EST. 0.5% PYRITE 3 GRAINS OF ARSENOPYRITE
										1	31.1	6	
78-20	Y	25 X 25	5 C						2	2			EST. 0.1% PYRITE
		50 X 75	13 C		1					1			
		100 X 125	22 C		2					2			
		150 X 200	34 C		1					1			
										6	24.6	504	
78-21	Y	50 X 50	10 C		1					1			EST. 0.1% PYRITE
		50 X 75	13 C		1					1			
		50 X 150	20 C		1					1			
										3	23.6	88	
78-22	Y	50 X 100	15 C		1					1			EST. 1% PYRITE 4 GRAINS OF ARSENOPYRITE
		75 X 225	29 C		1					1			
		100 X 100	20 C		1					1			
		100 X 150	25 C		1					1			
										4	29.5	338	
78-23	Y	NO VISIBLE GOLD											EST. 5% PYRITE 10 GRAINS OF ARSENOPYRITE
78-24	Y	75 X 125	20 C		1					1			EST. 1.5% PYRITE
										1	22.6	66	

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
78-25	Y	NO VISIBLE GOLD											EST. 5% PYRITE
78-26	Y	50 X 75	13 C		2					2			EST. 2% PYRITE
										2	17.5	43	
78-27	Y	25 X 25	5 C		1					1			EST. 0.5% PYRITE
		50 X 50	10 C						1	1			
		50 X 75	13 C		3				1	4			
		75 X 75	15 C		1				1	2			
		75 X 125	20 C		1					1			
										9	36.7	122	
78-28	Y	50 X 75	13 C		1					1			EST. 3% PYRITE
		100 X 125	22 C		1					1			50 GRAINS OF ARSENOPYRITE
										2	28.0	89	

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
79-01	N	NO VISIBLE GOLD											
79-02	N	50 X 75	13 C			1				1			
										1	26.8	14	
79-03	N	NO VISIBLE GOLD											
79-04	N	NO VISIBLE GOLD											
79-05	N	NO VISIBLE GOLD											
79-06	N	75 X 150	22 C	1						1			
										1	35.4	60	
80-01	Y	50 X 100	15 C		1					1			EST. 2.5% PYRITE
										1	22.7	28	
80-02	Y	25 X 75	10 C		1					1			EST. 0.5% PYRITE
		50 X 50	10 C		1					1			
		175 X 175	34 C		1					1			
										3	20.9	389	
80-03	Y	50 X 75	13 C		1					1			EST. 1% PYRITE
		125 X 150	27 C		1					1			15 GRAINS OF ARSENOPYRITE
										2	20.0	210	
80-04	Y	50 X 50	10 C		1					1			EST. 5% PYRITE
		50 X 75	13 C		2					2			
										3	25.6	37	
80-05	Y	25 X 25	5 C		1					1			EST. 5% PYRITE
		25 X 50	8 C		1					1			20 GRAINS OF ARSENOPYRITE
		50 X 75	13 C		1					1			
		175 X 250	40 C		1					1			
										4	22.9	614	
80-06	Y	75 X 75	15 C		1					1			EST. 0.8% PYRITE
													5 GRAINS OF ARSENOPYRITE

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										1	25.4	25	
80-07	Y	75 X 75	15 C		1					1			EST. 1% PYRITE 10 GRAINS OF ARSENOPYRITE
										1	21.0	31	
80-08	Y	75 X 75	15 C				1			1			EST. 2% PYRITE 10 GRAINS OF ARSENOPYRITE
										1	23.0	28	
80-09	Y	100 X 125	22 C		1					1			EST. 0.5% PYRITE
										1	18.2	117	
80-10	Y	75 X 100	18 C		1					1			EST. 0.4% PYRITE
										1	18.5	55	
80-11	Y	75 X 125	20 C		1					1			EST. 0.2% PYRITE
										1	23.8	63	
80-12	Y	25 X 25	5 C		1					1			EST. 0.5% PYRITE
		50 X 50	10 C		1					1			
										2	22.7	10	
80-13	Y	25 X 50	0 C		1					1			EST. 2% PYRITE
		50 X 75	13 C		1					1			
										2	19	0	
80-14	Y	75 X 100	15 C		1					1			EST. 0.5% PYRITE
										1	24.3	42	
80-15	Y	NO VISIBLE GOLD											EST. 0.1% PYRITE
80-16	Y	75 X 75	15 C				1			1			EST. 0.1% PYRITE
		100 X 125	22 C		1					1			
										2	25.8	107	
80-17	Y	50 X 50	10 C		1					1			EST. 0.1% PYRITE
		50 X 75	13 C		1		1			2			

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GOLD CLASSIFICATION
===================

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
		75 X 100	18 C		1					1			
		100 X 100	75 M						1	1			
										5	23.8	318	
80-18	Y	25 X 50	8 C		1					1			EST. 0.4% PYRITE
		100 X 125	100 M		1					1			
										2	21.4	447	
80-19	Y	NO VISIBLE GOLD											EST. 0.5% PYRITE
80-20	Y	25 X 25	5 C		1					1			EST. 0.5% PYRITE
		50 X 50	10 C		1					1			5 GRAINS ARSENOPYRITE
		50 X 75	13 C		1					1			
		100 X 175	27 C		1					1			
										4	19.5	226	
80-21	Y	75 X 150	22 C		1					1			EST. 1% PYRITE
										1	20.5	104	
80-22	Y	NO VISIBLE GOLD											EST. 0.1% PYRITE
80-23	Y	50 X 75	13 C				1			1			EST. 3% PYRITE
										1	35.6	10	
80-24	Y	50 X 50	10 C		2					2			EST. 3% PYRITE
										2	38.0	10	
81-02	Y	25 X 50	8 C		1					1			EST. 15% PYRITE
		50 X 75	13 C	1						1			
		75 X 75	50 C		2					2			
		75 X 100	18 C	1						1			
										5	21.9	260	
81-03	Y	25 X 50	8 C		2					2			EST. 5% PYRITE
		50 X 100	15 C		1					1			
		50 X 125	18 C	1						1			
		75 X 100	18 C	1						1			

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										5	22.3	127	
81-04	N	NO VISIBLE GOLD											
81-05	N	NO VISIBLE GOLD											
81-06	Y	25 X 25	5 C						1	1			EST. 60% PYRITE
		25 X 50	8 C		1					1			100 GRAINS OF ARSENOPYRITE
		50 X 50	10 C		2					2			10 GRAINS NATIVE COPPER
		50 X 75	13 C	1			1			2			
										6	40.4	31	
81-07	Y	50 X 50	10 C		1					1			EST. 70% PYRITE
		50 X 75	13 C		2					2			50 GRAINS OF ARSENOPYRITE
		100 X 100	50 M		1					1			
		100 X 250	75 M		1					1			
										5	38.8	565	
82-01	Y	50 X 100	15 C						1	1			EST. 0.5% PYRITE
		100 X 125	22 C		1					1			2 GRAINS OF ARSENOPYRITE
										2	25.3	109	
82-02	Y	50 X 75	13 C		1					1			EST. 0.8% PYRITE
		50 X 100	15 C		2					2			5 GRAINS OF ARSENOPYRITE
										3	20.4	81	
82-03	Y	50 X 50	10 C		2					2			EST. 2% PYRITE
													3 GRAINS OF ARSENOPYRITE
										2	17.2	22	
82-04	Y	NO VISIBLE GOLD											EST. 1.5% PYRITE
													2 GRAINS OF ARSENOPYRITE
82-05	Y	25 X 25	5 C		2					2			EST. 1% PYRITE
										2	23.9	2	
82-06	Y	25 X 50	8 C		1					1			EST. 1% PYRITE
		50 X 50	10 C		1					1			
										2	20.6	13	

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GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
82-07	Y	25 X 25	5 C		2					2			EST. 0.3% PYRITE
										2	19.7	2	
82-08	Y	NO VISIBLE GOLD											EST. 0.25% PYRITE
82-09	Y	75 X 75	15 C				1			1			EST. 0.25% PYRITE
		75 X 100	18 C		1					1			
		125 X 125	25 C				1			1			
		225 X 375	75 M		1					1			
										4	22.7	382	
82-10	Y	75 X 75	15 C		1					1			EST. 0.5% PYRITE
										1	21.4	30	
82-11	Y	50 X 75	13 C		1					1			EST. 0.25% PYRITE
										1	23.3	16	
82-12	Y	150 X 200	34 C		1					1			EST. 0.4% PYRITE
										1	22.6	342	
82-13	Y	75 X 75	15 C		1					1			EST. 0.5% PYRITE 3 GRAINS OF ARSENOPYRITE
										1	29.9	21	
82-14	Y	150 X 275	40 C		1					1			EST. 0.25% PYRITE
										1	24.9	0	
82-15	Y	NO VISIBLE GOLD											EST. 0.25% PYRITE
82-16	Y	25 X 50	8 C		1					1			EST. 0.5% PYRITE
										1	22.8	4	
82-17	Y	NO VISIBLE GOLD											EST. 0.25% PYRITE
82-18	Y	75 X 100	18 C		2					2			EST. 3% PYRITE
										2	29.7	68	

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GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
82-19	Y	75 X 100	18 C		1					1			EST. 2% PYRITE 50 GRAINS OF ARSENOPYRITE
										1	27.6	37	
82-20	Y	25 X 50	8 C		1		1			2			EST. 2% PYRITE
										2	21.9	7	
82-21	Y	25 X 75	10 C				1			1			EST. 2% PYRITE
										1	27.1	7	
82-22	Y	50 X 75	13 C	1						1			EST. 2% PYRITE
										1	23.4	16	
82-23	Y	75 X 150	22 C	1						1			EST. 3% PYRITE
										1	40.4	53	
83-01	N	NO VISIBLE GOLD											
83-02	N	50 X 75	13 C	1						1			
										1	20.2	18	
83-03	N	NO VISIBLE GOLD											
83-04	N	NO VISIBLE GOLD											
83-05	N	NO VISIBLE GOLD											
83-06	N	NO VISIBLE GOLD											
83-07	N	50 X 100	15 C	1						1			
										1	23.6	27	
83-08	Y	25 X 25	5 C		3					3			EST. 1% PYRITE
		50 X 75	13 C		2					2			
		50 X 100	15 C		1					1			
		75 X 100	18 C	1						1			
		125 X 150	27 C	1						1			

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GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										8	26.7	236	
83-09	N	NO VISIBLE GOLD											
83-10	N	NO VISIBLE GOLD											
83-11	N	NO VISIBLE GOLD											
83-12	N	NO VISIBLE GOLD											
84-01	Y	25 X 25	5 C		1					1			EST. 0.5% PYRITE
										1	20.5	1	
84-02	Y	50 X 150	20 C					1		1			EST. 0.25% PYRITE
										1	24.4	61	
84-03	Y	25 X 50	8 C		1					1			EST. 0.5% PYRITE
		50 X 50	10 C		1					1			
		50 X 75	13 C		2					2			
		75 X 100	18 C		1					1			
										5	23.3	87	
84-04	Y	25 X 75	10 C		1					1			EST. 1% PYRITE
		50 X 50	10 C		1					1			
		50 X 75	13 C		1					1			
		50 X 100	15 C						1	1			
		75 X 75	15 C		2					2			
		125 X 150	27 C		1					1			
										7	40	163	
84-05	Y	50 X 75	13 C		1					1			EST. 20% PYRITE
		75 X 75	15 C		1					1			
		100 X 175	27 C		1					1			
										3	36.6	132	
84-06	Y	50 X 125	18 C		1					1			EST. 10% PYRITE
		75 X 75	15 C		1					1			
		75 X 100	50 M		2					2			
		100 X 125	22 C		1					1			

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GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
		125 X 125	25 C				1			1			
										6	33.9	366	
84-07	Y	25 X 50	8 C		1					1			EST. 10% PYRITE
		50 X 50	10 C		1		1			2			PHOTOMICROGRAPH AVILABLE
		50 X 75	13 C		1					1			PICTURE REFERENCE #21
		75 X 125	20 C		1		1			2			
		75 X 150	50 M		1					1			
		100 X 100	20 C				2			2			
		100 X 125	22 C		1					1			
		125 X 125	50 M		1					1			
		125 X 200	75 M		1		1			2			
										13	63.7	774	
84-08	Y	25 X 50	8 C		3					3			EST. 5% PYRITE
		50 X 50	10 C				1			1			
		50 X 75	13 C		1		1			2			
		150 X 175	75 M		1					1			
										7	45.1	356	
84-09	Y	25 X 25	5 C				1			1			EST. 3% PYRITE
		25 X 50	8 C				1			1			PHOTOMICROGRAPH AVAILABLE
		50 X 75	13 C		1		1			2			PICTURE REFERENCE # 21
		75 X 100	18 C		2					2			
		100 X 125	22 C		1					1			
		100 X 125	75 M				1			1			
		175 X 200	75 M				1			1			
		200 X 200	38 C		1					1			
										10	31.2	1388	
84-10	Y	50 X 50	10 C		1					1			EST. 5% PYRITE
		50 X 100	15 C				1			1			
		100 X 100	20 C		1		1			2			
										4	32.3	119	
84-11	Y	50 X 75	13 C		2					2			EST. 7% PYRITE
		50 X 100	15 C		2					2			
		150 X 225	36 C		1					1			
										5	31.3	367	

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
84-12	Y	25 X 50	8 C				1			1			EST. 3% PYRITE
		75 X 100	18 C		1					1			
										2	21.9	50	
84-13	Y	25 X 50	8 C				1			1			EST. 7% PYRITE
										1	31.4	3	
84-14	Y	50 X 50	10 C		1		1			2			EST. 3% PYRITE
										2	24.1	16	
84-15	Y	50 X 50	10 C		1					1			EST. 2% PYRITE
		50 X 75	13 C		1					1			
		50 X 100	15 C		1					1			
		100 X 150	25 C		1					1			
										4	32.9	125	
84-16	Y	50 X 75	13 C		2					2			EST. 2% PYRITE
		50 X 100	15 C				1			1			
										3	31.1	45	
84-17	Y	NO VISIBLE GOLD											EST. 1% PYRITE
84-18	Y	50 X 50	10 C		1					1			EST. 1% PYRITE
										1	22.8	8	
84-19	Y	50 X 50	10 C		1					1			EST. 2% PYRITE
		100 X 175	27 C		1					1			
										2	24.7	163	
84-20	Y	NO VISIBLE GOLD											EST. 1% PYRITE
84-21	Y	NO VISIBLE GOLD											EST. 1% PYRITE
84-22	Y	25 X 75	10 C		1					1			EST. 5% PYRITE
		50 X 75	13 C		1					1			
		75 X 100	18 C		1					1			
		125 X 175	29 C		1					1			

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GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
		200 X 400	75 M		1					1			
										5	22.0	2597	
84-23	Y	NO VISIBLE GOLD											EST. 5% PYRITE
84-24	Y	75 X 150	22 C		1					1			EST. 3% PYRITE
		50 X 75	13 C		1					1			
										2	30.2	83	
84-25	Y	50 X 75	13 C		1					1			EST. 2% PYRITE
										1	33.2	11	
84-26	Y	NO VISIBLE GOLD											EST. 1% PYRITE 1/4 H PANNING
84-27	Y	50 X 75	13 C			1				1			EST. 0.5% PYRITE 1/4 H PANNING
										1	31.3	12	
84-28	Y	NO VISIBLE GOLD											EST. 10% PYRITE 1/4 H PANNING
84-29	Y	NO VISIBLE GOLD											EST. 12% PYRITE 1/4 H PANNING
84-30	Y	75 X 100	18 C		1					1			EST. 1% PYRITE
										1	40.7	25	
84-31	Y	50 X 50	10 C		1					1			EST. 4% PYRITE
		125 X 150	27 C		1					1			
										2	21.9	183	
84-32	Y	75 X 125	20 C				1			1			EST. 95% PYRITE 10 GRAINS OF ARSENOPYRITE
										1	72.6	21	
85-01	N	100 X 150	25 C	1						1			
										1	19.7	147	
85-02	N	NO VISIBLE GOLD											
85-03	N	NO VISIBLE GOLD											

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GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
85-04	N	225 X 300	48 C	1						1			
										1	23.8	1047	
85-05	N	50 X 100	13 C	1						1			
										1	22.9	16	
85-06	N	NO VISIBLE GOLD											
85-07	Y	25 X 75	10 C		1					1			EST. 2% PYRITE
		50 X 50	10 C	1						1			
		50 X 75	13 C	1						1			
		50 X 100	15 C	1						1			
										4	22.0	64	
85-08	N	NO VISIBLE GOLD											
85-09	N	NO VISIBLE GOLD											
85-10	N	NO VISIBLE GOLD											
86-01	Y	25 X 25	5 C		1					1			EST. 3% PYRITE
		50 X 75	13 C		2					2			
		100 X 125	22 C		1					1			
										4	34.7	83	
86-02	Y	25 X 25	3 C		1					1			EST. 2% PYRITE
		50 X 50	10 C		1		1			2			
										3	32.7	12	
86-03	Y	50 X 50	10 C		1					1			EST. 1% PYRITE
		75 X 100	18 C		1					1			
		100 X 175	27 C		1					1			
										3	25.1	200	
86-04	Y	50 X 75	13 C				1			1			EST. 0.1% PYRITE
										1	21.4	17	

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	P	IRREGULAR T	P	DELICATE T	P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
86-05	Y	50 X 75	13 C		1					1			EST. 0.3% PYRITE
		75 X 100	18 C		1					1			
		75 X 125	20 C		1					1			
		100 X 100	20 C		1					1			
										4	23.2	189	
86-06	Y	25 X 50	8 C		1					1			EST. 1.5% PYRITE
		25 X 75	10 C					1		1			5 GRAINS OF ARSENOPOYRITE
		50 X 75	13 C		1					1			
		75 X 100	50 M		1					1			
										4	18.1	194	
86-07	Y	25 X 25	5 C		1					1			EST. 0.3% PYRITE
		25 X 75	10 C		1					1			
		50 X 50	10 C				1			1			
		50 X 75	13 C		1					1			
		50 X 100	15 C		1					1			
		75 X 125	20 C		1					1			
		175 X 200	36 C		1					1			
										7	30.6	404	
86-08	Y	50 X 50	10 C		1					1			EST. 1% PYRITE 5 GRAINS OF ARSENOPYRITE
										1	30.9	6	
86-09	Y	25 X 25	5 C		2					2			EST. 0.7 PYRITE
		25 X 50	8 C		1					1			5 GRAINS OF ARSENOPYRITE
		25 X 75	10 C		1					1			
		50 X 50	10 C		1					1			
		50 X 75	13 C		1					1			
										6	35.6	25	
86-10	Y	25 X 50	8 C		1					1			EST. 15% PYRITE
		50 X 100	15 C		1				1	2			10 GRAINS OF ARSENOPYRITE
		75 X 75	15 C		1					1			
										4	39.8	50	
87-01	N	NO VISIBLE GOLD											
87-02	Y	25 X 25	5 C				2			2			EST. 50% PYRITE

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
		25 X 50	8 C	1						1			50 GRAINS OF ARSENOPYRITE
		75 X 125	20 C		1					1			
		100 X 125	22 C	1						1			
		100 X 225	50 M		1					1			
		175 X 300	75 M		1					1			
										7	41.0	1107	
88-01	Y	25 X 25	5 C		1					1			EST. 3% PYRITE
		25 X 50	8 C		1					1			20 GRAINS OF ARSENOPYRITE
		50 X 50	10 C				1			1			
		50 X 100	15 C		1		1			2			
		75 X 75	15 C				1			1			
		75 X 125	20 C				1			1			
		100 X 100	20 C				1			1			
										8	34.8	150	
88-02	Y	25 X 75	10 C		1					1			EST. 2% PYRITE
		50 X 50	10 C				1			1			10 GRAINS OF ARSENOPOYRITE
		50 X 75	13 C		1					1			
										3	25.4	30	
88-03	Y	25 X 25	5 C				1			1			EST. 0.4% PYRITE
		50 X 50	10 C						1	1			10 GRAINS OF ARSENOPOYRITE
		50 X 75	13 C		1					1			
										3	23.0	26	
88-04	Y	25 X 50	8 C		1		1			2			EST. 1.5% PYRITE
		50 X 50	10 C		1					1			20 GRAINS OF ARSENOPYRITE
										3	31.4	11	
89-01	N	NO VISIBLE GOLD											
90-01	Y	NO VISIBLE GOLD											EST. 2% PYRITE
90-02	Y	25 X 50	5 C		1					1			EST. 1% PYRITE
		100 X 175	27 C		1					1			
										2	28.3	136	
90-03	Y	50 X 50	10 C		1		1			2			EST. 2% PYRITE

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
		50 X 100	10 C				1			1			
										3	19.9	19	
90-04	Y	100 X 125	13 C		1					1			EST. 0.25% PYRITE 2 GRAINS OF ARSENOPYRITE
										1	24.4	15	
90-05	Y	50 X 50	10 C		2					2			
										2	25.8	15	
90-06	Y	NO VISIBLE GOLD											EST. 0.25% PYRITE
90-07	Y	50 X 100	10 C		1					1			EST. 0.25% PYRITE
		50 X 125	13 C		1					1			
										2	27	21	
90-08	Y	25 X 25	3 C		1					1			EST. 1% PYRITE
		50 X 75	13 C		1					1			
		75 X 125	18 C		1					1			
										3	20.2	69	
90-09	Y	NO VISIBLE GOLD											EST. 1% PYRITE
90-10	Y	50 X 50	50 C				1			1			EST. 0.5% PYRITE
		100 X 175	50 M				1			1			
										2	32.1	177	
90-11	Y	50 X 100	15 C				1			1			EST. 0.1% PYRITE
										1	23.8	27	
91-01	Y	50 X 50	10 C			1	1			2			EST. 10% PYRITE
		75 X 100	18 C		1					1			
										3	20.8	67	
91-02	N	NO VISIBLE GOLD											
91-03	N	100 X 175	27 C	1						1			

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										1	18.2	210	
91-04	Y	25 X 25	5 C						1	1			EST. 3% PYRITE
		50 X 75	13 C	1						1			0.5% GRAINS OF ARSENOPYRITE
										2	21.5	18	
91-05	Y	25 X 50	8 C				1			1			EST. 75% PYRITE
		50 X 50	10 C		2					2			EST. 5% ARSENOPYRITE
										3	82.1	6	
92-01	Y	50 X 50	10 C		1					1			EST. 0.25% PYRITE
		50 X 75	13 C		1					1			
		50 X 150	20 C		1					1			
										3	28.7	72	
92-02	Y	25 X 50	8 C		1					1			EST. 0.25% PYRITE
		50 X 50	10 C		1					1			
		50 X 75	13 C		1					1			
										3	19	34	
92-03	Y	25 X 50	8 C						1	1			EST. 0.25% PYRITE
		50 X 50	10 C		1					1			
		50 X 75	13 C		1					1			
										3	16.3	40	
92-04	Y	50 X 50	10 C		1					1			EST. 0.25% PYRITE
		50 X 75	13 C		1					1			
										2	19.3	29	
92-05	Y	75 X 75	15		1					1			EST. 0.5% PYRITE
										1	18.6	34	
92-06	Y	75 X 100	50 M				1			1			EST. 0.8% PYRITE
										1	23.1	124	
92-07	Y	75 X 75	75 M		1					1			EST. 0.7% PYRITE

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
				NUMBER OF GRAINS									
CB-89													
										1	36.9	86	
92-08	Y	25 X 50	8 C				1			1			EST. 3% PYRITE
		50 X 50	10 C				1			1			
		50 X 100	15 C				1			1			
		75 X 75	15 C				1			1			
										4	20.3	77	
93-01	Y	25 X 50	8 C		1					1			EST. 5% PYRITE
													20 GRAINS OF ARSENOPYRITE
										1	13.0	6	
93-02	Y	25 X 25	5 C		1					1			EST. 2% PYRITE
		25 X 50	8 C		1					1			20 GRAINS OF ARSENOPYRITE
		50 X 50	10 C		1					1			10 GRAINS OF GALENA
										3	20.6	14	
93-03	Y	50 X 50	10 C				1			1			EST. 7% PYRITE
													10 GRAINS OF ARSENOPYRITE
										1	20.2	10	
94-01	Y	50 X 75	10 C		1					1			EST. 7% PYRITE
										1	20.3	9	
94-02	Y	50 X 75	10 C				1			1			EST. 0.5% PYRITE
													5 GRAINS OF ARSENOPYRITE
										1	10.0	19	
94-03	Y	50 X 50	8 C		1					1			EST. 4% PYRITE
		125 X 175	29 C		1					1			
										2	10.6	473	
94-04	Y	NO VISIBLE GOLD											EST. 0.1% PYRITE
94-05	Y	25 X 50	8 C		1					1			EST. 0.3% PYRITE
		75 X 125	20 C		1					1			
										2	9.7	163	
94-06	Y	NO VISIBLE GOLD											EST. 0.3% PYRITE

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
94-07	Y	NO VISIBLE GOLD											EST. 0.1% PYRITE
94-08	Y	50 X 75	13 C		1					1			EST. 0.2% PYRITE
		75 X 75	15 C		1					1			
										2	12.2	83	
94-09	Y	25 X 50	8 C				1			1			EST. 0.2% PYRITE
										1	12.7	6	
94-10	Y	50 X 75	13 C		1					1			EST. 2% PYRITE
		75 X 100	18 C				1			1			
										2	15.7	88	
94-11	Y	25 X 25	5 C		1					1			EST. 1% PYRITE
		25 X 50	8 C				1			1			
		25 X 75	10 C		1					1			
		50 X 50	10 C		1					1			
		50 X 75	50 M				1			1			
		75 X 75	15 C		1					1			
										6	15.2	171	
94-12	Y	50 X 100	15 C				1			1			EST. 3% PYRITE
		75 X 125	20 C		1					1			
										2	11.9	180	
94-13	Y	50 X 50	10 C		1					1			EST. 2% PYRITE
		75 X 75	15 C		1					1			
		75 X 100	18 C		1					1			
										3	11.9	155	
94-14	Y	50 X 100	15 C		1					1			EST. 0.1% PYRITE
										1	26.7	24	
94-15	Y	25 X 50	8 C		1					1			EST. 0.5% PYRITE
		50 X 75	50 M		1					1			
										2	24.8	62	

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GOLD CLASSIFICATION
====================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

				NUMBER OF GRAINS									
SAMPLE #	PANNED			ABRADED		IRREGULAR		DELICATE		TOTAL	NON MAG	CALC V.G. ASSAY	
	Y/N	DIAMETER	THICKNESS	T	P	T	P	T	P		GMS	PPB	REMARKS
CB-89													
94-16	Y	25 X 75	10 C		2					2			EST. 0.1% PYRITE
		50 X 75	13 C		1					1			
		75 X 100	18 C		1					1			
										4	24.0	74	
94-17	Y	25 X 75	10 C		2					2			EST. 0.1% PYRITE
		50 X 75	13 C		1					1			
		75 X 100	18 C		1					1			
										4	21.1	84	
94-18	Y	25 X 50	8 C		1					1			EST. 0.1% PYRITE
		25 X 75	10 C		1					1			
		50 X 75	13 C		1					1			
		75 X 75	15 C		1					1			
										4	23.1	56	
94-19	Y	50 X 100	15 C		1					1			EST. 2% PYRITE
		100 X 125	22 C		1					1			
										2	20.9	132	
94-20	Y	NO VISIBLE GOLD											EST. 0.2% PYRITE
94-21	Y	25 X 50	8 C		2					2			EST. 1% PYRITE
		50 X 50	10 C		2					2			
		50 X 100	15 C		1					1			
		125 X 175	29 C		1					1			
										6	23.3	263	
94-22	Y	100 X 125	22 C		1					1			EST. 0.4% PYRITE
		125 X 200	31 C		1					1			
										2	21.5	389	
94-23	Y	25 X 25	5 C		1					1			EST. 1.5% PYRITE
		75 X 75	15 C		1					1			
		75 X 100	18 C		1					1			
										3	21.3	75	
94-24	Y	25 X 50	8 C		1					1			EST. 0.3% PYRITE

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
		50 X 50	10 C		1					1			
		50 X 75	13 C		1					1			
										3	19.0	34	
94-25	Y	50 X 75	13 C				1			1			EST. 0.7% PYRITE
		50 X 100	15 C		2					2			
										3	28.2	59	
94-26	Y	50 X 50	10 C		1					1			EST. 1% PYRITE
										1	22.7	8	
94-27	Y	50 X 75	13 C		1					1			EST. 2% PYRITE
										1	22.8	16	
94-28	Y	50 X 50	10 C		1					1			EST. 1% PYRITE
		50 X 100	15 C				1			1			
										2	27.3	31	
94-29	Y	50 X 50	10 C				1			1			EST. 1% PYRITE
		50 X 75	13 C		1		1			2			
										3	28.7	33	
94-30	Y	75 X 75	15 C		1					1			EST. 0.5% PYRITE
										1	31.0	21	
94-31	Y	50 X 50	10 C		2					2			EST. 0.8% PYRITE
		50 X 100	15 C		1					1			
		75 X 75	15 C		1					1			
										4	27.7	60	
94-32	Y	50 X 50	10 C		1					1			EST. 1% PYRITE
		50 X 75	13 C		2					2			
		100 X 100	20 C		1					1			
		100 X 125	22 C		1					1			
										5	27.1	168	

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
94-33	Y	NO VISIBLE GOLD											EST. 1% PYRITE
95-01	N	NO VISIBLE GOLD											
96-01	Y	50 X 75	13 C		1					1			EST. 1% PYRITE
		150 X 250	38 C		1					1			5 GRAINS OF ARSENOPYRITE
										2	21.8	540	
96-02	Y	50 X 75	13 C		1					1			EST. 0.3% PYRITE
		75 X 150	22 C				1			1			5 GRAINS OF ARSENOPYRITE
										2	26.2	95	
96-03	Y	50 X 75	13 C				2			2			EST. 0.5% PYRITE
										2	24.1	31	
96-04	Y	50 X 100	15 C				1			1			EST. 1% PYRITE
										1	15.8	41	
96-05	Y	50 X 75	13 C		1					1			EST. 1% PYRITE
										1	27.5	14	
96-06	Y	50 X 50	10 C				1			1			EST. 1% PYRITE
										1	20.4	9	
96-07	Y	25 X 50	8 C		1					1			EST. 1% PYRITE
										1	33.1	2	
96-08	Y	25 X 50	8 C		1					1			EST. 1% PYRITE
		50 X 50	10 C		1		1			2			
										3	28.3	16	
96-09	Y	50 X 75	13 C				1			1			EST. 1% PYRITE
		75 X 125	20 C				1			1			
										2	24.8	76	
96-10	Y	NO VISIBLE GOLD											EST. 0.5% PYRITE

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
96-11	Y	25 X 75	10 C		1					1			EST. 1% PYRITE
		50 X 50	10 C				1			1			
										2	17.2	22	
96-12	Y	50 X 50	10 C		1					1			EST. 1% PYRITE
										1	25.9	7	
96-13	Y	75 X 150	22 C		1					1			EST. 0.1% PYRITE
										1	20.1	106	
96-14	Y	25 X 25	5 C		2					2			EST. 0.1% PYRITE
		50 X 50	10 C		3					3			5 GRAINS OF MARCASITE
										5	20.0	31	
96-15	Y	25 X 25	5 C		1					1			EST. 0.5% PYRITE
		25 X 50	8 C		1					1			30 GRAINS OF ARSENOPYRITE
		50 X 50	10 C		1					1			
		50 X 75	13 C		1					1			
		75 X 75	15 C		1					1			
		125 X 125	25 C		1					1			
										6	13.2	319	
96-16	Y	50 X 75	0 C		1					1			EST. 0.1% PYRITE
		50 X 100	15 C		1					1			
										2	16.2	40	
96-17	Y	NO VISIBLE GOLD											EST. 0.1% PYRITE
96-18	Y	50 X 50	10 C		1					1			EST. 0.2% PYRITE
		75 X 75	15 C		1					1			
										2	11.5	72	
96-19	Y	NO VISIBLE GOLD											EST. 0.1% PYRITE
96-20	Y	NO VISIBLE GOLD											EST. 1% PYRITE
96-21	Y	NO VISIBLE GOLD											EST. 0.1% PYRITE

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GOLD CLASSIFICATION
===================

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
96-22	Y	25 X 25	5 C		1					1			EST. 0.4% PYRITE
		25 X 50	8 C		2					2			
		50 X 50	10 C		2					2			
		50 X 75	13 C		2					2			
										7	23.9	55	
96-23	Y	50 X 50	10 C		1					1			EST. 0.1% PYRITE
		50 X 100	15 C		1					1			
										2	24.1	35	
96-24	Y	NO VISIBLE GOLD											EST. 0.1% PYRITE
96-25	Y	25 X 25	5 C				1			1			EST. 0.1% PYRITE
		25 X 50	8 C		1					1			
										2	19.8	5	
96-26	Y	NO VISIBLE GOLD											EST. 0.1% PYRITE
96-27	Y	NO VISIBLE GOLD											EST. 0.1% PYRITE
96-28	Y	NO VISIBLE GOLD											EST. 0.1% PYRITE
96-29	Y	NO VISIBLE GOLD											EST. 2% PYRITE
96-30	Y	NO VISIBLE GOLD											EST. 1.5% PYRITE
96-31	Y	NO VISIBLE GOLD											EST. 0.8% PYRITE
96-32	Y	NO VISIBLE GOLD											EST. 0.1% PYRITE
96-33	Y	NO VISIBLE GOLD											EST. 0.4% PYRITE
96-34	Y	25 X 25	5 C		1		1			2			EST. 0.5% PYRITE
		75 X 100	18 C		1					1			
										3	26.3	40	
96-35	Y	25 X 75	10 C		1					1			EST. 3% PYRITE
										1	26.6	7	

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GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
96-36	Y	25 X 25	5 C		1					1			EST. 1% PYRITE
										1	35.7	1	
96-37	Y	50 X 75	13 C		2					2			EST. 3% PYRITE
		75 X 75	15 C		1					1			
		150 X 250	38 C		1					1			
										4	34.7	368	
96-38	Y	25 X 50	8 C		1					1			EST. 10% PYRITE
		50 X 50	10 C		1					1			10 GRAINS ARSENOPYRITE
		50 X 125	18 C				1			1			
										3	38.6	33	
96-39	Y	25 X 50	8 C				1		1	2			EST. 8% PYRITE
		50 X 100	15 C		1					1			10 GRAINS ARSENOPYRITE
										3	29.3	27	
97-01	Y	25 X 50	8 C	1	1					2			EST. 15% PYRITE
		50 X 50	10 C		1					1			50 GRAINS OF ARSENOPYRITE
		50 X 100	15 C	1						1			
		100 X 200	29 C	1						1			
										5	24.8	239	
97-02	N	75 X 100	18 C	1						1			
										1	28.6	35	
97-03	N	NO VISIBLE GOLD											
98-01	Y	NO VISIBLE GOLD											EST. 15% PYRITE
99-01	N	25 X 100	13 C	1						1			
										1	27.9	13	
100-01	Y	NO VISIBLE GOLD											EST. 4% PYRITE, 1% PYRRHOTITE 20 GRAINS OF ARSENOPYRITE
100-02	Y	25 X 50	8 C				1			1			EST. 0.1% PYRITE
		25 X 75	10 C						1	1			

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GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										2	22.7	12	
100-02	Y	25 X 50	8 C		1					1			EST. 2% PYRITE 10 GRAINS OF ARSENOPYRITE
										1	15.7	5	
100-04	Y	50 X 100	15 C				1			1			EST. 0.2% PYRITE 10 GRAINS OF PYRRHOTITE
		75 X 75	75 M				1			1			
										2	14.9	43	
100-05	Y	NO VISIBLE GOLD											EST. 0.1% PYRITE
100-06	Y	50 X 50	10 C		1					1			EST. 0.1% PYRITE 100 GRAINS OF COBALTITE
		50 X 100	0 C		1					1			
		75 X 75	0 C		1					1			
		75 X 100	0 C		1					1			
										4	24.4	8	
100-07	Y	NO VISIBLE GOLD											EST. 1.5% PYRITE
100-08	Y	25 X 25	5 C		1					1			EST. 3% PYRITE 10 GRAINS OF ARSENOPYRITE
		50 X 50	10 C		1					1			
		75 X 100	18 C		1					1			
										3	19.1	64	
100-09	Y	25 X 50	8 C				1			1			EST. 5% PYRITE
		50 X 50	10 C				1			1			
		50 X 75	13 C				1		1	2			
										4	22.4	46	
100-10	Y	50 X 50	10 C						2	2			EST.4% PYRITE
		50 X 125	18 C						1	1			
										3	28.7	49	
100-11	Y	25 X 50	8 C		1					1			EST. 6% PYRITE 20 GRAINS ARSENOPYRITE
		50 X 50	10 C		1					1			
		100 X 150	50 M		1					1			
										3	37.8	162	

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GOLD CLASSIFICATION
===================

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
101-01	N	100 X 125	22 C	1						1			
										1	36.4	58	
101-02	Y	25 X 50	8 C				1			1			EST. 50% PYRITE
		50 X 100	15 C		1					1			
		75 X 75	15 C		1					1			
										3	32.9	41	
101-03	N	NO VISIBLE GOLD											
101-04	N	NO VISIBLE GOLD											
101-05	N	NO VISIBLE GOLD											
101-06	Y	25 X 50	8 C	1						1			EST. 2% PYRITE
		50 X 50	10 C		2					2			
		75 X 100	18 C		1					1			
										4	18.2	81	
101-07	N	NO VISIBLE GOLD											
101-08	Y	25 X 75	10 C		1					1			EST. 2% PYRITE
		50 X 50	10 C		1					1			200 GRAINS ARSENOPYRITE
		50 X 75	13 C	1						1			
		50 X 100	15 C		2					2			
		75 X 100	18 C	1						1			
		350 X 350	50 M	1						1			
										7	38.2	1282	
101-09	N	NO VISIBLE GOLD											
101-10	N	NO VISIBLE GOLD											
101-11	N	NO VISIBLE GOLD											
102-01	Y	NO VISIBLE GOLD											EST. 0.1% PYRITE
													15 GRAINS OF ARSENOPYRITE
102-02	Y	50 X 75	13 C		2					2			EST. 0.5% PYRITE
		50 X 100	15 C		1					1			30 GRAINS OF ARSENOPYRITE
		75 X 125	50 M		1					1			

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										4	26.3	53	
102-03	Y	25 X 50	8 C		1					1			EST. 1% PYRITE
		50 X 75	13 C		1					1			50 GRAINS OF ARSENOPYRITE
										2	25.5	3	
102-04	Y	50 X 75	13 C		1					1			EST. 1% PYRITE
													15 GRAINS OF ARSENOPYRITE
										1	20.1	19	
102-05	Y	NO VISIBLE GOLD											EST. 0.9% PYRITE
													30 GRAINS OF ARSENOPYRITE
102-06	Y	25 X 50	8 C				1			1			EST. 0.5% PYRITE
		200 X 600	125 M		1					1			10 GRAINS OF ARSENOPYRITE
										2	19.3	7772	
102-07	Y	NO VISIBLE GOLD											EST. 0.3% PYRITE
													5 GRAINS OF ARSENOPYRITE
102-08	Y	50 X 50	10 C		1					1			EST. 2% PYRITE
		50 X 75	13 C		1					1			25 GRAINS OF ARSENOPYRITE
		125 X 175	29 C		1					1			
										3	47.6	116	
102-09	Y	25 X 25	5 C		1					1			EST. 2% PYRITE
		50 X 75	50 M		1					1			25 GRAINS OF ARSENOPYRITE
										2	20.7	72	
102-10	Y	75 X 75	15 C		1					1			EST. 0.5% PYRITE
													10 GRAINS OF ARSENOPYRITE
										1	22.7	28	
102-11	Y	NO VISIBLE GOLD											EST. 0.3% PYRITE
													10 GRAINS OF ARSENOPYRITE
102-12	Y	25 X 50	8 C		1					1			EST. 0.2% PYRITE
		50 X 75	50 M		1					1			
										2	24	64	
102-13	Y	50 X 75	13 C		1					1			EST. 0.7% PYRITE
		100 X 125	22 C		1					1			

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										2	21.4	117	
102-14	Y	NO VISIBLE GOLD											EST. 0.2% PYRITE
102-15	Y	25 X 75	10 C		1		1			2			EST. 0.5% PYRITE
		50 X 75	13 C		1					1			
										3	25.1	30	
102-16	Y	50 X 50	10 C		1					1			EST. 4% PYRITE
		50 X 75	13 C		1					1			5 GRAINS OF ARSENOPYRITE
										2	22.2	25	
103-01	N	NO VISIBLE GOLD											
103-02	Y	25 X 25	5 C		1					1			EST. 10% PYRITE
		50 X 75	13 C				1			1			100 GRAINS ARSENOPYRITE
		50 X 100	15 C	1						1			
		75 X 75	15 C	1						1			
		75 X 100	18 C	1						1			
										5	20.7	130	
103-03	Y	25 X 25	5 C	1						1			EST. 2% PYRITE
		50 X 50	10 C		1					1			
		50 X 75	13 C	1			1			2			
		75 X 75	15 C		1					1			
		125 X 175	29 C	1						1			
										6	14.9	439	
103-04	N	25 X 50	8 C	1						1			
										1	24.0	3	
103-05	Y	25 X 50	8 C		1					1			EST. 5% PYRITE
		50 X 75	13 C		1					1			
		50 X 75	50 M	1						1			
		50 X 125	18 C	1						1			
		75 X 75	15 C		1					1			
		125 X 175	50 M	1						1			
										6	27.4	438	

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
103-06	Y	25 X 25	5 C		1					1			EST. 20% PYRITE
		25 X 50	8 C		1					1			
		75 X 100	18 C	2						2			
		100 X 175	50 M	1						1			
										5	34.5	267	
104-01	Y	50 X 50	10 C		1					1			EST. 1% PYRITE
		75 X 175	25 C		1					1			
										2	14.7	210	
104-02	Y	NO VISIBLE GOLD											EST. 0.1% PYRITE 20 GRAINS OF ARSENOPYRITE
104-03	Y	25 X 50	8 C		1					1			EST. 0.5% PYRITE
		50 X 50	10 C		2					2			10 GRAINS OF ARSENOPYRITE
		50 X 75	13 C		1					1			
										4	21.5	22	
104-04	Y	25 X 75	10 C		1					1			EST. 0.3% PYRITE
		50 X 100	15 C				1			1			10 GRAINS OF ARSENOPYRITE
										2	19.7	42	
104-05	Y	50 X 50	10 C		1					1			EST. 0.3% PYRITE
		100 X 175	27 C		1					1			5 GRAINS OF ARSENOPYRITE
										2	17.2	234	
104-06	Y	50 X 100	15 C		1					1			EST. 0.2% PYRITE
		75 X 100	18 C		1					1			10 GRAINS OF ARSENOPYRITE
		75 X 175	25 C		1					1			
										3	18.6	244	
104-07	Y	NO VISIBLE GOLD											EST. 0.1% PYRITE
104-08	Y	NO VISIBLE GOLD											EST. 0.1% PYRITE
104-09	Y	25 X 25	5 C		1					1			EST. 0.1% PYRITE
		25 X 50	8 C		2					2			
		50 X 50	10 C		2					2			
		50 X 75	13 C		2					2			

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE # CB-89	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
										7	20.3	28	
104-10	Y	100 X 150	25 C		1					1			EST. 0.1% PYRITE
		175 X 175	34 C		1					1			
										2	15.7	677	
104-11	Y	50 X 75	13 C				1			1			EST. 0.5% PYRITE
										1	6.7	56	
104-12	Y	NO VISIBLE GOLD											EST. 0.3% PYRITE
104-13	Y	25 X 50	8 C				1			1			EST. 0.2% PYRITE
		50 X 50	10 C		1					1			
		50 X 100	15 C				1			1			
										3	18.9	14	
104-14	Y	25 X 25	5 C		1					1			EST. 0.3% PYRITE
										1	19.9	1	
104-15	Y	25 X 25	5 C		1					1			EST. 0.4% PYRITE
										1	22.0	1	
104-16	Y	50 X 75	13 C		1					1			EST. 0.2% PYRITE
		75 X 100	18 C		1					1			
		100 X 125	22 C		1					1			
										3	20.4	68	
104-17	Y	50 X 50	10 C		1					1			EST. 0.2% PYRITE
		75 X 100	18 C		1					1			
		150 X 300	42 C		1					1			
										3	21.4	56	
105-01	N	NO VISIBLE GOLD											
105-02	N	NO VISIBLE GOLD											
105-03	N	NO VISIBLE GOLD											

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GOLD CLASSIFICATION
====================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

				NUMBER OF GRAINS									
				ABRADED		IRREGULAR		DELICATE		TOTAL	NON MAG	CALC V.G. ASSAY	
SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	T	P	T	P	T	P		GMS	PPB	REMARKS
CB-89													
106-01	Y	50 X 75	13 C		1					1			EST. 0.1% PYRITE
		125 X 275	0 C				1			1			
										2	17.8	~~21~~ 661	
106-02	Y	25 X 25	5 C						1	1			EST. 0.5% PYRITE
		25 X 50	8 C		1					1			
										2	18.2	1	
106-03	Y	25 X 25	5 C				1			1			EST. 0.5% PYRITE
		50 X 75	13 C		1					1			
										2	13.2	30	
106-04	Y	25 X 25	5 C		1					1			EST. 1% PYRITE
		25 X 50	8 C		1					1			
		50 X 75	13 C		1					1			
		50 X 100	15 C		1					1			
		75 X 75	15 C				1			1			
										5	14.7	120	
106-05	Y	75 X 100	18 C		1					1			EST. 1% PYRITE
										1	13.7	74	
106-06	Y	25 X 50	8 C						1	1			EST. 2% PYRITE
										1	13	6	
106-07	Y	NO VISIBLE GOLD											EST. 2% PYRITE
106-08	Y	50 X 125	18 C		1					1			EST. 0.2% PYRITE
		100 X 150	25 C		1					1			
										2	14.2	71	
106-09	Y	25 X 25	5 C						1	1			EST. 0.5% PYRITE
		50 X 125	18 C		1					1			
										2	9.9	105	
106-10	Y	50 X 50	10 C		1					1			EST. 0.2% PYRITE
		50 X 75	13 C		2					2			

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										3	19.2	49	
106-11	Y	25 X 50	8 C				1			1			EST. 0.2% PYRITE
		50 X 50	10 C		1					1			
		50 X 75	13 C		2					2			
		50 X 100	15 C		1					1			
										5	20.5	81	
106-12	Y	50 X 75	13 C		1					1			EST. 0.2% PYRITE
		75 X 75	15 C		1					1			
		150 X 150	29 C		1					1			
										3	12.5	476	
106-13	Y	50 X 100	15 C						1	1			EST. 0.1% PYRITE
										1	21.6	30	
106-14	Y	100 X 100	20 C		1					1			EST. 0.1% PYRITE
		125 X 175	29 C		1					1			
										2	29.3	220	

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GOLD CLASSIFICATION
===================

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
107-01	Y	50 X 50	10 C		1					1			EST. 10% PYRITE 200 GRAINS OF ARSENOPYRITE
										1	26.6	7	
107-02	Y	NO VISIBLE GOLD											EST. 7% PYRITE 50 GRAINS OF ARSENOPYRITE
107-03	N	100 X 125	22 C	1						1			
										1	32.9	65	
107-04	N	150 X 200	75 M			1				1			
										1	28.1	613	
107-05	N	NO VISIBLE GOLD											
107-06	Y	50 X 75	13 C	1						1			EST. 3% PYRITE
		100 X 150	25 C	1						1			
										2	26.6	123	
107-07	N	75 X 125	20 C	1						1			
										1	24.8	60	
107-08	N	75 X 125	20 C	1						1			
										1	32.5	46	
107-09	N	50 X 50	10 C	1						1			
										1	14.4	13	
108-01	Y	50 X 50	10 C		1					1			EST. 0.1% PYRITE
										1	22.3	9	
108-02	Y	25 X 25	5 C		1					1			EST. 2% PYRITE
		50 X 50	10 C		1					1			
		50 X 75	13 C		1					1			
										3	19.1	31	
108-03	Y	NO VISIBLE GOLD											EST. 2% PYRITE

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
108-04	Y	50 X 75	13 C				1			1			EST. 50% PYRITE
		50 X 100	15 C		1					1			
		75 X 100	18 C		1		1			2			
		100 X 150	25 C		1					1			
		125 X 100	75 M		1					1			
		125 X 125	25 C		1					1			
		200 X 325	48 C		1					1			
										8	71.4	572	
109-01	Y	25 X 50	8 C		1					1			EST. 5% PYRITE
		50 X 75	13 C	1	1					2			20 GRAINS OF ARSENOPYRITE
		50 X 125	18 C	1			1			2			
										5	12.1	236	
109-02	Y	25 X 25	5 C		1				2	3			EST. 20% PYRITE
		25 X 50	8 C		3		1		1	5			20 GRAINS OF ARSENOPYRITE
		25 X 75	10 C	1						1			20 GRAINS OF GALENA
		50 X 50	10 C	2						2			
		50 X 75	13 C	3						3			
		50 X 100	15 C		1					1			
										15	32.7	86	
109-03	Y	25 X 25	5 C		1		1			2			EST. 5% PYRITE
		25 X 50	8 C	1	1					2			20 GRAINS OF ARSENOPYRITE
		25 X 75	10 C			1				1			20 GRAINS OF GALENA
		50 X 50	10 C	1		1				2			
		50 X 75	13 C			1				1			
		50 X 75	50 M				1			1			
		50 X 100	50 M				1			1			
		75 X 100	75 M				1			1			
		100 X 100	20 C	1						1			
		100 X 125	22 C			1				1			
		100 X 125	50 M			1				1			
		125 X 175	29 C		1					1			
		125 X 200	75 M			1				1			
										16	26.9	1383	
109-04	Y	25 X 25	5 C				1		1	2			EST. 5% PYRITE
		50 X 50	10 C				1			1			20 GRAINS OF ARSENOPYRITE
		50 X 75	13 C			1				1			50 GRAINS OF GALENA
		75 X 125	20 C	1			1			2			

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GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED			NUMBER OF GRAINS							NON	CALC V.G.	
				ABRADED		IRREGULAR		DELICATE		TOTAL	MAG	ASSAY	
	Y/N	DIAMETER	THICKNESS	T	P	T	P	T	P		GMS	PPB	REMARKS
CB-89													
										6	22.6	160	
109-05	Y	25 X 25	5 C				3		1	4			EST. 10% PYRITE
		25 X 50	8 C				4		1	5			20 GRAINS OF ARSENOPYRITE
		25 X 75	10 C				1			1			20 GRAINS OF GALENA
		50 X 50	10 C				2			2			
		50 X 75	13 C			1			1	2			
		75 X 125	20 C			1				1			
										15	28.8	116	
109-06	Y	50 X 50	10 C		1					1			EST. 8% PYRITE
													10 GRAINS OF ARSENOPYRITE
										1	24	8	
109-07	Y	25 X 25	5 C				1	1		2			EST. 0.7% PYRITE
		25 X 50	8 C				2	1		3			10 GRAINS OF ARSENOPYRITE
										5	22.8	13	
109-08	Y	25 X 50	8 C				1			1			EST. 2% PYRITE
		50 X 75	13 C			1	1			2			10 GRAINS OF ARSENOPYRITE
		75 X 100	18 C				1			1			
		75 X 125	20 C			1				1			
										5	23.1	145	
109-09	Y	25 X 25	5 C						2	2			EST. 1.5% PYRITE
		50 X 50	10 C				1			1			10 GRAINS OF ARSENOPYRITE
		50 X 100	15 C			1				1			
		75 X 75	50 M						1	1			
		75 X 100	50 M			1				1			
										6	23.8	246	
109-10	Y	25 X 50	8 C		1				1	2			EST. 6% PYRITE
		50 X 50	10 C		1					1			10 GRAINS OF ARSENOPYRITE
		75 X 100	18 C	1						1			
		75 X 125	20 C			1				1			
										5	25.3	113	
109-11	Y	50 X 50	10 C		1					1			EST. 4% PYRITE
		50 X 75	13 C	1	1					2			10 GRAINS OF ARSENOPYRITE

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
		100 X 175	27 C	1						1			
										4	29.2	163	
109-12	Y	25 X 50	8 C		1		1			2			EST. 20% PYRITE
		50 X 50	10 C				1			1			5 GRAINS OF ARSENOPYRITE
		50 X 75	13 C			2	1			3			
		75 X 100	18 C				1			1			
		75 X 125	50 M				1			1			
		100 X 100	50 M	1						1			
										9	36.2	276	
110-01	Y	25 X 100	13 C				1			1			NO SULPHIDES
										1	21.9	17	
110-02	Y	NO VISIBLE GOLD											NO SULPHIDES
110-03	Y	50 X 50	10 C		1					1			NO SULPHIDES
		50 X 75	13 C		2					2			
		75 X 100	18 C		1					1			
										4	16.3	120	
110-04	Y	25 X 50	8 C		1					1			NO SULPHIDES
										1	15.5	5	
110-05	Y	NO VISIBLE GOLD											NO SULPHIDES
110-06	Y	NO VISIBLE GOLD											EST. 0.1% PYRITE
110-07	Y	100 X 150	25 C		1					1			EST. 0.1% PYRITE
										1	22.7	127	
110-08	Y	25 X 25	5 C		1					1			EST. 2% PYRITE
		50 X 125	18 C		1					1			
										2	28.3	37	
110-09	Y	125 X 200	31 C		1					1			EST. 3% PYRITE
		250 X 300	50 C		1					1			

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GOLD CLASSIFICATION
===================

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										2	30.5	1138	
110-10	Y	NO VISIBLE GOLD											EST. 5% PYRITE
112-01	Y	25 X 50	8 C			1	1			2			EST. 1% PYRITE
		50 X 50	10 C	1		1				2			
		50 X 75	13 C			1				1			
		75 X 100	18 C		1					1			
										6	21.5	90	
112-02	N	NO VISIBLE GOLD											
112-03	Y	25 X 25	5 C	1						1			EST. 2% PYRITE
		25 X 50	8 C	1						1			
		50 X 50	10 C		2					2			
		50 X 75	13 C	1		1				2			
		75 X 125	20 C	1						1			
		100 X 100	20 C	1						1			
		100 X 150	100 M	1						1			
										9	43.4	368	
112-04	Y	50 X 50	10 C	1			1			2			EST. 5% PYRITE
		50 X 75	13 C	1	1					2			
		75 X 150	75 M	1						1			
		100 X 125	22 C	1						1			
		350 X 375	100 M	1						1			
										7	43.8	2487	
112-05	Y	50 X 50	10 C		1					1			EST. 3% PYRITE
		50 X 75	13 C		1					1			
		50 X 100	15 C	1						1			
		75 X 100	18 C		1					1			
		75 X 125	20 C	1						1			
		275 X 325	75 M	1						1			
										6	25.7	2114	
112-06	N	50 X 50	10 C	1						1			
										1	28.0	7	
112-07	N	NO VISIBLE GOLD											

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GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
112-08	N	NO VISIBLE GOLD											
112-09	N	NO VISIBLE GOLD											
112-10	N	NO VISIBLE GOLD											
113-01	Y	100 X 125	22 C						1	1			EST. 1% PYRITE
										1	7.0	303	
113-02	Y	75 X 100	18 C	1						1			EST. 1% PYRITE
										1	20.5	49	
114-01	N	NO VISIBLE GOLD											
114-02	N	125 X 150	27 C	1						1			
										1	22.5	170	
114-03	N	25 X 100	13 C			1				1			
										1	21.4	17	
114-04	N	225 X 325	50 C	1						1			
										1	25.8	1103	
114-05	N	100 X 125	22 C	1						1			
										1	26.5	80	
114-06	N	NO VISIBLE GOLD											
114-07	N	NO VISIBLE GOLD											
114-08	Y	25 X 25	5 C	1						1			EST. 3% PYRITE
		25 X 100	13 C	1						1			100 ARSENOPYRITE CRYSTALS
		50 X 50	10 C		1					1			
										3	25.3	23	
114-09	Y	25 X 25	5 C				1			1			EST. 3% PYRITE
		50 X 75	50 M		1					1			

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
		50 X 75	13 C				1			1			
		75 X 75	15 C	1	1					2			
		75 X 100	18 C	1						1			
										6	24.1	172	
114-10	Y	25 X 25	5 C			1				1			EST. 3% PYRITE
		25 X 50	8 C		1					1			
		50 X 75	13 C	1						1			
		75 X 75	15 C	1						1			
										4	29.0	39	
114-11	Y	25 X 50	8 C				1			1			EST. 2% PYRITE
		75 X 100	18 C	2						2			
										3	25.7	82	
114-12	Y	25 X 50	8 C				1			1			EST. 2% PYRITE
		50 X 50	10 C	1	1					2			
		75 X 100	18 C			1				1			
		125 X 125	50 M			1				1			
										5	21.7	338	
114-13	Y	50 X 75	13 C		1					1			EST. 3% PYRITE
										1	19.0	20	
114-14	Y	25 X 25	5 C	1						1			EST. 3% PYRITE
		25 X 50	8 C	1		1				2			
		50 X 75	13 C		1					1			
		125 X 175	29 C	1						1			
		125 X 200	50 M	1						1			
										6	16.8	917	
115-01	N	NO VISIBLE GOLD											
116-01	N	75 X 75	15 C	1						1			
										1	15.3	42	
116-02	N	50 X 125	18 C			1				1			

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										1	32.3	31	
116-03	N	NO VISIBLE GOLD											
116-04	N	175 X 175	34 C			1				1			
										1	29.4	263	
116-05	N	NO VISIBLE GOLD											
116-06	N	NO VISIBLE GOLD											
116-07	N	NO VISIBLE GOLD											
116-08	N	NO VISIBLE GOLD											
116-09	N	NO VISIBLE GOLD											
116-10	N	NO VISIBLE GOLD											
116-11	N	NO VISIBLE GOLD											
116-12	N	75 X 100	18 C	1						1			
										1	29.9	34	
116-13	N	NO VISIBLE GOLD											
116-14	Y	50 X 75	13 C		1					1			EST. 70% PYRITE
		75 X 100	18 C	1						1			100 GRAINS OF ARSENOPYRITE
										2	45.5	30	
116-15	Y	75 X 75	15 C		2					2			EST. 70% PYRITE
													50 GRAINS OF ARSENOPYRITE
										2	69.0	19	
116-16	Y	25 X 25	5 C		1					1			EST. 60% PYRITE
		50 X 50	10 C				2			2			50 GRAINS OF ARSENOPYRITE
		50 X 75	13 C		2					2			
		50 X 100	15 C		1					1			
		75 X 75	15 C		1					1			
										7	51.5	47	

CAMB4GLD.WR1

GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
116-17	Y	25 X 25	5 C				1		1	2			EST. 25% PYRITE
		50 X 50	10 C		1				1	2			
		75 X 100	18 C		1					1			
		100 X 125	22 C		1					1			
										6	27.8	128	
117-01	Y	25 X 25	5 C	1					1	2			EST. 1% PYRITE
		25 X 50	8 C				1			1			
		50 X 50	10 C		1			1		2			
		50 X 50	10 C			1				1			
		75 X 125	20 C	1						1			
										7	10.9	202	
117-02	Y	25 X 25	5 C				1			1			EST. 5% PYRITE
		25 X 50	8 C				1			1			20 GRAINS OF ARSENOPYRITE
		50 X 50	10 C	1			1			2			
		50 X 75	13 C				2			2			
		75 X 75	15 C				1			1			
		75 X 75	50 C					1		1			
										8	18.6	214	
117-03	Y	25 X 25	5 C						2	2			EST. 10% PYRITE
		25 X 50	8 C				1			1			100 GRAINS OF ARSENOPYRITE
		50 X 75	13 C			2				2			20 GRAINS OF NATIVE COPPER
										5	17.3	51	
117-04	Y	25 X 25	5 C				1		2	3			EST. 80% PYRITE
		25 X 50	8 C				3			3			200 GRAINS OF ARSENOPYRITE
										6	57.5	6	
118-01	N	75 X 150	22 C	1						1			
										1	22.5	94	
118-02	N	NO VISIBLE GOLD											
118-03	N	NO VISIBLE GOLD											
118-04	Y	25 X 50	8 C			1				1			EST. 5% PYRITE

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
		50 X 50	10 C	2						2			20 GRAINS OF ARSNEOPYRITE
		50 X 75	13 C					1		1			10 GRAINS OF GALENA
		50 X 100	15 C			1				1			
		50 X 125	18 C			1				1			
		75 X 100	18 C			1				1			
										7	29.6	118	
118-05	Y	25 X 25	5 C		1					1			EST. 6% PYRITE
		25 X 75	10 C	1						1			30 GRAINS OF ARSENOPYRITE
		50 X 50	10 C	1	1	1				3			10 GRAINS OF GALENA
		75 X 100	50 M	1						1			
		100 X 150	50 M	1		1				2			
		125 X 200	31 C	1						1			
										9	39.4	549	
118-06	Y	25 X 25	5 C			1		1		2			EST. 9% PYRITE
		25 X 50	8 C					1		1			20 GRAINS OF ARSENOPYRITE
		50 X 50	10 C			1				1			20 GRAINS OF GALENA
		50 X 75	13 C			1				1			
		200 X 275	75 M	1						1			
										6	29.6	1095	
118-07	N	75 X 75	15 C	1						1			
										1	16.4	39	
118-08	N	NO VISIBLE GOLD											
118-09	N	NO VISIBLE GOLD											
118-10	N	25 X 25	5 C			1				1			
										1	18.2	1	
119-01	Y	25 X 50	8 C				1			1			EST. 3% PYRITE
		50 X 75	13 C	1						1			100 GRAINS OF ARSENOPYRITE
		75 X 75	15 C			1				1			
		75 X 100	18 C	1						1			
										4	29.7	71	
120-01	N	NO VISIBLE GOLD											

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
120-02	N	NO VISIBLE GOLD											
120-03	Y	25 X 25	5 C	1						1			EST. 4% PYRITE
		25 X 50	8 C			1				1			10 GRAINS OF ARSENOPYRITE
		50 X 75	13 C	1		1				2			
		50 X 100	15 C	1						1			
		75 X 75	15 C			1				1			
		75 X 150	22 C	1						1			
		125 X 20	50 M	1						1			
										8	36.5	171	
120-04	Y	25 X 50	8 C			1				1			EST. 10% PYRITE .
		50 X 50	10 C			1				1			30 GRAINS OF ARSENOPYRITE
		50 X 75	13 C			1				1			
		100 X 175	75 M	1						1			
										4	29.1	388	
121-01	Y	25 X 50	8 C		1					1			EST. 3% PYRITE
		25 X 75	10 C		2					2			EST. 0.5% ARSENOPYRITE
		50 X 50	10 C	1			1			2			
		50 X 75	13 C		2					2			
										7	14.0	114	
121-02	Y	25 X 50	8 C						1	1			EST. 80% PYRITE
													EST. 2% ARSENOPYRITE
										1	72.7	1	
122-01	Y	50 X 50	10 C		1					1			EST. 4% PYRITE
		50 X 75	13 C		1					1			20 GRAINS OF ARSENOPYRITE
		50 X 125	18 C				1			1			
		75 X 100	18 C				1			1			
		75 X 125	50 M		1					1			
		75 X 200	50 M		1					1			
										6	19.0	707	
122-02	N	NO VISIBLE GOLD											
123-01	Y	25 X 25	5 C				1		1	2			EST. 3% PYRITE
		50 X 50	10 C			1				1			EST. 0.5% ARSENOPYRITE

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GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										3	24.4	10	
123-02	Y	25 X 25	5 C				1			1			EST. 10% PYRITE
		50 X 75	13 C			1	2		1	4			EST. 0.25% ARSENOPYRITE
		50 X 100	15 C	1						1			
										6	37.9	57	
123-03	Y	100 X 175	50 M	1						1			EST. 5% PYRITE
		125 X 150	50 M			1				1			100 GRAINS OF ARSENOPYRITE
										2	51.1	277	
123-04	Y	25 X 25	5 C	1						1			EST. 10% PYRITE
		50 X 75	13 C		1					1			EST. 0.25% ARSENOPYRITE
										2	37.3	11	
123-05	Y	25 X 25	5 C		2		1			3			EST. 15% PYRITE
		50 X 50	10 C	1						1			500 GRAINS OF ARSENOPYRITE
		75 X 100	18 C		1					1			
		150 X 150	50 M	1						1			
										6	49.0	198	
124-01	Y	25 X 50	8 C			1				1			EST. 5% PYRITE
		25 X 75	10 C				1			1			
		50 X 50	10 C				1			1			
		50 X 75	13 C	1						1			
		50 X 100	15 C			1				1			
		75 X 100	50 M	1						1			
										6	17.4	250	
124-02	N	75 X 100	50 M	1						1			
										1	29.0	99	
124-03	N	50 X 50	50 M	1						1			
										1	18.0	52	
124-04	N	NO VISIBLE GOLD											
124-05	N	100 X 125	22 C	1						1			

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GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										1	22.9	93	
124-06	N	NO VISIBLE GOLD											
125-01	Y	25 X 25	5 C		1					1			EST. 15% PYRITE
		50 X 50	10 C	1						1			200 GRAINS OF ARSENOPYRITE
		75 X 75	15 C	1		1				2			
		75 X 75	50 M	1						1			
		75 X 100	50 M	1						1			
										6	30.8	210	
125-02	N	NO VISIBLE GOLD											
125-03	N	150 X 150	50 M	1						1			
										1	23.7	356	
126-01	Y	75 X 100	18 C	1						1			EST. 6% PYRITE
		175 X 225	125 M	1						1			50 GRAINS OF ARSENOPYRITE
										2	24.6	1565	
126-02	Y	25 X 25	5 C		1					1			EST. 8% PYRITE
		25 X 50	8 C	2		1		1		4			50 GRAINS OF ARSENOPYRITE
		50 X 50	10 C	1		1				2			10 GRAINS OF GALENA
		50 X 100	15 C				1			1			
		100 X 125	22 C	1						1			
		150 X 175	31 C	1						1			
		175 X 250	40 C	1						1			
										11	31.8	733	
126-03	Y	25 X 25	5 C	1		1	1			3			EST. 3% PYRITE
		25 X 50	8 C	2			1			3			50 GRAINS OF ARSENOPYRITE
		50 X 100	15 C			1				1			PHOTOMICROGRAPH AVIALABLE
		75 X 100	50 M	1						1			PICTURE REFERENCE #160
		75 X 125	20 C	1						1			
		75 X 225	75 M	1						1			
		100 X 125	22 C	1						1			
		100 X 125	75 M			1				1			
		125 X 125	25 C			1				1			
		125 X 300	75 M	1						1			
		150 X 200	100 M	1						1			

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GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										15	34.1	2302	
127-01	Y	25 X 50	8 C	1						1			EST. 4% PYRITE
		25 X 75	10 C			1				1			
		50 X 75	13 C	3			1			4			
		75 X 75	15 C	1						1			
		75 X 100	18 C	1						1			
										8	25.8	132	
127-02	N	100 X 100	20 C	1						1			
										1	30.3	50	
127-03	N	NO VISIBLE GOLD											
127-04	N	NO VISIBLE GOLD											
127-05	N	NO VISIBLE GOLD											
127-06	N	NO VISIBLE GOLD											
127-07	N	NO VISIBLE GOLD											
127-08	N	NO VISIBLE GOLD											
127-09	N	100 X 125	22 C	1						1			
										1	35.0	61	
127-10	Y	50 X 75	13 C		1					1			EST. 2% PYRITE
		50 X 125	18 C	1						1			
		75 X 125	20 C	1						1			
										3	27.7	104	
127-11	N	75 X 125	20 C	1						1			
										1	24.2	62	
127-12	Y	50 X 100	15 C		1					1			NO SULPHIDES
		100 X 100	20 C	1						1			
		200 X 200	75 M	1						1			
		275 X 300	75 M	1						1			

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GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										4	22.0	3233	
127-13	N	100 X 150	25 C	1						1			
										1	19.4	149	
127-14	N	100 X 200	29 C	1						1			
										1	25.1	197	
127-15	N	NO VISIBLE GOLD											
127-16	N	NO VISIBLE GOLD											
127-17	N	NO VISIBLE GOLD											
127-18	Y	25 X 75	10 C		1					1			EST. 0.1% PYRITE
		50 X 75	13 C		1					1			
		75 X 125	20 C				1			1			
		100 X 100	20 C	2						2			
										5	17	298	
127-19	N	NO VISIBLE GOLD											
127-20	N	NO VISIBLE GOLD											
127-21	N	NO VISIBLE GOLD											
127-22	N	NO VISIBLE GOLD											
127-23	N	NO VISIBLE GOLD											
127-24	N	50 X 75	13 C	1						1			
										1	29.3	13	
127-25	Y	25 X 50	8 C	1						1			EST. 1% PYRITE
		75 X 150	50 M	1						1			
		100 X 125	50 M	1						1			
										3	36.5	262	
127-26	N	125 X 150	27 C	1						1			

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										1	23.5	163	
127-27	N	NO VISIBLE GOLD											
127-28	N	NO VISIBLE GOLD											
127-29	N	NO VISIBLE GOLD											
127-30	N	NO VISIBLE GOLD											
127-31	Y	75 X 100	50 M	1						1			EST. 20% PYRITE
		175 X 225	50 M	1						1			20 GRAINS OF ARSENOPYRITE
										2	31.5	567	
127-32	N	75 X 125	20 C	1						1			
										1	33.2	45	
127-33	Y	25 X 50	8 C		1					1			EST. 20% PYRITE
		50 X 75	13 C	2						2			50 GRAINS OF ARSENOPYRITE
		75 X 100	18 C	1						1			
		725 X 750	125 M	1						1			
										5	45.5	11247	
127-34	Y	25 X 75	10 C		1					1			EST. 20% PYRITE
													20 GRAINS OF ARSENOPYRITE
										1	34.9	6	
127-35	Y	25 X 75	10 C		1					1			EST. 20% PYRITE
		50 X 50	10 C		1					1			100 GRAINS OF ARSENOPYRITE
		50 X 75	13 C		1					1			
		100 X 150	25 C	1						1			
		125 X 175	29 C	1						1			
										5	37.7	228	
128-01	N	NO VISIBLE GOLD											
128-02	N	NO VISIBLE GOLD											
128-03	N	50 X 125	18 C	1						1			

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

				NUMBER OF GRAINS									
SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										1	18.2	56	
128-04	N	125 X 250	125 M	1						1			
										1	31.7	1040	
128-05	N	NO VISIBLE GOLD											
128-06	N	NO VISIBLE GOLD											
128-07	N	NO VISIBLE GOLD											
128-08	N	NO VISIBLE GOLD											
128-09	N	NO VISIBLE GOLD											
128-10	Y	75 X 100	18 C	1	1					2			EST. 4% PYRITE
		75 X 125	20 C	1						1			10 GRAINS OF ARSENOPYRITE
										3	19.9	177	
128-11	N	NO VISIBLE GOLD											
128-12	Y	25 X 25	5 C						1	1			EST. 5% PYRITE
		25 X 50	8 C			1	1	1		3			10 GRAINS OF GALENA
		50 X 50	10 C					2	1	3			
		50 X 75	13 C					1		1			
		50 X 75	50 M				1			1			
		50 X 100	15 C	1				1		2			
		50 X 125	18 C					1		1			
		75 X 75	15 C					1		1			
		75 X 100	18 C				1		1	2			
		75 X 100	50 M						1	1			
		75 X 125	20 C						1	1			
		100 X 125	50 M						1	1			
										18	23.8	704	
128-13	Y	50 X 75	13 C					1		1			EST. 5% PYRITE
													10 GRAINS OF ARSENOPYRITE
										1	17.8	21	
128-14	Y	25 X 25	5 C			2				2			EST. 10% PYRITE
		25 X 50	8 C				1			1			20 GRAINS OF ARSENOPYRITE
		25 X 75	10 C						1	1			

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GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
		50 X 50	10 C			1				1			
		50 X 75	13 C	1			1			2			
										7	16.6	76	
128-15	N	NO VISIBLE GOLD											
128-16	N	NO VISIBLE GOLD											
128-17	N	50 X 75	13 C	1						1			
										1	16.5	23	
128-18	N	NO VISIBLE GOLD											
129-01	N	NO VISIBLE GOLD											
129-02	N	NO VISIBLE GOLD											
129-03	N	NO VISIBLE GOLD											
129-04	N	NO VISIBLE GOLD											
129-05	N	125 X 175	29 C	1						1			
										1	22.5	219	
129-06	N	NO VISIBLE GOLD											
129-07	N	75 X 75	15 C			1				1			
										1	18.1	35	
129-08	N	NO VISIBLE GOLD											
129-09	N	NO VISIBLE GOLD											
129-10	N	NO VISIBLE GOLD											
129-11	N	NO VISIBLE GOLD											
129-12	N	NO VISIBLE GOLD											
129-13	N	NO VISIBLE GOLD											

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
129-14	N	NO VISIBLE GOLD											
129-15	N	NO VISIBLE GOLD											
129-16	N	50 X 100	15 C	1						1			
										1	34.0	19	
129-17	N	NO VISIBLE GOLD											
129-18	N	NO VISIBLE GOLD											
129-19	N	NO VISIBLE GOLD											
129-20	Y	50 X 50	50 M		1					1			EST. 8% PYRITE
		75 X 100	18 C	1	1					2			
		100 X 125	22 C	1						1			
		100 X 125	75 M	1						1			
										5	19.6	623	
130-01	N	NO VISIBLE GOLD											
130-02	N	NO VISIBLE GOLD											
130-03	N	100 X 125	100 M			1				1			
										1	16.8	565	
130-04	Y	50 X 75	13 C		2					2			EST. 10% PYRITE 5 GRAINS OF ARSENOPYRITE
		75 X 75	15 C				1			1			
		100 X 125	22 C	1						1			
		125 X 175	29 C	1						1			
										5	25.2	335	
130-05	Y	50 X 50	10 C				1			1			EST. 7% PYRITE
		50 X 75	13 C		1		1			2			
		75 X 100	18 C	1						1			
		100 X 125	22 C	1						1			
										5	27.7	147	
130-06	Y	50 X 75	13 C					1		1			EST. 7% PYRITE

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GOLD CLASSIFICATION
===================

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										1	19.9	19	
130-07	Y	NO VISIBLE GOLD											EST. 70% PYRITE
131-01	N	75 X 150	22 C			1				1			
										1	20.9	102	
131-02	N	NO VISIBLE GOLD											
131-03	N	NO VISIBLE GOLD											
131-04	N	NO VISIBLE GOLD											
131-05	N	150 X 150	29 C	1						1			
										1	28.6	173	
131-06	N	NO VISIBLE GOLD											
131-07	N	100 X 150	25 C	1						1			
										1	31.7	91	
131-08	N	NO VISIBLE GOLD											
131-09	N	NO VISIBLE GOLD											
131-10	N	NO VISIBLE GOLD											
131-11	N	NO VISIBLE GOLD											
131-12	Y	NO VISIBLE GOLD											EST. 20% PYRITE
132-01	N	100 X 150	25 C	1						1			
										1	16.6	174	
132-02	N	NO VISIBLE GOLD											
132-03	N	50 X 150	20 C	1						1			
										1	23.8	63	
132-04	Y	50 X 75	13 C		1					1			EST. 50% PYRITE

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
		75 X 100	50 M		1					1			15 GRAINS OF ARSENOPYRITE
										2	24.4	133	
132-05	Y	25 X 50	8 C		1					1			EST. 70% PYRITE
		50 X 50	10 C	1			1			2			10 GRAINS OF ARSENOPYRITE
										3	30.5	15	
133-01	N	NO VISIBLE GOLD											
133-02	N	125 X 150	27 C			1				1			
										1	17.4	220	
133-03	N	100 X 125	22 C	1						1			
										1	18.0	118	
133-04	Y	25 X 25	5 C		1					1			EST. 1% PYRITE
		25 X 50	8 C		2					2			
		50 X 75	13 C		1					1			
		75 X 100	16 C	1						1			
		75 X 125	20 C	1			1			2			
		200 X 200	38 C	1						1			
										8	19.4	823	
133-05	N	50 X 75	13 C	1						1			
										1	19.9	19	
133-06	N	NO VISIBLE GOLD											
133-07	N	100 X 125	22 C	1						1			
										1	17.6	121	
133-08	N	75 X 125	20 C			1				1			
										1	16.7	90	
133-09	N	50 X 75	13 C		1	1				2			EST. 1% PYRITE
		75 X 100	18 C	1						1			
		75 X 125	20 C	1						1			

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										4	19.3	169	
133-10	N	50 X 50	10 C	1						1			
										1	24.2	8	
133-11	N	NO VISIBLE GOLD											
133-12	Y	25 X 50	8 C		1					1			EST. 1% PYRITE
		50 X 50	10 C		1					1			
		50 X 75	13 C		1					1			
		75 X 125	20 C	1						1			
		175 X 250	40 C			1				1			
										5	25.7	612	
133-13	Y	50 X 75	13 C		1					1			EST. 20% PYRITE
										1	23.8	16	
133-14	N	NO VISIBLE GOLD											
133-15	N	NO VISIBLE GOLD											
133-16	N	NO VISIBLE GOLD											
133-17	N	NO VISIBLE GOLD											
133-18	N	NO VISIBLE GOLD											
133-19	N	NO VISIBLE GOLD											
133-20	N	NO VISIBLE GOLD											
133-21	N	NO VISIBLE GOLD											
133-22	N	NO VISIBLE GOLD											
133-23	N	NO VISIBLE GOLD											
133-24	N	NO VISIBLE GOLD											
133-25	N	NO VISIBLE GOLD											

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GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
133-26	N	NO VISIBLE GOLD											
133-27	N	NO VISIBLE GOLD											
133-28	N	NO VISIBLE GOLD											
133-29	N	NO VISIBLE GOLD											
133-30	N	NO VISIBLE GOLD											
134-01	N	NO VISIBLE GOLD											
134-02	N	NO VISIBLE GOLD											
134-03	N	NO VISIBLE GOLD											
134-04	Y	25 X 25	5 C		1					1			EST. 4% PYRITE
		50 X 75	50 M	1	1					2			10 GRAINS OF ARSENOPYRITE
		75 X 75	15 C	1						1			5 GRAINS OF GALENA
		100 X 100	20 C	1						1			
										5	23.6	216	
134-05	Y	25 X 50	8 C		1					1			EST. 2% PYRITE
		50 X 50	10 C		1					1			
		50 X 75	13 C	1	1					2			
		75 X 75	15 C	1						1			
										5	20.8	80	
134-06	Y	25 X 50	8 C		1					1			EST. 2% PYRITE
		50 X 75	13 C	1						1			5 GRAINS OF ARSENOPYRITE
		75 X 75	50 M	1						1			
										3	15.2	169	
134-07	N	NO VISIBLE GOLD											
134-08	N	NO VISIBLE GOLD											
135-01	N	NO VISIBLE GOLD											
135-02	N	75 X 275	75 M	1						1			
										1	23.9	721	

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

				NUMBER OF GRAINS									
				ABRADED		IRREGULAR		DELICATE		TOTAL	NON	CALC V.G.	
SAMPLE #	PANNED			========		=========		========		=====	MAG	ASSAY	
	Y/N	DIAMETER	THICKNESS	T	P	T	P	T	P		GMS	PPB	REMARKS
CB-89													
135-03	N	75 X 125	20 C	1						1			
										1	16.0	94	
135-04	N	NO VISIBLE GOLD											
135-05	N	100 X 100	20 C	1						1			
										1	17.9	84	
135-06	N	75 X 125	20 C	1						1			
										1	16.2	93	
135-07	N	75 X 100	18 C	1						1			
										1	18.0	56	
135-08	N	NO VISIBLE GOLD											
136-01	N	NO VISIBLE GOLD											
136-02	N	75 X 100	18 C	1						1			
										1	23.6	43	
136-03	N	NO VISIBLE GOLD											
136-04	N	125 X 175	29 C			1				1			
										1	23.7	208	
136-05	N	125 X 125	25 C	1						1			
										1	22.5	129	
136-06	Y	25 X 50	8 C		1					1			EST. 10% PYRITE
		25 X 75	10 C				1			1			
		75 X 125	20 C	1						1			
		150 X 150	29 C	1						1			
										4	21.5	312	
136-07	N	125 X 150	27 C			1				1			

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE # CB-89	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
										1	21.2	180	
136-08	Y	25 X 25	5 C		1					1			EST. 15% PYRITE
										1	21.1	1	
136-09	N	NO VISIBLE GOLD											
137-01	N	NO VISIBLE GOLD											
137-02	N	NO VISIBLE GOLD											
137-03	N	NO VISIBLE GOLD											
137-04	N	NO VISIBLE GOLD											
137-05	N	NO VISIBLE GOLD											
137-06	N	NO VISIBLE GOLD											
137-07	Y	25 X 25	5 C				1			1			EST. 3% PYRITE
		50 X 75	13 C	1						1			5 GRAINS OF ARSENOPYRITE
		75 X 100	18 C						1	1			
		125 X 125	25 C	1						1			
										4	17.0	253	
137-08	N	NO VISIBLE GOLD											
137-09	N	NO VISIBLE GOLD											
137-10	Y	50 X 50	10 C	1	3					4			EST. 10% PYRITE
		75 X 100	18 C	1						1			TRACE ARSENOPYRITE
		150 X 200	34 C				1			1			
										6	23.7	402	
137-11	N	50 X 100	15 C	1						1			
										1	22.9	28	
137-12	N	100 X 150	25 C	1						1			
										1	19.4	149	

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GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
137-13	Y	75 X 100	18 C	1						1			EST. 1% PYRITE
		150 X 150	29 C	1						1			
										2	27.5	216	
137-14	N	75 X 100	18 C	1						1			
										1	24.6	41	
137-15	N	NO VISIBLE GOLD											
137-16	N	NO VISIBLE GOLD											
137-17	N	NO VISIBLE GOLD											
137-18	N	NO VISIBLE GOLD											
137-19	Y	25 X 25	5 C		1					1			TRACE PYRITE
		50 X 75	13 C	1	1					2			
		125 X 225	34 C	1						1			
										4	24.9	342	
137-20	N	NO VISIBLE GOLD											
137-21	N	NO VISIBLE GOLD											
137-22	N	NO VISIBLE GOLD											
137-23	Y	50 X 50	10 C		1					1			EST. 15% PYRITE
		50 X 75	13 C		1					1			
		100 X 150	25 C		1					1			
										3	26.2	132	
137-24	Y	50 X 50	10 C						1	1			EST. 20% PYRITE
		50 X 100	15 C				1			1			
										2	26.0	32	
138-01	Y	25 X 50	8 C		2					2			EST. 10% PYRITE
		50 X 50	10 C		1					1			
		50 X 75	13 C	1						1			
		75 X 75	15 C	1						1			

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GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
		175 X 175	34 C			1				1			
										6	19.4	469	
139-01	N	NO VISIBLE GOLD											
139-02	N	NO VISIBLE GOLD											
139-03	N	125 X 150	27 C	1						1			
										1	21.1	181	
139-04	N	NO VISIBLE GOLD											
139-05	N	125 X 125	25 C	1						1			
										1	26.3	110	
139-06	N	NO VISIBLE GOLD											
139-07	N	NO VISIBLE GOLD											
139-08	N	NO VISIBLE GOLD											
139-09	Y	125 X 175	29 C			1				1			EST. 1% PYRITE
		200 X 275	44 C			1				1			
										2	16.5	1433	
139-10	N	NO VISIBLE GOLD											
139-11	N	NO VISIBLE GOLD											
139-12	N	50 X 100	15 C	1						1			
										1	16.7	38	
139-13	N	200 X 250	42 C	1						1			
										1	21.4	749	
139-14	N	NO VISIBLE GOLD											
139-15	N	NO VISIBLE GOLD											

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GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
139-16	N	75 X 100	18 C	1						1			
										1	27.4	37	
139-17	N	NO VISIBLE GOLD											
139-18	N	NO VISIBLE GOLD											
139-19	N	NO VISIBLE GOLD											
139-20	N	175 X 300	44 C	1						1			
										1	27.9	671	
139-21	N	NO VISIBLE GOLD											
139-22	N	NO VISIBLE GOLD											
139-23	N	NO VISIBLE GOLD											
139-24	N	NO VISIBLE GOLD											
139-25	N	NO VISIBLE GOLD											
139-26	N	NO VISIBLE GOLD											
139-27	N	NO VISIBLE GOLD											
139-28	Y	25 X 25	5 C		1					1			EST. 20% PYRITE
										1	22.2	1	
139-29	Y	NO VISIBLE GOLD											EST. 25% PYRITE
139-30	Y	50 X 50	10 C		1					1			EST. 80% PYRITE
		50 X 100	15 C		1					1			
										2	66.9	12	
140-01	N	NO VISIBLE GOLD											
140-02	Y	25 X 50	8 C		1					1			EST. 3% PYRITE
		50 X 75	13 C	1	1					2			

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GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
		75 X 75	15 C	1						1			
										4	22.3	66	
140-03	N	175 X 225	38 C	1						1			
										1	19.9	573	
140-04	Y	25 X 25	5 C		1					1			EST. 5% PYRITE
		50 X 50	10 C		2		1			3			PHOTOMICROGRAPH AVAILABLE
		50 X 75	13 C	1	4					5			PICTURE REFERENCE #159
		75 X 100	18 C	1			1			2			
		75 X 125	20 C	1						1			
		125 X 225	75 M		1					1			
										13	33.1	701	
140-05	Y	25 X 25	5 C		2				2	4			EST. 5% PYRITE
		25 X 50	8 C		2				1	3			
		50 X 50	10 C				1		2	3			
		50 X 75	13 C		1		1	1		3			
		75 X 125	20 C			1				1			
		100 X 200	29 C						1	1			
										15	24.2	350	
140-06	Y	25 X 25	5 C		1				1	2			EST. 5% PYRITE
		25 X 50	8 C		1				1	2			
		50 X 50	10 C					1		1			
		50 X 75	13 C		1					1			
		50 X 100	15 C		1					1			
		75 X 125	20 C		1					1			
										8	24.6	119	
140-07	Y	25 X 25	5 C		1					1			EST. 3% PYRITE
		50 X 50	10 C		3					3			
		50 X 75	13 C		2					2			
		75 X 75	15 C		1					1			
		75 X 100	18 C		1					1			
										8	20.8	144	
140-08	Y	25 X 50	8 C		1					1			EST. 5% PYRITE
		50 X 100	15 C		1					1			

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CP-89													
										2	18.4	39	
140-09	N	75 X 75	15 C	1						1			
										1	20	32	
140-10	Y	25 X 50	8 C		1					1			EST. 60% PYRITE
		50 X 50	10 C		1					1			
		75 X 175	25 C				1			1			
		100 X 200	29 C				1			1			
										4	36.1	224	
141-01	N	NO VISIBLE GOLD											
141-02	N	NO VISIBLE GOLD											
141-03	Y	50 X 75	13 C	1						1			EST. 3% PYRITE
		50 X 125	18 C		1					1			
		75 X 75	15 C			1				1			
										3	24.2	84	
141-04	N	NO VISIBLE GOLD											
141-05	N	NO VISIBLE GOLD											
141-06	N	200 X 300	46 C	1						1			
										1	30.8	704	
141-07	N	NO VISIBLE GOLD											
141-08	N	NO VISIBLE GOLD											
141-09	N	NO VISIBLE GOLD											
141-10	Y	50 X 50	10 C			1				1			EST. 2% PYRITE
		75 X 100	50 M			1				1			
		125 X 200	31 C	1						1			
		150 X 150	50 M			1				1			
										4	18.8	943	

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GOLD CLASSIFICATION
====================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
141-11	N	25 X 25	5 C	1						1			
										1	19.2	1	
141-12	N	NO VISIBLE GOLD											
141-13	Y	50 X 50	10 C			2				2			EST. 1% PYRITE
		100 X 125	22 C			1				1			
										3	14.8	169	
141-14	N	NO VISIBLE GOLD											
141-15	N	NO VISIBLE GOLD											
141-16	N	NO VISIBLE GOLD											
141-17	N	NO VISIBLE GOLD											
141-18	N	NO VISIBLE GOLD											
141-19	N	25 X 50	8 C	1						1			
										1	18.3	4	
141-20	N	NO VISIBLE GOLD											

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GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
141-21	N	50 X 50	10 C			1				1			
										1	15.0	13	
141-22	N	NO VISIBLE GOLD											
141-23	N	NO VISIBLE GOLD											
141-24	N	NO VISIBLE GOLD											
142-01	N	NO VISIBLE GOLD											
142-02	Y	25 X 50	18 C		1					1			EST. 10% PYRITE
		50 X 100	15 C		1					1			
		75 X 125	20 C	1						1			
		100 X 125	22 C	1						1			
		100 X 200	29 C	1						1			
		175 X 250	40 C	1						1			
										6	33.0	721	
143-01	N	450 X 600	83 C	1						1			
										1	18.7	9141	
143-02	N	NO VISIBLE GOLD											
143-03	N	25 X 50	8 C	1						1			
										1	14.0	6	
143-04	N	NO VISIBLE GOLD											
143-05	N	NO VISIBLE GOLD											
143-06	N	100 X 100	50 M	1						1			
										1	10.7	350	
143-07	Y	25 X 50	8 C		2					2			EST. 1% PYRITE
		50 X 75	13 C		2					2			
		50 X 100	15 C					1		1			
		75 X 75	15 C		1					1			
										6	19.0	115	

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GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG BMS	CALC V.G. ASSAY PPB	REMARKS
				NUMBER OF GRAINS									
CB-89													
143-08	N	NO VISIBLE GOLD											
143-09	N	NO VISIBLE GOLD											
143-10	Y	25 X 50	8 C		2					2			EST. 1% PYRITE
		50 X 75	13 C		2					2			
		50 X 100	15 C					1		1			
		75 X 75	15 C		1					1			
										6	20.0	110	
143-11	N	125 X 150	27 C	1						1			
										1	14.8	259	
143-12	N	75 X 125	20 C	1						1			EST. 2% PYRITE
		125 X 150	27 C	1						1			
										2	22.8	234	
143-13	N	NO VISIBLE GOLD											
143-14	N	NO VISIBLE GOLD											
143-15	N	50 X 50	10 C	1						1			
										1	30.1	6	
143-16	N	NO VISIBLE GOLD											
143-17	N	NO VISIBLE GOLD											
143-18	N	50 X 75	13 C	1						1			
										1	30.0	12	
144-01	N	75 X 100	18 C	1						1			
										1	26.5	38	
144-02	N	NO VISIBLE GOLD											
144-03	N	NO VISIBLE GOLD											

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GOLD CLASSIFICATION
==================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
144-04	Y	25 X 50	8 C		1					1			EST. 5% PYRITE
		50 X 50	10 C		2					2			
		50 X 75	13 C						2	2			
		50 X 100	15 C		1					1			
		75 X 150	22 C			1				1			
		100 X 150	25 C	1						1			
										8	26.9	255	
144-05	Y	50 X 50	10 C		2				1	3			EST. 3% PYRITE
		50 X 75	13 C		1	1				2			
		75 X 75	15 C		1					1			
		75 X 125	20 C			1				1			
		125 X 175	29 C	1						1			
										8	34.8	241	
144-06	Y	25 X 25	5 C		1					1			
		50 X 50	10 C		1					1			
		50 X 100	15 C	1						1			
		75 X 100	18 C	1						1			
										4	36.2	52	
145-01	N	NO VISIBLE GOLD											
145-02	N	NO VISIBLE GOLD											
145-03	Y	50 X 50	10 C	1	1					2			EST. 2% PYRITE
		50 X 75	13 C		2					2			
		75 X 100	18 C	1						1			
										5	16.4	131	
145-04	Y	25 X 50	8 C		1					1			EST. 2% PYRITE
		50 X 50	10 C		2					2			
		50 X 75	13 C	2						2			
										5	18.8	64	
145-05	N	NO VISIBLE GOLD											
145-06	N	NO VISIBLE GOLD											
145-07	N	100 X 150	25 C	1						1			

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GOLD CLASSIFICATION
==================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										1	14.6	198	
145-08	N	NO VISIBLE GOLD											
145-09	Y	25 X 25	5 C		1					1			
		25 X 50	8 C		1					1			
		50 X 50	10 C	1						1			
		50 X 75	50 C	1						1			
		50 X 100	50 C	1						1			
										5	19.2	202	
145-10	N	NO VISIBLE GOLD											
145-11	N	NO VISIBLE GOLD											
145-12	N	25 X 50	8 C	1						1			
										1	17.1	5	
145-13	N	125 X 175	29 C	1						1			
										1	23.0	215	
145-14	N	NO VISIBLE GOLD											
146-01	N	75 X 75	20 C	1						1			
										1	33.9	2	
146-02	Y	25 X 50	18 C		2					2			EST. 5% PYRITE
		50 X 100	22 C	1						1			
		50 X 150	27 C			1				1			
										4	32.3	27	
146-03	N	100 X 100	22 C	1						1			
										1	28.3	7	
146-04	N	NO VISIBLE GOLD											
147-01	N	NO VISIBLE GOLD											

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
148-01	N	150 X 150	29 C	1						1			
										1	28.2	175	
148-02	N	75 X 100	18 C	1						1			
										1	31.6	32	
149-01	N	NO VISIBLE GOLD											
149-02	N	NO VISIBLE GOLD											
149-03	N	NO VISIBLE GOLD											
149-04	N	NO VISIBLE GOLD											
149-05	N	NO VISIBLE GOLD											
150-01	Y	25 X 25	5 C		3		1			4			EST. 5% PYRITE
		25 X 50	8 C			1				1			
		50 X 50	10 C		1					1			
		50 X 75	13 C	1						1			
		50 X 125	18 C		1					1			
		75 X 125	20 C	1						1			
		100 X 200	29 C		1					1			
										10	24.6	333	
150-02	N	25 X 50	8 C			1				1			
										1	21.1	4	
150-03	N	NO VISIBLE GOLD											
150-04	N	NO VISIBLE GOLD											
150-05	N	NO VISIBLE GOLD											
150-06	N	NO VISIBLE GOLD											
150-07	N	150 X 200	34 C	1						1			
										1	22.8	339	
151-01	N	NO VISIBLE GOLD											

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GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
151-02	N	NO VISIBLE GOLD											
152-01	Y	NO VISIBLE GOLD											EST. 30% PYRITE
152-02	Y	NO VISIBLE GOLD											EST. 20% PYRITE
154-01	N	NO VISIBLE GOLD											
154-02	Y	50 X 50	10 C					1		1			EST. 10% PYRITE
		50 X 75	13 C		1					1			
										2	32.3	18	
154-03	Y	50 X 75	13 C		1					1			EST. 15% PYRITE
		50 X 100	15 C	1						1			
		75 X 125	20 C	1						1			
										3	29.6	85	
154-04	N	100 X 125	22 C	1						1			
										1	32.4	66	
154-05	Y	25 X 50	8 C		1					1			EST. 1% PYRITE
		50 X 50	10 C		1					1			
		50 X 75	13 C		1					1			
		75 X 75	15 C	1						1			
		250 X 325	52 C	1						1			
										5	24.3	1382	
154-06	N	NO VISIBLE GOLD											
154-07	N	NO VISIBLE GOLD											
154-08	N	NO VISIBLE GOLD											
154-09	N	150 X 200	34 C	1						1			
										1	32.0	242	
155-01	Y	50 X 50	10 C		2					2			EST. 15% PYRITE
		50 X 75	13 C		1					1			

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										3	25.3	30	
155-02	N	NO VISIBLE GOLD											
155-03	Y	25 X 25	5 C		1					1			EST. 7% PYRITE
		25 X 50	8 C		1		1			2			
		75 X 125	20 C	1						1			
		75 X 125	75 M				1			1			
		125 X 175	29 C	1						1			
										6	23.5	521	
155-04	N	NO VISIBLE GOLD											
155-05	N	NO VISIBLE GOLD											
155-06	N	50 X 75	13 C	1						1			
										1	11.3	33	
155-07	Y	25 X 25	5 C	2	2					4			EST. 3% PYRITE 0.1% ARSENOPYRITE
		50 X 50	10 C		1					1			
		50 X 75	13 C	2	3					5			
		75 X 100	18 C	1						1			
										11	21.3	149	
155-08	Y	50 X 50	10 C		1					1			EST. 70% PYRITE
		75 X 125	20 C		1					1			
										2	34.1	50	
156-01	Y	25 X 25	5 C		1					1			NO SULPHIDES
		25 X 50	8 C		1					1			
		50 X 50	10 C		1					1			
		50 X 100	15 C	1						1			
		75 X 125	20 C	1						1			
										5	36.7	66	
156-02	N	75 X 125	20 C	1						1			
										1	25.4	59	
156-03	N	NO VISIBLE GOLD											

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE # CB-89	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
156-04	N	NO VISIBLE GOLD											
156-05	N	NO VISIBLE GOLD											
156-06	N	NO VISIBLE GOLD											
156-07	N	NO VISIBLE GOLD											
156-08	N	NO VISIBLE GOLD											
156-09	N	NO VISIBLE GOLD											
156-10	Y	25 X 50	8 C		1					1			EST. 8% PYRITE
		50 X 50	10 C		1					1			
		75 X 100	18 C			1				1			
		100 X 125	22 C	1						1			
										4	21.4	159	
157-01	N	NO VISIBLE GOLD											
157-02	N	NO VISIBLE GOLD											
157-03	N	NO VISIBLE GOLD											
157-04	N	NO VISIBLE GOLD											
157-05	N	100 X 100	20 C	1						1			
										1	12.3	122	
157-06	Y	50 X 50	10 C		2					2			EST. 0.5% PYRITE
		50 X 75	13 C	1						1			
		75 X 75	15 C		1					1			
		125 X 150	27 C			1				1			
										5	14.8	353	
157-07	N	75 X 100	18 C	1						1			
										1	18.1	56	
157-08	N	NO VISIBLE GOLD											

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
157-09	Y	25 X 25	5 C		1		3			4			EST. 1% PYRITE
		25 X 50	8 C		1		1			2			
		50 X 50	10 C		1					1			
		50 X 75	13 C				1			1			
		50 X 100	15 C		1					1			
		75 X 125	18 C	1						1			
		100 X 100	20 C	1						1			
		100 X 125	22 C						1	1			
										12	19.6	336	
157-10	N	NO VISIBLE GOLD											
157-11	N	NO VISIBLE GOLD											
157-12	N	75 X 125	20 C	1						1			
										1	20.0	75	
157-13	N	NO VISIBLE GOLD											
157-14	Y	50 X 75	13 C	1	1					2			EST. 3% PYRITE
		50 X 100	15 C			1				1			
		75 X 100	18 C	1						1			
		100 X 150	25 C	1						1			
										5	22.1	239	
157-15	N	75 X 150	50 M	1						1			
										1	18.4	258	
157-16	Y	25 X 50	8 C		2					2			EST. 3% PYRITE
		50 X 50	10 C	1						1			
		400 X 550	75 M	1						1			
										4	18.2	6993	
158-01	N	NO VISIBLE GOLD											
158-02	N	NO VISIBLE GOLD											
159-01	Y	50 X 75	13 C		2					2			EST. 3% PYRITE
		50 X 100	15 C	1						1			
		75 X 100	18 C	1						1			

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GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CS-89													
		75 X 125	20 C	1						1			
		100 X 125	22 C	1						1			
										6	19.5	309	
159-02	Y	25 X 50	8 C		1					1			EST. 5% PYRITE
		50 X 100	15 C		1					1			
		75 X 75	15 C		1					1			
		75 X 100	18 C	1						1			
		175 X 175	34 C	1						1			
										5	18.1	559	
159-03	N	275 X 300	52 C	1						1			
										1	19.9	1623	
159-04	N	50 X 100	15 C	1						1			
										1	19.0	34	
159-05	N	NO VISIBLE GOLD											
159-06	N	NO VISIBLE GOLD											
159-07	N	100 X 100	20 C			1				1			
										1	11.5	130	
159-08	N	NO VISIBLE GOLD											
159-09	N	NO VISIBLE GOLD											
159-10	N	NO VISIBLE GOLD											
159-11	N	NO VISIBLE GOLD											
159-12	N	NO VISIBLE GOLD											
159-13	N	NO VISIBLE GOLD											
159-14	N	75 X 100	18 C	1						1			
										1	11.1	91	

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GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED			NUMBER OF GRAINS							NON	CALC V.G.	
				ABRADED		IRREGULAR		DELICATE		TOTAL	MAG	ASSAY	
	Y/N	DIAMETER	THICKNESS	T	P	T	P	T	P		GMS	PPB	REMARKS
CB-89													
159-15	N	NO VISIBLE GOLD											
159-16	N	100 X 125	22 C	1						1			
										1	16.7	127	
159-17	N	NO VISIBLE GOLD											
159-18	N	NO VISIBLE GOLD											
159-19	Y	25 X 50	8 C		1					1			EST. 1% PYRITE
		75 X 75	15 C	1						1			
		100 X 100	20 C		1					1			
		125 X 125	25 C		1					1			
		200 X 300	46 C	1						1			
										5	11.5	2330	
159-20	N	NO VISIBLE GOLD											
159-21	N	NO VISIBLE GOLD											
159-22	N	NO VISIBLE GOLD											
160-01	N	NO VISIBLE GOLD											
160-02	Y	25 X 75	10 C		1					1			EST. 20% PYRITE
		50 X 75	13 C		1					1			
		100 X 150	25 C				1			1			
		150 X 175	31 C	1						1			
										4	35.5	273	
160-03	N	NO VISIBLE GOLD											
160-04	N	75 X 100	18 C	1						1			
										1	29.9	34	
160-05	N	50 X 50	10 C			1				1			
										1	22.4	9	
161-01	N	125 X 125	25 C	1						1			

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL (NUMBER OF GRAINS)	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										1	21.0	138	
161-02	N	NO VISIBLE GOLD											
161-03	N	NO VISIBLE GOLD											
161-04	N	NO VISIBLE GOLD											
162-01	Y	25 X 25	5 C				1			1			EST. 5% PYRITE
		50 X 50	10 C	1			1			2			
		75 X 125	50 M	1						1			
		150 X 200	75 M	1						1			
										5	27.5	778	
163-01	N	125 X 175	29 C	1						1			
										1	24.4	202	
163-02	Y	25 X 25	5 C		2		2			4			
		25 X 75	10 C				1			1			
		50 X 50	10 C		1		1			2			
		50 X 75	13 C		2		1			3			
		50 X 100	15 C		1					1			
		100 X 100	20 C	1						1			
		100 X 125	75 M			1				1			
										13	23.4	472	
163-03	Y	25 X 25	5 C		1					1			EST. 2% PYRITE
		25 X 50	8 C		2		1			3			
		50 X 75	13 C				1			1			
		50 X 100	15 C				2			2			
		75 X 75	15 C				1			1			
										8	18.3	140	
163-04	N	NO VISIBLE GOLD											
163-05	N	NO VISIBLE GOLD											
163-06	N	50 X 10	6 C	1						1			
										1	21.5	2	

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
163-07	N	125 X 125	25 C	1						1			
										1	19.5	148	
163-08	Y	25 X 25	5 C		1					1			EST. 2% PYRITE
		50 X 75	13 C		2					2			
		100 X 125	22 C	1						1			
		150 X 350	150 M			1				1			
										5	22.4	3268	
163-09	N	NO VISIBLE GOLD											
163-10	Y	25 X 25	5 C		1		1			2			EST. 1% PYRITE
		25 X 50	8 C		1		1			2			
		25 X 75	10 C				1			1			
		50 X 50	10 M	1	1					2			
		50 X 100	15 C	1						1			
										8	27.6	52	
163-11	N	75 X 100	15 C			1				1			
										1	19.1	53	
163-12	Y	25 X 50	8 C	1	2		1			4			EST. 3% PYRITE
		25 X 75	10 C			1				1			
		50 X 50	10 C		1					1			
		50 X 75	13 C			1				1			
		50 X 100	15 C			1				1			
		75 X 75	25 M		1					1			
										9	27.2	102	
163-13	Y	25 X 25	5 C			2				2			EST. 1% PYRITE
		25 X 50	8 C		1					1			
		50 X 50	10 C		2					2			
		50 X 75	13 C	1						1			
		50 X 100	15 C	1						1			
		75 X 100	18 C		1					1			
										8	16.4	138	
163-14	N	75 X 75	15 C	1						1			

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GOLD CLASSIFICATION
====================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										1	27.9	23	
163-15	Y	25 X 50	8 C		1		1			2			EST. 3% PYRITE
		50 X 50	10 C		2					2			
		50 X 75	13 C	1						1			
		50 X 100	15 C	1						1			
		75 X 125	20 C		1					1			
										7	23.8	129	
163-16	N	150 X 200	100 M	1						1			
										1	19.9	1154	
163-17	N	NO VISIBLE GOLD											
163-18	Y	25 X 50	8 C	1	2					3			EST. 1% PYRITE
		50 X 50	10 C	1						1			
		50 X 75	13 C		1					1			
		75 X 125	20 C	1						1			
		100 X 100	20 C	1						1			
										7	17.2	222	
164-01	Y	25 X 25	5 C		1					1			EST. 4% PYRITE
		50 X 50	10 C	1						1			20 GRAINS OF ARSENOPYRITE
		50 X 100	15 C	1						1			
		75 X 100	18 C			1				1			
										4	20.9	89	
164-02	N	25 X 25	5 C		1					1			EST. 4% PYRITE
		25 X 50	8 C			1				1			5 GRAINS OF ARSENOPYRITE
		100 X 200	50 M	1						1			
										3	20.9	409	
164-03	Y	75 X 75	75 M			1				1			EST. 2% PYRITE
		75 X 100	18 C	1						1			5 GRAINS OF ARSENOPYRITE
		150 X 175	50 M	1						1			5 GRAINS OF GALENA
										3	17.9	786	
164-04	Y	25 X 50	8 C	1						1			EST. 5% PYRITE
		50 X 50	10 C	2						2			5 GRAINS OF ARSENOPYRITE

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GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
		50 X 75	13 C	1	1					2			
		75 X 100	50 C	1						1			
										6	17.1	239	
164-05	Y	25 X 75	10 C	1						1			EST. 5% PYRITE
		100 X 100	20 C			1				1			15 GRAINS OF ARSENOPYRITE
													5 GRAINS OF GALENA
										2	16.7	101	
164-06	Y	25 X 50	8 C	1						1			EST. 3% PYRITE
		50 X 75	13 C	1						1			10 GRAINS OF ARSENOPYRITE
										2	16.7	27	
164-07	N	NO VISIBLE GOLD											
164-08	N	100 X 150	25 C	1						1			
										1	14.4	200.9073	
164-09	N	25 X 50	8 C	1						1			
										1	18.0	5	
164-10	N	NO VISIBLE GOLD											
164-11	N	50 X 100	15 C	1						1			
										1	22.3	29	
164-12	N	NO VISIBLE GOLD											
164-13	Y	50 X 75	13 C	1						1			EST. 0.1% PYRITE
		75 X 75	15 C		1					1			
		75 X 100	18 C	1						1			
										3	26.9	75	
164-14	N	50 X 175	22 C	1						1			
										1	24.7	86	
164-15	Y	50 X 75	13 C		1					1			EST. 8% PYRITE
		75 X 75	15 C	1						1			30 GRAINS OF ARSENOPYRITE

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GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
		100 X 150	25 C	1						1			
										3	28.1	139	
165-01	Y	50 X 75	13 C	1	1					2			EST. 2% PYRITE
		75 X 125	20 C	1						1			
		125 X 175	29 C	1						1			
										4	23.3	308	
165-02	N	NO VISIBLE GOLD											
165-03	Y	25 X 25	5 C		1					1			EST. 2% PYRITE
		75 X 75	15 C	1						1			
		75 X 100	18 C	1						1			
		75 X 100	18 C		1					1			
										4	16.6	162	
165-04	N	250 X 325	52 C	1						1			
										1	22.3	1449	
165-05	Y	25 X 50	8 C		1					1			EST. 5% PYRITE
		50 X 50	10 C		1		1			2			
		50 X 75	13 C		1					1			
		125 X 200	31 C	1						1			
		150 X 225	36 C	1						1			
										6	21.2	780	
165-06	N	NO VISIBLE GOLD											
165-07	Y	25 X 25	5 C		1					1			EST. 3% PYRITE
		50 X 75	13 C	2						2			
										3	19.9	39	
165-08	N	100 X 175	27 C	1						1			
										1	19.4	197	
165-09	N	NO VISIBLE GOLD											
166-01	N	NO VISIBLE GOLD											

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE # CB-89	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
167-01	N	NO VISIBLE GOLD											
167-02	N	NO VISIBLE GOLD											
167-03	N	NO VISIBLE GOLD											
167-04	N	50 X 75	13 C	1						1			
										1	19.3	19	
167-05	N	125 X 125	25 C	1						1			
										1	15.4	188	
167-06	N	NO VISIBLE GOLD											
167-07	N	NO VISIBLE GOLD											
167-08	N	75 X 100	18 C	1						1			
										1	18.9	54	
167-09	N	NO VISIBLE GOLD											
167-10	Y	50 X 50	10 C		1					1			EST. 0.5% PYRITE
		50 X 75	13 C	1	1					2			
		75 X 75	15 C		1					1			
		100 X 125	22 C	1						1			
										5	14.7	252	
167-11	N	NO VISIBLE GOLD											
167-12	N	NO VISIBLE GOLD											
168-01	N	100 X 150	25 C	1						1			
										1	17.2	168	
168-02	N	NO VISIBLE GOLD											
168-03	N	NO VISIBLE GOLD											
168-04	N	100 X 150	25 C			1				1			

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GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CP-89													
										1	19.0	152	
168-05	N	50 X 50	10 C	1						1			
										1	18.8	10	
168-06	N	NO VISIBLE GOLD											
168-07	Y	50 X 50	10 C		1					1			EST. 30% PYRITE
		125 X 175	29 C		1					1			50 GRAINS OF ARSENOPYRITE
										2	33.0	155	
168-08	Y	50 X 50	10 C		1					1			EST. 40% PYRITE
		50 X 125	18 C		1					1			50 GRAINS OF ARSENOPYRITE
										2	39.3	31	
168-09	Y	50 X 50	10 C		1					1			EST. 40% PYRITE
													30 GRAINS OF ARSENOPYRITE
										1	39.7	5	
169-01	N	NO VISIBLE GOLD											
169-02	N	NO VISIBLE GOLD											
169-03	N	100 X 125	22 C	1						1			
										1	22.7	93	
169-04	N	NO VISIBLE GOLD											
169-05	N	NO VISIBLE GOLD											
169-06	N	NO VISIBLE GOLD											
169-07	N	NO VISIBLE GOLD											
170-01	N	NO VISIBLE GOLD											
170-02	Y	25 X 25	5 C	1						1			EST. 3% PYRITE
		50 X 50	10 C	1						1			20 GRAINS OF ARSENOPYRITE
		75 X 150	22 C	1						1			

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GOLD CLASSIFICATION
==================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										3	17.7	132	
171-01	N	NO VISIBLE GOLD											
171-02	N	75 X 100	18 C			1				1			
										1	19.0	53	
171-03	Y	25 X 50	6 C		3					3			
		50 X 50	10 C	2						2			
		50 X 75	13 C		2					2			
		75 X 125	20 C						1	1			
		100 X 125	22 C	1						1			
										9	22.2	225	
171-04	Y	25 X 25	5 C				1		1	2			EST. 15% PYRITE
		25 X 50	8 C	1			3			4			
		50 X 50	10 C		1		1			2			
		50 X 100	15 C		1				1	2			
		100 X 125	22 C	1						1			
		150 X 275	40 C	1						1			
										12	23.6	752	
171-05	Y	25 X 50	8 C		1		1			2			EST. 15% PYRITE
		50 X 50	10 C		2		1			3			
		50 X 75	13 C		1					1			
		75 X 75	15 C		1					1			
		100 X 125	22 C		1					1			
										8	19.4	200	
171-06	Y	25 X 25	5 C	1	3	1				5			EST. 7% PYRITE
		25 X 50	8 C		1		1			2			
		50 X 50	10 C		1					1			
		75 X 100	18 C		1					1			
										9	19.1	78	
171-07	Y	25 X 25	5 C		2					2			EST. 1% PYRITE
		25 X 50	8 C		1					1			
		50 X 75	13 C	1	2		1			4			
		75 X 75	15 C	1						1			

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GOLD CLASSIFICATION
==================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
										8	13.7	165	
171-08	N	NO VISIBLE GOLD											
171-09	N	NO VISIBLE GOLD											
171-10	N	NO VISIBLE GOLD											
171-11	N	NO VISIBLE GOLD											
171-12	Y	75 X 75	15 C		1					1			EST. 40% PYRITE
		75 X 100	18 C		1					1			
		100 X 100	20 C		1					1			
										3	27.0	117	
171-13	Y	25 X 25	5 C						1	1			EST. 40% PYRITE
		50 X 50	10 C				1		1	2			
										3	18.8	22	
172-01	N	NO VISIBLE GOLD											
173-01	N	NO VISIBLE GOLD											
173-02	Y	25 X 50	8 C		2		1			3			EST. 65% PYRITE
		50 X 75	13 C		2					2			
		75 X 125	20 C	1						1			
		150 X 175	31 C	1						1			
										7	29.9	292	
174-01	Y	50 X 75	13 C	1						1			EST. 3% PYRITE
		100 X 125	22 C	1						1			5 GRAINS OF ARSENOPYRITE
										2	13.1	190	
174-02	N	50 X 50	10 C	1						1			
										1	12.9	15	
174-03	Y	25 X 25	5 C	1						1			EST. 0.1% PYRITE
		50 X 50	10 C	1						1			
		50 X 75	13 C	1						1			
		50 X 100	15 C	1						1			

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GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
		75 X 100	75 M	1						1			
										5	19.8	280	
174-04	N	150 X 200	50 M	1						1			
										1	18.2	631	
174-05	Y	75 X 100	50 M	1						1			EST. 0.2% PYRITE
		75 X 125	20 C	1						1			
		100 X 100	50 M	1						1			
		100 X 125	22 C	1						1			
		200 X 225	40 C	1						1			
										5	23.0	1036	
174-06	Y	25 X 25	5 C		1					1			EST. 1% PYRITE
		25 X 50	8 C	1						1			
		50 X 100	15 C	1						1			
		50 X 150	20 C	1						1			
		75 X 75	15 C	1						1			
		75 X 150	22 C	1						1			
		100 X 125	22 C	1						1			
		100 X 125	50 M	1						1			
										8	25.4	468	
174-07	Y	25 X 25	5 C		1					1			EST. 0.2% PYRITE
		50 X 50	10 C		1					1			
		75 X 100	50 M	1						1			
		75 X 350	75 M	1						1			
										4	21.7	1313	
174-08	Y	25 X 25	5 C	1						1			EST. 0.1% PYRITE
		50 X 50	10 C	1						1			
		50 X 100	15 C				1			1			
		100 X 175	27 C	1						1			
										4	18.4	255	
174-09	Y	50 X 75	13 C	1						1			EST. 3% PYRITE
		75 X 75	15 C	1						1			
		100 X 100	20 C	1						1			
		125 X 150	50 M	1						1			

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GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
C9-89													
		150 X 175	75 M	1						1			
										5	22.1	1107	
175-01	N	NO VISIBLE GOLD											
176-01	Y	50 X 75	13 C	2						2			EST. 8% PYRITE
		75 X 75	15 C		1					1			30 GRAINS OF ARSENOPYRITE
		75 X 100	18 C	1						1			
										4	24.1	100	
176-02	Y	125 X 175	29 C	1						1			EST. 5% PYRITE
		200 X 250	42 C	1						1			10 GRAINS OF ARSNEOPYRITE
										2	43.9	477	
177-01	Y	25 X 25	5 C		2					2			EST. 3% PYRITE
		25 X 50	8 C		1					1			
		75 X 75	15 C	1						1			
		75 X 100	18 C		1					1			
										5	13.7	130	
177-02	N	100 X 150	25 C	1						1			
										1	27.2	106	
178-01	Y	50 X 50	10 C	1						1			EST. 6% PYRITE
		100 X 100	20 C	1						1			10 GRAINS OF ARSENOPYRITE
		125 X 175	50 C		1					1			
										3	24.0	422	
178-02	N	75 X 125	20 C	1						1			
										1	24.0	63	
178-03	Y	25 X 100	13 C	1						1			EST. 9% PYRITE
		50 X 50	10 C				1			1			5 GRAINS OF ARSENOPYRITE
		50 X 75	13 C		1					1			
		75 X 125	75 M				1			1			
		75 X 150	22 C	1						1			
										5	22.0	395	

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GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CP-89													
178-04	Y	50 X 75	13 C	1						1			EST. 20% PYRITE 30 GRAINS OF ARSENOPYRITE
										1	30.1	12	
178-05	N	75 X 100	50 M			1				1			
										1	20.2	142	
178-06	N	NO VISIBLE GOLD											
178-07	Y	NO VISIBLE GOLD											EST. 40% PYRITE
178-08	Y	50 X 100	15 C	1						1			EST. 4% PYRITE
		75 X 125	20 C	1						1			
										2	19.0	113	
178-09	N	50 X 100	15 C	1						1			
										1	20.4	31	
178-10	N	NO VISIBLE GOLD											
178-11	N	NO VISIBLE GOLD											
179-01	N	50 X 75	13 C	1						1			
										1	21.9	17	
179-02	Y	25 X 50	8 C		3					3			EST. 1% PYRITE
		75 X 100	18 C	1						1			
		75 X 125	20 C	1						1			
										5	13.7	201	
179-03	Y	25 X 50	8 C		2	2				4			EST. 1% PYRITE
		25 X 75	10 C		1					1			
		75 X 100	50 M				1			1			
										6	16.9	201	
179-04	Y	25 X 25	5 C		2					2			EST. 1% PYRITE
		50 X 50	10 C		3		1			4			
		75 X 100	15 C	1						1			

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GOLD CLASSIFICATION
====================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
		75 X 125	20 C	1						1			
										8	16.1	207	
179-05	N	NO VISIBLE GOLD											
179-06	Y	25 X 50	8 C		2		1			3			
		50 X 50	10 C		1					1			
		50 X 75	13 C		2					2			
		100 X 125	22 C	1						1			
		125 X 200	31 C	1						1			
										8	13.4	712	
179-07	N	NO VISIBLE GOLD											
179-08	Y	25 X 25	5 C		2					2			EST. 1% PYRITE
		25 X 50	8 C	2			1			3			
		50 X 50	10 C		3		1			4			
		50 X 75	13 C	1	3					4			
										13	19.0	134	
179-09	Y	75 X 75	15 C	1						1			EST. 1% PYRITE
		75 X 125	20 C	1						1			
										2	16.6	129	
180-01	Y	25 X 50	8 C		1					1			EST. 1% PYRITE
		50 X 75	13 C		1					1			
		75 X 75	15 C			1				1			
		75 X 125	20 C	1						1			
										4	19.3	134	
180-02	Y	25 X 50	8 C		1					1			EST. 2% PYRITE
		50 X 50	10 C	1						1			
		50 X 75	13 C	1						1			
		75 X 75	15 C		1					1			
		75 X 125	20 C		1					1			
										5	23.4	119	
180-03	N	NO VISIBLE GOLD											

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GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
180-04	N	NO VISIBLE GOLD											
180-05	N	NO VISIBLE GOLD											
180-06	N	NO VISIBLE GOLD											
180-07	Y	25 X 25	5 C	1						1			EST. 0.2% PYRITE
		175 X 275	42 C	1						1			
										2	24.0	668	
180-08	Y	100 X 125	22 C	1						1			EST. 2% PYRITE
		150 X 175	31 C	1						1			
										2	20.8	402	
180-09	N	NO VISIBLE GOLD											
180-10	N	50 X 125	18 C	1						1			
										1	21.1	48	
180-11	N	75 X 100	18 C	1						1			
										1	27.5	37	
180-12	Y	50 X 50	10 C	1						1			EST. 0.2% PYRITE
		100 X 125	22 C	1						1			
										2	30.3	76	
180-13	N	75 X 125	20 C	1						1			
										1	32.0	47	
180-14	N	NO VISIBLE GOLD											
180-15	N	NO VISIBLE GOLD											
181-01	N	NO VISIBLE GOLD											
181-02	N	NO VISIBLE GOLD											
181-03	N	50 X 75	13 C	1						1			

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GOLD CLASSIFICATION

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CP-89													
										1	16.9	22	
181-04	N	NO VISIBLE GOLD											
181-05	N	NO VISIBLE GOLD											
181-06	N	NO VISIBLE GOLD											
181-07	N	NO VISIBLE GOLD											
181-08	Y	25 X 75	10 C		1					1			EST. 3% PYRITE
		50 X 75	13 C	1						1			
		175 X 200	36 C			1				1			
										3	19.0	527	
181-09	N	75 X 125	20 C	1						1			
										1	18.3	82	
181-10	N	NO VISIBLE GOLD											
182-01	N	NO VISIBLE GOLD											
182-02	N	50 X 75	13 C	1						1			
										1	19.5	19	
182-03	N	NO VISIBLE GOLD											
182-04	N	25 X 25	5 C	1						1			
										1	24.6	1	
183-01	N	NO VISIBLE GOLD											
183-02	N	25 X 50	8 C	1						1			
										1	15.1	5	
183-03	N	NO VISIBLE GOLD											
184-01	N	75 X 100	18 C	1						1			
										1	22.2	46	

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GOLD CLASSIFICATION
====================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE # CB-89	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
185-01	N	75 X 125	20 C	1						1			
										1	20.4	74	
185-02	Y	25 X 50	8 C	1		1		1		3			EST. 2% PYRITE
		50 X 75	13 C		1	2	1			4			
		50 X 100	15 C					1		1			
		75 X 100	18 C				1			1			
		75 X 175	25 C			1				1			
										10	20.8	302	
185-03	Y	25 X 25	5 C		2					2			EST. 2% PYRITE
		50 X 50	10 C		1					1			
		50 X 100	15 C		2					2			
		75 X 100	50 M				2			2			
										7	22.5	323	
186-01	N	NO VISIBLE GOLD											
186-02	N	200 X 325	48 C	1						1			
										1	13.5	1846	
186-03	N	NO VISIBLE GOLD											
186-04	N	NO VISIBLE GOLD											
186-05	N	75 X 100	18 C	1						1			
										1	28.0	36	
186-06	N	NO VISIBLE GOLD											
186-07	N	50 X 50	10 C	1						1			
										1	21.7	9	
186-08	Y	25 X 50	8 C	1						1			EST. 1% PYRITE
		75 X 100	75 M	1						1			
										2	20.0	219	

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GOLD CLASSIFICATION
===================

VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
186-09	N	75 X 100	18 C	1						1			
										1	15.9	64	
187-01	N	NO VISIBLE GOLD											
187-02	N	NO VISIBLE GOLD											
187-03	N	NO VISIBLE GOLD											
188-01	N	125 X 225	34 C	1						1			
										1	16.7	463	
188-02	N	NO VISIBLE GOLD											
188-03	N	NO VISIBLE GOLD											
188-04	N	NO VISIBLE GOLD											
188-05	N	NO VISIBLE GOLD											
188-06	N	175 X 250	40 C	1						1			
										1	18.6	730	
188-07	Y	100 X 125	50 M	1						1			EST. 5% PYRITE
		100 X 150	25 C	1						1			
										2	20.8	367	
188-08	N	NO VISIBLE GOLD											
188-09	N	75 X 125	20 C	1						1			
										1	17.6	85	
188-10	N	NO VISIBLE GOLD											
188-11	N	NO VISIBLE GOLD											
189-01	N	NO VISIBLE GOLD											
191-01	Y	25 X 50	8 C			1				1			EST. 0.4% PYRITE
		100 X 100	20 C	1						1			

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GOLD CLASSIFICATION
===================
VISIBLE GOLD FROM SHAKING TABLE AND PANNING

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
		50 Y 150	20 C	1						1			20 GRAINS OF ARSENOPYRITE
										2	19.9	94	
194-05	Y	50 X 50	10 C			1				1			EST. 7% PYRITE
		50 X 75	13 C			1				1			20 GRAINS OF ARSENOPYRITE
										2	20.7	27	
194-06	Y	25 X 25	5 C				1			1			EST. 5% PYRITE
		25 X 75	10 C			1				1			10 GRAINS OF ARSENOPYRITE
		50 X 100	15 C			1				1			
										3	26.2	33	
196-01	Y	50 X 75	13 C	1			1			2			EST. 3% PYRITE
		75 X 75	15 C	1						1			10 GRAINS OF ARSENOPYRITE
										3	18.3	76	
197-01	Y	25 X 50	8 C			1				1			EST. 0.5% PYRITE
		50 X 75	50 M			1				1			5 GRAINS OF ARSENOPYRITE
										2	20.2	77	
197-02	N	25 X 50	8 C			1				1			
										1	11.1	7	

CAMB5GLD.WR1

GOLD CLASSIFICATION
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VISIBLE GOLD FROM SHAKING TABLE AND PANNING

				NUMBER OF GRAINS									
SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-39													
		150 X 175	50 M	1						1			
										3	28.4	404	
191-02	Y	25 X 25	5 C			1				1			EST. 0.1% PYRITE
		75 X 75	15 C			1				1			
										2	24.5	27	
191-03	N	NO VISIBLE GOLD											
191-04	Y	25 X 25	5 C		1		1			2			EST. 1% PYRITE 5 GRAINS OF ARSENOPYRITE
		50 X 75	13 C				2			2			
		75 X 125	20 C	1						1			
		100 X 125	22 C	1						1			
										6	23.4	189	
191-05	N	NO VISIBLE GOLD											
192-01	N	NO VISIBLE GOLD											
194-01	Y	25 X 25	5 C						1	1			EST. 5% PYRITE 30 GRAINS OF ARSENOPYRITE
		25 X 50	8 C				1			1			
		50 X 50	10 C				1			1			
		50 X 100	15 C	2						2			
										5	15.3	103	
194-02	Y	25 X 50	8 C				1			1			EST. 3% PYRITE 20 GRAINS OF ARSENOPYRITE
		50 X 100	15 C	1						1			
		125 X 175	29 C	1						1			
										3	22.6	250	
194-03	Y	25 X 25	5 C				1			1			EST. 5% PYRITE 20 GRAINS OF ARSENOPYRITE
		25 X 50	8 C	1		1				2			
		25 X 75	10 C		1		1			2			
		50 X 50	10 C					1		1			
		50 X 75	13 C	1						1			
		125 X 150	27 C			1				1			
										8	18.1	274	
194-04	Y	50 X 75	13 C	1						1			EST. 5% PYRITE

APPENDIX D

BINOCULAR LOGS - BEDROCK CHIP SAMPLES

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 01-03	Dark green	Unchilled Unfoliated 2% vein calcite	0.2	Equigranular interlocking	50% plagioclase 40-50% pale to medium green pyroxene 5% dark green chlorite from pyroxene 1% quartz	2% dissem. calcite 2% vein calcite	1% dissem. pyrite	Nil	BASALT
02-08	Dk. gn.	Unchilled. Unfoliated. Weakly brecciated with 10% q.c.v veinlet infill.	0.2	Equigranular. Subdiabasic	40-50% pale to mostly dk. gn. chl. (rare px.) 50% plag. 1% qtz.	10% dissem. cal. 10% breccia veinlet cal.	Nil	Nil	BASALT
03-06	bleached gray to buff.	15% bleached, brecciated host = chilled basalt 50% brecciated qtz / Fe/mg vein 35% transitional between vein + host.	Host: aphanitic metacrysts: 0.3 to 0.5	Host: aphanitic, saussuritized porphyritic having up to 20% green chloritoid metacrysts. Vein: intensely brecciated loganged.	Host: aphanitic saussuritized buff - bleached	Host: 10% breccia veinlet Fe/mg carb. Veins: 40% Fe/mg carb.	Trace pyrite in brecciated vein.	Nil	BASALT
04-03	Bleached gy. to buff	Chilled w. 30% syngenetic hydrothermal chert in relatively continuous bands suggesting pillow selvage. Chilled phase microbrecciated (2 to 10+ mm); chert micro-brecciated (0.05-0.3 mm frag). Also 10% qtz-carb gash veins. Good brittle shear def.	Max. 0.1, mainly aphanitic. Chert is aphanitic.	Aphanitic to E/I w. syngenetic cherty infill.	Host: where coarsest 50% hard plag. & 40-50% buff-bleached chl. Chert: 100% chert	Chert zone contains 10% matrix (breccia) cal. Host = 2% frac. cal. Veins = 50% cal.	Tr. py. conc. in matrix of chert microbreccia	Nil	BASALT
05-03	Med. gray.	Faintly grad. bedded. Mod. fol. Unsheared.	Generally 0.05-0.2 Rarely 20% grains of 0.5-2.0	Fine silty sand rarely grading to gritty fine silty sand.	10% qtz. sand. Generally 20% gray chl. and 60-70% undifferentiable plag/lithic sand. Rarely 20% coarse sand lithics being 2:1 chilled int. volc. vs. black mudstone	3-5% dissem. cal.	1% dissem. py.	Nil	GREYWACKE

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 06-03	Bleached med. buff-gy.	Chilled. Amygdaloidal (1% qtz. cal. amyg. to 0.5 mm) Not metamorphically fol. but mod. brittle shear def. manifested by macro-brecciatinted and 20% related qtz-carb. gash veinlets	Apham. to 0.1 mm w. plag. microlites to 0.5 mm long	Aphanitic, microlitic	60% plag. 40% buff-bleached chl. 1% qtz 1% dk. gn. hydrothermal chl. hosted in q.c.v. + shear seams	3% dissem. + frac. cal. 10-15% vein cal.	Tr. dissem. py.	Nil	BASALT
07-02	Dark green	Unchilled Weakly foliated 2% quartz/calcite vein	0.4-0.6	Equigranular interlocking	20% plagioclase 30% dark green chlorite/serpentine 40% pale green px (mostly chloritized)	10% dissem + fracture calcite 1% vein calcite	NIL	1% leucoxene (locally rutile)	ULTRAMAFIC FLOW
08-02 a) weathered b) fresh	a) ochre (weathered) b) medium green (fresh)	Well chilled Moderately foliated Amygdaloidal (foliation due to shearing not metamorphism)	0.05 to 0.1 amygdules up to 1.0	Aphanitic to equigranular interlocking where coarser 10% calcite/chlorite amygdules. Few qtz-pyrite amygdules.	50% plagioclase 40% pale green chlorite	10% dissem. calcite 5% amygdule calcite	Trace pyrite in qtz amygdules	NIL	BASALT
09-01	Pale green with 3% ochre weath. seams (bleached)	80% unchilled 20% chilled Unfoliated chilling contacts are gradational	unchilled 0.1 to 0.2 chilled. aphanitic	Unchilled: equigranular interlocking Chilled: aphanitic	45% plagioclase 40% pale green to bleached chlorite 2% quartz	10% dissem. Fe/mg carb.	NIL	5% pervasive leucoxene	BASALT
10-02	Bleached buff w. 10% ochre weath seams	Chilled. Amygdaloidal (variable 1 to 30%, 0.1 to 0.5 mm, mostly qtz-filled) Mod. shear def. as 0.5-2 mm spaced partings Mod. fol. (due shearing, not metamorphism)	Aphan to 0.1 with plag. micro-lites to 1.5 mm long	Inequigranular, microlitic	60% plag. 40% buff-bleached chl.	tr. amyg. py.	3% dissem and frac. calcite 3% vein cal. 1% amyg. cal.	Nil	BASALT

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 11-03	Dark green to black	unchilled unfoliated	0.2 to 0.3	Equigranular interlocking	75% pale to dark green talc-serpentine (± chlorite) (very soft)	20% Fe/mg carbonate	Trace dissem. pyrrhotite and trace intersertal py.	5% pervasive magnetite	ULTRAMAFIC
12A-07	Medium green	Chilled, sheared (brittle) microbrecciated Amygdaloidal 1% vein calcite	aphanitic to 0.05	Aphanitic, locally equigranular interlocking but mostly obliterated by shearing saussuritized 10% calcite/chlorite amygdules.	50% plagioclase partly saussuritized 40% green chlorite	10% dissem. calcite 1% vein calcite 5% calcite amygdules	NIL	NIL	BASALT
13-03	Dark green	Unfoliated Unchilled	0.1 to 0.2	Equigranular interlocking	85% pale to dark green talc-serpentine (± chlorite) (very soft)	10% dissem. Fe/mg carbonate	0.5% dissem. pyrite	3% pervasive magnetite	ULTRAMAFIC
14-04B	Medium green	Chilled, unfoliated Amygdaloidal gradational chilling contacts = pillow selvage	aphanitic to 0.05	Aphanitic to equigranular interlocking 5% amygdules = calcite, chlorite, qtz-calc-pyrite.	55-60% plagioclase partly saussuritized 35% medium green chlorite 2% chlorite amygdules	5% dissem. and fracture calcite 3% calcite amygdules	Trace pyrite in a few qtz-calcite amygdules	NIL	BASALT
15-19	Medium green to ochre in more weathered chips	Chilled, unfoliated amygdaloidal in fresher chips 90% of drilled section Regolithic	aphanitic to 0.05 in some fresher chips	Mostly grounded to clay when drilling. Aphanitic and completely saussuritized and chloritized with some fresher chips showing equigranular interlocking texture	Regolithic portion completely altered; saussuritized and chloritized. Fresher chips have 50% partly saussuritized plagioclase 50% chlorite.	NIL	NIL	NIL	BASALT

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB - 89 16 - 04	Medium to pale green	Unfoliated chilled Amygdaloïdal gradational chilling contacts → pillow selvage 2% calcite veins	aphanitic up to 0.1 (metacrysts)	aphanitic locally equigranular interlocking 5% calcite metacrysts	60% partly saussuritized plag. 35% chlorite	2% vein calcite 5% pervasive calcite metacrysts 2% calcite amygdules	Trace dissem. pyrite	NIL	BASALT
17 - 03	Dark gray to black	Unfoliated -bedded thicker than chip size 5% graphitic shears 2-3%, pyritic chert beds 10% brecciated gray q.c.v.	aphanitic	Aphanitic	Unknown due to fine grain size very soft, graphitic	25% Fe/Mg carb:- 10-15% as breccia and stringer infilling; 10% disseminated in host	q.c.v. contain 1% coarse crystalline py. Contain 50% fine grained syngenetic py.	graphitic proportion unknown due to fine grain size	MUDSTONE
17 - 04	Dark gray to black	Unfoliated bedded 5% graphitic shears 2-3 percent pyritic chert beds, limonitized 10% brecciated qtz-carb veins	a) <0.05 mostly aphanitic b) aphanitic	a) aphanitic to silty b) aphanitic	Unknown due to fine grain size very soft, graphitic	25% Fe/Mg carb:- 10-12% as breccia/vein & stringer infilled; 12% disseminated	Chert-limonite beds contain <1% residual py. + about 50% limonite, presumably from py.	graphitic proportion unknown due to fine grain size	Siltstone (10%) + MUDSTONE (90%)
18 - 02	Medium green	Unfoliated chilled Amygdaloidal	0.05 to 0.1	Equigranular interlocking 5% chlorite/calcite amygdules	45% partly saussuritized plag. 45% medium green chlorite	5% dissem. and fracture calcite 1% vein calcite	Trace dissem. pyrite	NIL	BASALT
17 - 06	(a) 90% of sample -- med. gy. + black in beds (b) 10% of sample -- med. gy.	Bedded as fine as 0.5 mm but often over chip size. Unfoliated, unsheared	(a) <0.05, mostly aphanitic (b) to 0.2	(a) aphanitic to silty (b) fine sandy	(a) unknown due fine grain size + lack of weathering; variably hard to soft (b) 10% qtz sand, 60% undifferentiable plag./lithic sand, 25% gray chl.	(a) 1% fracture Fe/Mg carb. (b) 10% dissem. Fe/Mg carb	(a) nil (b) nil	(a) nil (b) nil	SILTSTONE (90%) GREYWACKE (10%)

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 20-13	Medium yellowish green	Unfoliated microbrecciated bleached	aphanitic	aphanitic, soft original texture obliterated by microbrecciation saussuritization and bleaching	Unknown proportions due to aphanitic nature. Completely saussuritized plagioclase and bleached chlorite	NIL	NIL	NIL	BASALT
21-02	Medium gray	Schistose resulting from shearing. Few thin (0.5 mm.) black aphanitic beds 2% sericitic shear partings.	mostly: 0.05 to 0.1 some (10%) sand grains up to 0.6	Sandy, locally silty	50-55% plag. (lithic undifferentiated 30% quartz 10-15% gray chlorite 2% sericite on shear planes	10% dissem. and infilling breccia gashes Fe/Mg carbonate	2% cubic pyrite bands patchy distribution	NIL	GREYWACKE
22-04	medium olive green (70%) medium gray (30%)	Unfoliated, chilled microbrecciated with 15% dark gray green chlorite infilling breccia gashes. Few chlorite amygdules	aphanitic to 0.05	aphanitic obscured by bleaching where coarser (0.05 mm) Soft, saussuritized carbonatized.	proportions unknown due to bleaching and aphanitic nature Saussuritized and carbonatized. Chlorite is bleached.	10% dissem. calcite	NIL	NIL	BASALT
23-02	Medium gray-green	Unfoliated Unsheared 5% qtz-carb. veins	0.1 to 0.15 Qtz eyes up to 0.3	Equigranular interlocking having 1% qtz eyes	70% plagioclase 15-20% gray-green chlorite 10% quartz	8% dissem. calcite 2% vein calcite	No. dissem. pyrite Veins contain 1% each coarse po. + py. + trace chalcopyrite	5% dissem. leucoxene	ANDESITE
24-06	Medium gray-green bleached w. 20% rusty weath chips	Unfoliated unchilled 1% qtz/calcite vein No shear deformation but has shear controlled bleaching.	Mostly 0.3 locally to 0.8 metacrysts: up to 0.5	Sub-diabasic 5% calcite metacrysts	50% plagioclase 40% brownish green chlorite (bleached) 3% dark green chlorite lining fractures and locally interstitial	5% calcite metacrysts 3% dissem. calcite 0.5% vein calcite	NIL	2% leucoxene	BASALT

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 25-02	Pale green (bleached) 30% ochre weathered chips	Unfoliated bleached, microbrecciated	Groundmass: aphanitic Phenocrysts: up to 0.5	obscured by microbrecciation and bleaching carbonatized 4% dark green chloritoid metacrysts 4% clean calcite metacrysts	proportions unknown due to aphanitic grain size and bleaching. Saussuritized plag. + bleached chlorite 4% dark green chloritoid metacrysts. 2% qtz.	10% dissem. calcite 4% calcite metacrysts.	Trace dissem. pyrite in calcite metacrysts	NIL	BASALT
26-02	Medium green 5% weathered ochre chips	Unfoliated bleached, sheared microbrecciated 1% qtz/calcite vein.	Groundmass: aphanitic to 0.1 Phenocrysts: up to 0.5	obscured by shearing and bleaching (carbonatized) 10% metacrysts in aphanitic to locally equigranular interlocking groundmass.	35% saussuritized plagioclase 35% chlorite 10% chloritoid metacrysts 5% qtz.	15% dissem. Fe/mg carb. 1% vein calcite	Trace dissem. cubic pyrite	NIL	BASALT
27-04	Pale gray	Unfoliated, variably chilled, bleached weakly fractured Few calcite/pyrite amygdules	mostly: aphanitic to 0.05 locally: 10% 0.1	aphanitic to equigranular interlocking	60% plagioclase 2% quartz 35-40% brownish gray chlorite	5% dissem. calcite also fracture infilling.	Trace dissem. pyrite with few grains chalcopyrite proximal to fractures	NIL	BASALT
27-05	Pale gray to gray-green with yellowish overprint.	Unfoliated, chilled 30% bleached chips as above (27-04) 70% altered, brecciated saussuritized chips.	mostly aphanitic to 0.05 locally: 10% 0.1	aphanitic to equigranular interlocking. (Saussuritized giving yellowish overprint in 70% of sample)	60% plagioclase 2% quartz 35-40% brownish gray chlorite	2% dissem. calcite	Trace dissem. pyrite proximal to fractures	NIL	BASALT
28-02	Dark green Flecked white (metacrysts)	Unfoliated Unchilled	0.5 to 1.0 metacrysts up to 0.6	Equigranular interlocking with 15% calcite metacrysts	60% plagioclase partly saussuritized 40% chlorite	15% calcite metacrysts	NIL	NIL	BASALT

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 29-01	Medium gray-green	Unfoliated Unsheared Unchilled	mainly 0.2 but up to 0.8 (plag) in same chips.	Equigranular interlocking varying from sub-diabasic to sub porphyritic having plag. up to 0.8 mm.	50-55% plagioclase 30-35% pale green chlorite 5% quartz 1-2% intersertal chert	5% dissem calcite	NIL	2-3% leucoxene	BASALT
30-09	Medium gray	well foliated and weakly sheared; 3-5% quartz-carbonate veinlets (indistinct)	Generally 0.05 to 0.2 about 20% coarse grains 0.5 to 3.0	Sandy with 20% coarser grains (to 5mm) comprising of: 10% qtz sand 5% plag sand 5% leucocratic lithics (generally int. volc.)	60-70% undifferentiated plag./lithic sand 15% qtz sand 20% gray chlorite	1% calcite in veinlets; 6-8% Fe Mg carbonate - disseminated (very poorly reactive)	1-2% dissem. pyrite; 0.5% disseminated pyrrhotite	NIL	GREYWACKE
31-07	Medium gray-green	Unfoliated chilled amygdaloidal 5% calcite 5% chlorite/calcite	Aphanitic to 0.1 microlites up to 0.5 long.	Equigranular microlitic	60% plagioclase 40% bleached, buff chlorite	3% dissem. and fracture calcite	Trace dissem. pyrrhotite	NIL	BASALT
32-19	Bleached buff-gray	Unfoliated. Unchilled. Shear deformation as manifested as 15% mylonitic crush zones + 5% silicated calcite veins 1% qtz/calcite vein	Laths 0.5 to 0.8 mm long x 0.3 mm wide Leucoxene grains 0.3-0.5	Good diabase texture locally where plagioclase content is highest (50%)	60% buff bleached chlorite 30% plag.	5% calcite metacrysts 5% dissem and fracture calcite 5% vein calcite	Trace (few grains) Chalcopyrite	1% leucoxene from ilmenite (locally ilmenite still exist)	BASALT
33-03	Dark gray	strongly schistose; 25% grey vein qz-carbonate-brecciates samples; vein material ranges from dark to light grey and is sometimes laminated giving local sedimentary appearance; vein-host contacts indistinct	0.1 to 0.2	vaguely equigranular & interlocking but indistinct due to veining & alteration; locally rubbly to sandy appearance due to growth of alteration carbonate	not distinct due to alteration; 20-25% chlorite local (1-2%) actinolite	10% fracture calcite; 15-20% poorly reactive Fe/Mg carbonate -- 75% in veins and 25% disseminated	Trace dissem. pyrite	1% leucoxene	Basalt

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 34-37A	BLACK	Unfoliated Fissile with locally crenulated	aphanitic	aphanitic	unknown due to aphanitic grain size. Very soft; graphitic	NIL	1% thin (0.1mm) pyrite laminations	graphite proportion unknown	MUDSTONE
34-37B	BLACK	Unfoliated (almost identical to "A" portion of rock except for higher sulphide content.)	aphanitic	aphanitic	unknown due to aphanitic grain size. very soft; graphitic	NIL	3% thin (0.1mm) pyrite laminations	graphite proportion unknown	MUDSTONE
35-08	Medium gray	Weakly foliated 1% qtz/calcite vein	mostly: 0.05 to 0.1 Rarely: up to 0.3	Fine silty sand to gritty fine sandy sand.	60-70% undifferentiald plagioclase / lithic sand. 15-20% gray chlorite 15% quartz sand	8% slow reacting (HCL) Fe/mg carb.	0.1% fracture lining pyrite	NIL	GREYWACKE
36-02	Pale green (bleached) 10% oxidized ochre chips	well foliated → schistose with some slip planes; chilled; pillow selvage Amygdaloidal 20% qtz/calcite amygdules. Few are chloritic	0.05 to 0.1 Amygdules: up to 0.3	Equigranular interlocking where coarser. Aphanitic in well chilled sections	60% partly saussuritized plag. 35% pale green chlorite (pale color due to chilling) 2-3% quartz.	10% calcite - 1-2% in veinlets, 1-2% in amygdules and 6% disseminated	Trace pyrite in amygdules	NIL	BASALT
37-03	Pale gray with yellowish overprint in 70% chips	Unfoliated brecciated having 10% Fe/mg carbonate infilling breccia gashes. 2% qtz/Fe/Mg carb vein	Generally: 0.05 to 0.1 Locally: up to 0.5	Fine sandy 5% silty patches 3% dark gray to black mudstone sand grains	60-70% undifferentiable saussuritized plag/lithic sand. 10-15% pale gray to buff chlorite 20% quartz sand	10% breccia fracture Fe/mg carb infilling.	0.5% dissem. pyrite	NIL	GREYWACKE

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 38-15	Medium gray (bleached)	Unfoliated, Sheared - brecciated(?) Amygdaloidal Brittle fracturing due to shearing, brecciated 2% white chert pillow selvage infill.	aphanitic to 0.05 microlites up to 0.3 long.	aphanitic, microlitic 5% qtz/Fe/mg carb. amygdules. up to 1.0 mm.	Too fine and bleached to determine original composition 10% plag. microlites 2% syngenetic white chert	30% dissem. and breccia fractures infilling Fe/mg carb. - pervasive carb. alteration	Trace coarse pyrite cubes in amygdules	NIL	BASALT
39A-08	Medium gray-green	Unfoliated to weakly foliated due to shearing. microbrecciated	Generally: 0.05 to 0.1 with 20% coarser sand 0.2 to 0.5	Sandy 20% coarser sand grain comprise of: 15% clean qtz sand 4% white plag/lithic sand 1% black mudstone lithic	60-65% plag + lithic sand, partly saussuritized 15% pale green to buff bleached chlorite 15-20% qtz sand.	10% dissem. and fracture (breccia gashes) infilling Fe/Mg carb.	Trace dissem. pyrite	NIL	GREYWACKE
40-21	Dark gray to black	Unfoliated Fissile Bedded: bed thickness grater than chip size (4mm) 60% SILSTONE beds 40% mudstone beds	Sitstone 0.05 Mudstone aphanitic	Siltstone: Silty with 10% Fe/mg carb metacryst of 0.1-0.15 mm. Mudstone: aphanitic	Samples 40-21 and 40-22 are very similar. There composition is exactly the same. They vary only in grain size. Plagioclase, quartz, gray chlorite	10% Fe/mg carb metacrysts in silty beds.	3% chert/pyrite chips. Thin band within mudstone (as recorded on drill log)	graphitic proportion unknown	SILTSTONE (60%) + MUDSTONE (40%)
40-22	Dark gray to black	Unfoliated Fissile Bedded: bed thickness grater than chip size (4mm) 60% mudstone beds 40% mudstone beds	Mudstone aphanitic Siltstone 0.05	Mudstone aphanitic Siltstone Silty with 10% Fe/mg carbonate metacryst of 0.1-0.15	in unknown proportions due to fine grain. Variably soft to moderately hard.	10% Fe/mg carb. metacrysts in silty beds.	NIL	graphitic proportion unknown	MUDSTONE (60%) + SILTSTONE (40%)
41-02	medium to dark green	Unfoliated Unsheared Chilled	0.1	Equigranular interlocking	55-60% plagioclase 35% chlorite 1-2% quartz	5-10% dissem. and fracture filling calcite	NIL	NIL	BASALT

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 42-05	Pale gray (70%) weathered ochre (30%)	Unfoliated, unchilled. Weathered portion is a shear zone 10% Fe/Mg carb associated to brittle shearing (brecciation) in unweathered portion.	0.5	Sub-diabasic	55% plagioclase 35-40% pale gray-green to bleached chlorite 1-2% quartz.	5% dissem and 10% fracture filling Fe/Mg carbonate (shear controlled)	0.3% dissem. py. Trace pyrite and few specks chalcopyrite associated with fracturing.	5% dissem. leucoxene in both fresh + weathered zones. Weath zone contains 30% crusty goethite, 50% amorphous limonite-clay-chlorite, 20% qtz.	BASALT
43-06	Medium gray	Extensively shear brecciated and bleached Bedding not visible Unfoliated.	Matrix 1.0-3.0 Pebbles >5mm. (greater than chip size)	Coarse sand to granular matrix with 85% aphanitic volcanic lithic pebbles, some very vesicular. Few of the black mudstone lithics	Matrix: 10-15% plag. sand 5-10% quartz sand variable 2-5% black mudstone lithics. 80% aphanitic volcanic lithics sand.	10% dissem. and fracture filling Fe/Mg carb.	3% dissem. pyrite along fractures. 0.5% pyrite sand (detrital)	NIL	CONGLOMERATE
44-02	Medium to dark green	Unfoliated, unsheared Chilled Amygdaloidal 3% calcite amygdules 1% qtz/calcite vein	0.05 to 0.1	Equigranular interlocking	60% plagioclase 35% green chlorite 5% quartz.	5% dissem. calcite 3% amygdules calcite	NIL	NIL	BASALT
45-05	Medium gray-green	Unfoliated Extensively shear brecciated Bedding not visible.	Matrix: 0.2 to 1.0 Pebbles >5mm (greater than chip size)	Medium to coarse sand matrix with 60% aphanitic volcanic lithic pebbles.	MATRIX: 5-10% plag. sand 5-10% quartz sand 85% aphanitic volcanic lithics sand.	10% dissem. and fracture filling Fe/Mg carb.	1% dissem. pyrite along fractures. 0.5% detrital pyrite sand grains	NIL	CONGLOMERATE
46-08	Dark gray to black	Unfoliated, bedded, bed thickness greater than chip size (4 mm) 85% silty dark gray beds 10% black aphanitic beds 5% hard grayish buff beds (cherty)	Mostly 0.05 locally up to 0.1 Aphanitic elsewhere.	Silty; where grain size 0.1 fine sandy Aphanitic in black beds. Cherty in hard grayish buff beds.	in silty beds where coarser grain: 60% plag. + lithic silt to fine sand. 20% quartz silt to fine sand. 20% gray chlorite	3% dissem. and fracture calcite. 3% calcite metacrysts 1% vein calcite	1% dissem. pyrite cubes throughout	NIL	SILTSTONE (85%) + MUDSTONE (10%) + Chert (5%)

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 47-06	Pale gray with irregular black spots	Unfoliated but extensively fractured (shear brecciated) 3% sericitic shears No visible bedding Trace vein calcite	Mostly: 0.4 to 1.0 locally up to 2.0	Coarse sandy to granular	40% plagioclase sand 10-15% quartz sand 15-20% black mudstone lithics 15-20% bleached aphan. volc. lithics. 5% sericite	10% dissem. + fracture Fe/Mg carb.	2% dissem. pyrite	NIL	GREYWACKE
48-18	Pale gray	Weakly foliated Shear brecciated 5% sericitic shear planes. 2% qtz/Fe/mg carb. vein	0.1 to 0.3 Metacrysts up to 0.5	Sandy 3% black mudstone lithics (sand size) 5% Fe/mg carb metacrysts	55% plagioclase + bleached volc. lithics sand undifferentiable 10-15% clean qtz sand 15-20% gray chlorite 3% black mudstone lithics. 5% sericite	5% Fe/mg carb. metacrysts 2-3% dissem + fracture Fe/mg carb 1% Fe/mg carb. vein.	NIL	NIL	GREYWACKE
49-12	Pale gray	Weakly foliated but extensively sheared, brecciated. Bedded, bed thickness greater than chip size. 90% sandy beds 5% silty beds 5% hard cherty beds	Sandy beds 0.05 to 0.3 Silty beds 0.05 Cherty beds aphanitic	Sandy beds include 5% black mudstone sand size lithics.	55% plagioclase and bleached volc. lithic sand undifferentiable partly saussuritized 10-15% clean qtz. sand 10-15% pale gray to bleached chlorite 5% black mudstone lithics 3% sericitic shear planes	10% dissem and fracture Fe/mg carb.	1% dissem. pyrite cubes	NIL	GREYWACKE
50-15	Pale gray-white with irregular black spots	Bedding not visible. Little foliated but extensively shear brecciated.	Mostly 0.5 to 3.0	Coarse sandy to granular	40% plagioclase sand 10-15% qtz. sand 25% bleached aphan. volc. lithics 3-5% black mudstone lithics 10% sericite	10% dissem. + fracture Fe/Mg carb	1% pyrite both dissem. + framboidal in mudstone (ie mainly syngenetic)	Nil	GREYWACKE
51-05	Dark gray-black	Breccia consisting of 50% pale gray fragments of 0.1 to 5 mm size in a black secondary micaceous matrix. Shear axis. Schistose overall.	Fragments consist of mainly 0.2 mm grains,	Fragments medium sandy overprinted by overgrowth of cherty haze (silicification) Rare surviving coarse sand grains (pale grey aphanitic chert) Matrix micaceous.	Fragments. hard; qtz, plag. + lithic sand grains rarely differentiable due to silica overgrowth. Rare resistant cherty sand grains. Matrix 80% black hydrothermal chlorite 20% sericite	1% dissem. and fracture Fe/Mg. carb.	NIL	NIL	GREYWACKE (95%) CHERT (5%)
		Also 5% black brecciated chert beds		Chert bed aphanitic.	Chert bed -- 100% silica				

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 52-07	(a) 60% of sample; pale to dk. gy. in beds (b) 40% of sample; pale gray to dark gray	Bedded coarser than chip scale (a) Weakly to mod. fol. (b) Fissile to weakly crenulated	(a) Mostly 0.1-0.15, rarely to 0.5, rare grit to 3.0 (b) aphanitic	(a) Fine sandy, occasional lithic granule (b) Aphanitic, inferred silty	(a) 10% qtz sand, 60% undifferentiable plag. sand/aphan. volc. lithics. Variably 1-5% black mudstone lithics. Variably 5-20% chl. (b) Soft - assumed 50% chl., 50% plag + qtz.	(a) 5% dissem Fe/Mg carb (b) Nil	(a) 1% mainly framboidal lithic py. (b) nil	(a) 1% leucoxene (b) nil	(a) GREYWACKE (60%) (b) SILTSTONE (40%)
53-08	Medium grayish green	Shistose due to shearing, weakly crenulated. 25% sericitic shear planes 20% quartz/carb (Fe/mg) brecciated vein	aphanitic to 0.05	Obscured by shearing but locally faintly silty plag. partly saussuritized	Proportions unknown due to aphanitic grain size. Assume (soft) approx. 70% saussuritized plag + qtz silt, 30% gray chlorite ± sericite.	3% dissem. Fe/mg carb. 5% vein Fe/mg carb.	Trace dissem. pyrite along shear planes.	NIL	SILTSTONE
54-17	Pale to medium gray	Unfoliated No bedding visible 1% sericitic shears 3% fractures resulting in bleaching and weathering of adjacent chips.	mostly: 0.05 to 0.1 Locally: aphanitic	Silty to fine sandy locally aphanitic Few black mudstone lithic fragments up to 1.0 mm. 3% Fe/mg carb metacrysts	60% undifferentiable plagioclase SILT/SAND and aphan. volcanic lithics. 10-15% clean qtz SILT/SAND variable 2-5% black mudstone lithics (silt to fine sand size)	3% Fe/mg carb metacrysts. 3% Fe/mg carb dissem.+fracture	NIL	NIL	SILTSTONE
55-01	Medium green	Unfoliated Unbedded	0.1 to 0.2	Equigranular interlocking	50% plagioclase 35-40% green chlorite 5% quartz.	5-7% dissem. and fracture calcite	0.5% dissem. pyrite with few local concentrations (patches) along fractures.	NIL	BASALT
56-13	Medium to dark gray	Moderate foliation due to shearing. Bedded: a) bed coarser than chip size b) gradational bed contacts c) bed thickness 1.5 mm. Fissile to weakly crenulated	a) mostly 0.1 to 0.4 rarely up to 1.2 b) 0.05 c) aphanitic	a) Sandy with 1% black mudstone lithic granules b) silty to aphanitic c) aphanitic	a) 60% undifferentiable plag sand/aphan. volc. lithics; 10% quartz sand. Variably 2-5% black mudstone lithics. Variably 10-20% chlorite b) inferred same as coarser greywacke. c) aphanitic, soft	7% dissem. and fracture Fe/mg carb.	2% dissem. pyrite, also patchely peppered along fractures	NIL	a) GREYWACKE (65%) b) SILTSTONE (30%) c) Mudstone (5%)

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 57-09	BUFF (bleached)	Unfoliated, Unchilled sheared, carbonatized silicified and bleached having intersertal: 15% Fe/mg carb and 15% clear quartz 2% qtz/Fe/mg carb veinlets	mainly 0.2 to 0.4 but obscured by bleaching	Equigranular interlocking but generally obscured by shearing + bleaching	Proportions obscured by bleaching but estimate 55% partly saussuritized plag. 15% quartz (introduced) 10% bleached chlorite. 5% sericite with trace Fuchsite.	15% intersertal Fe/mg carb 1% Fe/mg carb vein.	NIL	NIL	BASALT
58-02	Medium greenish gray	Unfoliated Chilled Weakly shear brecciated Amygdaloidal having 2% Fe/mg carb amygdules 1% vein qtz/Fe/mg carb.	Mostly aphanitic Locally (15%) up to 0.05	aphanitic to equigranular interlocking where grain size 0.05mm	Mostly aphanitic but in coarser sections: 55% partly saussuritized plag. 35% pale green to completely bleached chlorite.	10% dissem + fracture Fe/Mg Carbonate. 2% amygdule Fe/mg carb. 0.5% vein Fe/mg carb.	Trace dissem. pyrite.	NIL	BASALT
59-04	Pale grayish green	Unfoliated 55% unchilled 45% chilled Sharp chilling contacts. Amygdaloidal.	Unchilled 0.1-0.15 Chilled aphanitic	Good equigranular interlocking texture in unchilled portion. Aphanic in chilled portion.	60% plagioclase 30-35% pale green chlorite 2% quartz	10% dissem. calcite 2% calcite amygdules	0.5% dissem. pyrite	NIL	BASALT
60-02	Medium green	Unfoliated Un sheared Chilled Amygdaloidal: 2% calcite/chlorite amygdules. 1% qtz/calcite vein	aphanitic to 0.05 (35% of chips)	aphanitic to equigranular interlocking where grain size 0.05mm.	55% partly saussuritized plagioclase 35% medium to dark green chlorite	10% dissem. + fracture calcite 0.5% vein calcite	NIL	NIL	BASALT
61-03	Pale grayish green	Unfoliated Chilled Amygdaloidal 3% calcite amygdules.	aphanitic to 0.05	aphanitic to locally (where 0.05) equigranular interlocking	60% plagioclase 30-35% pale green chlorite 2% quartz	10% dissem. calcite	Trace dissem. pyrite	NIL	BASALT

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 62-02	Medium green	Unfoliated Unsheared chilled Amygdaloidal having 4% calcite/chlorite amygdules	aphanitic to 0.05 locally (15%) up to 0.1	aphanitic to equigranular interlocking	50% plagioclase partly saussuritized 40% pale to medium green chlorite	10% dissem. and fracture calcite 4% calcite/chlorite amygdules	NIL	NIL	BASALT
63-11	Dark gray to black	Weak to moderate foliation due to shearing which is responsible for 0.1 to 0.3 mm partings resulting in local crenulations. Bedded: a) 85% thickness b) 15% >chip size.	a) aphanitic to 0.05 b) 0.1 to 0.15	a) aphanitic to silty b) Sandy.	65-70% plag + aphan. volc. lithic sand. 10-15% quartz sand 15% gray chlorite 2-3% black mudstone lithics Proportions observed in wacke chips but assumed same in siltstone chips.	10% dissem. and fracture filling Fe/Mg carb.	0.5% dissem. and fracture pyrite	NIL	SILTSTONE (85%) + GREYWACKE (15%)
64-03	Medium greenish gray	Unfoliated Chilled Microbrecciated having hairline saussurite anastomosing fractures throughout.	aphanitic	aphanitic	Proportions not determined due to aphanitic grain size. Plag with pale green chlorite. Locally chlorite dark green	10% mostly fracture filling but also dissem. calcite	0.1% cubic pyrite associated to fracturing	NIL	BASALT
65-05	Dark green	Unfoliated to weakly foliated Unchilled. No shear deformation but strong Fe/Mg carb alt. must be shear-controlled	0.1-0.2 Carb. metacrysts 0.3-0.4	Sub-diabasic with superimposed carb. metacrysts	30 partly saussuritized plagioclase 40% dark green to pale green chlorite 1% quartz	25% Fe/Mg carbonate metacrysts	NIL	NIL	BASALT
66-38	BLACK	Unfoliated Bedded: a) fissile to locally crenulated. b) laminated with a) 0.5 mm laminations. c) thin 0.3 to 1.0 mm beds.	a) aphanitic b) aphanitic to 0.05 c) aphanitic	a) aphanitic b) aphanitic to silty c) aphanitic	Unknown due to aphanitic grain size. Very soft and graphitic. Mostly grounded to black clay by drill.	3% fracture lining calcite	3% pyrite all in pyritic cherty beds	graphite proportion unknown	MUDSTONE (85%) + SILTSTONE (10%) + Chert (5%)

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 67-13	Medium olive green (partly bleached)	Schistose due to extensive shearing resulting in bleaching 10% sericitic shears 5% brecciated qtz/Fe/mg carb. veins.	aphanitic 2% chips intact. 0.1 mm	obscured by shearing rubbly. Saussuritized Equigranular interlocking in intact chip.	Proportions obscured by bleaching but estimate from intact chip: 60% plag. 40% chlorite elsewhere in bleached chips chlorite completely bleached + plag. saussuritized	3% vein Fe/mg carb. 5% dissem. Fe/mg carb.	Trace dissem. pyrite	NIL	BASALT
68-21	Pale gray	Schistose due to shearing. 5% sericitic shears No bedding visible	Matrix: 0.1 to 0.3 Pebbles up to 5 mm.	Fine to medium sandy matrix with 30% pebbles consisting of: 25% bleached volc. lithics 3% black mudstone lithics 2% quartz	MATRIX: 65% undifferentiable plag. sand/aphanitic volcanic lithics. 15-20% qtz sand. 10% bleached chlorite variable 1-5% black mudstone lithics 2% sericite with trace Fuchsite along shears.	8% dissem. and fracture Fe/Mg carb.	2% pyrite mostly dissem. along fractures but also in mudstone lithics and as detrital sand grains	NIL	GREYWACKE
69-17	Dark gray	Weakly foliated due to shearing 20% gray chloritic shears. Bedding not visible Locally crenulated	aphanitic to 0.05	Aphanitic, inferred silty.	Proportions not determined due to aphanitic grain size. Assume 50% plag + quartz silt. 50% gray chlorite.	5-8% dissem. and fracture Fe/Mg carb.	NIL	NIL	SILTSTONE
70-11	Pale gray-green (partly bleached)	Generally unfoliated but highly shear fractured along grain boundaries and through grains. 20% q.c.v. + bleached carbonatized zones	0.5-1.5 but modified by fracturing	Inequigranular interlocking to rubbly (due to fracturing)	70% plag. 25% dk. gn to pale gn to buff - bleached chl.	10% vein calcite 5% fracture calcite	Tr. py.	3% ilmenite/rutile	GABBRO
71-12	Dark gray to black	Unfoliated Bedded → bed thickness greater than chip size (5 mm) a) 80% wacke b) 20% siltstone Shear brecciated	a) wacke mostly 0.2 to 0.4 locally up to 0.8 b) siltstone aphanitic to 0.05	a) Medium sandy b) aphanitic	35-40% plagioclase sand 20-25% aphanitic volc. lithics 3-5% black mudstone lithics 10-15% quartz sand 15% gray chlorite	5% dissem. + fracture FE/mg carb.	Trace dissem. and 0.5% detrital pyrite	NIL	GREYWACKE (80%) + SILTSTONE (20%)

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 72-17	Dark basaltic green	No visible bedding. Mod. foliated. No significant shearing.	0.2-0.5, rare lithics to 1.0	Medium to coarse sandy	25% dk. gn. chlorite (hence basaltic colour) 5-10% qtz. sand. 40% plag. sand 20% cherty to aphanitic volcanic lithic sand, no mudstone lithics	3% dissem calcite	1% dissem. to framboidal syngenetic py.	Nil	GREYWACKE
73-07	Medium gray	No visible bedding. Mod. foliated. No significant shearing.	0.1-0.3	Fine sandy.	15% gray chl. 15% qtz sand 60-70% plag. sand (volc. lithics not discernible No mudstone lithics	3% dissem. calcite	0.3% dissem. to framboidal syngenetic py.	Nil	GREYWACKE
74-30	Medium green to pale green where most strongly chilled	Strongly chilled. Weakly foliated. Unsheared. Most strongly chilled zones contain 10-30% qtz-chl.-epidote amygdules to 0.5 mm rounded + local quench breccia	Aphanitic to 0.05	Aphanitic + locally microlitic to equigranular interlocking	In coarsest chips 40% chlorite 60% plag (aphanitic chips assumed same) up to 5% amygdule epidote in aphanitic chips	<1% fracture calcite	Tr. dissem. py	Nil	BASALT
75-08	Dark green	Massive. No significant shear deformation. 5% calcite veinlets Unchilled	0.1-0.15	Equigranular interlocking	40-50% chlorite 50-60% plag.	5% dissem. calcite 5% veinlet calcite	Nil	2-3% dissem. xlline magnetite	BASALT
74-31	(a) White vein (90% of section --see field log) host (b) Black host 5% of sample (c) Black + white breccia (vein walls - 5% sample	(a) Massive (b) Schistose (c) Brecciated	(a) NA (very coarse) (b) aphanitic (c) comb. of (a) + (b)	(a) Coarse crystalline (b) aphanitic (c) comb. of (a) + (b)	(a) 100% qtz. (b) Soft, est. 70% chl. (gray), 30% plag.-qtz. (c) comb. of (a) + (b) with 10% sericite	(a) Nil (b) Nil (c) 20% Fe/Mg carb	(a) No sulphides in vein but locally up to 50% dissem. py. at vein/mudstone contact. (b) 0.5% py. (c) 20% cubic py. 1% arsenopy. tabular w. diamond x-section	(a) Nil (b) Nil (c) Nil	(a) QUARTZ VEIN (90%) (b) MUDSTONE (5%) (c) VEIN WALLS (5%)

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB - 89 76 - 34	Mottled medium green and white	Unfoliated Massive	mostly 1.0 - 1.5 but varying between 0.5 - 3.0	Sub diabasic texture to sub porphyritic having chloritized pyroxene grain up to 3.0 mm	65% plagioclase 35% chloritized pyroxene (5% pyroxene intact remaining)	NIL	NIL	Trace leucoxene	GABBRO
77 - 04	Buff (bleached)	Weak foliation due to shearing. Chilled Amygdaloidal 2% calcite amygdules 3% brecciated qtz/calcite vein	0.05 to 0.1	Equigranular interlocking	55% partly saussuritized plagioclase 35% completely bleached chlorite	10% dissem. and fracture calcite	Trace fracture and vein pyrite	NIL	BASALT
78 - 29	medium green to Buff (bleached)	Weakly foliated & rubbly due to moderate shear-related fracturing through grains & around boundaries	0.3-0.8	Inequigranular interlocking	75% plagioclase 25% chlorite (partly bleached) 1% qtz.	3% fracture calcite	Trace po. & py. (both present)	<1% leucoxene	GABBRO
79 - 08	Yellowish buff (bleached)	Unfoliated, Sheared Bedded: bed thickness greater than chip size (>5mm) a) 90% wacke b) 10% siltstone 3% brecciated qtz/Fe/mg carb vein	a) 0.2 to 0.4 b) aphanitic to 0.05	a) medium sandy b) aphanitic to silty	a) 65% undifferentiable plag. sand and aphanitic volc. lithics (sericitized) 1-3% black mudstone lithics 15% quartz. 20% undifferentiable bleached chlorite and sericite & Trace Fuchsite.	in both a and b: 10% dissem. Fe/Mg carbonate 2% vein Fe/mg carbonate	in both a and b: Trace dissem. pyrite	NIL	GREYWACKE (90%) + SILTSTONE (10%)
80 - 25	Black	Shistose locally crenulated both due to shearing 3% qtz/calcite vein.	aphanitic to 0.05	aphanitic to silty	Proportions unknown due to fine grain size but estimate at least 50% gray chlorite ± graphite 50% plag + quartz silt	1% dissem calcite 2% vein calcite	2% finely peppered pyrite also trace in vein	NIL	SILTSTONE

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 81-08	Dark gray	Unfoliated bedding not visible	Mostly: 0.05 to 0.2 locally up to 0.5	fine sandy	65% undifferentiable plag. sand and aphan. volc. lithics. 0-3% variable, black mudstone lithic 15% quartz sand 15% gray chlorite	4% dissem. and fracture calcite	Trace dissem. pyrite	Nil	GREYWACKE
82-24	(a) Med. gray to gy-buff (bleached) ~80% sample (b) Black (20% sample) w. 5% gray laminations	Bedded (a) Schistose + lineated due to shearing. (b) Micro laminated (3/4 mudstone, 1/4 siltstone) on 1 mm scale. Fissile to schistose/crenulated at 20° to bedding	(a) Shredded due shearing with 10-20% resistant cherty volc. lithics 0.5-1 (b) Aphanitic, 0.05 in silty beds	(a) Coarse sandy overprinted by shear-related shredding (b) Aphanitic w. silty laminations	(a) 30% gray to buff-bleached chl., 5-10% qtz. sand, 10-20% resistant aphan. volc. lithics, < 1% mudstone lithics, 40% undifferentiable plag./volc. lithics (b) Very soft -- est. 70% gray chl., 30% plag-qtz	(a) 5% dissem. Fe/Mg carb. (b) 20% dissem. Fe/Mg carb. in siltstone beds only. Also 10% qtz. v. contain 50% Fe/Mg carb.	(a) 1% dissem. cubic to locally framboidal py. (b) nil	Nil	GREYWACKE (80%) MUDSTONE (15%) SILTSTONE (5%)
83-13	a) Dark gray (90%) b) Black (10%)	Bedded: a) weakly foliated due to shearing b) Fissile to schistose/crenulated	a) 0.1 to 0.2 b) aphanitic to 0.05	a) fine sandy b) aphanitic, inferred silty	65% undifferentiable plag. sand and aphanitic volcanic lithics. Variable 1-5% black mudstone lithics 15% quartz sand 15% gray chlorite	in both a and b: 2% dissem + fracture calcite	a) 2% dispersed pyrite and trace fracture pyrite b) Nil	NIL	GREYWACKE (90%) SILTSTONE (10%)
84-34	Banded (a) dark gray (80%) and (b) pale gray (20%) of 1/3 of dk. chips are rusty weathered	Banded (bedded) [0.5 to 1.0 mm thick] (a) hematite-chert + (b) chert Unmetamorphosed (no increase in chert grain size) Unsheared (massive) 30% overburden clast contam.	(a) aphanitic to 0.05 (b) aphanitic to 0.05	(a) aphanitic to cherty (b) cherty to sugary	(a) 50% chert 0-30% chlorite (b) 95% chert	(a) nil (b) nil	(a) 2% fine to coarse dissem. cubic py. (b) 5% finely dissem. py. Also 1-2% mass. py. beds + stringers	(a) average 50% hematite (limonite in weath. chips) (b) nil	IRON FORMATION
85-11	Medium gray	Weakly foliated due to shearing No bedding visible 0.2 to 1.0 mm closely spaced hairline saussurite shears Some anastomosing in 15% of sample.	0.1 to 0.2	fine sandy	60% undifferentiated plagioclase sand and aphanitic volc. lithics 15% quartz sand 15% gray chlorite 1-3% black mudstone lithics	10% dissem + fracture Fe/Mg carb.	1% dissem. pyrite also 0.5% dissem. pyrrhotite	NIL	GREYWACKE

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 86-11	Med. to dk. gray in beds with increasing silt content	Bedded -- both colour + grain size -- on 0.2 to 10+ mm thickness scale. Fissile along bedding contacts, mod. foliated within beds. Not sheared	<0.05 but palest beds contain up to 20% fine sand of 0.1-0.2 mm	Silty with subordinate sand in some beds	Where coarsest: 20-30% gray chl. 10% qtz silt/sand 60% plag. silt/sand Chl. increases to about 70% (soft) in dark siltier beds	1% fracture Fe/Mg carb. No dissem. carb.	0.1% fine to coarse dissem. cubic py.	Nil	SILTSTONE
87-03	a) Black (90%) b) Dark gray (10%)	Bedded: Bed thickness greater than chip size (5mm) a) 90% weakly foliated b) 10% unfoliated	a) aphanitic to 0.05 b) 0.1 to 0.2	a) aphanitic to silty b) fine sandy	a) aphanitic, relatively soft est. 60% gray chlorite 40% qtz + plag silt. b) 60% plag sand and aphanitic volc. lithic (undifferentiated). 20% quartz sand, 15% gray chlorite. 1-3% black mudstone lithics.	5% dissem. calcite	Both a and b: NIL	NIL	SILTSTONE (90%) + GREYWACKE (10%)
88-05	(a) Pale gray to buff-gray bleached (60% of sample) (b) Dark gray (40% of sample)	Bedded, mostly on 0.5-5 mm thick scale (a) Well foliated + lineated indicating ductile shear deformation ~3:1 lineation (b) Schistose + lineated	(a) 0.1-0.3 (b) <0.05	(a) Sorted fine sandy (b) silty	(a) 10% buff-bleached chl. 10% qtz sand, 60% undifferentiated plag./aphanitic volc. sand, 3% black mudstone lithics (b) 50-70% unbleached gray chl., 30-50% plag-qtz.	(a) 20% dissem. Fe/Mg carb (b) 2% dissem. Fe/Mg carb	(a) 2% finely dissem. cubic py. (b) 0.5% very finely dissem py	(a) Nil (b) nil	GREYWACKE (60%) + SILTSTONE (40%)
89-02	Buff with yellowish overprint (bleached)	Shistose due to shearing. 10% anastomosing sericitic shears. Bedding not visible	0.1 to 0.3	Fine sandy	50% undifferentiable plag sand and aphanitic volc. lithics. 0-2% black mudstone lithics. 20% quartz sand 20% sericite/bleached chlorite (undifferentiable)	10% dissem. and fracture Fe/Mg carb.	0.5% very finely dissem. pyrite	NIL	GREYWACKE
90-12	(a) Med. gray not bleached (40% sample) (b) Dk. gray (60% sample)	Mod. foliation displacing bedding at 20° (i.e. shear controlled) Bedded mostly at 0.1 to 5.0 mm thickness scale	(a) 0.05-0.1 (b) <0.05	(a) Very fine sandy (b) silty	(a) 15-20% gray chl. 10% qtz. sand 50% undifferentiable plag./aphanitic volc lithics (b) Mod soft indicating 40-50% chlorite (gray) 50% plag.-qtz.	(a) 20% dissem. Fe/Mg carb. (b) nil	(a) 0.1% dissem py. (b) 0.1% dissem py.	(a) nil (b) nil	GREYWACKE (40%) + SILTSTONE (60%)

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 91-06	Medium to Dark gray with yellowish overprint	Unfoliated, extensively shear brecciated with 10% sericitic shear planes.	original grain size unrecognizable due to extensive shearing. qtz grains up to 1.0 mm	obscured by extensive shearing and carbonatization Rubbly, locally pulverized 10% siltstone patches (lozenges) preserved silty appearance 15% qtz sand → some appear stretched	original mafics completely bleached out except for siltstone patches where gray chlorite est. 50% 10% sericite 15% qtz sand	15-20% dissem. and fracture calcite	5% coarse (0.3 to 0.8 mm) crystalline (cubic) pyrite 0.5% arsenopyrite	NIL - disseminated	GREYWACKE (90%) + SILTSTONE (10%)
92-09	Pale gray due to a) bleaching and b) low chlorite related to coarse grain size	No obvious bedding except for local variation in % coarse sand + granules vs. medium sand. Moderate foliation due to weak shear deformation	0.2 to 5.0 (poorly sorted)	Medium to coarse sandy with average 10% scattered granules	10% bleached chlorite 10% quartz sand 30% plag. sand 40-50% aphanitic int. volc lithics 2% blue to white chert lithics 3% black mudstone lithics	2% Fe/Mg carbonate along grain boundaries	1% framboidal pyrite (probably detrital, possibly syngenetic hydrothermal)	NIL	GREYWACKE
93-04	Dark green	Moderate Foliation due to extensive shearing. 30% chilled aphanitic chips. 1% qtz/calcite vein.	chilled: aphanitic unchilled 0.1 to 0.2	chilled: aphanitic, locally microlitic, glassy microlites up to 0.8 mm long. Unchilled: Equigranular interlocking, 3% calcite metacrysts (0.2 to 0.3 mm)	45% plag. partly saussuritized 45% dark green chlorite	10% dissem. and fracture calcite 3% calcite metacryst.	NIL	Trace tourmaline (dark green to black) in sheared chips up to 5% in a single chip.	BASALT
94-34	(a) Pale gray (60% sample) (b) Dk gray (40% sample) Also 5% OB pebble contam.	(a) and (b) interbedded on 0.5 to 10 mm thick scale (a) is granular, friable due clay matrix related to shear controlled weathering (b) is schistose, lineated indicating shear deformation	(a) 0.1-0.15 (b) <0.05	(a) Sorted fine sandy overgrown with + grading to chert (b) Presumed silty overprinted by schistosity	(a) Typically 60% qtz sand, 5% black mudstone lithic grains, 35% white to ochre secondary clay matrix. Locally to 30% gray chl. instead clay, suggesting alt. involved precip. of silica over qtz (b) Estimate 50% gray chl.	Zero carbonate -- confirms bedrock not overburden leaching of chl. and + plag + lithic sand (mod soft)	(a) Nil (b) Nil	(a) Nil (b) Rare trace tourmaline	QUARTZITE (60%) + SILTSTONE (40%)
95-02	Very dark green	Massive. Unchilled. Unsheared	Mostly 0.1-0.2, locally 0.3 Calcite metacrysts 0.5-1.0	Equigranular interlocking	40-50% pale-med. gn. px partly chloritized 40% dk. gn. chlorite Not more than 10-20% plag.	5% calcite metacrysts	Nil	1-2% dissem magnetite or rutile (alternate between chips, 50:50 basis)	ULTRAMAFIC (pyroxenite flow)

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 96-40	Black	Unfoliated Fissile	<0.05	silty, well sorted	hard, estimate 75% undifferentiable plagioclase + quartz silt. 20% gray chlorite	5% Fracture and dissem. calcite	Trace Fracture pyrite	Nil	SILTSTONE
97-04	Dark green-black	Unchilled. Well foliated but this + Fe/Mg carb. do not necessarily indicate shearing in an ultramafic rock	0.2-0.3 but largely obscured by fol'n	Equigranular interlocking overprinted by fol'n.	50% dark green chlorite/serpentine 40% pale green talc/chlorite No plagioclase (very soft)	2% dissem Fe/Mg carb.	Nil	No magnetite or other oxides	ULTRAMAFIC VOLC.
98-02	Pale gray to buff	Schistose due to shearing. Severely dislocated by brittle shearing overprinted by buff-bleaching of all chlorite. Amygdaloidal having 2% chlorite and 2% calcite amygdules. Chilled. 1% blue/white pillow selvage material is brecciated. →	aphanitic	aphanitic with 4% coarse round amygdules. 5% qtz/calcite vein also brecciated	40-45% partly saussuritized plagioclase No mafics remaining completely leached out 1% brecciated blue/white cherty pillow selvage material.	10% dissem. + fracture calcite 2% calcite amygdules	Overall 10-15% hydrothermal pyrite. Fine to coarse cubic with variable concentrations ranging from 1 to 50 percent	30% patches (hydrothermal flooding) very fine grain mixture of quartz sericite ± altered chlorite ± kaolinite (I.D. by X-RAY)	BASALT
99-02	Bleached buff-gray	Chilled. 1% chlorite-filled amyg. No significant shear deformation but strong shear-controlled alt.	0.05-0.1	Near-aphanitic to equigranular interlocking	40-50% buff-bleached chlorite 30-40% plag.	15% dissem. Fe/Mg carb.	Rare tr. py.	Nil	BASALT
100-12	Black	Unfoliated Fissile; 5% thin graphitic partings, crenulated 0.5 to 2mm spaced. Bedded: 0.5 to > 5mm beds defined by colour and grain size. Black in aphanitic beds, gray where	Mostly aphanitic but 1-2% beds up to 0.05mm 0.05mm.	aphanitic to silty	hard; estimate 70% undifferentiable plagioclase + qtz silt. 20-25% gray chlorite	5-7% mostly Fracture and dissem calcite	Overall 2% pyrite Finally peppered (detrital) with concentrations of up to 30% in some beds.	Nil	SILTSTONE

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 101-12	Bleached buff	Unchilled. Massive. No shear deformation -- only shear effect is bleaching	Typically 0.3-0.4 Some plag. laths to 0.8x0.3	Diabasic	50-60% plag. 40-50% buff-bleached chlorite	3% dissem. calcite	Nil	0.5-1% leucoxene	BASALT
102-17	a) Pale gray (70%) b) Black (30%)	Unfoliated. Bedded. a) Sheared with 10% sericitic shear planes. Bleached due to brecciation. b) Fissile with 2% black mudstone partings,	a) 0.2-0.6 b) aphanitic	a) Medium to coarse sandy with variably 1-3% black mudstone lithics. b) aphanitic	a) 70% undifferentiable plag. sand / aphanitic volc. lithics. 10% quartz sand 15-20% undifferentiable bleached chlorite / sericite b) hard; 70% plagioclase and quartz undifferentiable 30% gray chlorite	a) 5% dissem. and fracture calcite b) NIL	a) NIL b) Trace thin 0.2mm bed chert/pyrite (one chip)	NIL	GREYWACKE (70%) + SILTSTONE (30%)
103-07	Bleached buff with 30% rust-spotted chips	Unchilled. Massive. No shear deformation but strong shear-controlled Fe/Mg carbonate alt.	0.1-0.15 with 25% Fe/Mg carb. meta-crysts of 0.2-0.4	Equigranular interlocking to sub-diabasic with superimposed carb. metacrysts. Best shown in weathered chips.	40% buff-bleached chlorite 30% plag	25% Fe/Mg carb. metacryst (selectively weathered in rusty chips)	<0.1% dissem py	Nil	BASALT
104-18	a) Pale gray (90%) b) Black (10%)	Bedded, Bed thickness greater than chip size. a) well foliated due to shearing, lineated 5% sericitic shears. b) Fissile, soft.	a) 0.05 to 0.2 b) aphanitic	a) Fine sandy, with 2-5% black mudstone lithics b) aphanitic	a) 60% undifferentiable plag sand / aphan. volc. lithics 10% bleached chlorite/sericite 20% qtz sand. 2-5% black mudstone lithics. b) soft; minimum 70% gray chlorite	a) 5% dissem. + fracture Fe/mg carb. b) NIL	a) Trace finely dissem. pyrite locally up to 1%. b) NIL	NIL	GREYWACKE (90%) + MUDSTONE (10%)
105-04	Pale gray to buff due to both chilling + bleaching	Chilled. Massive. No significant shear deformation but strongly bleached	0.05-0.1 Plag. microlites to 0.2x0.5, often clustered as clots to 3 mm	Aphanitic to equigranular interlocking with glomeroporphyritic microlites	5% plag. microlites Groundmass hard due to fine grain size, est. 60% plag., 30-40% bleached chlorite	3% fracture calcite	Nil	Nil	BASALT

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 106-15	Medium gray	Schistose due to shearing. Also lineated. 2% qtz/Fe/Mg carb vein	0.1 to 0.3 (poorly sorted)	Fine sandy (poorly sorted as opposed to unsorted as in most graywackes on the property)	65% undifferentiable plag. sand and aphanitic volcanic lithics. 10% quartz sand variable 0-3% black mudstone lithics. 20% gray chlorite	3% dissem. Fe/Mg carb.	Trace finely dissem. pyrite	NIL	GREYWACKE
107-10	Dark gray instead of green (due to abundance of carbonate)	Strongly foliated due to shearing slightly lineated. Unchilled.	0.2-0.3	Equigranular interlocking (probably) overprinted by carbonatization	25% bleached gray to buff chlorite 25% plag	50% dissem. Fe/Mg carb.	Nil	2% leucoxene	BASALT
108-05	Pale gray (bleached)	Extensively brecciated and veined; bleached 50% host → brecciated with 10% sericitic shears 50% qtz/calcite vein brecciated.	Mostly 0.1 to 0.5 locally 0.5 to 0.8 Few granules up to 2.0	Mostly fine to medium sandy with few coarse sandy chips (beds?) 2-3% aphanitic volc. lithic granular size.	65% undifferentiable plag sand and aphanitic volcanic lithics. 15% quartz sand. variable 0-5% black mudstone lithics 15-20% undifferentiable bleached chlorite and sericite.	2% dissem. calcite 15% vein calcite	Trace detrital pyrite. (coarse sand grain) overall 0.5% cubic pyrite along breccia fractures and shears with local concentrations of up to 30%	NIL	GREYWACKE (50%) + Vein (50%)
109-13	Dark green to buff (carbonate) - green	Unchilled. Massive. 2% qtz-carb veins, otherwise no shear deformation but carb. alt. is shear controlled	0.15-0.25 Carb. metacrysts 0.3-1.0	Equigranular interlocking overprinted by carb. metacrysts	40% dk. gn. chl. 30% plag.	30% Fe/Mg carb. metacrysts	No dissem. sulphides. Veins contain 30% cubic py.	Nil	BASALT
110-11	Medium gray	Unsheared unfoliated 5% qtz veinlets and hairline fracture fillings.	aphanitic	aphanitic, assumed silty but obscured by silicification.	proportions unknown due to aphanitic grain size. Very hard and silicified. Est. max 10% chlorite.	5% Fe/Mg. dissem. carb.	Overall 1% pyrite of which we have 0.5% fine cubic dissem. pyrite and rusty patches of very finely peppered pyrite with concentrations of up to 30%.	NIL	SILTSTONE

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 111-01	Dark green to buff (bleached) 10% white veins	Shear zone. No original rock. Two secondary phases: (a) 80% of sample -- massive, crystalline (b) 10% of sample -- schistose, micaceous also 10% white calcite veins	(a) 0.2-0.4 (b) max. 0.05	(a) Mosaic, crystalline (b) Aphanitic, micaceous	(a) 50% dk. gn. chlorite crystals (hydrothermal); locally bleached buff (b) essentially 100% chlorite	(a) 50% Fe/Mg carbonate crystals (b) Local, sparse Fe/Mg carb metacrysts Also 10% late vein calcite	(a) Tr. coarse cubic crystalline pyrite	Nil	BASALT (shear axis alteration products indicate basalt parent)
112-11	Dark gray to black	Unfoliated, bedded. Bed thickness larger than chip scale. a) 80% silty beds b) 20% aphanitic beds Fissile	a) max. 0.05 b) aphanitic	a) aphanitic to silty moderately hard. b) aphanitic, soft.	a) 65% plag + aphan. volc. lithics (undifferentiated) 10% qtz silt 15% gray chlorite b) soft, estimate 70-75% gray chlorite	a) 10% dissem. + fracture Fe/mg carb. b) 5% dissem. Fe/mg carb.	a) Trace dissem. pyrite b) nil	Nil	SILTSTONE (80%) + MUDSTONE (20%)
113-03	Dark green	Massive. Unchilled	1 to 3	Inequigranular interlocking; px. coarser than other minerals but doesn't form true phenos	50-60% dk. gn. px (partly chloritized) 40-50% plag. 1% qtz.	<1% dissem. cal.	Tr. fracture py.	5% leucoxene (locally ilmenite)	GABBRO BOULDER (lack of alt. indicates different age from basalt; lack of chilling indicates not in situ)
113-04	Bleached buff.	Chilled with glass microstructure. Brecciated by shearing w. 30% infill/replacement flooding patches.	<0.05	Glassy to microlitic	Breccia fragments 50% bleached chl. 50% soft colourless mineral replacing plag. -- pyrophyllite? Infill: 50% soft colourless mineral -- pyrophyllite?	Breccia fragments 3% dissem. cal. Infill 50% calcite	Nil	Nil	BASALT
114-13	Dark gray	Unfoliated Bedding not visible	max. 0.05	aphanitic to silty	65% undifferentiable plag silt and aphanitic volcanic lithics. 10% qtz. silt. 15% gray chlorite	10% dissem. Fe/mg carb.	NIL	NIL	SILTSTONE

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 115-02	Very dark green	Massive. Unchilled. Unsheared + essentially unmetamorphosed (still contains olivine)	0.1-0.1.5 Olivine phenos 0.2-0.3	Porphyritic with sparse olivine microphenocryst in equigranular interlocking groundmass.	40-50% dark gr. chl and/or serp. 40-50% pale gr. pyroxene 2-3% olivine phenos Not more than 10% plag.	3% dissem cal.	Nil	Tr. magnetite	ULTRAMAFIC (PYROXENITE FLOW)
116-19	Dark gray	Unfoliated Bedding not visible	mostly 0.3 to 0.4 but varies from 0.1 to 0.8	Coarse sandy	20% plag. sand 45% aphanitic volcanic lithics only 5-10% quartz sand. 15% gray chlorite	5% dissem. Fe/mg carb.	3% sand size cubic pyrite dissem.	NIL	GREYWACKE
117-05	Bleached buff with ochre weathered overprint	Massive, chilled with 5% crush zone due to shearing. Bleaching + weathering indicate shearing is strong.	0.05-0.1	Equigranular interlocking but faint due to bleaching + fine texture.	Difficult to determine due to bleaching + fine grain size. Hardness suggests 60% bleached chl. 40% plag.	Tr. fracture Fe/Mg carb also 10% cavities where similar carb weathered out.	Nil (weathered)	Nil	BASALT
118-11	black	sub-fissile; some relatively coarse (0.1mm) sandy beds; 2-3% quartz-carbonate stringers (<0.1-0.3 mm thick) parallel to and cross-cutting fabric	0.05-0.1	silty to locally sandy; very soft	undifferentiated qz, plag, lithics - chlorite - 30%(?)	2% Fe Mg carbonate - in veinlets (mostly) and minor disseminations	0.3% pyrite - finely disseminated		Siltstone
119-02	Bleached buff	Chilled. Massive with 15% breccia zone and associated q.c.v. recording brittle shear. Bleaching + Fe/Mg carb indicate strong shear control	aphanitic to 0.1	Aphanitic to equigranular interlocking to faintly microlitic.	40% bleached -50% chlorite 5-10% sericite 40% plag.	10% Fe/Mg carb (dissem). 5% vein calcite	Tr. fairly dissem py. conc. in vein walls	Nil	BASALT

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 120-05	light to medium grey	well foliated; rare slip planes; local bedding defined by variations in grain size and black silty/muddy partings	0.2-1.0	sandy to locally silty; 75-80% sand grains;	undifferentiated plag and lithics — quartz - 10% chlorite (grey) - 10-12% sericite (light grey) - <5%(?)	1% calcite as stringers; 5-7% Fe/Mg carbonate in light grey wacke (bleached?) as disseminations	—		Greywacke
121-03	Bleached buff; 40% brassy veins + replacement zones	Unchilled. Brecciated + veined due to strong brittle shearing (40% veins + replacement zone)	0.1-0.2 (rarely apparent)	Equigranular interbedding (rarely apparent due to carbonatization + bleaching)	40% completely bleached chl. 10% sericite 30% plag Veins contain 10% soft colourless mineral - pyrophyllite?	20% dissem Fe/Mg carb Veins contain 40% Fe/Mg carb.	Veins/replacement patches contain 30-40% fine to coarse dissem. cubic py. + 3% coarse tabular arsenopy. w. diamond x-section. Nil in host.	Trace black unidentified sulphide (?) in veins.	BASALT (shear axis)
122-03	Dark grey (little bleaching)	No visible bedding. Strongly foliated, lineated + shredded by shear deformation	Generally obscured by shredding <1% resistant lithic sand grains to 1 mm	Apparently medium to coarse sandy but mostly obscured by shear shredding	Only 2% qtz sand. 3% resistant chert + pyritic mudstone lithic sand 50-60% undifferentiable plag. + aphan. volc. sand 25-30% gray chlorite	15% Fe/Mg dissem. carb.	0.1% py. concentrated in mudstone lithics	Nil	GREYWACKE
123-06	Bleached buff.	Bedded (thickness not apparent). Brecciated by shearing + infilled w. 40% laminated carb. veinlets	Mostly 0.1-0.15 Variable 0.05 to 0.3 between beds	Fine sandy.	10% qtz. sand 80% undifferentiable plag. + int. volc. lithic sand 10% chlorite 1% each resistant white chert + black mudstone lithics; tr. fuchsite	10% laminated Fe/Mg carbonate veinlets.	0.1% fairly dissem. cubic py.	Nil	GREYWACKE
124-07	Pale grey due to original low chl. + new sericite	No visible bedding. Strongly fol. (but not lineated) due to shearing. Strong shear-controlled carbonatization	Mostly 0.1-0.2 Chloritoid metacrysts to 0.4	Faintly fine-medium sandy -- grain boundaries mostly obscured by strong carbonatization	Only 3% qtz sand 30-40% undifferentiable plag./aph. volc. lithic sand 5-10% gray chl. 10% sericite 1% black mudstone lithics 0.5% chloritoid metacrysts	30-40% dissem Fe/Mg carb	Nil	Nil	GREYWACKE

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 125-04	Bleached buff-gray	Unchilled. Well foliated + ribboned by shearing	0.2-0.5	Grain boundaries obscured by bleaching -- either equigranular or sub-dialasic	40-50% buff-bleached chlorite 40-50% plag.	3-5% dissem. + fracture calcite	Nil	5% leucoxene	BASALT
126-04	med-grey to black	schistose to fissile - slip planes along some foliation surfaces; 25% grey to white qz-carb veinlets (gradational with host), in some places causing	<0.1 and much <0.05mm	silty to muddy - very fine mudstone partings define bedding	overall chlorite content ~25%; remainder of host too fine to accurately determine mineralogy	8-10% Fe/Mg carbonate in veinlets	2-4% pyrite - associated with veinlets (semi-massive to disseminated) and along foliation planes as smears;	possibly minor graphite with chlorite in mudstone partings	Siltstone + minor Mudstone
		micro-brecciation of host					2-4% oxidized pyrite (now limonite) -- occurs as with pyrite		
127 - 36	competent chips are greenish grey; 98% of sample ground to beige (oxidized) to off-white clay	competent chips are highly schistose and strongly sheared	~0.1mm	competent chip have a vague sandy texture but this could be structurally produced	unable to determine groundmass mineralogy chlorite - 5% sericite/chlorite - 25%	nil	nil		Greywacke/Siltstone
127 - 37	light greenish grey to locally beige (lightly oxidized)	schistose; strongly sheared -- marked transposition in plane of foliation	~0.05-0.15 (??)	vaguely sandy texture with ~10% visible quartz in a few of the least deformed & altered chips -- may be structurally produced, however	lithics, plag not evident ~~to~~ differentiable quartz - 10% chlorite - 10% sericite (± chlorite) - 10-15%	nil	nil		Greywacke

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 128-19	grey-beige to greenish-beige (bleached)	moderately well foliated. 15% quartz-carbonate veinlets; local strong schistosity	0.1-0.3	sandy; bleaching obscures differences between plagioclase and lithic grains	plag. lithics } 55-60 quartz -15% chlorite - <5% sericite - 10-15% (yellow-beige to white)	5 %Fe/Mg carbonate -- minor amounts disseminated in host but 90% in veinlets	1% pyrite - similar amounts disseminated in veins and host	1-2% limonite - in veins, possibly replacing Fe-rich carbonate	Greywacke
129-21	light green	well foliated; bleached -- bleaching outlines (locally) groundmass mineralogy 25% overburden contamination	aphanitic	equigranular and interlocking with sparse plagioclase microlites to 0.15mm and 2-3% light-medium green subhedral pyroxene phenocrysts to 1.0mm; may be minor qz-chlorite infilled amygdales;	plagioclase - 65% pyroxene - 30% (groundmass & phenocrysts)	2 % calcite - - disseminated; difficult to differentiate whether bedrock or overburden chips are reacting	trace pyrite - disseminated		Andesite
130-08	medium grey to greenish-grey	well foliated; 3-5% quartz-carbonate veinlets	matrix 0.3-1.0 clasts to 6(+)mm	sandy matrix enclosing 40-50% indistinct, aphanitic intermediate volcanic lithics and 2-5% chert(?) lithics	matrix plag lithics } 60-65 quartz - 10-12% chlorite - 5-10% sericite - 5%(?)	5-8% Fe/Mg carbonate - disseminated throughout host (both matrix and clasts) and in veinlets in similar proportions	1-2% pyrite - disseminated in matrix and minor amounts (primary?) in chert clasts		Conglomerate
131-13	a) medium grey to b) black	a) 90% of sample; well foliated to sub-schistose; 2% qz-carb veinlets b) 10% of sample; fissile - bedding defined by siltstone beds	a) 0.1-0.4 b) 0.05mm	a) sandy b) silty	a) plag lithics } - 55-60% quartz - 15% chlorite - 12% b) plag, lithics, quartz — 60% chlorite - 25-30%	5-7% calcite - 1% in veinlets, 5-6% disseminated - may include 2-3% Fe/Mg carbonate	a) 3% pyrite - coarse to fine disseminations b) 2% pyrite - disseminated and rare thin (0.1mm) "beds"		a) Greywacke b) Siltstone
132-06	a) dark grey b) medium grey	a) well foliated to sub-fissile (90% of sample) b) poor foliation - thin (1.0mm) beds in "a"; 10% of sample	a) ~0.05 b) 0.1-0.2	a) silty to very fine sandy b) sandy	a) plag, lithics, qz not differentiable chlorite - 20%(+) b) plag lithics } - 15% quartz chlorite - 5-7%	trace calcite as disseminations; 1-2% Fe/Mg carbonate -- mostly as dissemination in wacke bands but also in siltstone	1% pyrite - mostly as coarse disseminations, but also finely disseminated		a) Siltstone b) Greywacke

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
CB-89 133-31	competent chips are medium to dark green; much of sample ground to a beige white highly calcareous clay	competent chips are well foliated (resealed?) and some strongly sheared & bleached soft white chips are present; 5% vein calcite + quartz -- clay is mostly calcite and assumed to be mostly vein material	0.1-0.5	crystalline to sugary volcanic texture; ~5% beige subhedral plag. phenocrysts to 3.0 mm; rock is soft and composed of chlorite and light green soft saussuritized plagioclase	plagioclase (saussuritized) -40% chlorite -50%	5-7% calcite -veinlets are 90-95% calcite; remainder occurs rimming plag. phenocrysts and as disseminations	nil		Basalt
134-09	yellowish grey - light oxidation	well foliated to locally schistose with ~10% dark grey chert as beds(?)	0.2-0.6 (greywacke) aphanitic (chert)	sandy; aphanitic chert assumed to be beds rather than large grains as other sand grains are not as large (0.5cm) as chert chips	undifferentiated plag. and lithics - 60% quartz - 15-20% mudstone - 1% chlorite - 5-7% sericite -10% (yellow to beige-white)	nil	0.5% sulfides (or less) - mostly pyrite but ~0.1% chalcopyrite - sulfides as disseminations in chert	0.1% specular hematite associated with sulfides in chert bands	Greywacke + Chert
135-09	medium grey (bleached by carbonate)	well foliated with local shear planes -- rubbly;	0.1-0.3 with chloritoid (planes?) to 0.6	sub diabasic; chloritoid laths enclosed by extensively carbonatized plagioclase; sample also contains matrix quartz and leucoxene; chloritoid replaces original mafics	plag - 30% (carbonatized) quartz - 5% (matrix & eyes?) chloritoid - 25-30% (replaces original mafics)	25% moderately reactive Fe/Mg carbonate -- alteration of plag. only -- strong reaction with HCl suggest calcite is also present	0.2% pyrite- disseminated	2% leucoxene	Basalt (coarse)
136-10	grey beige; bleached	good but indistinct foliation; 2% thin (0.2-0.3) grey quartz-carbonate veinlets cross-cutting foliation; relict bedding defined by minor variation in grain size	0.1-0.3	sandy - bleaching obscures mineralogy	plag lithics } 60-65% quartz - 15-20% mudstone - <1% chlorite - <5% sericite - 5% (yellow-beige)	1-2% poorly reactive carbonate (Fe Mg variety) - equal amounts disseminated in host and in veinlets with quartz	1% pyrite as fine disseminations (0.5%) and concentrated locally, possibly in some beds (0.5%)		Greywacke
137-25	medium grey	strongly schistose with a pseudo-fissility -- strongly sheared; 15% Fe/Mg carbonate veinlets	<0.05 to ~0.1	vague equigranular and interlocking texture	unable to differentiate groundmass minerals chlorite -25-30% and 5-10% very light grey, elastic micaceous mineral -- may be serpentine	15% Fe/Mg carbonate - in veins; 5-10% FeMg carbonate marginal to veins -very poorly reactive	trace pyrite- disseminated	local graphite - 1%	Basalt

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
138-02	greenish-grey (locally bleached)	fissile; rare slip planes; 35-45% grey to white quartz-carbonate veining - grades imperceptibly into host so % may not be accurate	<0.05	silty	undifferentiated plag, lithics, and quartz - 80% chlorite - 15-20% (light grey to greenish - may include some sericite)	10% Fe/Mg carbonate - minor amounts disseminated in host but 90% in veins	1% pyrite - fine to coarse cubes disseminated in or marginal to veinlets		Siltstone (veined)
138-03	grey beige	fissile; minor slip planes and locally crenulated; 40-50% white to grey quartz-carbonate veining -- grades imperceptibly into host	<0.05	silty - similar in all respects to 138-02	as with 138-02	12-15% Fe/Mg carbonate - occurs in same manner as in 138-02	2% pyrite - coarse cubes disseminated in or near vein material		Siltstone (veined)
139-31	dark grey to black - sample mostly ground to grey, graphitic clay	only a few competent chips -- these are sheared	aphanitic	muddy - clay rich	too fine and ground to clay to determine	nil	10% pyrite - disseminated cubes	graphitic - % uncertain	Graphitic Mudstone
140-11	medium grey	well foliated to schistose; locally crenulated; sand grains are stretched 2-3:1 in foliation plane; 7-8% quartz-carbonate veinlets; local slip planes	0.05-0.4	sandy	plag. lithics } 70% quartz - 15% mudstone <1% chlorite - 12% (grey - may be 1-3% light colored sericite)	1-2% calcite in veinlets (mostly) and disseminated in host; 1% or less Fe Mg carbonate - disseminated in host	2% pyrite as coarse to fine disseminations in or marginal to qz-carb veinlets		Greywacke
141-25	light to medium green - partially bleached	well foliated to sub-schistose with minor slip planes; 10% carbonate + qz veinlets	0.05-0.1	equigranular and interlocking; pervasively carbonatized	plag - ?? chlorite - 5-7 pyroxene - ?? - unable to differentiate groundmass mineralogy accurately	5% calcite in veinlets; 15% Fe/Mg carbonate in veinlets (7%), and disseminated and along microfractures (8% total)	0.2% pyrite - fine to coarse disseminations	2-3% leucoxene	Basalt

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
142-03	greenish-grey	well foliated; 1-2% calcite-qz veinlets - moderate grain size variations define an indistinct bedding	0.05-0.1	finely to very finely sandy	unable to differentiate groundmass mineralogy/lithology accurately chlorite - 20%	3% calcite - mostly in veinlets, and along foliation planes	0.5-1% pyrite - fine to coarse disseminations		Greywacke
143-19	medium grey (greenish) -- much of sample ground to beige (oxidized) to off-white clay	competent chips are schistose and strongly sheared	0.1-0.2 (not distinct due to strong fabric)	vague sandy texture -- may be due in part to strong shearing	mineralogy not distinct but there appears to be 5-10% quartz sand chlorite - 20% (± light colored sericite)	10-12% Fe/Mg carbonate - pervasive	0.5-1.0% pyrite as disseminated cubes	trace graphite along some foliation planes	Greywacke
144-07	grey to locally greenish	well foliated to schistose - fabric appears to wrap around clasts; some of foliation planes display slickensides; sample is locally brecciated - most obvious near the 5%	matrix <0.1 clasts >1 cm	sample composed of 80% (int. volcanics, chert) in a fine sandy to silty matrix	matrix - undifferentiated due to fine grain size clasts intermediate volcanics - 60% chert - 20%	6% Fe/Mg carbonate - in veinlets, along fractures and concentrated in some clasts (1% in veinlets;	5% pyrite - in or near chert clasts and veinlets and near foliation planes -- occurs as fine to coarse disseminations	trace Fuchsite	Conglomerate
		quartz-carbonate veinlets; rare muddy partings			8-10% grey chlorite and 2-3% yellow sericite(?) -- generally along foliation planes	2% in fractures; 2-3% disseminated in chips (+ matrix?)	(secondary); local semi-massive concentrations near veinlets		
145-15	light to medium grey -- 5-10% is oxidized beige brown	schistose -- numerous sericitic/chloritic slip planes - sheared strongly	<0.1-0.2 (not distinct)	vaguely sandy texture almost wholly disrupted by shearing and alteration (sericite, andalusite, carbonate)	groundmass mineralogy not determinable quartz - 5% chlorite - 5-7 sericite - ~~15~~-25% (grey-white -- may include some chlorite)	20(+)% Fe/Mg carbonate - pervasive	nil	andalusite? (sericitized) - 5%; grey, equant metacrysts to 0.5mm; soft, so may be sericitized	Greywacke

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
146-05	light to medium grey -- slightly greenish	schistose and sheared; 40-50% qz-carb flooding/veining grading into host sediment; <10% beige white, sheared sericitic-chloritic siltstone(?) bands	0.1 to 0.4	host is sandy and bleached but texture is still visible even with the massive replacement and veining by qz-carb	greywacke - undifferentiated plag & lithics - 30% quartz - 10% chlorite - 10% (grey) sericite - 5% (yellow beige)	<10% calcite; 20% Fe/Mg carbonate -- ranges from 3-5% in least altered greywacke chips to 75% in some vein chips	5% pyrite - disseminated to semi-massive, generally in or marginal to veins and shear planes		Greywacke -veined-
147-02	medium to dark grey	well foliated to sub-fissile -- a few foliation planes display slickensides; possible bedding defined by color variations (med. & dark grey) which appear to represent slight variations in grain size	maximum of 0.05	silty	unable to differentiate groundmass mineralogy chlorite - 15%	5-7% Fe Mg carbonate - disseminated but probably introduced along foliation planes	trace pyrite - disseminated		Siltstone
148-03	medium grey to locally black	well foliated -- local shearing - not distinct due to coarse grain size; finely brecciated → fractured	matrix 0.1-0.3(?) clasts to 1.0mm (may be up to 2mm)	coarse sandy to pebbly; sandy matrix enclosing coarse sand/granule to pebble size clasts -- size and grain outlines not distinct due to pervasive alteration; clasts mostly intermediate	matrix undifferentiated plag. & lithics - quartz - 5% chlorite ± sericite } - 10% - 60-80% clasts of which 10% are	25% Fe/Mg carbonate - pervasive but appears to be slightly less common in intermediate volcanic clasts	nil	trace Fuchsite	Conglomerate
				volcanics and 10% black siltstone and possibly a few cherty pebbles	siltstone, <2% are chert and remainder are intermediate volcanic lithics				
149-06	beige (oxidized) to grey-beige	strongly schistose and sheared; 10-15% grey to white qz-carb veinlets -- veinlets are often most oxidized portions of sample suggesting the presence of Fe carbonate	0.1?? (indistinct)	vague crystalline to sugary texture; sample is hard, possibly silicified (sugary) due to veining	groundmass mineralogy not determinable chlorite - 5% 10-15% yellow (oxidized) chlorite ± sericite	6% Fe/Mg carbonate -- 4% in veinlets and 2% disseminated	0.1% pyrite - disseminated		Basalt

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
150-08	light grey (bleached) - local beige oxidation	well foliated to schistose -- probably partially re-sealed by alteration (silicification) -- suggests initially sheared; 3-5% distinct quartz veinlets	0.1	vague relict sandy texture but secondary alteration obscures much of texture	undifferentiated due to alteration - sample is hard & silicified chlorite - 1% sericite - 3%	< 1% Fe/Mg carbonate - as stringers (with quartz) and disseminations	nil		Greywacke (silicified)
151-03	medium to light grey - weakly bleached -	well foliated -- locally well sheared -- extensively fractured and shear brecciated, outlined by dark chloritic partings that resemble mud partings	0.1-0.2	vague equigranular and interlocking volcanic texture extensively disrupted by shearing; growth of carbonate (crystals ?) gives a pseudo-sandy texture	groundmass mineralogy not distinct quartz - < 2 chlorite - 20% sericite 5% (± grey chlorite)	8% calcite - disseminated and along fracture/foliation planes; 6% FeMg carbonate - pervasive	6-8% pyrite - disseminated to semi-massive concentrations along fractures & as stringers		Basalt
152-03	light to dark grey - black parts are bleached	schistose; both sandy & silty phases - bedding - Much of sample ground to clay when drilling	0.05 to 0.2 (local coarser grains)	90% dark to light grey sandy greywacke - primary to white (bleached) but relict texture distinct; 10% schistose to fissile siltstone; light color due to alteration to sericite	greywacke:- - undifferentiated plag. and lithics quartz - 10-15% chlorite - 5-10% sericite - 10-15% - siltstone composition assumed to be similar	5% Fe/Mg carbonate as disseminations and small crystals (to 0.8 mm) -- in both primary and altered chips	0.1% pyrite - disseminated in least altered (dark colored) chips		Greywacke + Siltstone
				and/or clay minerals (kaolin??)					
153-01	medium grey-green; 10% is oxidized beige brown	well foliated -- well sheared (sheared portions are typically oxidized); 3% calcite ± quartz veinlets	~0.1	equigranular and interlocking volcanic texture with ~10% chloritized pyroxene needles to 1.0 mm. scattered (2-3%) calcite infilled amygdules to 0.5 mm	saussuritized plagioclase - 50-55% chlorite - 20% pyroxene (chloritized) - 10-12%	12% calcite - pervasive -- particularly in unoxidized chips	nil		Basalt

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
154-10	a) dark grey to b) black	a) schistose to sub-fissile; Much of sample ground to clay when drilling – sheared ??	a) 0.15-0.3 b) 0.05	a) sandy – 60% of chips b) silty – 40% of chips	a) undifferentiated plag and lithics quartz – 10% chlorite – 12-15 b) undifferentiated plag, lithics, quartz chlorite – 30%	5-7% Fe/Mg carbonate – disseminated (75% in greywacke and 25% in siltstone)	<0.1% pyrite disseminated in greywacke	siltstone is locally weakly graphitic	Greywacke and Siltstone
155-09	medium to dark green – 5% is oxidized beige-brown	well foliated; 10% quartz-calcite veinlets; a few slip planes	0.15-0.2 (may be finer)	equigranular and interlocking; fairly coarse grain size results from measurement on crystalline alteration carbonate	plagioclase (saussuritized) – 45% chlorite and chloritized pyroxene – 40%	10-12% calcite – 50:50 as disseminations and in veinlets	0.2% pyrite – local concentrations	0.2% magnetite – disseminated	Basalt
156-11	a) light to b) dark grey 5% is oxidized beige brown	a) well foliated b) well foliated	a) 0.15-1.0 b) <0.1	a) sandy -- light color precludes differentiation of plag, lithics b) silty	a) undifferentiated plag. and lithics – 80% quartz – ~10% chlorite – 5% b) undifferentiated groundmass with ~25% chlorite	1% calcite – disseminated 1-2% Fe/Mg carbonate – disseminated	1% pyrite – semi massive (bands?) in siltstone		a) Greywacke b) Siltstone
157-17	light greenish grey – bleached; ~10% is oxidized beige	moderately well foliated with minor strongly schistose to sheared chips; 15% of sample is micro-brecciated (due to fracturing?) -- these areas are off-white and harder and may be silicified	0.05-0.1	equigranular and interlocking	light color, bleaching makes mineralogy indistinguishable chlorite – 10% (?)	4% calcite disseminated	0.3% pyrite – disseminated		Andesite
158-03	light grey	well foliated – a few schistose chips; a few thin beds of black siltstone (< 0.5 mm thick)	0.15-0.5	sandy	plag + lithics (undifferentiated) – mud/siltstone – 2% quartz – 10% chlorite – 5% sericite – 5%	5% Fe/Mg carbonate – disseminated and along foliation/fracture planes	<0.1% pyrite – disseminated		Greywacke

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
159-23	brass yellow	massive sulfides with schistose sedimentary chips; no obvious banding in sulfides although colloform pyrite is noted and possibly some cherty sulfide "bands"	—	80% massive to crystalline pyrite; 12% quartz veinlets; 5-8% grey schistose (chloritic/sericitic) silt/mudstone; sulfides rarely are colloform	—	nil - a trace amount is present in some sedimentary chips but these may be contamination	80% - massive to crystalline		Sulfide Iron Formation
160-06	dark grey - slightly greenish	schistose to fissile; faint banding on the order of 0.2 mm thick parallel to foliation; 12% quartz-carb veinlets along fractures and parallel to foliation (indistinct)	<0.05	silty	too fine grained to determine composition chlorite - 20%	10% Fe/Mg carbonate - predominantly (80%) in veinlets	0.5% pyrite - disseminated cubes		Siltstone
161-05	dark grey; 15% oxidized beige brown	strongly schistose and sheared; locally crenulated; oxidized chips may partially represent Fe-carb/rich veinlets	~0.05 (not distinct due to strong fabric/chlorite development)	silty to very finely sandy	too fine grained to determine groundmass composition chlorite - 25% (light grey - may include some sericite)	2% calcite in oxidized chips; 6% Fe/Mg carbonate in oxidized chips and 2% Fe/Mg carbonate as disseminations	0.5% disseminated pyrite cubes carb. in oxidized chips suggests they represent Fe/Mg carb. rich veinlets	possible trace graphite	Siltstone/Wacke
162-02	light greenish grey - 5% is oxidized brown	schistose; sheared; 7-10% distinct to indistinct quartz ± carbonate veinlets (light grey) - grade into host and may result in bleaching of host	0.1-0.3	vague sandy texture but overprinted by strong fabric (grains stretched 3:1), alteration (sericite), 2 bleaching	plag. and lithics cannot be differentiated quartz - 5% (minimum) chlorite - <5% sericite - 12-15% (light grey)	6-8% Fe/Mg carbonate -- equal proportions in veinlets and disseminated in host	2-3% pyrite - most occurs as local ~~crystalline~~ concentrations in or marginal to veinlets; minor disseminated cubes		Greywacke
163-19	med. greenish grey to white (veining)	well foliated; local sheared chips; 40% white vein quartz	matrix <0.1 mm phenocrysts 0.4-1.5 mm	equigranular and interlocking volcanic matrix, enclosing 50% subhedral plagioclase phenocrysts	plag (matrix) - ?? plag (phenos) - 50% chlorite - 10-12% pyroxene (matrix) - ??	2% calcite - disseminated in host	nil	3% tourmaline - black needles in masses along veinlet margins	Porphyritic Andesite (veined)

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
164-16	medium grey	well foliated; 5% black silty partings MUCH OF SAMPLE GROUND TO GREY CLAY	0.1-0.2	sandy	plag. and lithics not differentiable chlorite - 10% (or less) quartz - 5-10%	15-20% Fe/Mg carbonate - pervasive	trace pyrite - disseminated		Greywacke
165-10	medium green	moderately well foliated; micro-fractured	aphanitic	equigranular, interlocking	too fine to differentiate plag and mafics (pyroxene and chlorite) except for 10-15% visible chlorite	7% calcite - disseminated and along microfractures -- locally causes weak bleaching of rock	nil	0.2% leucoxene	Andesite
166-02	dark grey to black	moderately well foliated	<0.05	texture not apparent due to fine grain size but appears generally to be microcrystalline; clear carbonate metacrysts (to 0.2mm) give faint sandy appearance prior to etching with acid	undifferentiated matrix mineralogy due to fine grain size	20% Fe/Mg carbonate -- very poorly reactive; occurs as disseminated crystals	0.5% pyrite - fine to coarse disseminations and local concentrations		Basalt
167-13	medium grey	highly schistose and sheared; 12% quartz-carbonate veinlets	0.2-0.3	fairly coarse with a vague crystalline volcanic texture but strong fabric obscures much of diagnostic texture	indistinct -- appears to contain ~40% chlorite but much is pale and not readily apparent	15-20% Fe/Mg carbonate :- 5-7% in veinlets and remainder is disseminated (probably along foliation planes)	0.2% pyrite - fine to coarse disseminations	0.2% specular hematite - occurs marginal to or near veinlets -- speckled with 1% leucoxene of 0.1-0.2mm	Basalt.
168-10	medium - dark grey to grey beige (beige color due to carbonate alteration)	well foliated - minor very fine black silty material -- not partings or beds -- may be large sand grains (>0.5mm) or represent broken (brecciated) silty partings; 2-4% white to dark grey qz-carb. veinlets	0.1-0.3 (minor grains > 0.5mm)	vague sandy texture (visible quartz sand) but texture is largely masked by intense carbonate alteration	groundmass lithology mineralogy not distinct but sample does contain 5-15% quartz sand; chlorite 10%	25% Fe/Mg carbonate - pervasive, particularly in in beige colored chips; 1% local calcite	1% pyrite - fine to coarse disseminations		Greywacke

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
169-08	medium grey	fissile; bedded -- thin (0.1-0.5mm) muddy partings; 5-7% light grey qz-carbonate veinlets, or altered siltstone bands -- not distinct from remainder of sample so % may not be accurate	<0.05	silty; fissility indicates sedimentary rock	too fine grained to accurately determine; chlorite - 20%	10% FeMg carbonate -- in veinlets or altered bands	0.3% disseminated pyrite - in veinlets or altered bands		Siltstone
170-03	beige to light greyish green; some chips have rusty vugs - altered FeMg carb metacrysts	well foliated; sand grains elongated in plane of foliation	0.15-2mm - minor number of grains in excess of 5mm	sandy; unsorted; grains appear to be mostly intermediate volcanics	lithics - 60% } 90's plag - 10% } [illegible] quartz - 5 (-10%) siltstone - 2% chert - 1% chlorite - 5-10%	10% Fe Mg carbonate - fine to coarse (metacrysts) disseminations; 1-2% calcite - disseminated	0.5-1% pyrite - fine to coarse cubic disseminations		Greywacke
171-14	a) dark grey (90% of sample) b) greenish-grey (10% of sample)	a) fissile b) schistose - 2-3% quartz-carb veinlets	a) <0.05 b) 0.1-0.2	a) silty b) sandy	a) too fine to differentiate constituents chlorite - 20-25% b) undifferentiated plag. and lithics; quartz - 5-10% chlorite - 5%	3% Fe/Mg carbonate - in or marginal to veinlets; 8% very poorly reactive FeMg carbonate as disseminations	0.1% pyrite - finely disseminated		a) Siltstone b) Greywacke
172-02	dark grey to black	well foliated to sub-fissile	<0.05	silty	too fine grained to determine groundmass mineralogy; chlorite - 25%	5% Fe/Mg carbonate - disseminated	0.2% pyrite - disseminated to local cubic concentrations that appear to occur in specific bands (with chert ?);	bands are <0.5 mm thick and are not common	Siltstone
173-03	light to medium greenish grey	poorly foliated; ~30% hard, light greyish green, hard, cherty or silicified patches (or beds ?)	0.05-0.15	some of darker (medium grey) chips appear to possess a faint sandy texture; this is not distinct and texture could be equigranular and interlocking	too fine grained to determine groundmass mineralogy chlorite - 10%	1% calcite - stringers and disseminations; 1% Fe/Mg carbonate -- disseminated	0.5% pyrite -- disseminated in cherty patches		Greywacke

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
173-04	light grey-bleached	indistinct foliation	0.1-0.2 (indistinct)	vague sandy texture - bleaching obscures grain outlines; may be weakly silicified	composition not discernible chlorite -1% sericite - 1-2%	6-8% calcite - disseminated	0.3-0.5% pyrite - disseminated		Greywacke
174-14	black	well foliated with a few slip planes; 15% white coarsely crystalline calcite ± quartz veins	0.05-0.15 (indistinct due to dark color)	appears to have an equigranular, interlocking microcrystalline texture with indistinct plag(?) microlites to 0.15mm -- texture, however, is not distinct	plag - 35% mafics chlorite - 25% pyroxene - 20% (chloritized)	5% calcite - disseminated in host; 90% of veinlets are coarsely crystalline calcite (14%)	trace pyrite - disseminated		Basalt
175-02	dark green	well foliated - 2% calcite veinlets	~0.1	equigranular and interlocking	plagioclase - 40-45% (saussuritized) chlorite - 45%	12% calcite - 2-4 as veinlets and stringers and remainder as disseminations	nil		Basalt
176-03	beige (bleached)	well foliated to weakly sheared. 7% white calcite-quartz veinlets -- weak brecciation at veinlet margins	0.05	equigranular and interlocking texture largely overprinted by carbonate alteration; 15% light green euhedral lath shaped pyroxene phenocrysts	plagioclase - ? chlorite - 5% pyroxene - 15% (phenocrysts)	5% calcite in veinlets; 15-20% disseminated (pervasive) calcite	0.5% pyrite - marginal to veinlets		Basalt
177-03	medium to dark green-beige alteration discoloration along fabric	strongly foliated to moderately well sheared -- fabric results in a fine dismemberment of sample; 2% calcite veinlets	0.1-0.2 - may partially be measuring dismembered chips not individual grains	equigranular and interlocking volcanic texture with 12% amygdules to 1.0mm variably infilled with calcite and chlorite;	plag (saussuritized) - 50% chlorite - 25% sericite - 5% (or bleached chlorite)	15% calcite - 2% in veinlets, 5-7% in amygdules, 7% disseminated	0.1% pyrite - disseminated		Basalt

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
178-12	dark grey	schistose to well foliated; bedded -- thin (1.0 mm or less) muddy partings, thicker (5 mm) cherty partings, and thin sulfide (to 0.2 mm) beds; 5% quartz-carbonate veinlets which imparts a local marginal brecciation	<0.05	very fine sugary bedded chert, mudstone partings (silicified), sulfide beds and chert pyrite beds; 15-20% green to black, glassy, pyroxene like mineral that is concentrated in layers parallel to bedding but the crystals cross-cut foliation	chert - 65-70(?) chloritoid - 12-15% - chloritoid	8% Fe Mg carbonate - 3% in veinlets and remainder is disseminated -- mostly in cherty bands	5% pyrite - massive to semi-massive beds (75%) and with chert in same beds (25%)		Iron Formation -chert-chloritoid-pyrite-
179-18	grey to beige (oxidized) - bleached -	generally massive but distinctly micro-fractured -- calcite-silica introduced along fractures; 5% quartz-calcite veinlets	aphanitic	microcrystalline; sample is bleached, altered -- silicified(?) and carbonatized along microfractures	mineralogy not distinct; no visible chlorite	10% calcite - in veinlets and along micro-fractures	0.5% pyrite - disseminated in or marginal to veinlets	0.5% tourmaline - needles in veinlets	Basalt
180-16	grey (25%); beige brown - oxidized (75%) (oxidation is spotty, suggesting oxidation of carbonate)	schistose due to strong shearing; 7% quartz-carbonate veinlets	0.1-0.3 (indistinct)	grey chips display a vague sandy texture but this is largely overprinted by strong fabric, chlorite development; sandy texture apparent from ~5% quartz grains	grey chips contain ~5% qz, 20% grey chlorite and undifferentiated plag and lithics; oxidized chips contain oxidized chlorite (20%) but remaining minerals not distinct	~7% calcite - most (80%) in oxidized spots; 2-3% Fe Mg carbonate -- in oxidized spots & disseminated in grey chips	nil		Greywacke
181-11	medium to dark green	poorly foliated; 2-4% indistinct calcite veinlets	0.05-0.1	equigranular and interlocking	plag - 45% chlorite - 25% chloritized pyroxene - 15%	8-10% calcite - veinlets and as disseminations	2% pyrite - minor amounts as disseminations but most as local crystalline concentrations along fractures		Basalt
182-05	light to medium green -- white veining; color gradational from white veins to medium green least altered host	well foliated; 10% distinct quartz-calcite veinlets -- vein material grades into host and bleaches host so proportions may be low	0.05-0.1	equigranular and interlocking; bleached and altered -- carbonate and possibly silica addition; to 30% indistinct plag. phenocrysts of 1-4 mm	plag - ?? chlorite - 15% (total) - alteration makes determination of mineralogy impossible	10% calcite - 3% in veinlets and remaining 7% is disseminated	trace pyrite - disseminated		Andesite (porphyritic)

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
183-04	beige to grey beige (bleached)	well foliated -- scattered shear planes; 2-3% veinlet carbonate-quartz	0.1-0.2	equigranular and interlocking microcrystalline texture. bleached and altered so mineralogy not obvious	unable to differentiate groundmass mineralogy accurately -- appears to be 50:50 plag. versus bleached mafics	6-7% calcite - in veinlets and stringers (2%) and disseminated (3-5%)	0.1% pyrite - disseminated		Basalt
184-02	medium to dark green	well foliated; 3% calcite veinlets	0.1-0.2	equigranular interlocking texture with indistinct pyroxene microlites; 1-2% calcite infilled amygdules to 0.8mm	plag - 40% chlorite - 15% chloritized pyroxene - 25%	10% calcite - as veinlets, in amygdules and as disseminations	7% pyrite - concentrated in some chips as very fine disseminations to semi-massive patches - the distribution may	be related to veining or fractures but the reason is not obvious	Basalt
185-04	pinkish grey;	well foliated but foliation is not distinct in many chips; 5% calcite ± quartz veinlets	~0.1mm	variable indistinct sandy texture largely masked by pervasive carbonatization; contains ~10% visible quartz and other grains are selectively stained pink by calcite	indistinct but appears to be composed of 30-40% pink stained lithics, 40% grey feldspar, 5-10% quartz	20% calcite - in veinlets (5%) and as disseminations	nil		Greywacke
186-10	beige-grey (bleached) to dark grey (veining); 5% of chips are oxidized brown	well foliated with common highly schistose (sheared) chips; 7% white to dark grey carbonate + quartz ± chlorite veinlets and stringers -- locally contains small rock fragments - brecciation at veinlet margins	aphanitic to 0.05	assumed to be equigranular and interlocking with rare calcite ± sulfide infilled amygdules	too fine to determine groundmass mineralogy chlorite - <5% (visible)	5% calcite in veinlets and stringers; 7% Fe/Mg carbonate in stringers and as disseminations	0.3% pyrite - disseminated and near veinlet margins		Basalt
187-04	beige-grey (bleached); 5% brown oxidized chips	schistose and sheared; 20-30% pervasive grey carbonate + quartz veinlets & stringers - % may be questionable as veins grade into host and have resulted in strong bleaching and carbonate alteration of host	0.05-0.1 (indistinct)	texture overprinted by bleaching and carbonate alteration but relict equigranular and interlocking volcanic texture is locally observed as are a few pyroxene microlites	too fine and altered to determine groundmass mineralogy <5% chlorite (generally seen along foliation planes)	5% calcite in veinlets; 15-20% moderately reactive Fe/Mg carbonate (~5-7% in veins and remainder is disseminated)	0.1-0.2% pyrite - disseminated		Basalt

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
188-12	medium beige-green (bleached)	schistose - some slip planes present; 7% grey to white quartz-calcite veinlets	0.05	equigranular and interlocking texture with 5% calcite-quartz (± chlorite) infilled amygdules from 0.3-2.0 mm	too fine and bleached to determine groundmass mineralogy chlorite - 20% (bleached ?)	5% calcite in veinlets and amygdules; 7-9% Fe/Mg carbonate (total) disseminated and 2-3% in veinlets	0.2% pyrite in veinlets		Basalt
189-02	90% of sample is brown (oxidized-limonitized); 5% white veining and 5% beige green volcanic	schistose due to very strong shearing; 10% white to grey quartz-carbonate veining	0.05	texture of least sheared and oxidized chips appears to be microcrystalline but is still not distinct due to strong fabric	other than ~30% oxidized-bleached chlorite (± sericite), groundmass mineralogy cannot be determined	3-5% calcite in veinlets; 9-11% Fe/Mg carbonate (moderately reactive - may include calcite) as disseminations in all chips	trace pyrite in veinlets	10-20% limonite - may partially represent oxidized Fe-carbonate	Basalt shear axis
190-01	60-70% is brown (oxidized, limonitized); 30-40% is light greenish grey (bleached)	schistose -- well sheared; shearing most apparent in oxidized chips; microfractured; 2% distinct quartz-carbonate veinlets	aphanitic	unoxidized chips are assumed to be micro-crystalline, and they contain 10% medium to light green glass infilled amygdules to 0.8 mm	mineralogy not determinable in oxidized or unoxidized chips chlorite - 5% visible	12% moderately reactive Fe/Mg carbonate -- 75% in unoxidized chips; Fe Mg carbonate probably includes 2-3% calcite but the two cannot be differentiated	nil	15% limonite - carbonate not present in oxidized chip to a great extent suggesting limonite results from oxidation of carbonate	Basalt
191-06	beige, bleached (host) to white (veining)	schistose due to strong shearing; 30-40% distinct carbonate-quartz-sulfide veins; veins appear to parallel foliation	<0.05 (host)	indistinct texture due to strong shearing, bleaching and alteration but host does appear microcrystalline	sample (host) contains 25-30% beige (bleached?) chlorite and/or sericite but remaining mineralogy cannot be determined	25-30% Fe Mg carbonate - 20% in veinlets and remainder is disseminated in host	9% pyrite in veins; 3% arsenopyrite in veins; sulfides occur as crystalline to semi-massive	concentrations in veins	Basalt
192-02	medium to dark green	well foliated but not schistose; 7-10% calcite ± quartz veinlets (white to greenish) -- veinlets are distinct to gradational with host; random calcite microfractures; veinlets locally enclose rock fragments - weak brecciation	0.05	equigranular and interlocking micro-crystalline texture with 1-2% randomly oriented pyx. or plag. microlites to 0.2 mm	saussuritized plagioclase - 45% chlorite and chloritized pyroxene - 40%	15% calcite - 75% in veinlets and 25% as disseminations	0.2% pyrite as disseminations in host and veinlets		Basalt

SAMPLE NUMBER	COLOUR	STRUCTURE	GRAIN SIZE (mm)	TEXTURE	MINERALOGY				NAME
					Silicates	Carbonates	Sulphides	Other	
193-01	dark green	moderately well foliated; 3% distinct white calcite ± quartz veinlets and 3% light green carbonatized veinlet margins; 1% oxidized carbonate spots	0.05	equigranular and interlocking micro-crystalline texture; scattered (<1%) calcite infilled amygdules to 1.0mm	saussuritized plagioclase - 45% chlorite - 20% chloritized pyroxene - 20%	12-15% calcite - 8% in veinlets and veinlet margins and remainder is disseminated	0.2% pyrite - disseminated and local concentrations		Basalt
194-07	beige (bleached)	well foliated to poorly schistose - slip/shear planes present; sample is probably well sheared but this is not obvious due to bleaching and alteration; 15% white quartz-carbonate veinlets	aphanitic to 0.05; pyx. phenos to 0.5	texture not distinct but the sample is porphyritic with ~10% light green pyroxene phenocrysts and microlites to 0.5mm	pyroxene - 10% no visible chlorite but foliation planes are finely micaceous and this may be bleached chlorite or sericite	3-5% calcite in veinlets; 25% Fe/Mg carbonate - pervasive	trace pyrite - disseminated		Basalt
195-01	beige, very slightly greenish (bleached); 3-5% oxidized chips	well foliated and locally schistose - fabric better in least altered chips suggesting alteration results in a sealing of the fabric; 5% quartz-carbonate veinlets and micro stringers resulting in a weak brecciation of sample	0.05	microcrystalline -- microlites observable on etching with acid (<10% plag or pyx.)	fine grain size & alteration obscures mineralogy; 15% beige (bleached) chlorite or sericite	25-30% Fe/Mg carbonate in veinlets and as a pervasive alteration throughout the sample	2% pyrite - crystalline disseminations in chips that display effects of veining; 0.5-1% arsenopyrite	occurring in same manner as pyrite	Basalt
196-02	beige (bleached); 5% oxidized chips	well foliated -- no obvious shearing; 2-4% quartz-carbonate veining but entire sample is carbonatized	0.05-0.1	equigranular and interlocking micro-crystalline texture observable on etching with acid	mineralogy not determinable but 5% white sericite is present and 10% beige (bleached) chlorite or sericite	20-25% Fe/Mg carbonate - pervasive	0.1% pyrite - disseminated		Basalt
197-03	beige, slightly greenish (bleached); 5-10% brown oxidized chips	well foliated -- no obvious shearing; 2-3% quartz-carbonate veinlets but entire sample is strongly carbonatized	0.1-0.15	relict equigranular and interlocking texture visible on etching with acid	plag (relict) - 35% pyx (relict) - 35% chlorite - 2%	20% Fe/Mg carbonate - pervasive	<0.1% pyrite - disseminated		Basalt

APPENDIX E

BONDAR-CLEGG BEDROCK ANALYSES

Bondar-Clegg & Company Ltd.
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Geochemical Lab Report

REPORT: 089-50132.0

PROJECT: CASA BERARDI   PAGE 1A

SAMPLE NUMBER	ELEMENT UNITS	SiO2 PCT	TiO2 PCT	Al2O3 PCT	Fe2O3* PCT	MnO PCT	MgO PCT	CaO PCT	Na2O PCT	K2O PCT	P2O5 PCT	LOI PCT
CB89-01-03		48.80	1.12	12.20	13.10	0.22	7.05	9.30	3.32	0.12	0.16	4.10
CB89-02-08		46.00	0.17	13.00	12.20	0.27	6.66	11.10	1.00	0.05	0.16	10.71
CB89-03-06		48.50	0.08	11.40	9.19	0.16	4.62	9.07	0.82	1.02	0.16	14.17
CB89-04-03		39.30	0.21	12.40	18.50	0.61	3.65	11.80	0.77	0.29	0.15	12.57
CB89-05-03		58.10	0.19	13.20	12.20	0.18	2.52	3.74	2.92	1.35	0.12	5.66
CB89-06-03		52.50	0.09	14.10	7.33	0.25	1.78	9.12	3.23	1.24	0.21	8.85
CB89-07-02		44.30	0.10	15.60	9.29	0.16	10.30	8.68	1.28	0.42	0.12	10.79
CB89-08-02A		50.80	0.20	14.20	12.10	0.33	1.33	9.09	1.65	0.72	0.15	10.44
CB89-08-02B		41.70	0.20	13.10	14.30	0.41	2.40	12.60	1.15	0.50	0.20	14.54
CB89-09-01		49.60	0.19	14.70	7.27	0.14	3.34	8.34	0.47	3.93	0.14	13.11
CB89-10-02		49.50	0.11	13.80	10.20	0.36	2.57	8.56	3.13	0.47	0.18	11.35
CB89-11-03		37.60	0.40	5.79	15.10	0.27	23.10	5.32	0.06	0.09	0.18	13.32
CB89-12A-07		46.30	0.18	13.90	12.20	0.38	2.97	11.40	1.49	1.06	0.17	10.96
CB89-13-03		39.30	0.59	7.07	16.40	0.22	20.70	4.61	0.17	0.10	0.18	10.99
CB89-14-04		55.20	0.20	15.60	8.02	0.14	3.16	6.25	3.26	1.14	0.15	7.14
CB89-15-19		58.80	0.68	13.70	9.63	0.20	3.79	4.12	2.07	1.16	0.06	5.08
CB89-16-04		50.10	0.14	13.40	10.60	0.40	3.66	8.06	2.53	0.76	0.21	10.00
CB89-17-03		46.20	0.06	10.40	9.40	0.19	5.40	10.30	1.26	0.60	0.18	16.27
CB89-17-04		46.90	0.09	8.55	8.27	0.19	5.93	11.20	1.13	0.53	0.13	17.91
CB89-18-02		51.40	0.13	12.80	10.70	0.35	3.27	9.21	2.90	0.40	0.15	9.26
CB89-19-06		67.20	0.24	13.20	3.55	0.11	1.41	3.50	1.85	2.63	0.18	6.33
CB89-20-13		61.00	0.12	14.20	9.94	0.10	6.72	0.42	0.59	0.79	0.13	4.70
CB89-21-02		58.50	0.06	12.60	6.73	0.17	2.48	6.86	1.80	0.93	0.15	10.44
CB89-22-04		50.80	0.10	13.70	7.82	0.17	5.96	8.31	2.64	1.15	0.18	9.64
CB89-23-02		52.60	0.13	14.30	10.00	0.17	2.76	6.92	3.42	1.57	0.16	9.26
CB89-24-06		60.90	0.07	14.30	8.19	0.11	2.35	2.73	3.91	1.34	0.13	4.71

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PROJECT: CASA BERARDI PAGE 1B

SAMPLE NUMBER	ELEMENT UNITS	Total PCT	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB
CB89-01-03		99.49	81	54	<0.1	<2	16
CB89-02-08		101.32	65	50	<0.1	4	12
CB89-03-06		99.18	87	83	<0.1	178	13
CB89-04-03		100.24	59	85	<0.1	39	<5
CB89-05-03		100.18	49	98	<0.1	5	18
CB89-06-03		98.70	51	56	<0.1	3	<5
CB89-07-02		100.54	23	27	<0.1	7	11
CB89-08-02A		101.00	60	91	<0.1	4	14
CB89-08-02B		101.10	60	102	<0.1	4	19
CB89-09-01		101.23	69	66	<0.1	74	30
CB89-10-02		100.23	68	73	<0.1	70	6
CB89-11-03		101.18	26	14	<0.1	21	7
CB89-12A-07		101.01	57	97	<0.1	4	12
CB89-13-03		100.33	32	23	<0.1	4	12
CB89-14-04		100.25	50	99	<0.1	2	7
CB89-15-19		99.29	47	66	<0.1	60	7
CB89-16-04		99.85	68	85	<0.1	33	14
CB89-17-03		100.26	34	239	<0.1	72	19
CB89-17-04		100.83	28	556	<0.1	74	8
CB89-18-02		100.58	62	68	0.1	5	7
CB89-19-06		100.20	21	42	<0.1	8	14
CB89-20-13		98.70	28	117	<0.1	12	22
CB89-21-02		100.72	17	96	<0.1	41	7
CB89-22-04		100.46	39	74	<0.1	13	5
CB89-23-02		101.30	26	88	<0.1	19	9
CB89-24-06		98.73	31	125	<0.1	6	13

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PROJECT: CASA BERARDI PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	CO2 PCT
CB89-01-03		2.12
CB89-02-08		6.96
CB89-03-06		12.72
CB89-04-03		9.34
CB89-05-03		3.37
CB89-06-03		6.95
CB89-07-02		5.33
CB89-08-02A		6.96
CB89-08-02B		12.43
CB89-09-01		11.31
CB89-10-02		9.29
CB89-11-03		7.94
CB89-12A-07		8.53
CB89-13-03		6.27
CB89-14-04		4.58
CB89-15-19		1.63
CB89-16-04		7.19
CB89-17-03		15.10
CB89-17-04		13.03
CB89-18-02		6.92
CB89-19-06		4.99
CB89-20-13		0.06
CB89-21-02		9.87
CB89-22-04		5.98
CB89-23-02		7.65
CB89-24-06		3.50

BR

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REPORT: 089-50834.1

PROJECT: CASA BERARDI PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	SiO2 PCT	TiO2 PCT	Al2O3 PCT	Fe2O3* PCT	MnO PCT	MgO PCT	CaO PCT	Na2O PCT	K2O PCT	P2O5 PCT	LOI PCT	Total PCT
CB-89-129-21		64.00	0.40	13.90	5.19	0.08	2.87	5.15	3.37	1.33	<0.01	2.16	98.45
CB-89-131-13		62.50	0.07	15.00	5.10	0.12	1.44	3.47	4.24	1.38	<0.01	4.75	98.07
CB-89-133-31		49.10	0.71	13.80	11.80	0.25	7.88	8.07	2.50	0.19	0.02	6.03	100.35
CB-89-135-09		45.20	0.37	12.30	11.10	0.19	4.51	10.30	1.07	0.60	0.17	14.42	100.23
CB-89-137-25		38.00	0.08	11.90	10.10	0.21	7.44	11.00	1.19	0.61	0.12	17.49	98.14
CB-89-139-31		64.70	0.05	16.80	4.48	0.01	0.85	0.59	2.95	2.20	0.19	6.17	98.99
CB-89-141-25		44.30	0.08	12.90	8.17	0.15	5.71	9.62	3.04	0.61	<0.01	14.92	99.50
CB-89-156-11		68.60	0.05	12.80	2.74	0.05	1.14	2.99	4.17	1.59	0.21	4.47	98.80
CB-89-158-03		65.00	0.06	13.90	2.93	0.04	1.25	3.38	3.28	2.25	<0.01	6.06	98.15
CB-89-160-06		55.30	0.06	16.40	6.62	0.08	3.31	2.98	2.62	2.60	0.12	9.60	99.69
CB-89-162-02		58.60	0.08	18.80	6.17	0.26	0.82	3.12	2.72	1.98	0.13	5.55	98.22
CB-89-164-16		63.70	0.19	12.80	4.79	0.05	2.05	3.04	0.27	3.63	0.18	7.70	98.40
CB-89-166-02		49.80	0.05	13.10	12.90	0.21	5.11	9.25	1.27	1.22	0.13	5.74	98.79
CB-89-168-10		52.40	0.04	14.30	6.88	0.09	3.23	2.64	2.34	2.35	0.19	14.92	99.39
CB-89-169-08		54.20	0.06	16.00	6.69	0.13	2.44	5.16	3.28	1.95	0.13	9.51	99.55
CB-89-170-03		55.40	0.07	16.50	6.29	0.07	3.11	1.93	2.70	2.81	0.15	8.43	97.46
CB-89-171-14		56.30	0.06	16.70	6.41	0.07	3.16	1.96	2.74	2.82	0.06	8.69	98.97
CB-89-172-02		66.10	0.07	17.20	4.02	0.05	0.94	2.35	3.77	2.48	<0.01	4.47	101.46
CB-89-173-03		65.20	0.06	15.40	4.84	0.07	2.54	3.34	2.66	1.69	0.23	5.48	101.50
CB-89-173-04		61.00	0.06	15.50	3.41	0.08	1.82	6.30	3.49	1.40	0.12	7.26	100.44
CB-89-174-10		45.70	0.23	14.70	7.29	0.29	3.06	12.10	3.87	1.07	0.04	11.05	99.40
CB-89-175-02		45.40	1.72	12.60	15.60	0.22	4.88	7.39	2.14	0.32	<0.01	7.95	98.23

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PROJECT: CASA BERARDI PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	CO2 PCT
CB-89-129-21		1.06
CB-89-131-13		3.96
CB-89-133-31		2.67
CB-89-135-09		13.22
CB-89-137-25		15.34
CB-89-139-31		0.09
CB-89-141-25		13.65
CB-89-156-11		0.04
CB-89-158-03		4.41
CB-89-160-06		8.60
CB-89-162-02		6.29
CB-89-164-16		3.84
CB-89-166-02		12.43
CB-89-168-10		9.46
CB-89-169-08		7.15
CB-89-170-03		8.42
CB-89-171-14		8.75
CB-89-172-02		2.81
CB-89-173-03		3.65
CB-89-173-04		5.91
CB-89-174-10		8.97
CB-89-175-02		4.57

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PROJECT: CASA BERARDI PAGE 1A

SAMPLE NUMBER	ELEMENT UNITS	SiO2 PCT	TiO2 PCT	Al2O3 PCT	Fe2O3* PCT	MnO PCT	MgO PCT	CaO PCT	Na2O PCT	K2O PCT	P2O5 PCT	LOI PCT
CB89-25-02-B		48.80	0.07	14.90	9.64	0.24	1.77	9.21	2.04	0.67	0.19	12.60
CB89-26-02-B		42.10	0.12	11.90	9.69	0.32	4.95	11.00	1.82	0.48	<0.01	16.67
CB89-27-04-B		54.10	0.85	17.40	8.45	0.12	3.94	6.49	2.31	1.23	0.28	4.22
CB89-27-05-B		56.80	0.48	18.70	8.32	0.12	3.96	2.43	2.73	1.55	0.13	5.72
CB89-28-02-B		41.00	0.06	12.60	10.00	0.31	4.17	11.80	1.60	0.35	0.10	15.63
CB89-29-01-B		55.50	0.06	13.50	8.38	0.10	4.24	5.09	4.45	0.03	0.13	6.57
CB89-30-09-B		45.00	0.08	12.50	10.70	0.16	6.39	8.48	3.29	0.14	<0.01	11.97
CB89-31-07-B		52.40	0.86	13.70	9.79	0.26	3.70	7.67	2.31	0.58	0.03	6.38
CB89-32-19-B		45.20	0.09	12.40	11.20	0.18	7.68	8.24	1.81	0.22	<0.01	11.77
CB89-33-03-B		50.10	0.09	11.60	10.70	0.15	3.57	8.46	1.41	0.82	0.13	12.85
CB89-34-37A-B		71.40	0.22	12.80	6.03	0.06	1.48	1.48	2.09	2.23	0.07	2.75
CB89-34-37B-B		70.90	0.22	12.00	5.94	0.05	1.26	0.72	1.67	2.22	<0.01	3.03
CB89-36-02-B		54.20	0.11	13.00	8.61	0.14	2.52	7.53	2.06	0.74	0.29	10.28

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PROJECT: CASA BERARDI PAGE 18

SAMPLE NUMBER	ELEMENT UNITS	Total PCT	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB
CB89-25-02-B		100.13	93	98	0.1	40	<5
CB89-26-02-B		99.05	80	53	<0.1	5	<5
CB89-27-04-B		99.40	88	79	<0.1	12	<5
CB89-27-05-B		100.95	91	131	<0.1	11	<5
CB89-28-02-B		97.62	102	60	<0.1	5	<5
CB89-29-01-B		98.10	12	68	<0.1	<2	101
CB89-30-09-B		98.70	108	64	<0.1	4	<5
CB89-31-07-B		97.68	59	71	0.1	3	7
CB89-32-19-B		98.80	85	70	<0.1	19	<5
CB89-33-03-B		99.89	87	72	<0.1	66	5
CB89-34-37A-B		100.62	46	71	<0.1	18	<5
CB89-34-37B-B		98.06	29	74	<0.1	27	27
CB89-36-02-B		99.48	57	73	<0.1	4	195

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PROJECT: CASA BERARDI PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	CO2 PCT
CB89-25-02-B		10.63
CB89-26-02-B		15.41
CB89-27-04-B		1.60
CB89-27-05-B		0.27
CB89-28-02-B		13.19
CB89-29-01-B		4.00
CB89-30-09-B		9.29
CB89-31-07-B		3.91
CB89-32-19-B		8.27
CB89-33-03-B		11.93
CB89-34-37A-B		0.71
CB89-34-37B-B		0.24
CB89-36-02-B		8.63

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REPORT: 089-50203.0

PROJECT: CASA BERARDI PAGE 1A

SAMPLE NUMBER	ELEMENT UNITS	SiO2 PCT	TiO2 PCT	Al2O3 PCT	Fe2O3* PCT	MnO PCT	MgO PCT	CaO PCT	Na2O PCT	K2O PCT	P2O5 PCT	LOI PCT
CB-89-47-06-B		58.90	0.07	15.40	6.56	0.10	2.09	3.33	3.82	1.47	0.05	7.70
CB-89-49-12-B		59.30	0.04	14.70	4.63	0.06	2.76	3.83	2.45	1.73	0.17	8.64
CB-89-50-15-B		57.20	0.18	14.50	5.83	0.15	2.40	5.97	3.27	1.11	0.06	7.79
CB-89-51-05-B		66.60	0.14	15.60	6.09	0.05	1.86	1.43	1.52	0.65	0.18	3.22
CB-89-52-07-B		67.90	0.05	13.60	2.52	0.05	1.08	3.07	2.57	2.53	0.13	5.31
CB-89-53-08-B		56.40	0.03	15.30	6.13	0.08	3.10	3.61	1.47	2.53	0.19	9.91
CB-89-54-17-B		68.50	0.07	14.10	2.41	0.06	0.99	2.10	5.11	1.54	0.14	3.21
CB-89-55-01-B		51.40	0.10	14.90	8.77	0.12	4.82	6.14	4.55	0.10	0.21	6.77
CB-89-56-13-B		65.00	0.08	15.30	3.78	0.07	0.90	2.64	3.43	1.65	0.04	4.15
CB-89-57-09-B		47.80	0.10	15.70	6.55	0.13	3.13	9.33	2.66	0.73	0.05	13.52
CB-89-58-02-B		45.10	0.04	15.00	7.84	0.20	3.98	9.67	2.30	0.72	0.16	14.90

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REPORT: 089-50203.4

PROJECT: CASA BERARDI

SAMPLE NUMBER	ELEMENT UNITS	CO2 PCT
CB-89-47-06-B		7.09
CB-89-49-12-B		6.13
CB-89-50-15-B		7.01
CB-89-51-05-B		1.10
CB-89-52-07-B		4.46
CB-89-53-08-B		8.36
CB-89-54-17-B		2.50
CB-89-55-01-B		4.20
CB-89-56-13-B		3.51
CB-89-57-09-B		12.15
CB-89-58-02-B		13.41

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PROJECT: CASA BERARDI

SAMPLE NUMBER	ELEMENT UNITS	Total PCT	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB
CB-89-47-06-B		99.49	41	95	0.3	28	12
CB-89-49-12-B		98.31	30	80	<0.1	28	6
CB-89-50-15-B		98.46	36	89	<0.1	8	9
CB-89-51-05-B		97.33	28	58	<0.1	37	<5
CB-89-52-07-B		98.81	20	65	<0.1	29	<5
CB-89-53-08-B		98.75	46	99	<0.1	82	13
CB-89-54-17-B		98.23	24	56	<0.1	6	8
CB-89-55-01-B		97.88	37	107	<0.1	4	<5
CB-89-56-13-B		97.04	25	50	<0.1	20	<5
CB-89-57-09-B		99.70	59	56	<0.1	98	<5
CB-89-58-02-B		99.91	56	76	<0.1	50	<5

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PROJECT: CASA BERARDI

SAMPLE NUMBER	ELEMENT UNITS	SiO2 PCT	TiO2 PCT	Al2O3 PCT	Fe2O3* PCT	MnO PCT	MgO PCT	CaO PCT	Na2O PCT	K2O PCT	P2O5 PCT	LOI PCT
CB-89-35-08-B		56.30	0.06	17.30	5.90	0.06	2.59	1.75	3.99	2.88	0.09	7.55
CB-89-37-03-B		58.20	0.06	15.20	4.99	0.07	2.52	3.28	3.03	2.13	<0.01	7.87
CB-89-38-15-B		39.80	0.19	11.40	15.50	0.25	3.33	7.57	1.97	0.78	0.09	16.68
CB-89-39A-08-B		60.80	0.05	13.30	4.37	0.07	2.41	3.57	3.82	1.61	0.05	7.59
CB-89-40-21-B		67.70	0.04	14.90	4.94	0.08	0.74	1.26	2.56	2.31	0.16	4.59
CB-89-40-22-B		66.60	0.08	12.40	4.56	0.09	1.52	3.06	2.05	1.93	0.15	6.26
CB-89-41-02-B		44.70	0.73	14.00	10.70	0.34	4.65	11.50	2.87	0.16	0.16	9.96
CB-89-42-05-B		47.30	0.17	13.20	19.30	0.33	2.39	3.50	1.21	1.51	0.06	8.39
CB-89-43-06-B		57.60	0.05	14.20	7.27	0.14	2.31	4.03	3.54	1.42	0.19	6.56
CB-89-44-02-B		53.00	0.61	15.60	8.17	0.26	3.34	7.58	4.45	0.24	0.20	5.86
CB-89-45-05-B		56.00	0.04	14.60	6.35	0.12	2.52	4.93	3.74	1.41	0.20	8.43
CB-89-46-08-B		64.10	0.06	16.80	4.58	0.06	1.11	1.88	4.00	1.82	0.14	3.05
CB-89-48-18-B		67.30	0.16	13.50	2.95	0.08	1.33	3.33	3.33	1.80	<0.01	5.17
CB-89-60-02-B		47.50	0.08	14.40	11.70	0.35	3.68	8.79	2.02	0.45	0.23	9.73
CB-89-62-02-B		43.20	0.22	13.30	12.20	0.32	3.92	11.50	1.95	0.29	0.10	10.79
CB-89-64-03-B		48.10	0.11	16.40	9.32	0.20	2.61	8.43	2.95	1.38	0.20	9.16
CB-89-66-38-B		67.80	0.16	13.60	4.58	0.05	1.70	2.12	2.15	2.84	<0.01	3.14
CB-89-66-39(+10)-B		65.20	0.19	15.00	4.24	0.05	1.56	2.52	2.89	2.94	0.07	3.63
CB-89-66-39(-10)-B		67.80	0.17	14.40	3.29	0.04	1.11	2.74	3.28	2.22	0.06	2.08
CB-89-68-21-B		64.50	0.04	13.50	4.02	0.06	1.29	4.23	2.96	1.38	0.20	6.51
CB-89-70-11-B		48.50	0.06	15.80	6.81	0.16	4.81	7.90	4.86	0.36	<0.01	8.77

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PROJECT: CASA BERARDI

SAMPLE NUMBER	ELEMENT UNITS	CO_2 PCT
CB-89-35-08-B		5.91
CB-89-37-03-B		6.51
CB-89-38-15-B		16.34
CB-89-39A-08-B		7.13
CB-89-40-21-B		3.03
CB-89-40-22-B		4.67
CB-89-41-02-B		7.33
CB-89-42-05-B		5.76
CB-89-43-06-B		5.36
CB-89-44-02-B		3.65
CB-89-45-05-B		7.30
CB-89-46-08-B		1.18
CB-89-48-18-B		4.18
CB-89-60-02-B		6.76
CB-89-62-02-B		8.15
CB-89-64-03-B		6.55
CB-89-66-38-B		1.68
CB-89-66-39(+10)-B		1.70
CB-89-66-39(-10)-B		1.11
CB-89-68-21-B		5.99
CB-89-70-11-B		5.93

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PROJECT: CASA BERARDI

SAMPLE NUMBER	ELEMENT UNITS	Total PCT	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB
CB-89-35-08-B		98.47	48	78	<0.1	32	<5
CB-89-37-03-B		97.35	34	69	0.1	33	<5
CB-89-38-15-B		97.56	61	151	<0.1	73	<5
CB-89-39A-08-B		97.62	31	62	<0.1	23	<5
CB-89-40-21-B		99.28	29	53	0.4	55	<5
CB-89-40-22-B		98.71	24	44	<0.1	19	<5
CB-89-41-02-B		99.76	89	59	<0.1	5	<5
CB-89-42-05-B		97.36	137	331	<0.1	45	<5
CB-89-43-06-B		97.30	33	88	<0.1	18	12
CB-89-44-02-B		99.31	41	65	0.1	2	<5
CB-89-45-05-B		98.34	37	75	<0.1	16	<5
CB-89-46-08-B		97.60	41	72	<0.1	15	<5
CB-89-48-16-B		98.95	18	60	<0.1	14	<5
CB-89-60-02-B		98.93	54	99	<0.1	2	<5
CB-89-62-02-B		97.79	88	77	<0.1	5	<5
CB-89-64-03-B		98.86	92	91	0.1	10	<5
CB-89-66-38-B		98.14	32	69	0.4	45	<5
CB-89-66-39(+10)-B		98.29	37	71	0.3	107	<5
CB-89-66-39(-10)-B		97.18	22	36	<0.1	24	<5
CB-89-68-21-B		98.69	28	67	<0.1	50	8
CB-89-70-11-B		98.03	91	60	<0.1	4	<5

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REPORT: 089-50337.1

PROJECT: CASA BERARDI PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	SiO2 PCT	TiO2 PCT	Al2O3 PCT	Fe2O3* PCT	MnO PCT	MgO PCT	CaO PCT	Na2O PCT	K2O PCT	P2O5 PCT	LOI PCT	Total PCT
CB89-59-04-B		54.70	0.85	15.90	6.10	0.19	2.95	7.53	2.75	1.42	0.16	6.00	98.55
CB89-61-03-B		55.60	0.99	15.10	5.89	0.11	2.22	7.90	1.06	2.43	0.13	6.19	97.62
CB89-63-11-B		54.70	0.20	14.70	9.96	0.13	2.79	3.67	1.78	2.62	0.15	6.57	97.27
CB89-65-05-B		39.30	0.07	12.70	11.80	0.23	8.94	8.60	1.06	0.26	<0.01	15.47	98.43
CB89-67-13-B		53.40	0.56	12.80	6.02	0.14	3.17	6.84	1.49	1.97	0.16	11.26	97.81
CB89-84-34-B		63.20	0.25	6.51	15.70	0.16	1.31	1.72	1.09	1.01	0.15	6.23	97.33
CB89-86-11-B		69.10	0.12	12.30	4.21	0.07	1.14	2.34	3.63	1.37	0.12	3.20	97.60
CB89-88-05-B		61.10	0.51	13.50	5.65	0.11	1.10	3.58	1.91	1.25	0.06	8.24	97.01
CB89-90-12-B		60.80	0.20	13.70	5.03	0.08	2.47	3.99	2.53	2.31	0.12	6.49	97.72
CB89-92-09-B		69.50	0.38	12.80	3.56	0.16	1.10	2.35	3.30	1.49	<0.01	4.21	98.85
CB89-94-34-B		76.20	0.26	12.40	2.17	0.02	0.67	0.42	3.06	1.72	0.08	1.85	98.85

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB
CB89-R29-01-B						15
CB89-R34-37-B						8
CB89-R36-02-B						<5
CB89-59-04-B		63	63	<0.1	7	<5
CB89-61-03-B		38	81	<0.1	8	16
CB89-63-11-B		52	77	<0.1	25	9
CB89-65-05-B		80	62	<0.1	9	<5
CB89-67-13-B		61	61	<0.1	152	19
CB89-84-34-B		42	47	<0.1	61	39
CB89-86-11-B		20	70	0.1	9	6
CB89-88-05-B		36	86	<0.1	37	12
CB89-90-12-B		33	60	<0.1	18	6
CB89-92-09-B		31	62	0.1	14	<5
CB89-94-34-B		18	104	<0.1	7	<5

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SAMPLE NUMBER	ELEMENT UNITS	CO2 PCT
CB89-59-04-B		3.90
CB89-61-03-B		4.21
CB89-63-11-B		4.95
CB89-65-05-B		12.68
CB89-67-13-B		10.39
CB89-84-34-B		3.58
CB89-86-11-B		2.37
CB89-88-05-B		6.75
CB89-90-12-B		4.96
CB89-92-09-B		3.44
CB89-94-34-B		0.10

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SAMPLE NUMBER	ELEMENT UNITS	SiO2 PCT	TiO2 PCT	Al2O3 PCT	Fe2O3* PCT	MnO PCT	MgO PCT	CaO PCT	Na2O PCT	K2O PCT	P2O5 PCT	LOI PCT
CB89-69-17-B		59.50	0.13	15.20	10.50	0.23	2.44	1.78	2.08	2.02	0.12	5.16

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PROJECT: CASA BERARDI

SAMPLE NUMBER	ELEMENT UNITS	Total PCT	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB
CB89-69-17-B		99.16	44	97	<0.1	30	<5

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SAMPLE NUMBER	ELEMENT UNITS	CO2 PCT
CB89-69-17-8		2.48

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SAMPLE NUMBER	ELEMENT UNITS	SiO2 PCT	TiO2 PCT	Al2O3 PCT	Fe2O3* PCT	MnO PCT	MgO PCT	CaO PCT	Na2O PCT	K2O PCT	P2O5 PCT	LOI PCT	Total PCT
CB89-71-12-B		59.00	0.14	14.70	9.03	0.10	2.57	2.93	2.81	1.50	0.14	5.03	97.95
CB89-72-17-B		67.80	0.10	14.80	4.26	0.06	1.19	1.69	4.26	1.60	0.06	2.25	98.07
CB89-73-07-B		62.40	0.14	15.20	5.56	0.08	2.44	3.02	3.96	2.21	0.11	3.63	98.75
CB89-74-30-B		55.10	0.92	14.90	9.03	0.15	5.03	6.66	2.72	0.27	0.10	2.69	97.57
CB89-74-31-B		78.10	0.06	7.99	4.60	0.05	0.85	1.68	0.79	0.97	0.03	2.75	97.87
CB89-75-08-B		45.90	1.16	14.00	12.30	0.21	2.64	10.10	4.08	0.13	0.17	7.41	98.10
CB89-76-34-B		53.20	0.45	15.00	7.56	0.12	8.24	6.39	4.00	0.11	0.08	2.38	97.53
CB89-77-04-B		46.30	0.07	12.70	9.09	0.17	4.98	8.36	1.71	0.33	0.12	14.47	98.30
CB89-78-29-B		49.00	0.78	15.60	11.50	0.18	7.48	4.48	3.67	0.08	0.16	6.05	98.98
CB89-79-08-B		59.40	0.10	14.70	5.10	0.08	2.42	3.46	4.07	2.04	0.25	6.47	98.09
CB89-80-25-B		59.20	0.27	12.50	5.15	0.13	1.41	8.81	1.64	1.27	0.10	8.49	98.97
CB89-82-24-B		64.20	0.07	15.00	5.01	0.10	1.59	3.02	2.18	1.67	<0.01	5.06	97.90

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB
CB89-71-12-B		42	91	<0.1	21	5
CB89-72-17-B		23	55	<0.1	4	<5
CB89-73-07-B		40	65	<0.1	11	<5
CB89-74-30-B		46	86	<0.1	98	15
CB89-74-31-B		25	19	0.1	896	226
CB89-75-08-B		64	99	<0.1	17	<5
CB89-76-34-B		31	29	<0.1	2	<5
CB89-77-04-B		64	78	<0.1	106	<5
CB89-78-29-B		94	80	<0.1	5	<5
CB89-79-08-B		34	63	0.2	27	<5
CB89-80-25-B		33	131	<0.1	8	<5
CB89-82-24-B		45	53	<0.1	16	<5

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SAMPLE NUMBER	ELEMENT UNITS	CO_2 PCT
CB89-71-12-B		3.57
CB89-72-17-B		1.16
CB89-73-07-B		2.10
CB89-74-30-B		1.13
CB89-74-31-B		2.43
CB89-75-08-B		5.40
CB89-76-34-B		0.12
CB89-77-04-B		13.55
CB89-78-29-B		2.56
CB89-79-08-B		6.08
CB89-80-25-B		7.64
CB89-82-24-B		4.00

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SAMPLE NUMBER	ELEMENT UNITS	SiO2 PCT	TiO2 PCT	Al2O3 PCT	Fe2O3* PCT	MnO PCT	MgO PCT	CaO PCT	Na2O PCT	K2O PCT	P2O5 PCT	LOI PCT
CB-89-81-08-B		60.10	0.13	17.10	7.05	0.10	2.49	0.94	3.08	2.60	0.22	3.46
CB-89-83-13-B		56.30	0.17	14.60	12.70	0.15	2.69	3.37	2.73	1.39	0.13	4.61
CB-89-85-11-B		53.50	0.19	15.00	12.00	0.17	2.89	3.82	2.67	1.76	0.27	6.24
CB-89-87-03-B		54.50	0.09	16.80	8.28	0.13	3.04	3.58	2.69	1.98	0.21	6.87
CB-89-89-02-B		59.20	0.06	15.80	4.72	0.06	2.50	3.03	4.10	2.06	0.28	7.09
CB-89-91-06-B		41.50	0.27	13.50	9.37	0.20	3.35	11.60	2.07	0.86	0.14	15.51
CB-89-93-04-B		37.40	0.10	11.50	13.30	0.17	6.28	13.50	1.08	0.13	0.27	14.16
CB-89-95-02-B		52.00	0.68	13.30	11.60	0.19	4.03	6.44	3.51	0.05	0.22	5.58
CB-89-96-40-B		69.40	0.28	13.90	2.82	0.04	1.31	2.01	5.36	1.16	0.15	2.20
CB-89-97-04-B		39.60	0.74	9.78	17.30	0.14	21.20	1.66	0.11	0.07	0.19	7.82
CB-89-98-02-B		54.60	0.09	19.70	8.33	0.08	1.18	4.44	1.88	3.01	0.15	4.10
CB-89-99-02-B		48.00	0.26	16.50	7.62	0.22	2.01	7.38	2.22	1.25	0.39	11.40
CB-89-100-02-B		61.60	0.07	10.50	9.82	0.10	1.60	4.37	0.82	1.85	0.06	7.46
CB-89-101-12-B		49.30	0.49	17.60	9.41	0.12	8.53	5.49	2.20	0.11	0.08	5.48
CB-89-102-17-B		63.70	0.16	13.50	3.99	0.08	2.03	4.11	3.62	1.49	<0.01	5.00
CB-89-103-07-B		49.00	0.19	14.40	8.09	0.10	5.14	6.88	3.16	0.60	0.19	9.65
CB-89-104-18-B		55.40	0.08	13.00	10.40	0.16	2.79	2.42	2.26	1.63	0.08	9.66
CB-89-105-04-B		59.70	0.84	16.60	6.18	0.09	2.97	3.01	5.37	0.45	0.13	3.05
CB-89-106-15-B		64.30	0.10	14.30	5.25	0.07	1.58	1.57	3.10	1.87	<0.01	5.19
CB-89-107-10-B		44.40	0.04	13.70	9.65	0.12	5.64	9.62	1.62	0.57	0.11	15.43
CB-89-108-05-B		66.40	0.09	9.83	5.08	0.12	1.77	4.90	1.53	0.98	0.05	6.95
CB-89-109-13-B		41.90	0.06	12.30	11.90	0.18	6.08	9.08	2.55	0.20	0.26	13.68
CB-89-110-11-B		67.50	0.07	15.20	2.48	0.03	0.95	1.58	4.76	1.90	0.04	2.80
CB-89-111-01-B		39.70	0.05	12.30	15.00	0.38	5.40	9.82	0.79	0.13	0.12	14.89
CB-89-112-11-B		63.70	0.15	14.60	4.14	0.06	1.38	3.40	2.19	2.09	0.17	6.22
CB-89-113-02-B		48.70	2.03	13.80	15.80	0.23	4.03	7.52	2.22	0.56	0.31	3.78
CB-89-113-04-B		43.50	0.15	16.30	9.62	0.22	2.23	10.20	2.05	0.81	0.10	12.00
CB-89-114-15-B		69.80	0.05	12.80	2.56	0.08	1.24	3.25	1.53	1.83	0.06	6.21
CB-89-115-02-B		47.80	1.41	12.40	13.70	0.21	6.39	8.23	0.58	0.03	0.40	6.73
CB-89-116-19-B		65.40	0.10	16.50	4.58	0.05	1.30	1.47	3.44	2.01	0.21	3.26
CB-89-117-05-B		49.10	0.06	16.30	16.40	0.26	6.75	0.45	2.27	0.29	0.03	5.38
CB-89-118-01-B		67.40	0.03	15.70	2.92	0.06	0.82	2.32	2.55	2.07	0.25	5.12
CB-89-119-02-B		48.60	0.09	14.10	10.20	0.26	2.62	8.05	1.58	0.87	0.27	11.34
CB-89-120-05-B		57.20	0.07	14.10	4.46	0.09	1.67	6.16	3.22	1.12	0.12	9.58
CB-89-121-03-B		45.80	0.07	10.50	19.10	0.39	2.47	7.64	1.20	0.94	0.20	9.05
CB-89-122-03-B		59.80	0.04	13.70	6.18	0.10	2.62	5.67	1.58	1.01	0.35	8.77
CB-89-123-06-B		59.40	0.05	15.80	4.81	0.05	2.32	2.66	4.59	2.08	0.10	6.50
CB-89-124-07-B		57.30	0.04	13.80	5.48	0.09	2.48	7.73	1.72	1.46	0.34	10.48
CB-89-125-04-B		50.10	0.09	16.10	10.60	0.12	5.13	6.13	3.71	0.78	0.28	6.94
CB-89-126-04-B		66.30	0.07	15.10	3.79	0.05	1.48	3.73	1.89	2.17	<0.01	5.51

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SAMPLE NUMBER	ELEMENT UNITS	Total PCT	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB
CB-89-81-08-B		97.27	38	79	<0.1	11	<5
CB-89-83-13-B		98.84	41	93	<0.1	15	<5
CB-89-85-11-B		98.51	43	95	<0.1	9	<5
CB-89-87-03-B		98.16	51	93	<0.1	23	<5
CB-89-89-02-B		98.90	41	72	0.4	21	5
CB-89-91-06-B		98.37	47	161	<0.1	1750	57
CB-89-93-04-B		97.89	56	89	<0.1	27	<5
CB-89-95-02-B		97.59	33	109	<0.1	2	<5
CB-89-96-40-B		98.64	26	49	<0.1	8	<5
CB-89-97-04-B		98.61	45	68	<0.1	91	6
CB-89-98-02-B		97.57	49	49	<0.1	6	<5
CB-89-99-02-B		97.26	59	57	<0.1	98	<5
CB-89-100-02-B		98.25	31	65	0.1	87	<5
CB-89-101-12-B		98.81	25	51	<0.1	5	<5
CB-89-102-17-B		97.68	20	37	0.1	10	<5
CB-89-103-07-B		97.40	64	68	<0.1	24	<5
CB-89-104-18-B		97.88	39	90	<0.1	24	<5
CB-89-105-04-B		98.39	55	61	<0.1	4	<5
CB-89-106-15-B		97.34	32	49	<0.1	21	<5
CB-89-107-10-B		100.89	47	104	<0.1	250	<5
CB-89-108-05-B		97.69	20	55	<0.1	36	258
CB-89-109-13-B		98.39	63	96	<0.1	8	<5
CB-89-110-11-B		97.32	18	54	<0.1	11	<5
CB-89-111-01-B		98.56	65	94	<0.1	23	<5
CB-89-112-11-B		98.11	35	73	<0.1	11	<5
CB-89-113-02-B		98.98	65	105	<0.1	11	<5
CB-89-113-04-B		97.18	44	66	<0.1	36	<5
CB-89-114-15-B		99.41	15	40	<0.1	4	<5
CB-89-115-02-B		97.88	68	105	<0.1	11	<5
CB-89-116-19-B		98.32	42	71	0.1	25	<5
CB-89-117-05-B		97.28	74	111	<0.1	105	<5
CB-89-118-01-B		99.24	25	29	0.2	14	<5
CB-89-119-02-B		97.98	54	65	<0.1	67	<5
CB-89-120-05-B		97.79	20	63	0.6	45	<5
CB-89-121-03-B		97.36	39	72	<0.1	>2000	198
CB-89-122-03-B		99.83	27	80	<0.1	27	<5
CB-89-123-06-B		98.36	34	65	0.1	73	5
CB-89-124-07-B		100.91	23	65	<0.1	12	<5
CB-89-125-04-B		99.97	15	51	<0.1	12	<5
CB-89-126-04-B		100.09	30	43	<0.1	50	<5

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SAMPLE NUMBER	ELEMENT UNITS	SiO2 PCT	TiO2 PCT	Al2O3 PCT	Fe2O3* PCT	MnO PCT	MgO PCT	CaO PCT	Na2O PCT	K2O PCT	P2O5 PCT	LOI PCT
CB-89-128-19-B		67.90	0.09	12.80	5.15	0.09	1.61	1.84	3.22	1.59	0.17	3.46
CB-89-130-08-B		58.10	0.04	14.60	6.91	0.13	2.43	4.36	3.65	1.26	0.33	6.31
CB-89-132-06-B		55.00	0.06	16.90	8.30	0.11	3.32	3.17	2.50	2.17	0.35	6.10

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SAMPLE NUMBER	ELEMENT UNITS	Total PCT	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB
CB-89-128-19-B		97.92	60	109	<0.1	84	19
CB-89-130-08-B		98.11	35	87	<0.1	22	5
CB-89-132-06-B		97.98	52	96	<0.1	13	<5

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SAMPLE NUMBER	ELEMENT UNITS	CO_2 PCT
CB-89-81-08-B		0.81
CB-89-83-13-B		2.72
CB-89-85-11-B		4.69
CB-89-87-03-B		4.74
CB-89-89-02-B		4.78
CB-89-91-06-B		15.23
CB-89-93-04-B		10.75
CB-89-95-02-B		3.03
CB-89-96-40-B		1.25
CB-89-97-04-B		1.98
CB-89-98-02-B		3.09
CB-89-99-02-B		9.93
CB-89-100-02-B		6.14
CB-89-101-12-B		1.21
CB-89-102-17-B		4.06
CB-89-103-07-B		7.39
CB-89-104-10-B		7.10
CB-89-105-04-B		1.02
CB-89-106-15-B		2.61
CB-89-107-10-B		13.98
CB-89-108-05-B		6.49
CB-89-109-13-B		11.91
CB-89-110-11-B		1.89
CB-89-111-01-B		13.08
CB-89-112-11-B		4.42
CB-89-113-03-B		1.58
CB-89-113-04-B		9.42
CB-89-114-15-B		4.63
CB-89-115-02-B		2.93
CB-89-116-19-B		1.61
CB-89-117-05-B		0.28
CB-89-118-01-B		3.38
CB-89-119-02-B		9.38
CB-89-120-05-B		8.50
CB-89-121-03-B		10.24
CB-89-122-03-B		7.46
CB-89-123-06-B		5.34
CB-89-124-07-B		10.70
CB-89-125-04-B		4.02
CB-89-126-04-B		4.15
CB-89-128-19-B		2.80
CB-89-130-08-B		5.93
CB-89-132-06-B		4.60

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SAMPLE NUMBER	ELEMENT UNITS	SiO2 PCT	TiO2 PCT	Al2O3 PCT	Fe2O3* PCT	MnO PCT	MgO PCT	CaO PCT	Na2O PCT	K2O PCT	P2O5 PCT	LOI PCT
CB-89-134-09-B		76.70	0.13	12.80	4.25	0.05	0.34	0.23	0.69	1.11	0.04	1.76
CB-89-136-10-B		60.50	0.11	15.80	4.71	0.06	2.22	2.07	3.60	2.29	<0.01	6.36
CB-89-138-02-B		54.80	0.08	8.80	8.58	0.15	3.74	7.93	1.56	0.96	0.15	12.50
CB-89-138-03-B		55.00	0.54	12.20	7.60	0.14	2.78	4.88	2.30	1.30	0.19	11.21
CB-89-140-11-B		64.70	0.14	15.40	6.61	0.09	2.14	1.48	2.62	2.50	0.09	2.89
CB-89-142-03-B		61.30	0.55	14.60	7.64	0.08	2.89	2.51	2.20	1.86	0.02	4.31
CB-89-144-07-B		60.70	0.54	13.90	7.92	0.12	1.92	2.79	2.93	1.15	0.02	5.32
CB-89-146-05-B		57.70	0.53	13.20	6.45	0.13	2.53	5.60	2.57	1.05	0.14	9.38
CB-89-148-03-B		53.20	0.12	12.20	6.24	0.17	2.26	7.91	2.78	0.96	0.26	12.10
CB-89-150-08-B		74.30	0.20	13.60	1.21	0.04	0.40	0.95	3.10	1.71	0.09	2.59
CB-89-152-03-B		70.70	0.26	13.40	2.35	0.04	1.10	2.12	3.04	2.03	0.02	4.70
CB-89-154-10-B		65.30	0.48	15.00	3.96	0.08	0.89	1.73	2.29	1.82	0.22	5.35

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PROJECT: CASA BERARDI PAGE 1B

SAMPLE NUMBER	ELEMENT UNITS	Total PCT	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB
CB-89-134-09-B		98.10	57	32	0.2	34	17
CB-89-136-10-B		97.72	37	64	<0.1	49	<5
CB-89-138-02-B		99.25	25	78	<0.1	18	<5
CB-89-138-03-B		98.14	41	94	<0.1	29	<5
CB-89-140-11-B		98.66	48	101	<0.1	50	9
CB-89-142-03-B		97.96	52	102	0.1	16	<5
CB-89-144-07-B		97.31	38	69	0.1	36	7
CB-89-146-05-B		99.28	36	87	0.1	52	5
CB-89-148-03-B		98.20	19	72	<0.1	15	<5
CB-89-150-08-B		98.19	8	50	<0.1	<2	<5
CB-89-152-03-B		99.76	17	45	<0.1	9	<5
CB-89-154-10-B		97.13	27	64	0.1	10	<5

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PROJECT: CASA BERARDI

SAMPLE NUMBER	ELEMENT UNITS	CO2 PCT
CB-89-134-09-B		0.15
CB-89-136-10-B		4.63
CB-89-138-02-B		12.36
CB-89-138-03-B		9.03
CB-89-140-11-B		1.38
CB-89-142-03-B		1.95
CB-89-144-07-B		4.38
CB-89-146-05-B		8.34
CB-89-148-03-B		11.30
CB-89-150-08-B		1.30
CB-89-152-03-B		3.34
CB-89-154-10-B		3.26

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PROJECT: CASA BERARDI

SAMPLE NUMBER	ELEMENT UNITS	SiO2 PCT	TiO2 PCT	Al2O3 PCT	Fe2O3* PCT	MnO PCT	MgO PCT	CaO PCT	Na2O PCT	K2O PCT	P2O5 PCT	LOI PCT
CB-89-127-36-B		59.50	0.16	17.30	6.71	0.13	3.39	0.69	0.51	2.04	0.08	6.68
CB-89-127-37-B		63.10	0.60	15.40	5.76	0.08	3.47	0.89	4.29	1.01	0.12	2.87
CB-89-143-19-B		54.60	0.44	11.40	12.60	0.56	2.50	4.98	1.06	0.78	0.03	8.88
CB-89-145-15-B		59.90	0.49	13.60	5.15	0.10	1.65	6.39	2.41	1.61	0.17	9.25
CB-89-147-02-B		68.00	0.38	12.10	3.13	0.14	0.95	3.63	2.42	2.34	0.23	4.54
CB-89-149-06-B		54.50	0.35	14.90	4.95	0.12	2.90	6.66	3.68	1.06	0.27	7.71
CB-89-151-03-B		44.50	0.45	13.40	13.70	0.21	4.58	7.45	3.06	0.06	0.32	9.96
CB-89-153-01-B		47.00	0.45	14.50	9.69	0.16	3.01	11.00	1.46	0.56	0.25	11.00
CB-89-155-09-B		61.60	0.15	14.10	8.36	0.11	2.52	4.30	2.58	1.10	0.39	2.27
CB-89-157-17-B		62.30	0.70	13.90	6.09	0.10	2.93	6.21	3.32	0.44	0.23	1.53
CB-89-159-23-B		34.90	0.55	4.38	37.00	0.05	0.61	0.76	0.67	0.43	<0.01	18.55
CB-89-159-FINES		52.00	0.49	10.40	20.00	0.03	0.67	1.49	2.15	1.25	0.07	8.74
CB-89-161-05-B		64.30	0.37	14.70	5.01	0.08	1.57	4.10	3.63	2.03	0.24	4.19
CB-89-163-19-B		68.90	0.36	12.60	4.52	0.08	1.20	3.56	1.52	1.22	0.13	3.52
CB-89-165-10-B		65.70	0.51	15.40	4.14	0.03	1.48	2.16	3.63	1.16	0.18	2.67
CB-89-167-13-B		47.50	0.20	12.30	10.20	0.14	3.21	8.44	2.53	0.69	0.27	12.08
CB-89-176-03-B		47.50	0.47	10.70	9.52	0.21	3.74	10.20	1.26	0.40	0.30	13.32
CB-89-177-03-B		45.80	0.09	13.30	10.00	0.18	4.00	12.30	1.86	0.45	0.28	12.33
CB-89-178-12-B		62.20	0.55	12.50	8.60	0.13	1.59	4.20	0.58	0.34	0.29	6.04
CB-89-179-18-B		56.90	0.25	15.50	8.45	0.15	2.70	4.24	4.07	0.69	0.29	4.28
CB-89-180-16-B		63.00	0.45	13.80	4.08	0.09	0.95	5.52	0.59	2.27	0.08	6.15
CB-89-181-11-B		47.90	0.20	15.40	12.80	0.19	7.06	5.37	2.72	0.18	0.46	6.20
CB-89-182-05-B		55.70	0.36	16.40	5.17	0.14	1.72	5.50	3.00	2.69	0.25	6.87
CB-89-183-04-B		55.10	0.54	16.40	9.15	0.13	3.59	4.61	5.11	0.61	0.27	3.15
CB-89-184-02-B		55.80	0.37	15.10	8.29	0.18	2.76	6.02	5.40	0.28	0.40	4.02
CB-89-185-04-B		46.70	0.47	12.90	7.59	0.19	2.97	12.20	1.95	0.82	0.30	13.95
CB-89-186-10-B		54.40	0.48	15.30	5.56	0.11	2.43	8.98	2.54	1.07	0.22	10.65
CB-89-187-04-B		48.60	0.45	13.00	8.28	0.17	3.15	8.87	1.88	0.81	0.32	12.81
CB-89-188-12-B		49.10	0.15	14.10	10.40	0.24	3.52	9.73	2.34	1.10	0.25	10.48
CB-89-189-02-B		48.00	0.57	15.70	14.50	0.29	1.51	6.09	1.65	0.76	0.27	8.02
CB-89-190-01-B		51.80	0.45	14.50	12.20	0.18	3.05	6.09	1.74	0.81	0.21	9.00
CB-89-191-06-B		41.90	0.84	13.10	14.00	0.37	3.43	11.20	1.45	0.47	0.35	11.98
CB-89-192-02-B		43.90	0.50	13.50	12.40	0.35	3.54	10.30	0.94	0.76	0.09	11.26
CB-89-193-01-B		43.60	0.40	12.80	12.10	0.19	5.91	10.20	1.50	0.05	0.43	11.12
CB-89-194-07-B		47.00	0.80	12.10	8.34	0.20	2.54	10.00	1.23	0.66	0.29	14.08
CB-89-195-01-B		46.10	0.44	11.80	10.20	0.22	4.28	8.88	1.65	0.38	0.24	14.34
CB-89-196-02-B		49.30	0.46	14.50	6.38	0.17	2.98	9.43	2.13	0.79	0.21	11.87
CB-89-197-03-B		49.60	0.47	13.60	9.71	0.23	2.09	7.50	1.60	1.12	0.28	15.31

Bondar-Clegg & Company Ltd.
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Ottawa, Ontario
K1J 8X5
(613) 749-2220 Telex 053-3233

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Certificate of Analysis

REPORT: 089-50662.4

PROJECT: CASA BERARDI PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	CO2 PCT
CB-89-127-36-B		0.06
CB-89-127-37-B		0.09
CB-89-143-19-B		7.44
CB-89-145-15-B		8.78
CB-89-147-02-B		4.80
CB-89-149-06-B		8.35
CB-89-151-03-B		9.07
CB-89-153-01-B		9.75
CB-89-155-09-B		2.92
CB-89-157-17-B		1.76
CB-89-159-23-B		0.59
CB-89-159-FINES		0.50
CB-89-161-05-B		3.15
CB-89-163-19-B		3.08
CB-89-165-10-B		1.31
CB-89-167-13-B		11.76
CB-89-176-03-B		12.94
CB-89-177-03-B		10.22
CB-89-178-12-B		5.47
CB-89-179-18-B		2.67
CB-89-180-16-B		4.81
CB-89-181-11-B		2.76
CB-89-182-05-B		6.04
CB-89-183-04-B		2.50
CB-89-184-02-B		4.01
CB-89-185-04-B		13.08
CB-89-186-10-B		9.69
CB-89-187-04-B		12.35
CB-89-188-12-B		10.33
CB-89-189-02-B		5.57
CB-89-190-01-B		6.62
CB-89-191-06-B		16.24
CB-89-192-02-B		8.86
CB-89-193-01-B		8.17
CB-89-194-07-B		13.71
CB-89-195-01-B		13.30
CB-89-196-02-B		13.73
CB-89-197-03-B		10.46

Joe German, Chief Assayer

Bondar-Clegg & Company Ltd.
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Geochemical Lab Report

REPORT: 089-50662.0

PROJECT: CASA BERARDI PAGE 1B

SAMPLE NUMBER	ELEMENT UNITS	Total PCT	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB
CB-89-127-36-B		97.20	45	120	0.1	9	<5
CB-89-127-37-B		97.58	35	87	<0.1	4	<5
CB-89-143-19-B		97.83	32	91	<0.1	10	<5
CB-89-145-15-B		100.73	22	65	<0.1	36	5
CB-89-147-02-B		97.86	16	33	<0.1	10	<5
CB-89-149-06-B		97.10	38	54	0.3	112	<5
CB-89-151-03-B		97.69	61	123	<0.1	4	<5
CB-89-153-01-B		99.09	74	120	<0.1	7	<5
CB-89-155-09-B		97.48	41	60	<0.1	32	<5
CB-89-157-17-B		97.75	34	100	<0.1	8	<5
CB-89-159-23-B		97.89	19	495	0.1	238	14
CB-89-159-FINES		97.29	16	106	0.4	167	<5
CB-89-161-05-B		100.21	22	62	<0.1	6	<5
CB-89-163-19-B		97.62	26	66	<0.1	41	<5
CB-89-165-10-B		97.06	17	62	<0.1	<2	<5
CB-89-167-13-B		97.55	60	89	<0.1	5	7
CB-89-176-03-B		97.63	83	76	<0.1	22	6
CB-89-177-03-B		100.60	65	99	<0.1	7	<5
CB-89-178-12-B		97.23	142	577	<0.1	147	<5
CB-89-179-18-B		97.52	70	92	0.1	5	7
CB-89-180-16-B		97.37	23	66	0.5	41	<5
CB-89-181-11-B		98.47	38	126	1.1	8	<5
CB-89-182-05-B		97.80	29	66	<0.1	8	<5
CB-89-183-04-B		98.58	55	114	<0.1	2	<5
CB-89-184-02-B		98.62	52	64	<0.1	13	8
CB-89-185-04-B		100.04	33	57	<0.1	4	<5
CB-89-186-10-B		101.75	38	51	<0.1	14	<5
CB-89-187-04-B		98.34	45	82	<0.1	7	<5
CB-89-188-12-B		101.41	54	94	<0.1	24	<5
CB-89-189-02-B		97.36	86	120	<0.1	104	<5
CB-89-190-01-B		100.03	39	105	<0.1	5	<5
CB-89-191-06-B		99.09	71	44	<0.1	>2000	71
CB-89-192-02-B		97.54	73	80	<0.1	57	<5
CB-89-193-01-B		98.30	69	100	<0.1	15	<5
CB-89-194-07-B		97.24	45	51	<0.1	102	<5
CB-89-195-01-B		98.54	73	69	<0.1	976	6
CB-89-196-02-B		98.22	66	93	<0.1	145	5
CB-89-197-03-B		101.51	59	122	<0.1	144	<5

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Geochemical Lab Report

REPORT: 089-50834.0

PROJECT: CASA BERARDI PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB
CB-89-129-21		32	45	0.1	3	<5
CB-89-131-13		30	79	0.1	5	<5
CB-89-133-31		65	126	0.1	4	<5
CB-89-135-09		27	44	<0.1	15	<5
CB-89-137-25		68	98	<0.1	28	<5
CB-89-139-31		28	27	<0.1	51	<5
CB-89-141-25		56	56	<0.1	6	<5
CB-89-156-11		23	45	<0.1	11	<5
CB-89-158-03		21	40	<0.1	12	<5
CB-89-160-06		53	81	<0.1	26	<5
CB-89-162-02		46	48	<0.1	30	6
CB-89-164-16		166	47	<0.1	82	<5
CB-89-166-02		34	91	<0.1	3	<5
CB-89-168-10		38	114	<0.1	48	<5
CB-89-169-08		46	92	<0.1	67	<5
CB-89-170-03		37	88	<0.1	27	<5
CB-89-171-14		55	71	<0.1	32	<5
CB-89-172-02		34	52	<0.1	26	<5
CB-89-173-03		23	79	<0.1	5	<5
CB-89-173-04		22	56	<0.1	6	<5
CB-89-174-10		100	62	<0.1	42	<5
CB-89-175-02		61	114	<0.1	<2	<5

Bondar-Clegg & Company Ltd.
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Geochemical Lab Report

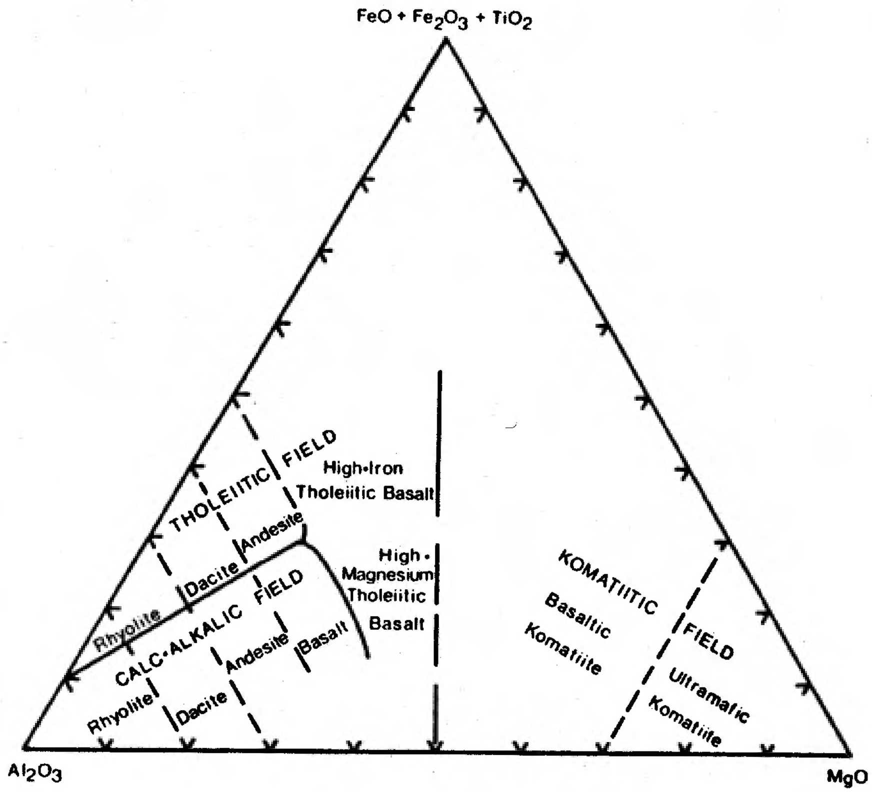
REPORT: 089-51114.0

PROJECT: CASA BERARDI PAGE 1

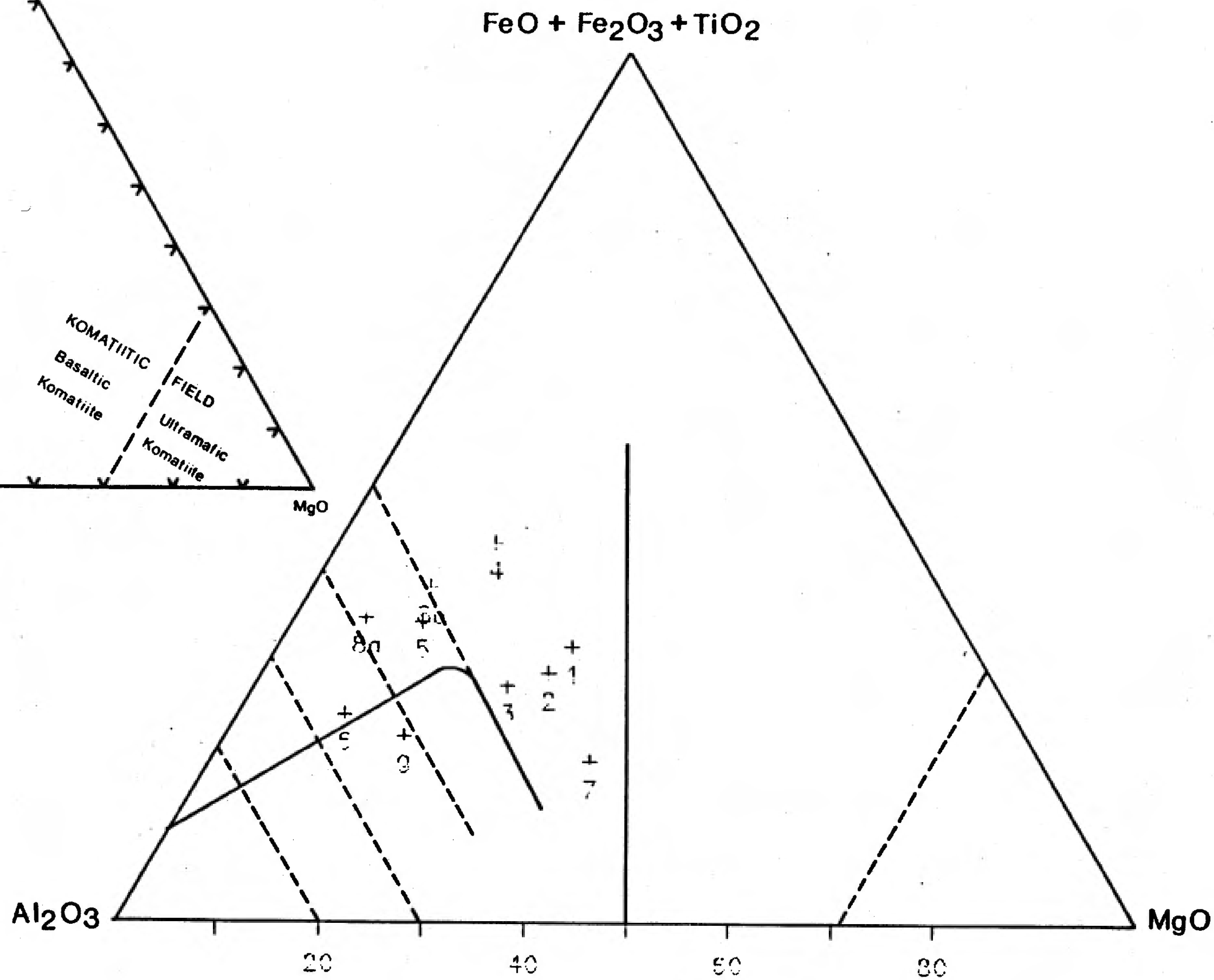
SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB
CB-89-117B		108	118	<0.1	696	8
CB-89-117C		93	84	<0.1	656	7

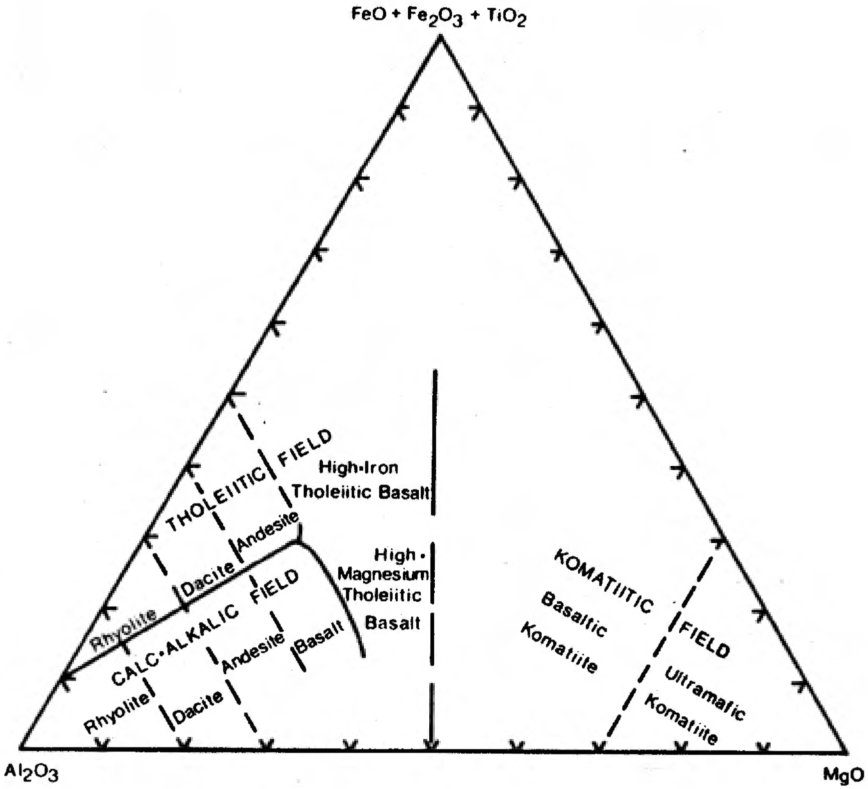
Clay samples -- believed to be regolith but logged as Quarternary sediments in field and only a small character sample taken

K [illegible]

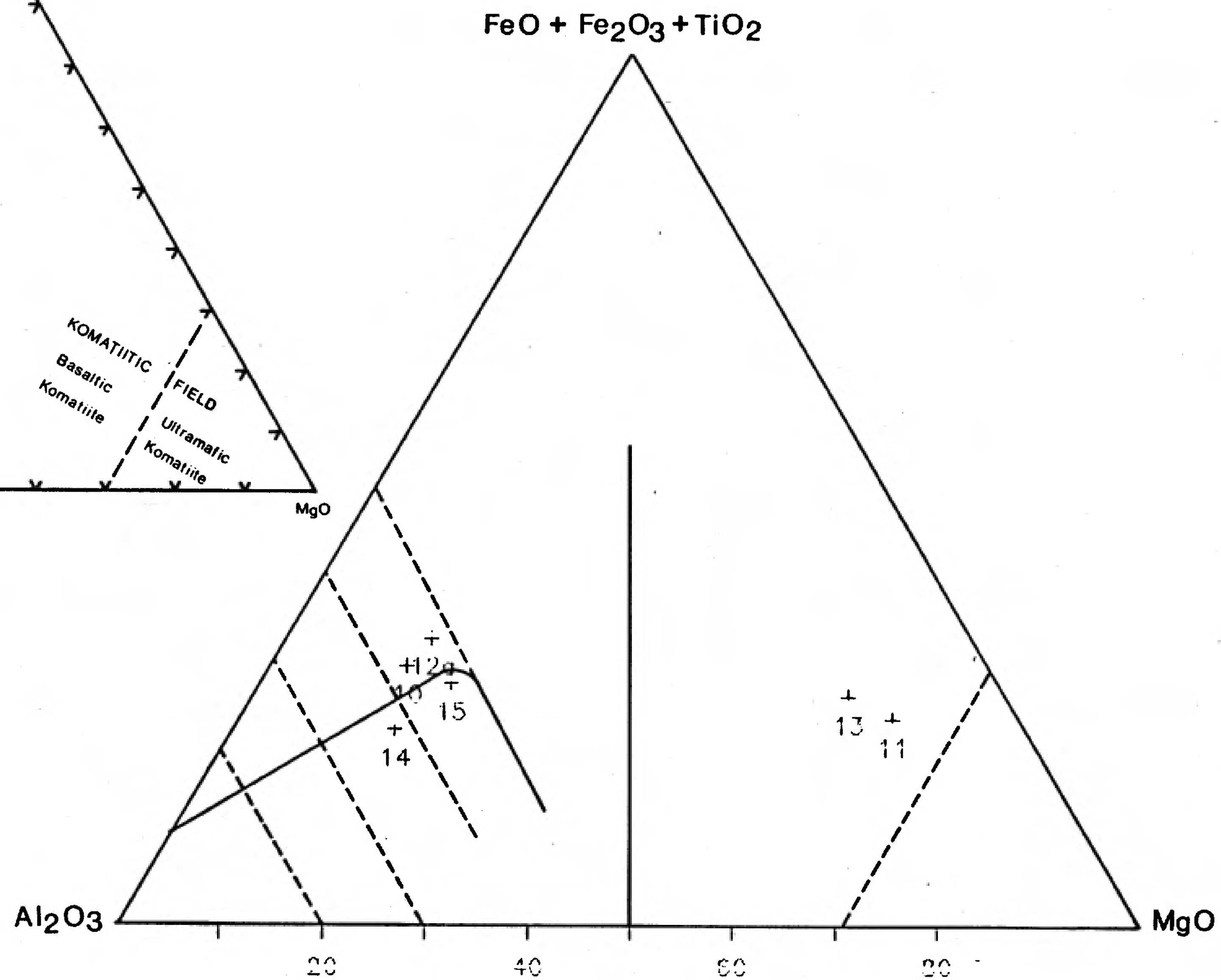

FeO + Fe$_2$O$_3$ + TiO$_2$
THOLEIITIC FIELD
High-Iron Tholeiitic Basalt
Andesite
Dacite
Rhyolite
High-Magnesium Tholeiitic Basalt
CALC-ALKALIC FIELD
Andesite
Basalt
Rhyolite
Dacite
KOMATIITIC FIELD
Basaltic Komatiite
Ultramafic Komatiite
Al$_2$O$_3$
MgO

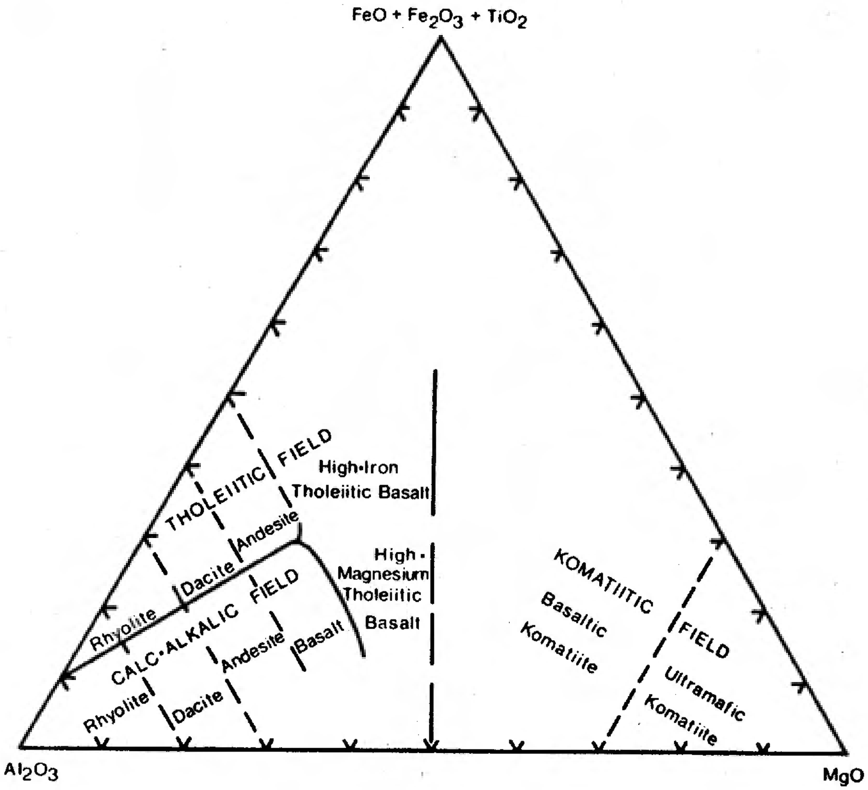
CB-89-01 to 09


FeO + Fe$_2$O$_3$ + TiO$_2$
Al$_2$O$_3$
MgO
20
40
60
80

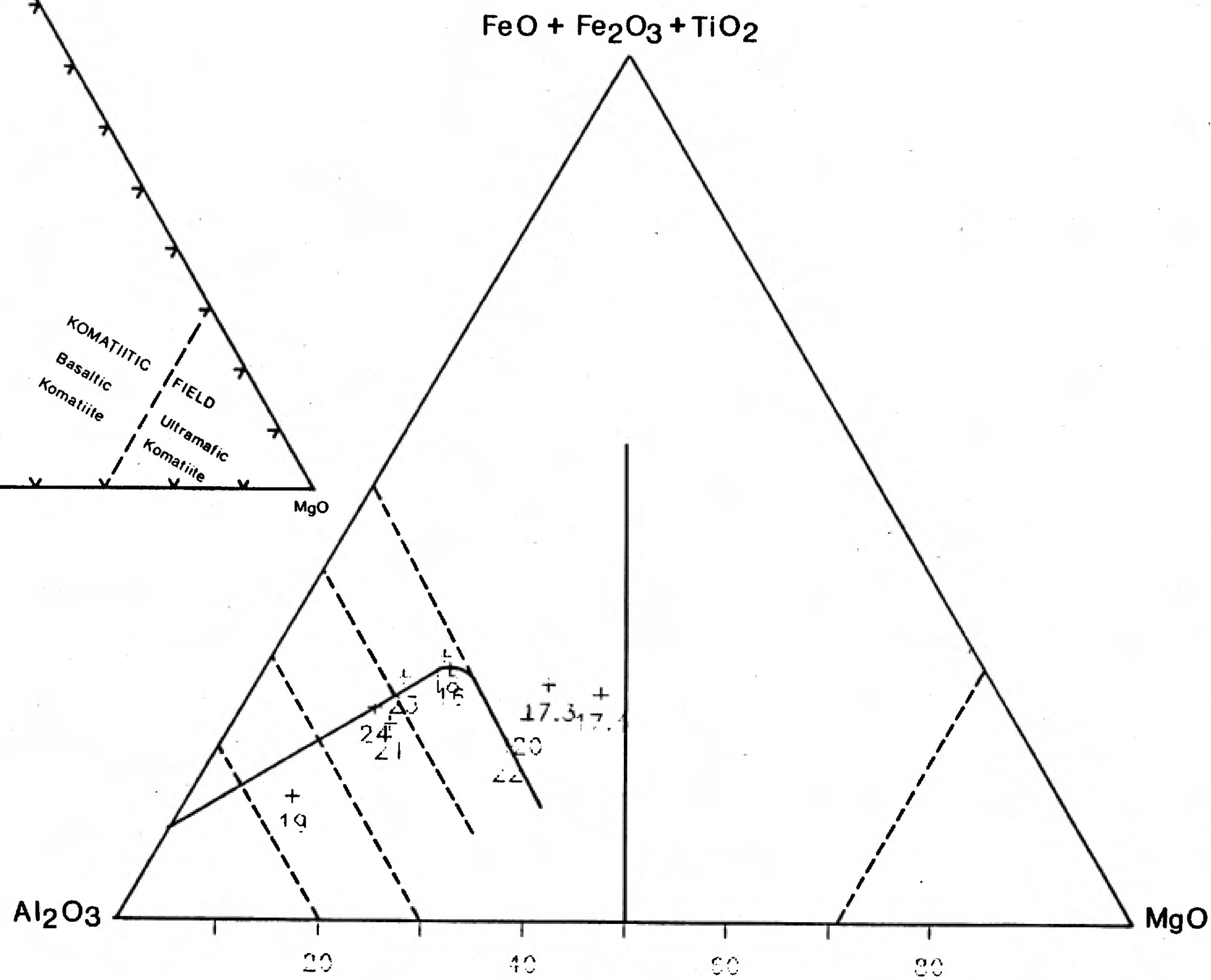

FeO + Fe_2O_3 + TiO_2
THOLEIITIC FIELD
High-Iron Tholeiitic Basalt
Andesite
Dacite
Rhyolite
CALC-ALKALIC FIELD
Andesite
Basalt
Rhyolite
Dacite
High-Magnesium Tholeiitic Basalt
KOMATIITIC FIELD
Basaltic Komatiite
Ultramafic Komatiite
Al_2O_3
MgO

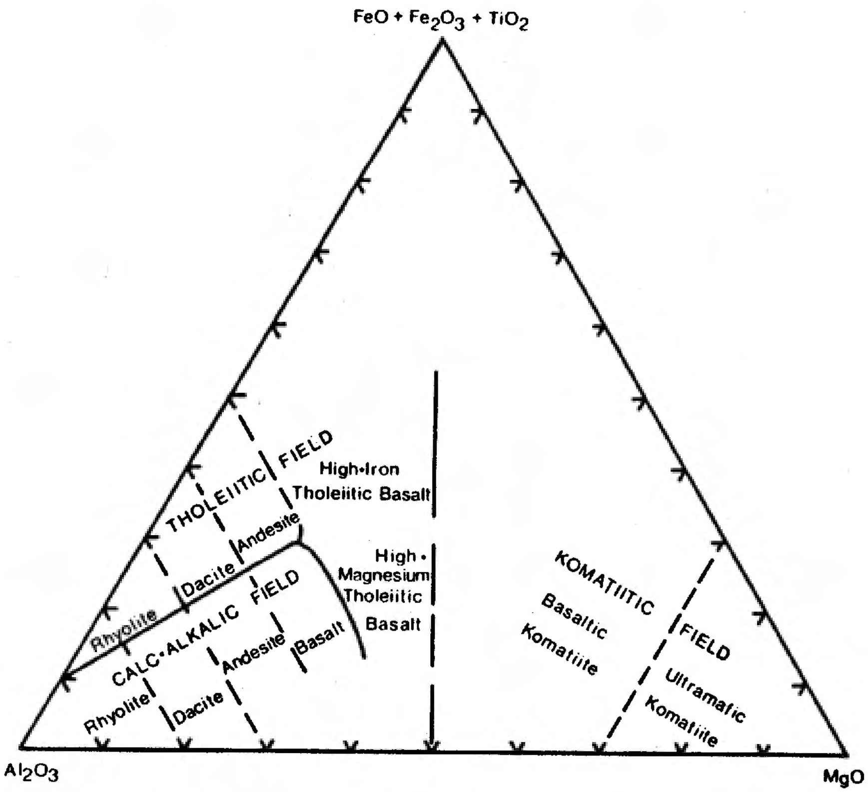
CB-89-10 to 15


FeO + Fe_2O_3 + TiO_2
12a
10
15
14
13
11
Al_2O_3
MgO
20
40
60
80

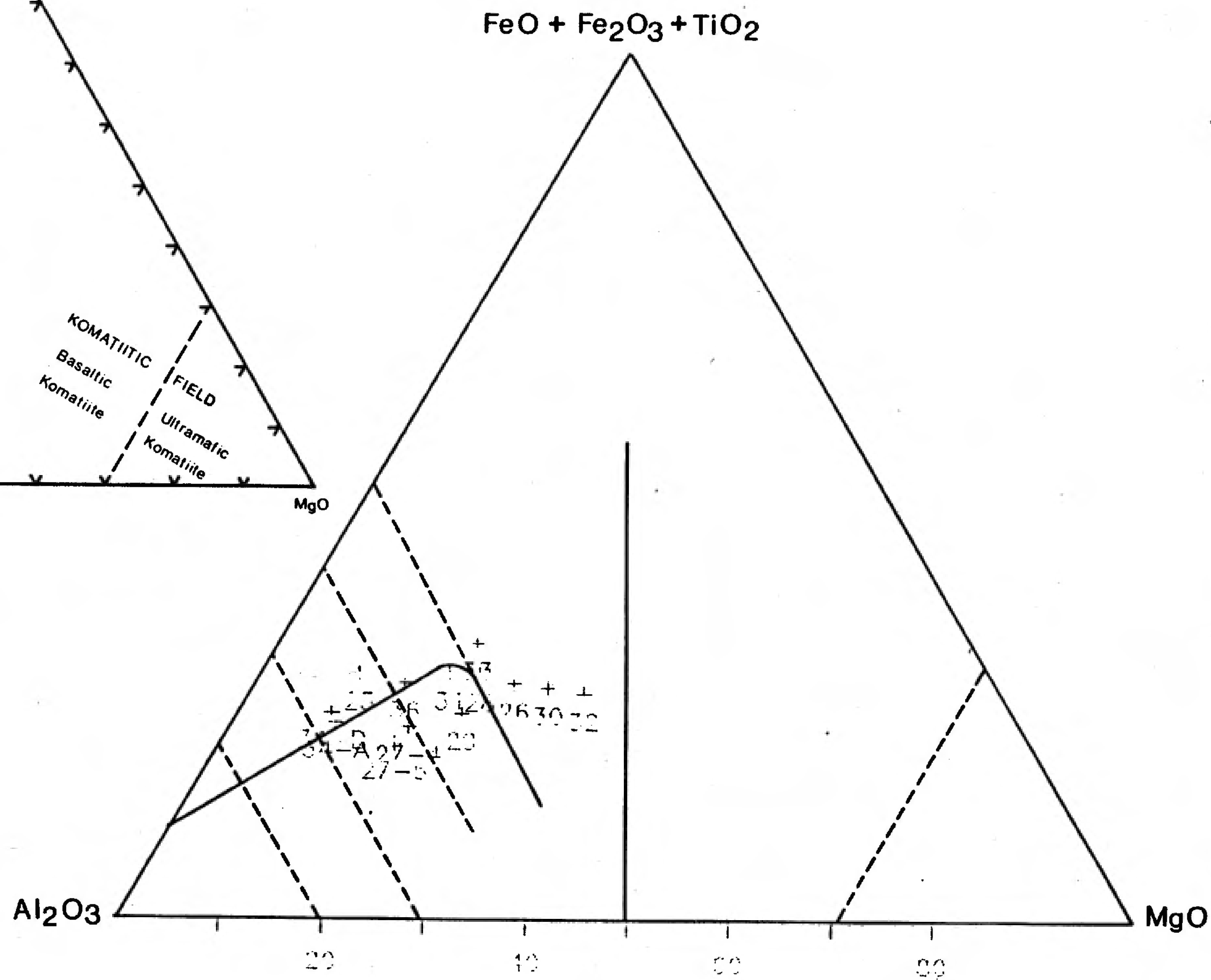

FeO + Fe_2O_3 + TiO_2
THOLEIITIC FIELD
High-Iron Tholeiitic Basalt
Andesite
Dacite
Rhyolite
High-Magnesium Tholeiitic Basalt
CALC-ALKALIC FIELD
Rhyolite
Dacite
Andesite
Basalt
KOMATIITIC FIELD
Basaltic Komatiite
Ultramafic Komatiite
Al_2O_3
MgO

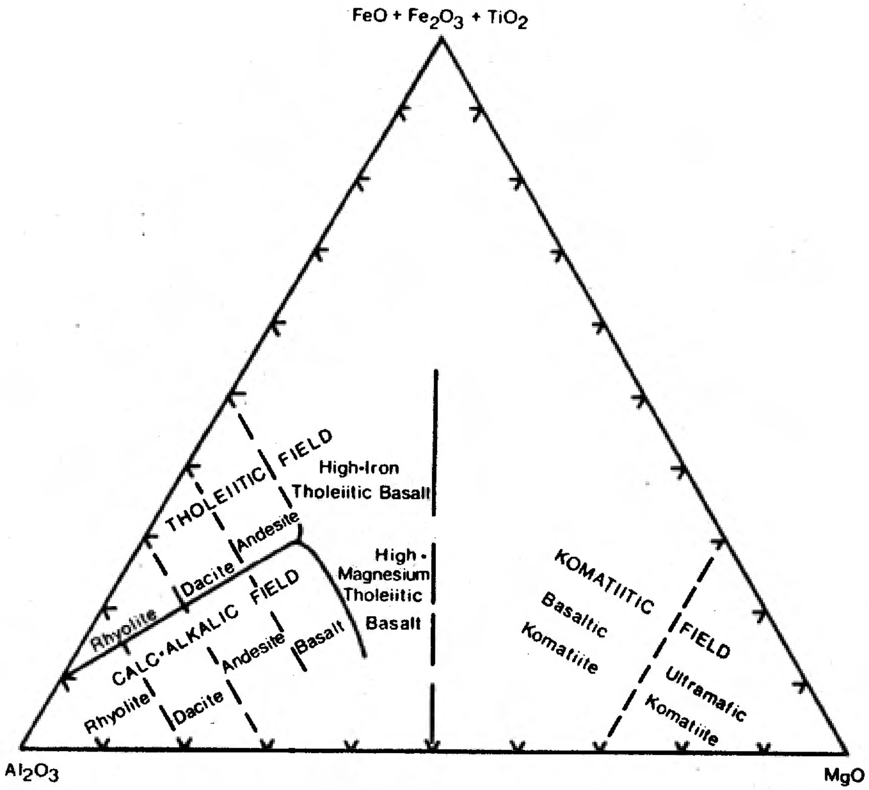
CB-89-16 to 24


FeO + Fe_2O_3 + TiO_2
Al_2O_3
MgO
20
40
60
80


FeO + Fe_2O_3 + TiO_2
THOLEIITIC FIELD
High-Iron Tholeiitic Basalt
Andesite
Dacite
Rhyolite
High-Magnesium Tholeiitic Basalt
CALC-ALKALIC FIELD
Rhyolite
Dacite
Andesite
Basalt
KOMATIITIC FIELD
Basaltic Komatiite
Ultramafic Komatiite
Al_2O_3
MgO

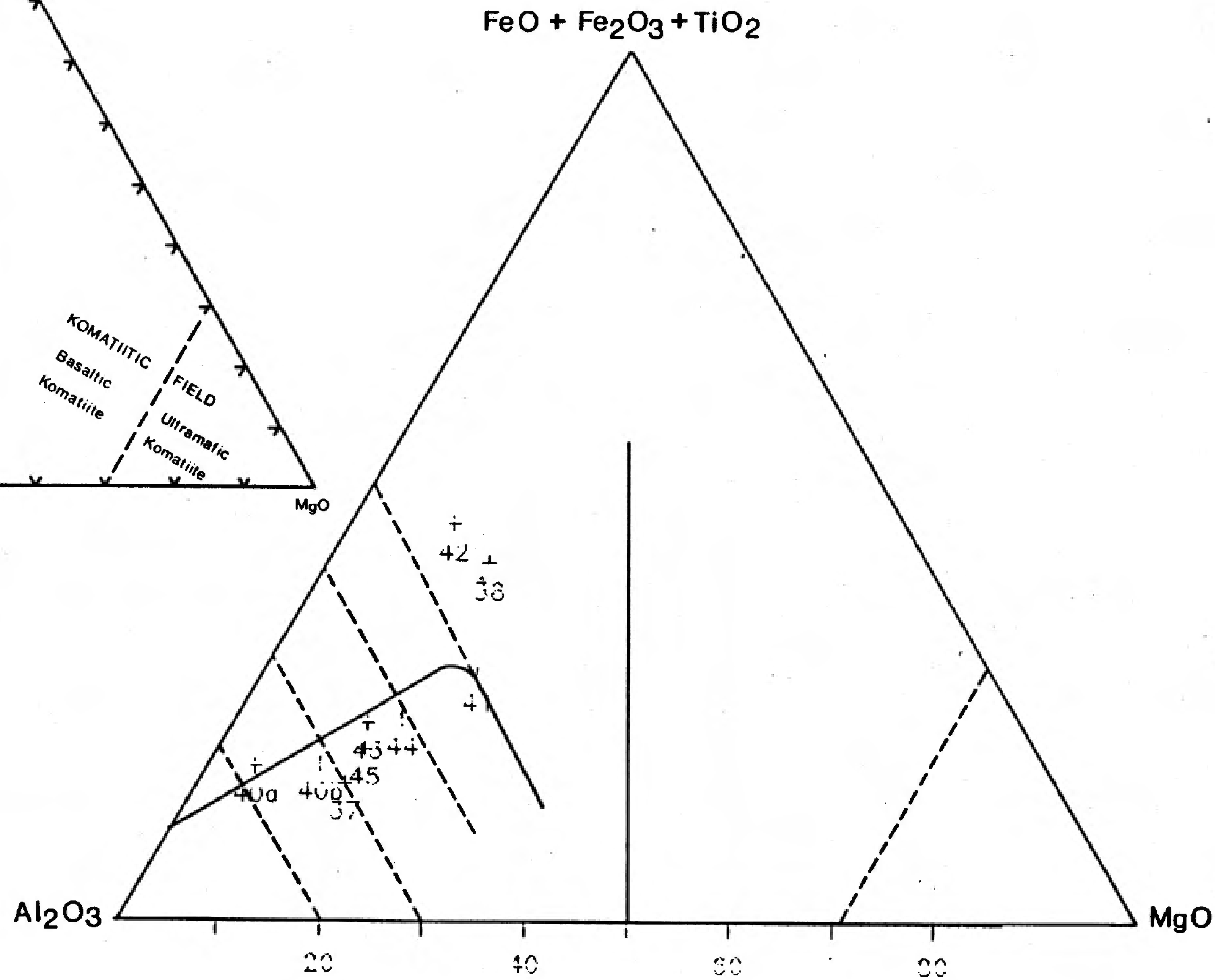
CB-89-25 to 31


FeO + Fe_2O_3 + TiO_2
Al_2O_3
MgO

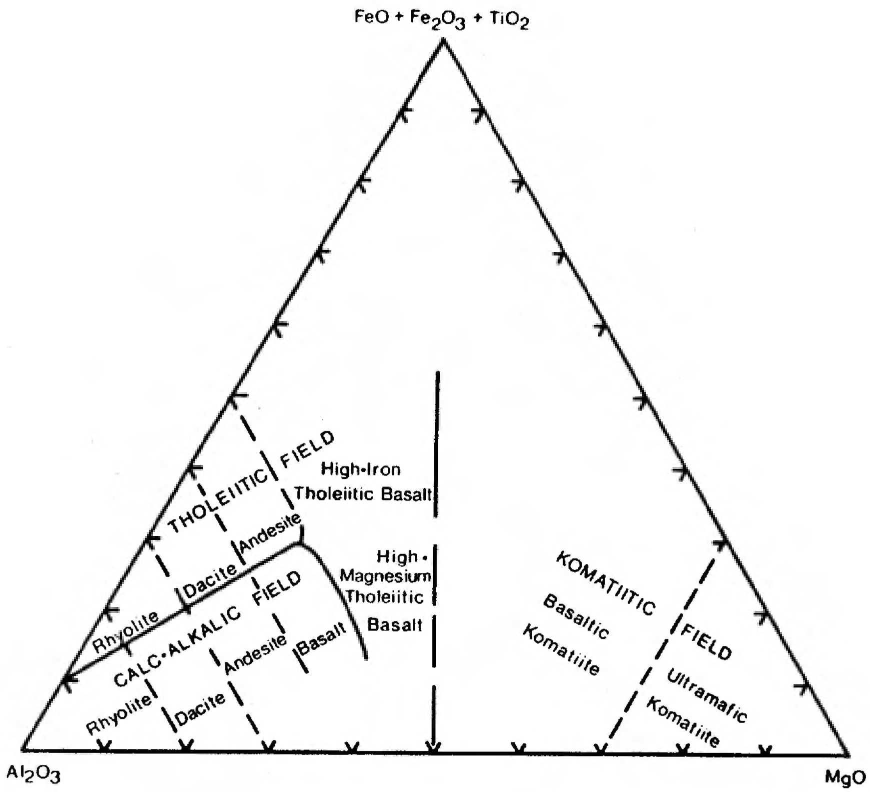


FeO + Fe2O3 + TiO2
THOLEIITIC FIELD
High-Iron
Tholeiitic Basalt
Andesite
Dacite
Rhyolite
High-
Magnesium
Tholeiitic
Basalt
CALC-ALKALIC FIELD
Andesite
Basalt
Rhyolite
Dacite
KOMATIITIC
Basaltic
Komatiite
FIELD
Ultramafic
Komatiite
Al2O3
MgO

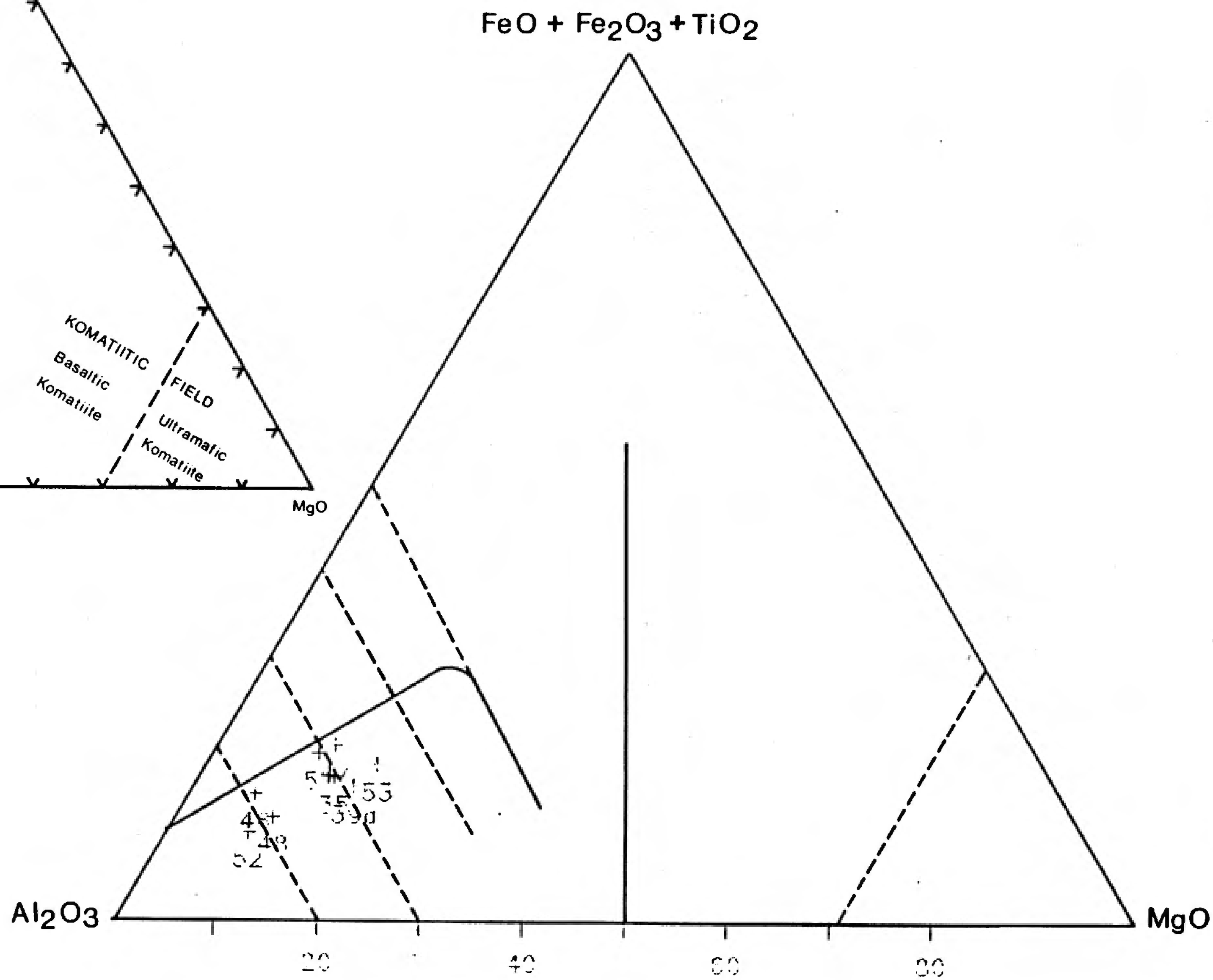
CB-89-37 to 45

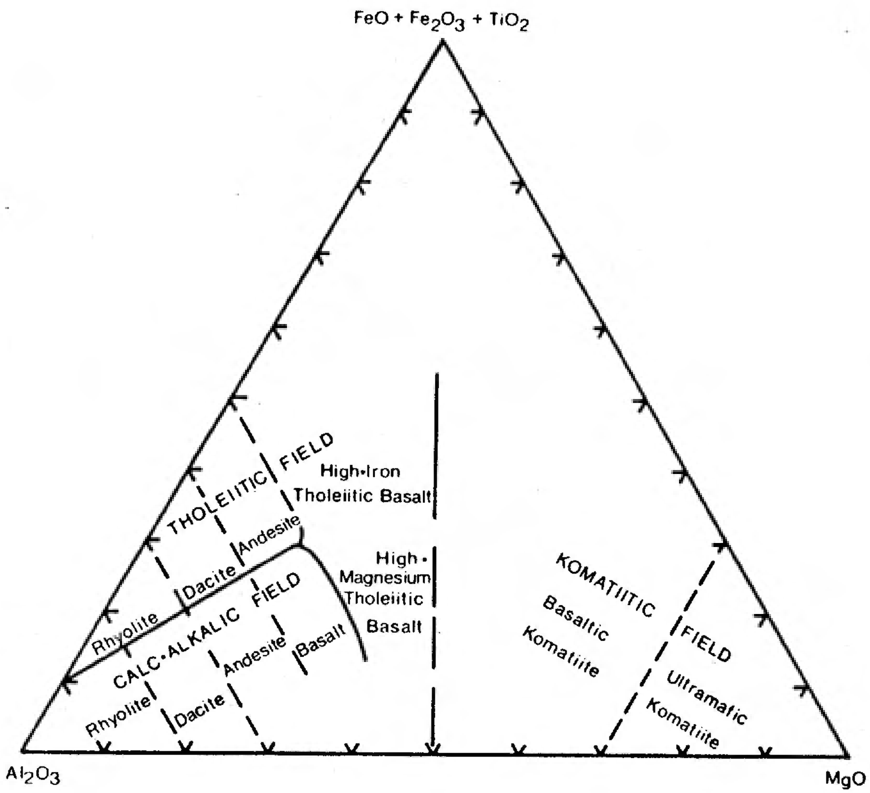


FeO + Fe2O3 + TiO2
42
38
41
43
44
45
40a
40b
37
Al2O3
MgO
20
40
60
80

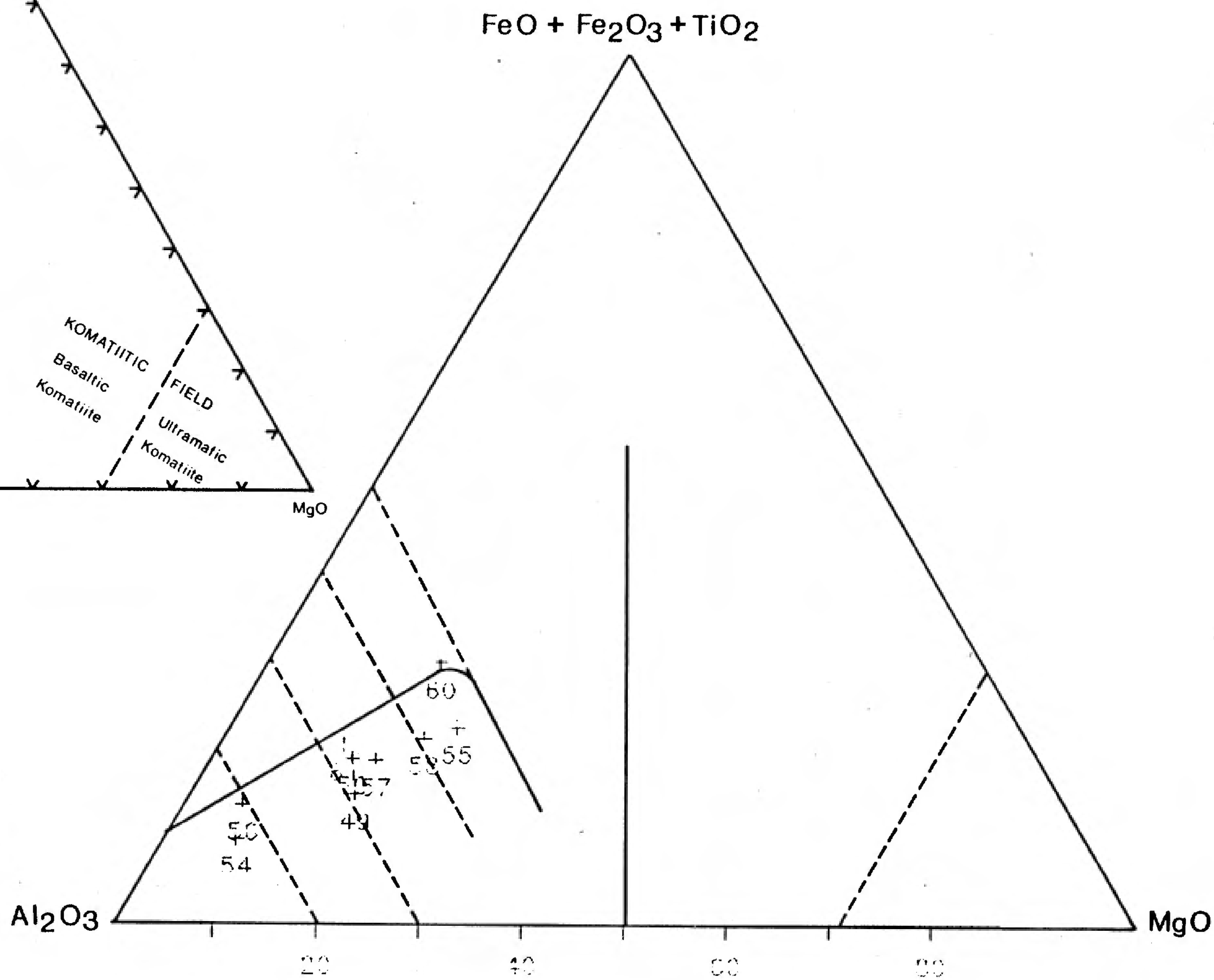


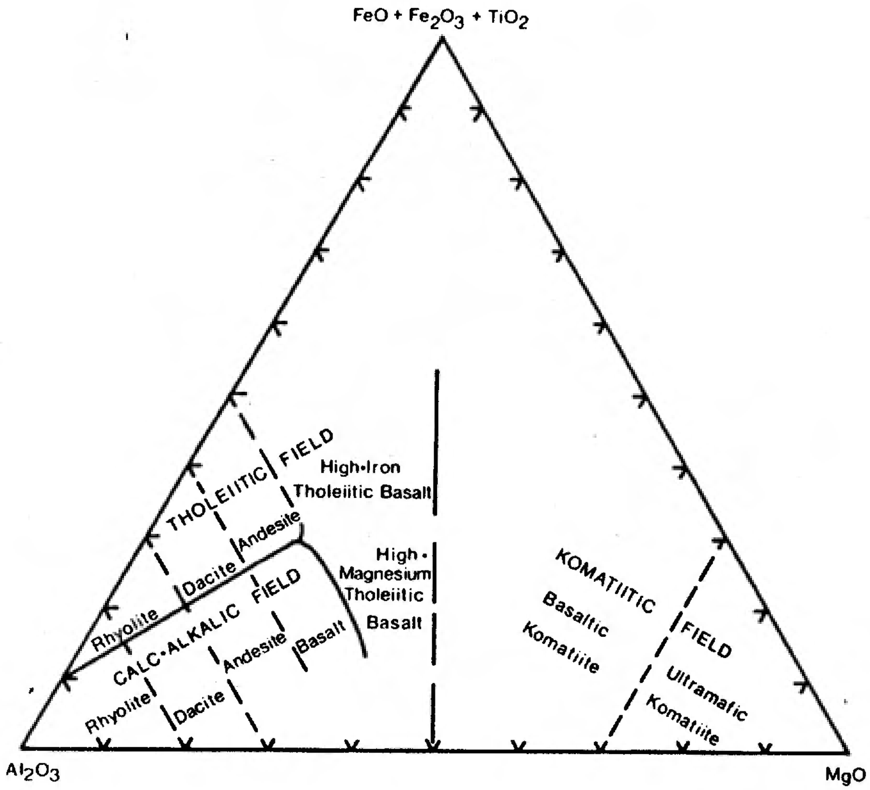
CB-89-36,39a,
and 46 to 53



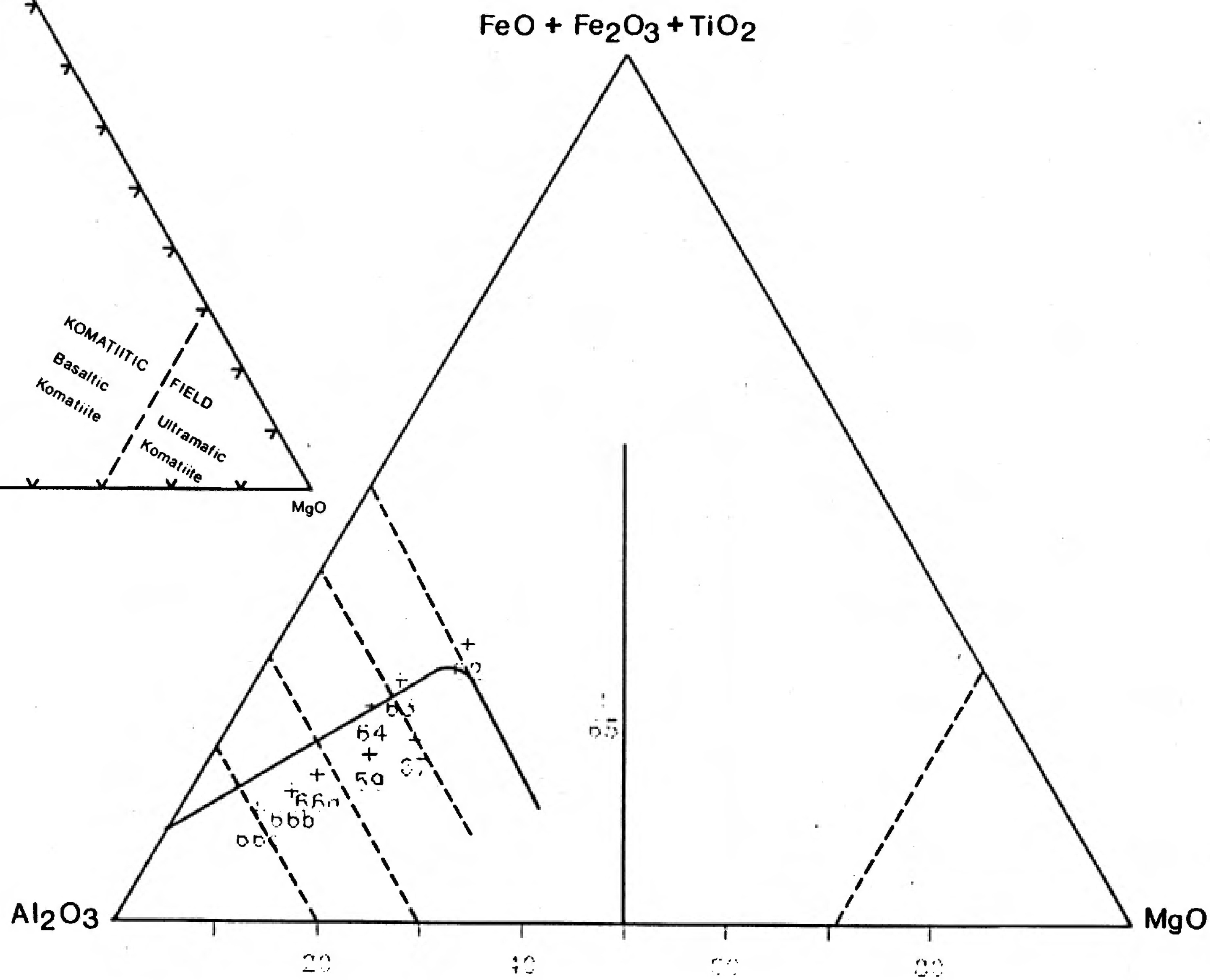


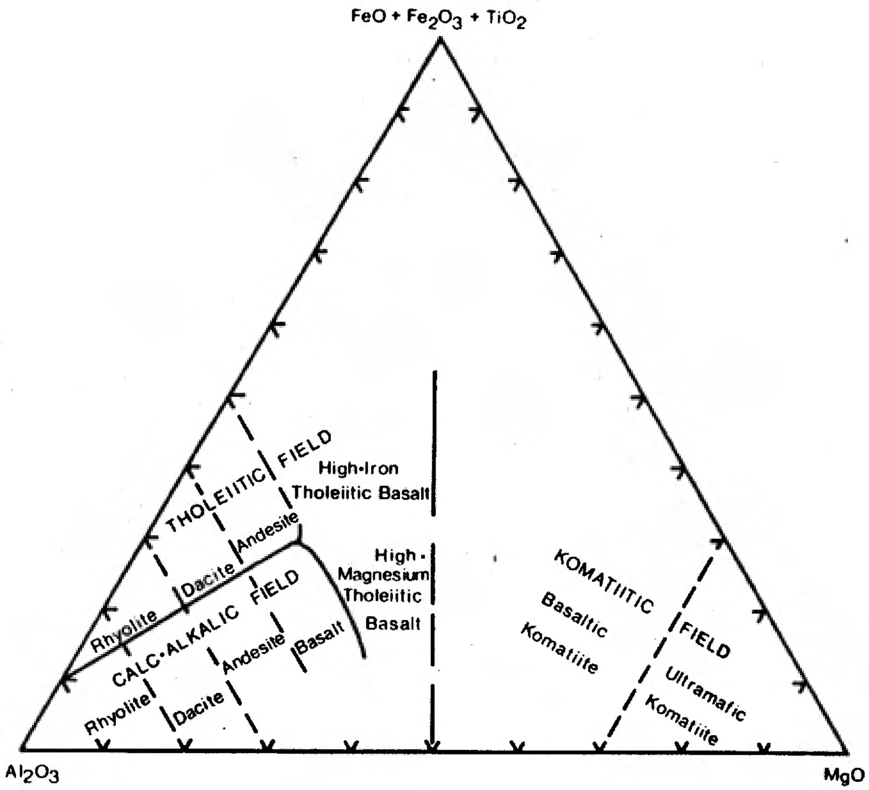
CB-89-49 and
54 to 61



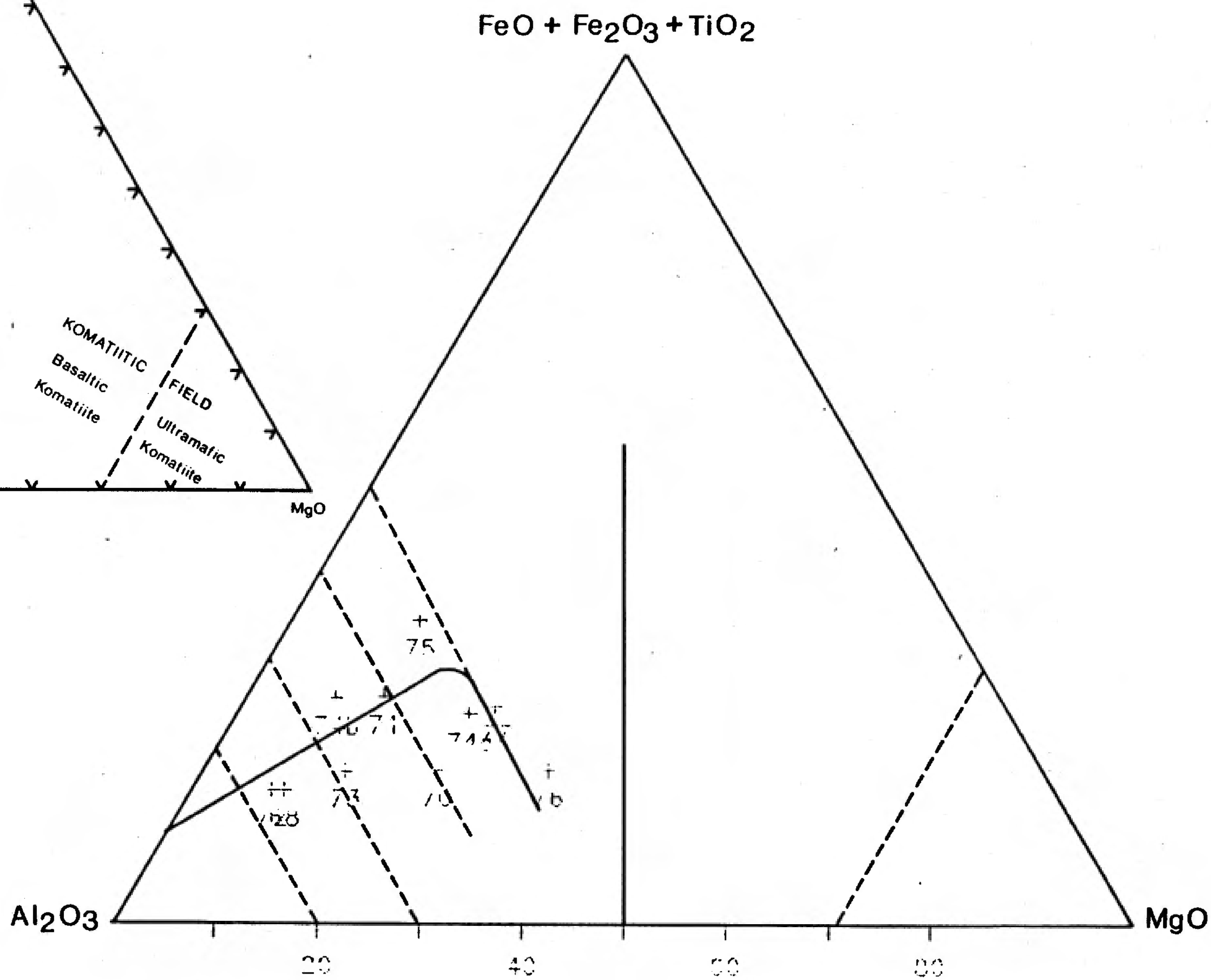


CB-89-59 and
62 to 67




FeO + Fe_2O_3 + TiO_2
THOLEIITIC FIELD
High-Iron Tholeiitic Basalt
Andesite
Dacite
Rhyolite
High-Magnesium Tholeiitic Basalt
CALC-ALKALIC FIELD
Rhyolite
Dacite
Andesite
Basalt
KOMATIITIC FIELD
Basaltic Komatiite
Ultramafic Komatiite
Al_2O_3
MgO

CB-89-68 to 77


FeO + Fe_2O_3 + TiO_2
Al_2O_3
MgO
75
71
20
40

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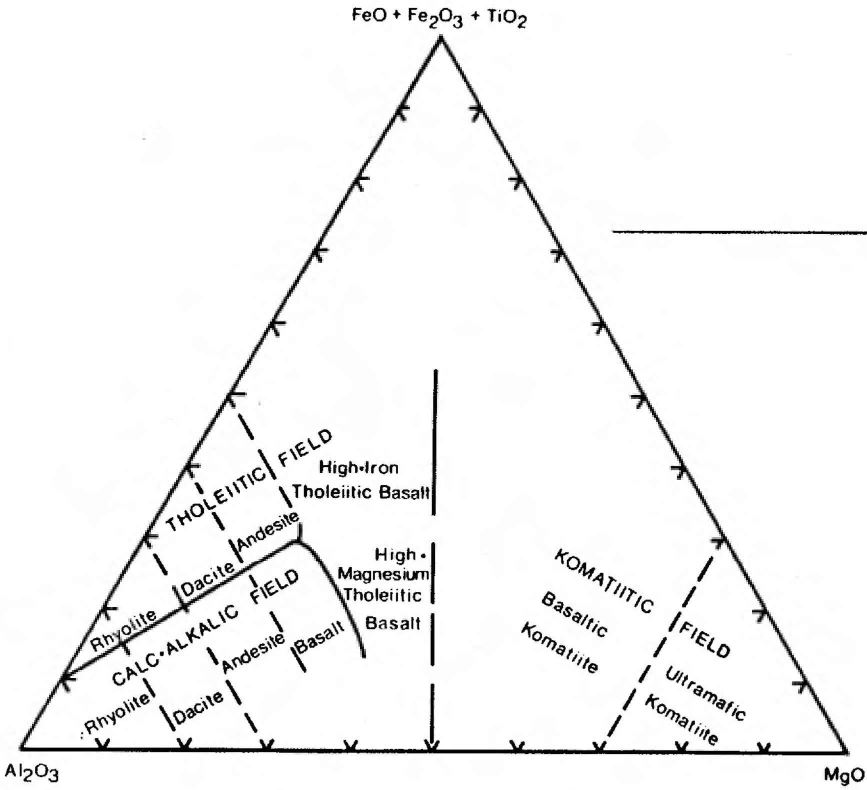
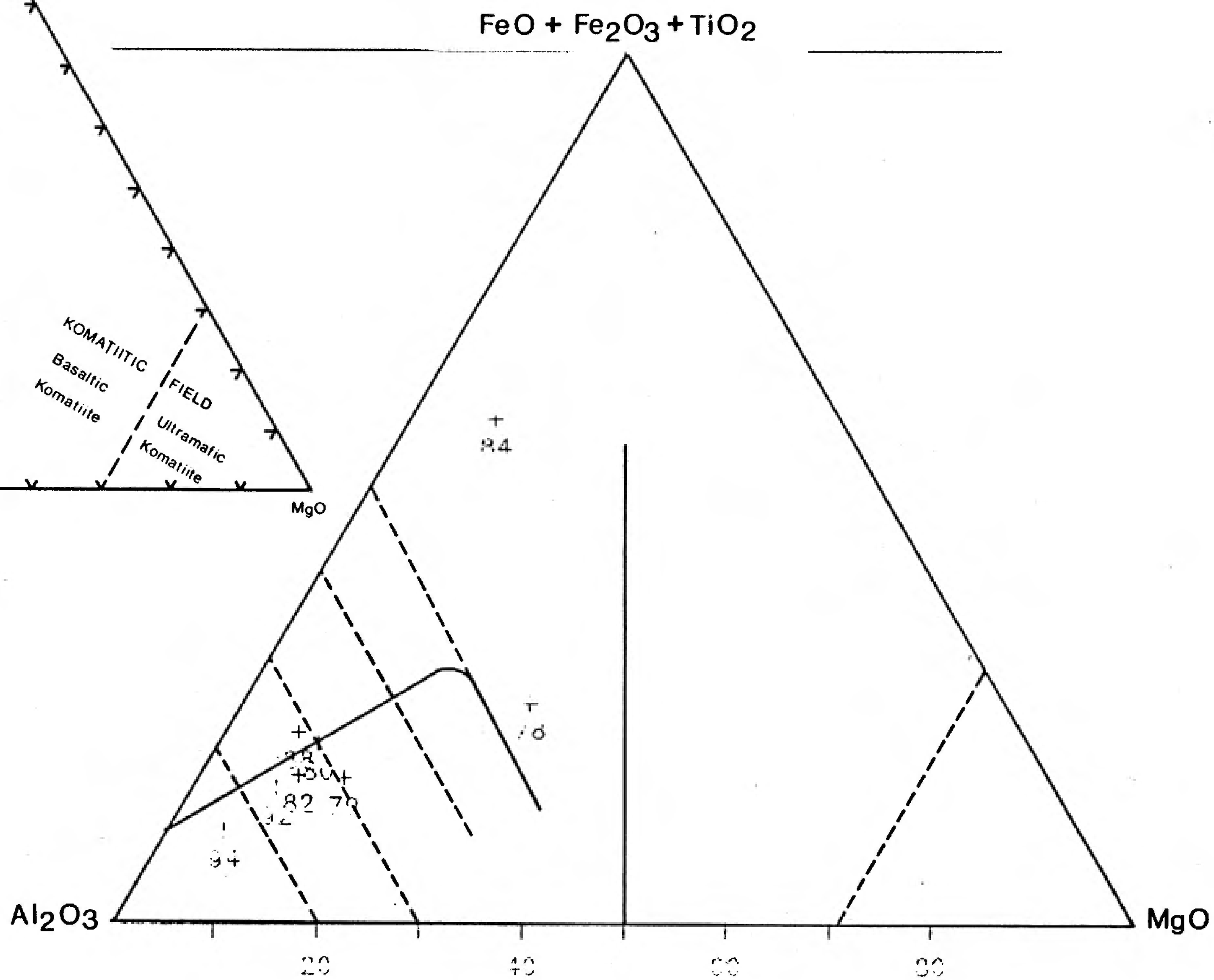
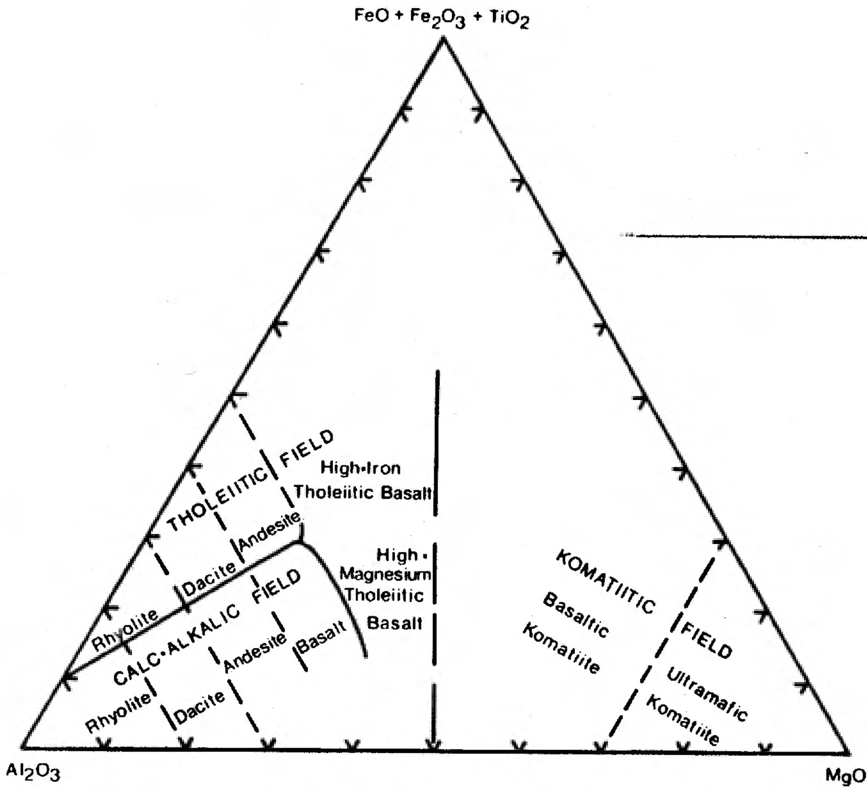


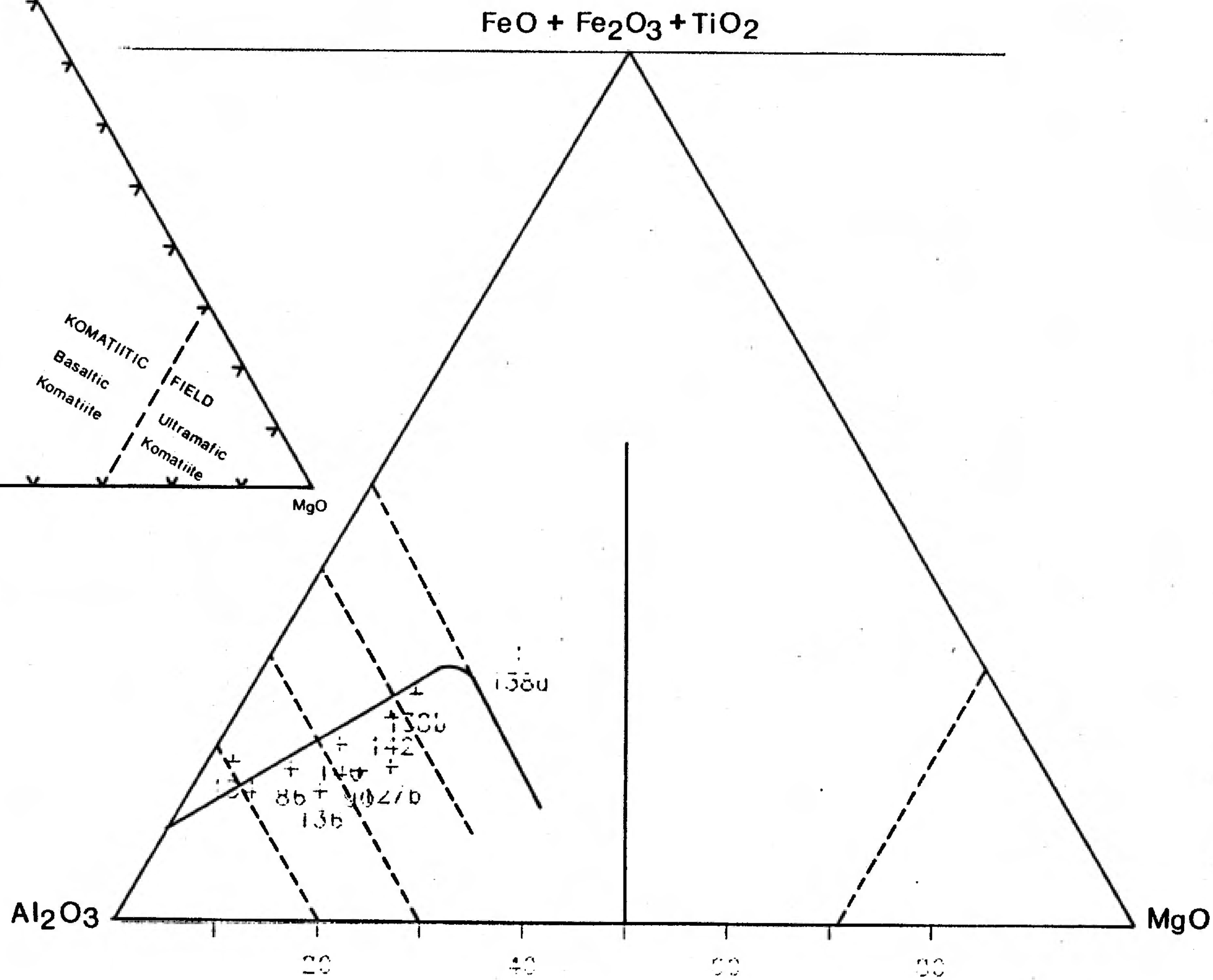
FeO + Fe_2O_3 + TiO_2
THOLEIITIC FIELD
High-Iron Tholeiitic Basalt
High-Magnesium Tholeiitic Basalt
Andesite
Dacite
Rhyolite
CALC-ALKALIC FIELD
Rhyolite
Dacite
Andesite
Basalt
KOMATIITIC FIELD
Basaltic Komatiite
Ultramafic Komatiite
Al_2O_3
MgO



FeO + Fe_2O_3 + TiO_2
84
82
94
Al_2O_3
MgO
20
40
60
80


FeO + Fe_2O_3 + TiO_2
THOLEIITIC FIELD
High-Iron Tholeiitic Basalt
Andesite
Dacite
Rhyolite
High-Magnesium Tholeiitic Basalt
CALC-ALKALIC FIELD
Rhyolite
Dacite
Andesite
Basalt
KOMATIITIC FIELD
Basaltic Komatiite
Ultramafic Komatiite
Al_2O_3
MgO

CAMBIOR INC


FeO + Fe_2O_3 + TiO_2
Al_2O_3
MgO

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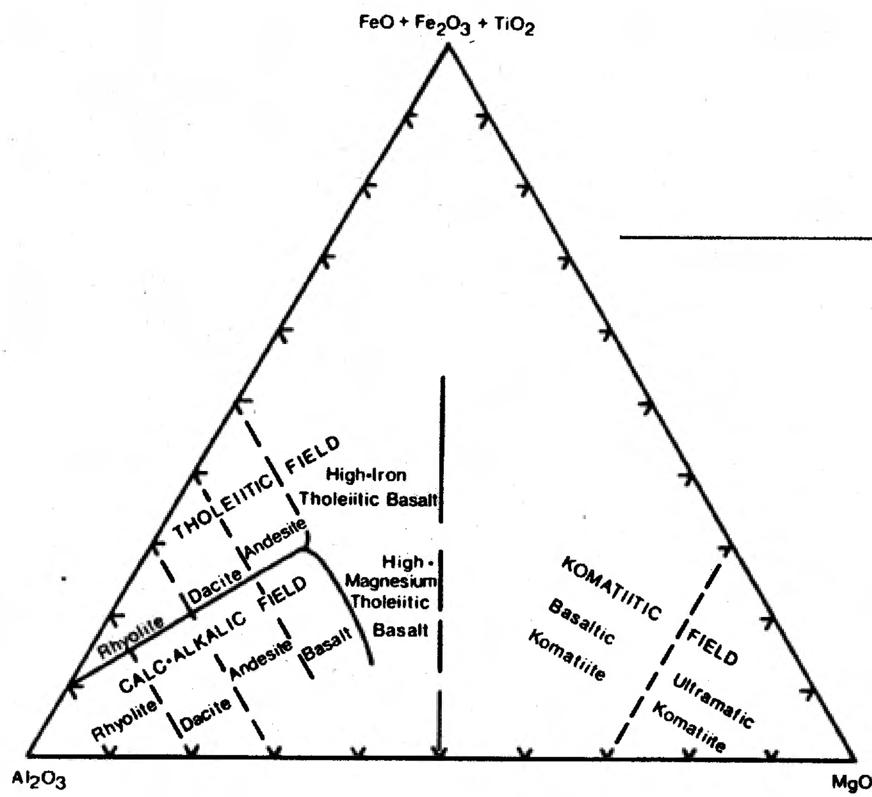
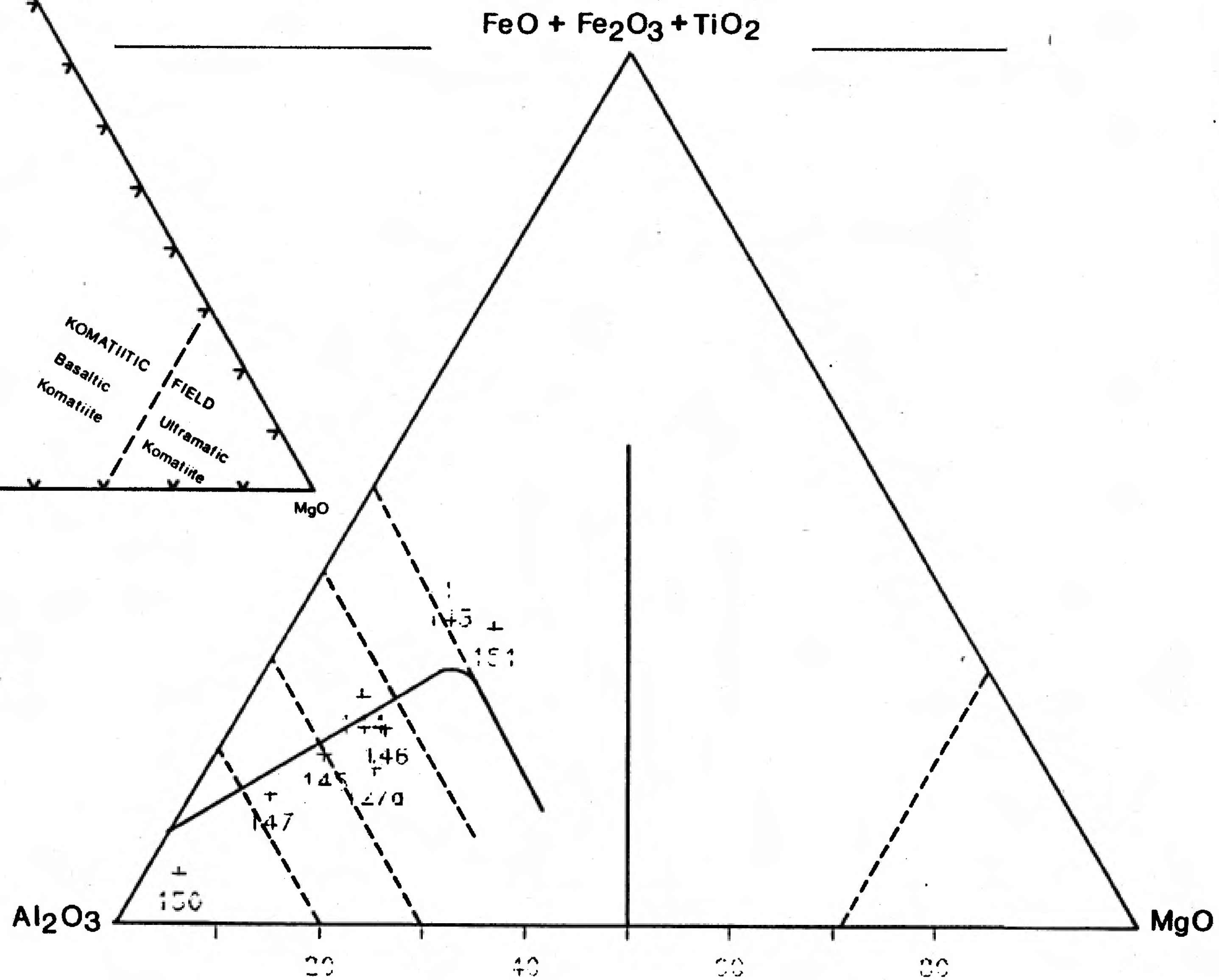
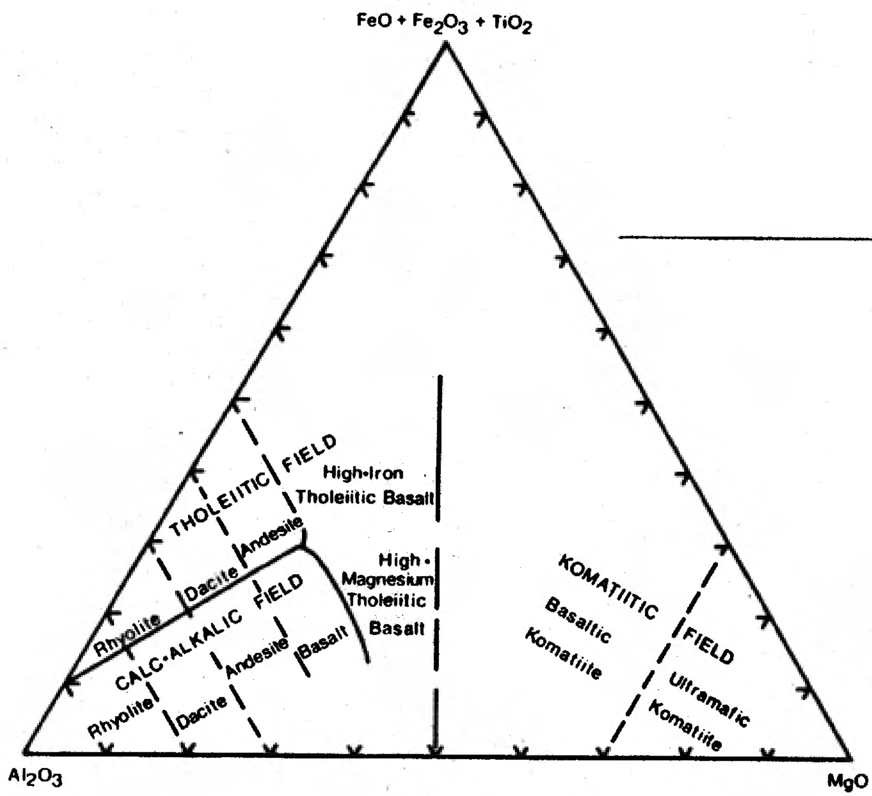


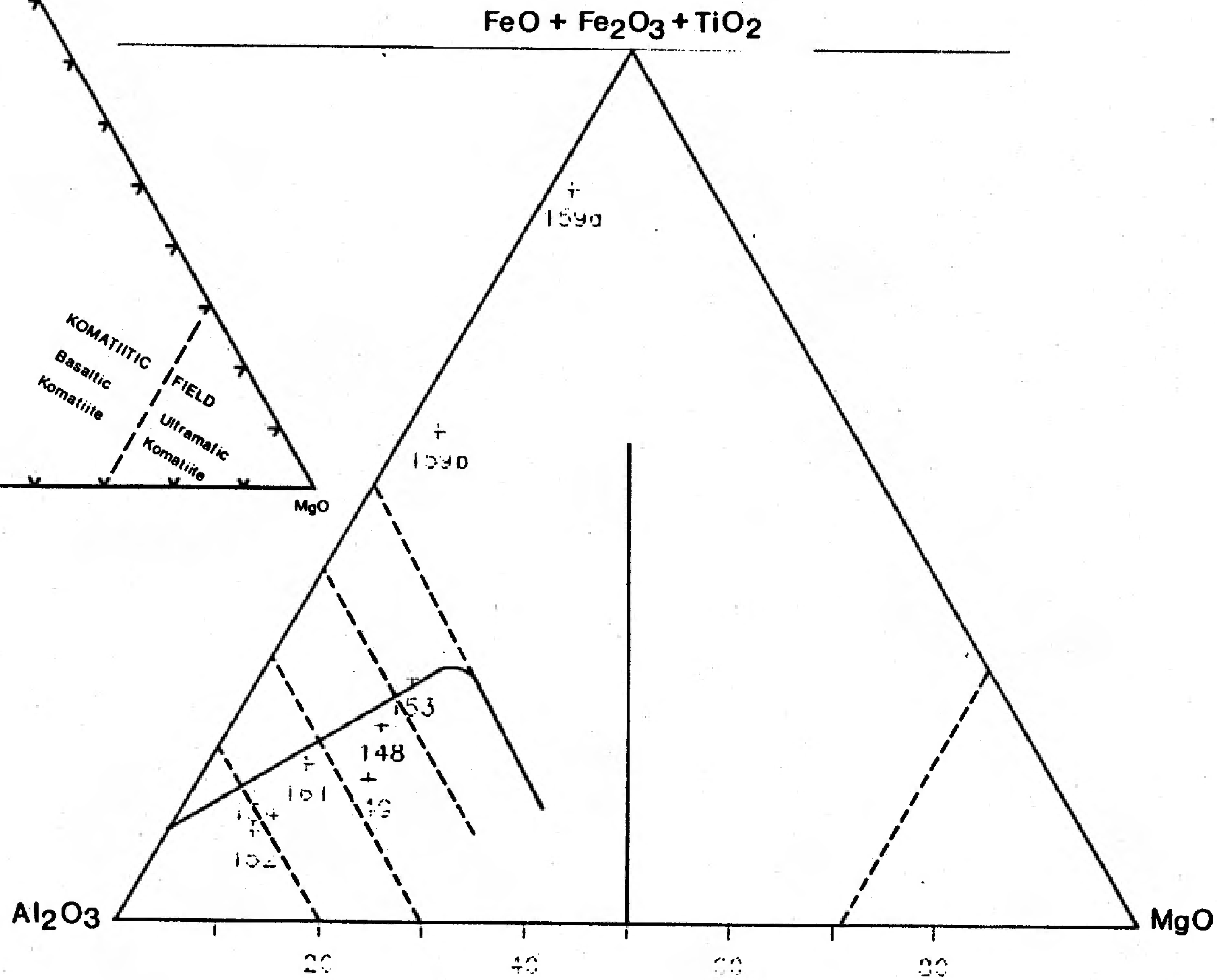
$FeO + Fe_2O_3 + TiO_2$
THOLEIITIC FIELD
High-Iron Tholeiitic Basalt
Andesite
Dacite
Rhyolite
High-Magnesium Tholeiitic Basalt
CALC-ALKALIC FIELD
Andesite
Basalt
Rhyolite
Dacite
KOMATIITIC FIELD
Basaltic Komatiite
Ultramafic Komatiite
Al_2O_3
MgO

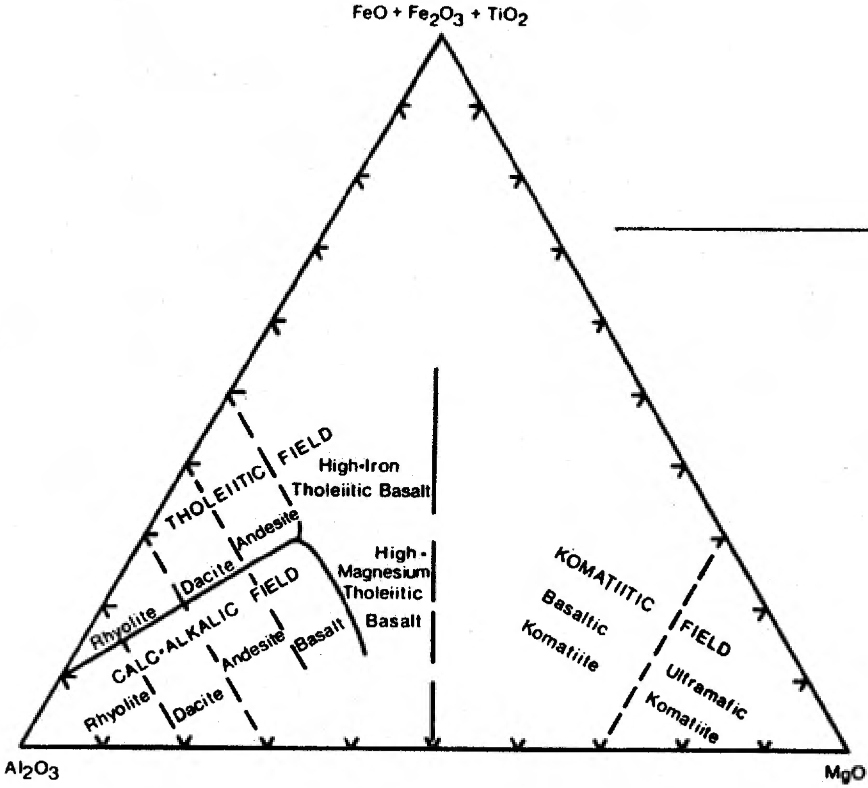


$FeO + Fe_2O_3 + TiO_2$
151
146
147
150
Al_2O_3
MgO
20
40
60
80

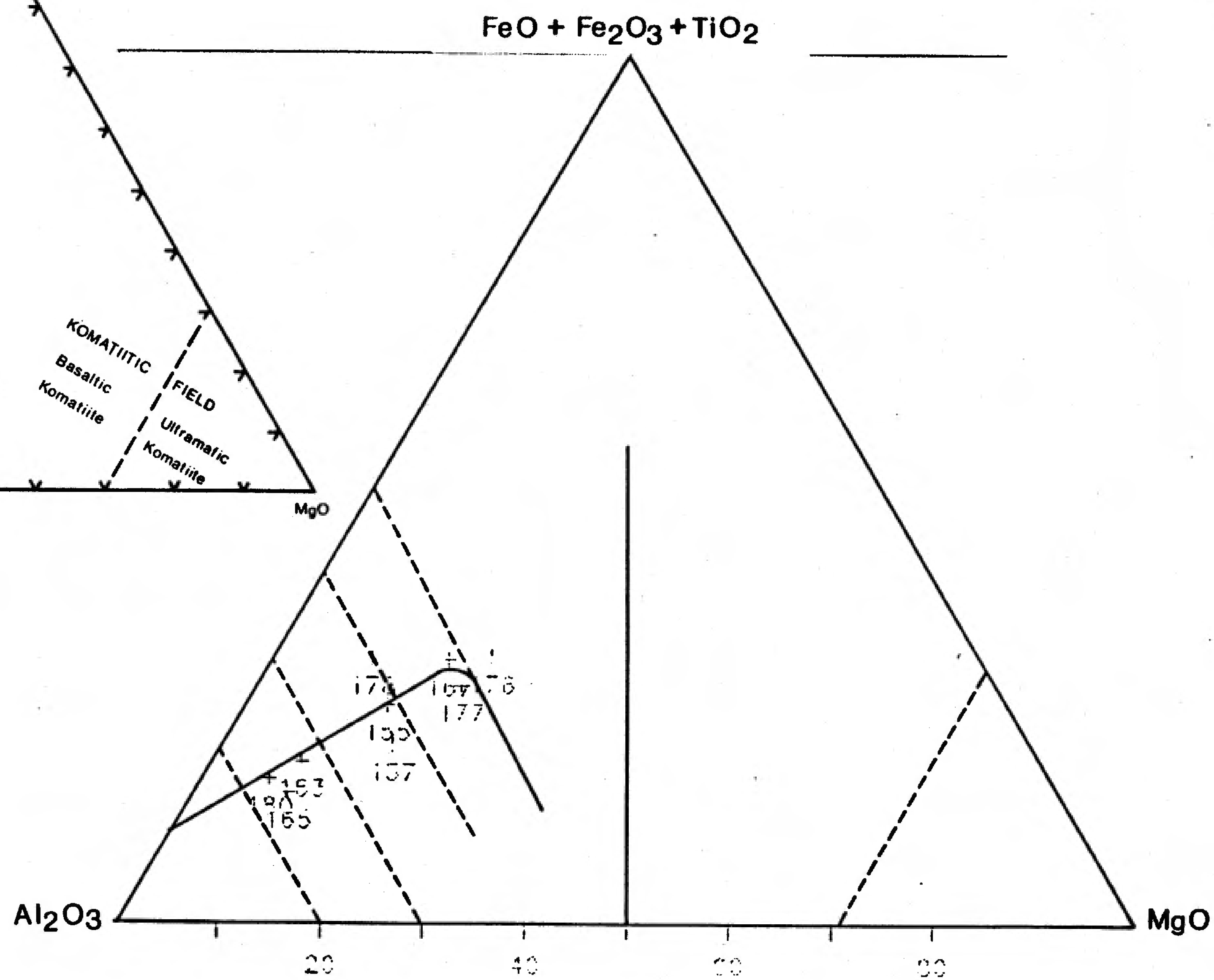

$FeO + Fe_2O_3 + TiO_2$
THOLEIITIC FIELD
High-Iron Tholeiitic Basalt
Andesite
Dacite
Rhyolite
High-Magnesium Tholeiitic Basalt
CALC-ALKALIC FIELD
Rhyolite
Dacite
Andesite
Basalt
KOMATIITIC FIELD
Basaltic Komatiite
Ultramafic Komatiite
Al_2O_3
MgO

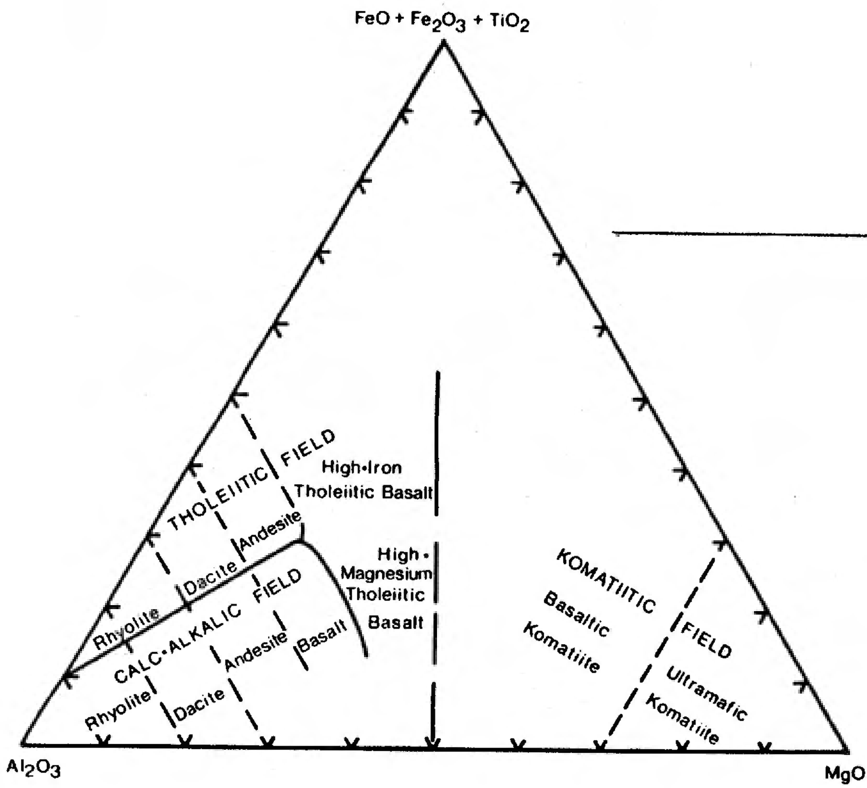
CAMBIOR INC


$FeO + Fe_2O_3 + TiO_2$
159a
159b
153
148
151
152
Al_2O_3
MgO
20
40
60
80


FeO + Fe2O3 + TiO2
THOLEIITIC FIELD
High-Iron
Tholeiitic Basalt
Andesite
Dacite
Rhyolite
High-
Magnesium
Tholeiitic
Basalt
CALC-ALKALIC FIELD
Andesite
Basalt
Rhyolite
Dacite
KOMATIITIC FIELD
Basaltic
Komatiite
Ultramafic
Komatiite
Al2O3
MgO

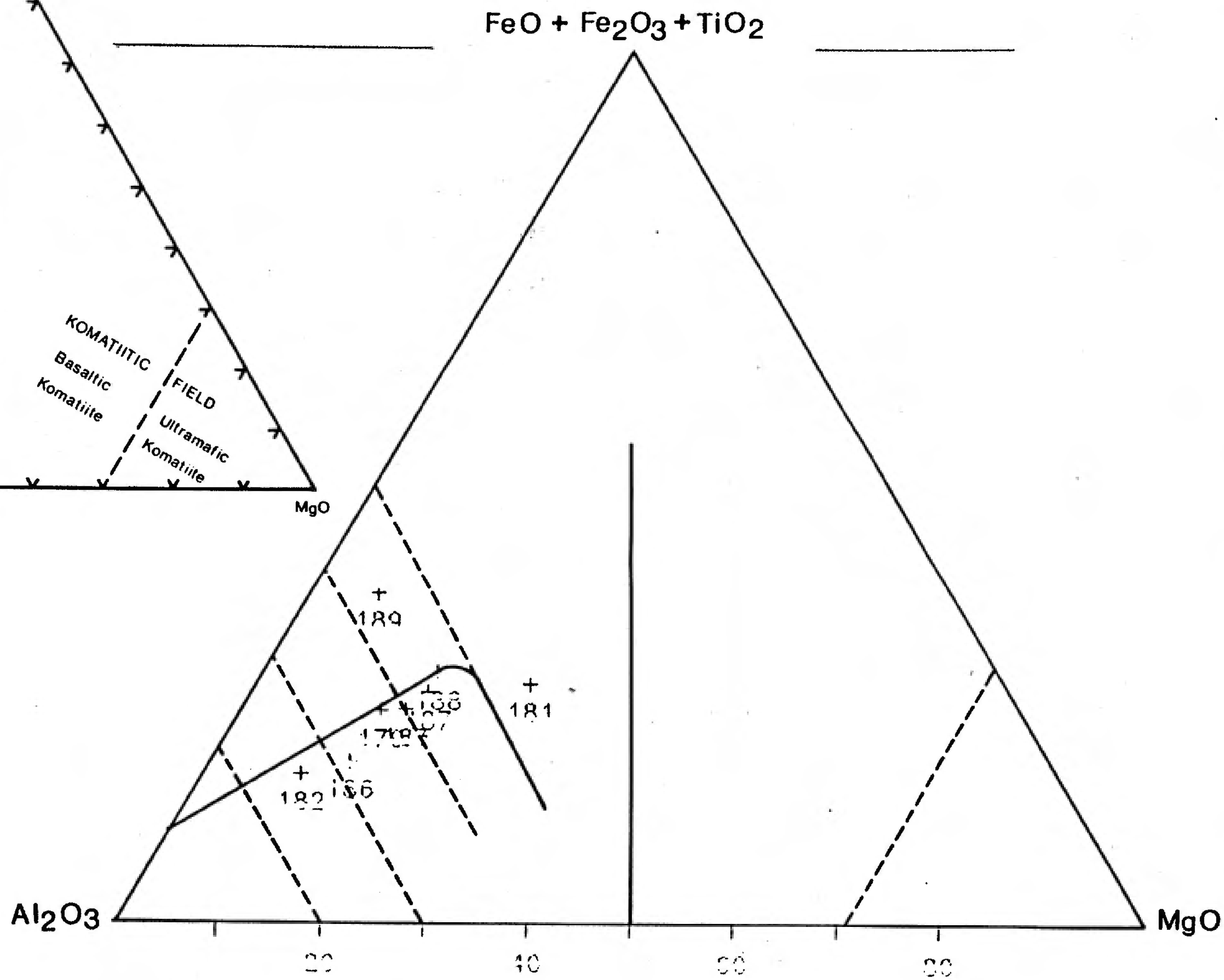
CAMBIOR INC


FeO + Fe2O3 + TiO2
177
157
153
165
Al2O3
MgO
20
40

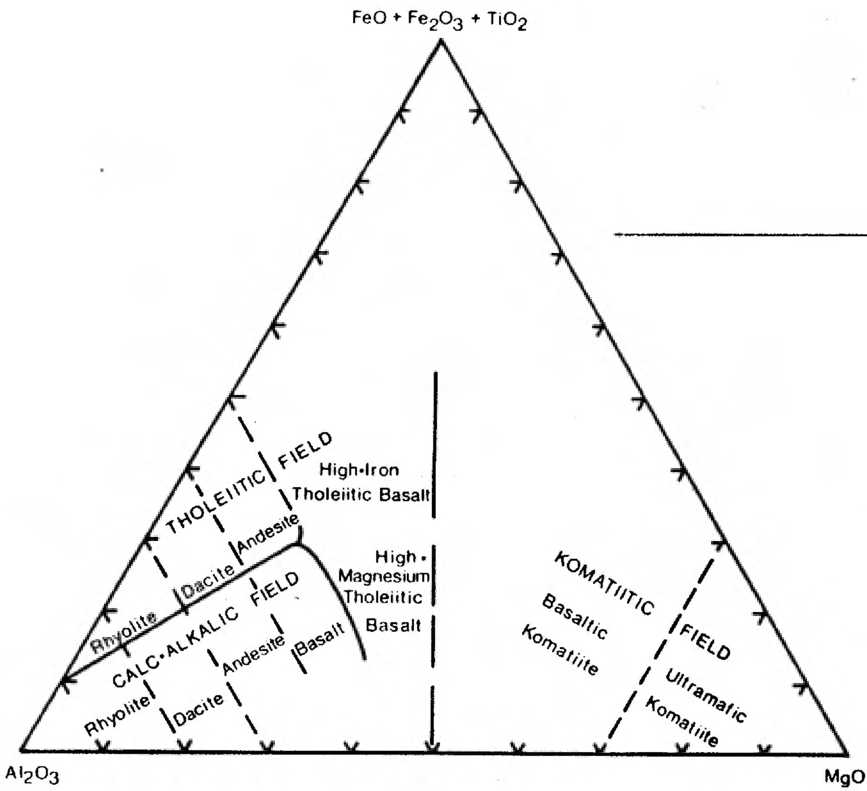


FeO + Fe2O3 + TiO2
THOLEIITIC FIELD
High-Iron
Tholeiitic Basalt
Andesite
Dacite
Rhyolite
High-
Magnesium
Tholeiitic
Basalt
CALC-ALKALIC FIELD
Andesite
Basalt
Rhyolite
Dacite
KOMATIITIC
Basaltic
Komatiite
FIELD
Ultramafic
Komatiite
Al2O3
MgO

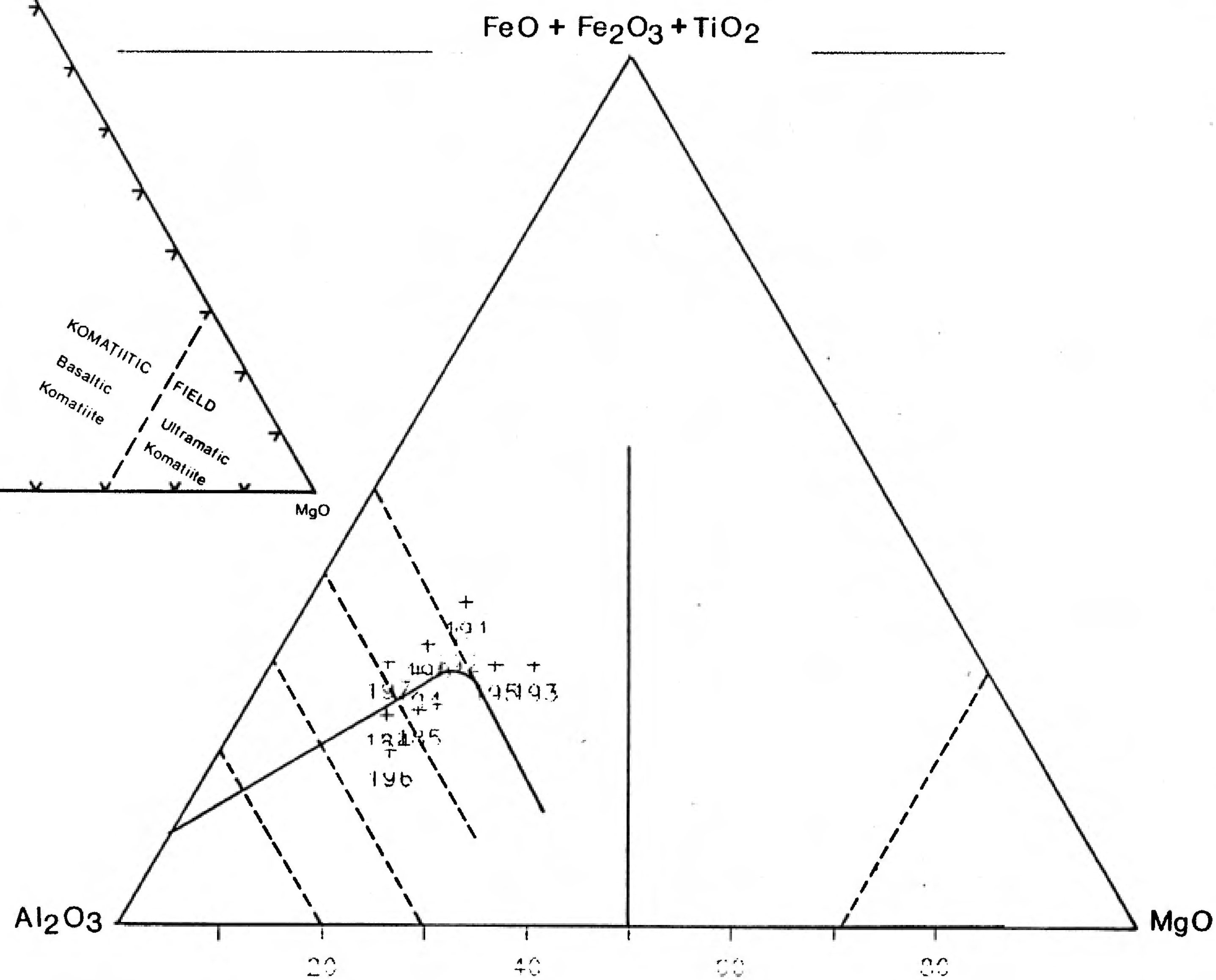
CAMBIOR INC



FeO + Fe2O3 + TiO2
189
181
182
166
Al2O3
MgO
20
40
60
80


FeO + Fe2O3 + TiO2
THOLEIITIC FIELD
High-Iron
Tholeiitic Basalt
Andesite
Dacite
Rhyolite
High-
Magnesium
Tholeiitic
Basalt
CALC-ALKALIC FIELD
Rhyolite
Dacite
Andesite
Basalt
KOMATIITIC FIELD
Basaltic
Komatiite
Ultramafic
Komatiite
Al2O3
MgO

CAMBIOR INC


FeO + Fe2O3 + TiO2
191
196
Al2O3
MgO
20
40
60
80

APPENDIX F

BONDAR-CLEGG HEAVY MINERAL ANALYSES

Bondar-Clegg & Company Ltd.
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Geochemical Lab Report

REPORT: 089-50187.0

PROJECT: CASA BERARDI

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB89-01-01-3/4H		52	36	<0.1	119	609	14.00
CB89-01-02-3/4H		99	33	<0.1	50	122	
CB89-02-01-3/4H		91	73	<0.1	252	94	15.00
CB89-02-02-3/4H		246	104	0.1	278	71	16.00
CB89-02-03-3/4H		131	63	<0.1	282	214	
CB89-02-04-3/4H		162	80	<0.1	358	148	15.00
CB89-02-05-3/4H		190	68	<0.1	616	99	10.00
CB89-02-06-3/4H		142	55	<0.1	350	84	14.00
CB89-02-07-3/4H		455	54	<0.1	151	235	6.00
CB89-03-01-3/4H		158	49	<0.1	154	38	22.00
CB89-03-02-3/4H		308	48	0.2	131	28	17.00
CB89-03-03-3/4H		139	71	<0.1	360	158	16.00
CB89-03-04-3/4H		145	52	<0.1	290	360	15.00
CB89-03-05-3/4H		146	50	<0.1	350	162	22.00
CB89-04-01-3/4H		78	42	<0.1	140	67	13.00
CB89-04-02-3/4H		155	51	0.1	286	480	7.00
CB89-05-01-3/4H		113	54	<0.1	152	48	15.00
CB89-05-02-3/4H		120	48	0.3	292	189	13.00
CB89-06-01-3/4H		103	68	<0.1	164	243	12.00
CB89-06-02-3/4H		105	39	<0.1	246	104	13.00
CB89-07-01-3/4H		120	61	<0.1	584	154	14.00
CB89-08-01-3/4H		46	27	<0.1	66	28	12.00
CB89-10-01-3/4H		115	56	<0.1	576	402	13.00
CB89-11-01-3/4H		125	48	<0.1	222	129	14.00
CB89-11-02-3/4H		123	36	0.1	752	1270	12.00
CB89-12-01-3/4H		154	144	<0.1	70	57	10.00
CB89-12-02-3/4H		95	78	<0.1	58	168	5.00
CB89-12-03-3/4H		89	37	<0.1	119	244	7.00
CB89-12-04-3/4H		47	39	<0.1	129	95	11.00
CB89-12-05-3/4H		62	31	<0.1	113	111	10.00
CB89-12-06-3/4H		60	36	<0.1	103	175	13.00
CB89-12-07-3/4H		75	42	0.1	119	193	14.00
CB89-12-08-3/4H		63	46	<0.1	100	136	15.00
CB89-12-09-3/4H		74	32	<0.1	109	73	12.00
CB89-12-10-3/4H		77	45	<0.1	144	150	11.00
CB89-12A-01-3/4H		61	40	<0.1	110	156	10.00
CB89-12A-02-3/4H		66	33	<0.1	155	150	12.00
CB89-12A-03-3/4H		53	32	<0.1	142	197	14.00
CB89-12A-04-3/4H		85	39	<0.1	141	204	
CB89-12A-05-3/4H		76	55	<0.1	133	22	11.00

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REPORT: 089-50187.0

PROJECT: CASA BERARDI PAGE 2

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB89-12A-06-3/4H		411	120	<0.1	96	146	7.00
CB89-13-01-3/4H		102	65	<0.1	>2000	238	13.00
CB89-13-02-3/4H		142	49	<0.1	>2000	201	
CB89-14-01-3/4H		96	47	<0.1	116	159	
CB89-14-02-3/4H		101	38	<0.1	146	420	9.00
CB89-14-03-3/4H		260	45	0.1	154	260	6.00
CB89-15-01-3/4H		118	61	<0.1	294	79	14.00
CB89-15-02-3/4H		80	35	<0.1	148	142	11.00
CB89-15-03-3/4H		57	38	<0.1	316	360	12.00
CB89-15-04-3/4H		77	36	<0.1	286	1329	13.00
CB89-15-05-3/4H		59	31	<0.1	80	34	25.00
CB89-15-06-3/4H		93	44	<0.1	320	<17	3.00
CB89-15-07-3/4H		86	32	<0.1	480	141	13.00
CB89-15-08-3/4H		93	31	<0.1	760	174	14.00
CB89-15-09-3/4H		57	36	<0.1	48	53	16.00
CB89-15-10-3/4H		60	60	<0.1	74	163	18.00
CB89-15-11-3/4H		60	33	<0.1	36	131	14.00
CB89-15-12-3/4H		100	38	<0.1	100	55	12.00
CB89-15-13-3/4H		57	27	<0.1	90	372	13.00
CB89-15-14-3/4H		124	74	<0.1	172	156	16.00
CB89-15-15-3/4H		160	87	0.1	304	81	10.00
CB89-15-16-3/4H		167	60	0.1	>2000	108	13.00
CB89-15-17-3/4H		143	74	0.1	648	95	12.00
CB89-15-18-3/4H		256	763	0.8	736	215	17.00
CB89-16-01-3/4H		94	38	<0.1	137	235	11.00
CB89-16-02-3/4H		84	32	<0.1	166	111	16.00
CB89-16-03-3/4H		86	33	<0.1	258	284	15.00
CB89-17-01-3/4H		134	31	<0.1	147	274	14.00
CB89-17-02-3/4H		110	80	0.1	354	95	12.00
CB89-18-01-3/4H		96	40	<0.1	244	90	15.00
CB89-19-01-3/4H		17	20	<0.1	3	199	14.00
CB89-19-02-3/4H		39	31	<0.1	7	156	14.00

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REPORT: 089-50202.0

PROJECT: CASA BERARDI PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB-89-19-03-3/4H		28	22	<0.1	2	70	15.00
CB-89-19-04-3/4H		115	60	<0.1	17	386	17.00
CB-89-19-05-3/4H		877	164	1.7	696	116	28.00
CB-89-20-01-3/4H		67	44	0.4	178	283	14.00
CB-89-20-02-3/4H		57	42	0.2	204	279	13.00
CB-89-20-03-3/4H		145	31	<0.1	115	155	14.00
CB-89-20-04-3/4H		116	40	<0.1	204	81	14.00
CB-89-20-05-3/4H		111	51	<0.1	149	191	11.00
CB-89-20-06-3/4H		77	36	<0.1	96	60	6.00
CB-89-20-07-3/4H		43	21	<0.1	9	60	11.00
CB-89-20-08-3/4H		34	25	<0.1	12	632	15.00
CB-89-20-09-3/4H		52	30	<0.1	18	225	12.00
CB-89-20-10-3/4H		27	30	<0.1	15	136	11.00
CB-89-20-11-3/4H		67	33	0.1	46	1620	15.00
CB-89-20-12-3/4H		56	26	0.3	52	30	11.00
CB-89-21-01-3/4H		74	135	0.2	188	156	10.00
CB-89-22-01-3/4H		248	423	4.4	75	56	7.00
CB-89-22-02-3/4H		206	427	3.9	73	36	5.00
CB-89-22-03-3/4H		110	109	0.3	1072	327	20.00
CB-89-23-01-3/4H		140	89	0.4	352	110	12.00
CB-89-24-01-3/4H		104	81	<0.1	208	109	11.00
CB-89-24-02-3/4H		145	54	0.2	346	512	14.00
CB-89-24-03-3/4H		174	82	0.4	456	272	15.00
CB-89-24-04-3/4H		139	69	0.3	792	219	13.00
CB-89-24-05-3/4H		177	147	0.7	163	155	6.00
CB-89-26-01-3/4H		263	55	0.1	472	135	16.00
CB-89-28-01-3/4H		111	60	0.4	1200	578	19.00
CB-89-30-01-3/4H		85	162	0.7	40	24	14.00
CB-89-30-02-3/4H		86	166	0.4	60	85	13.00
CB-89-30-03-3/4H		143	78	0.1	496	166	13.00
CB-89-30-04-3/4H		106	72	<0.1	278	642	13.00
CB-89-30-05-3/4H		72	49	0.1	600	807	11.00
CB-89-30-06-3/4H		59	37	0.9	140	170	12.00
CB-89-30-07-3/4H		75	78	0.1	520	43	14.00
CB-89-30-08-3/4H		262	36	0.6	>2000	158	11.00
CB-89-32-01-3/4H		116	60	0.3	760	284	30.00
CB-89-32-02-3/4H		116	37	0.3	234	119	21.00
CB-89-32-03-3/4H		89	75	0.2	230	167	19.00
CB-89-32-04-3/4H		45	32	0.1	40	123	9.00
CB-89-32-05-3/4H		31	21	<0.1	23	72	10.00

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Geochemical Lab Report

REPORT: 089-50202.0

PROJECT: CASA BERARDI

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB-89-32-06-3/4H		21	16	<0.1	8	24	16.00
CB-89-32-07-3/4H		17	15	<0.1	10	297	15.00
CB-89-32-08-3/4H		30	18	<0.1	14	12	10.00
CB-89-32-09-3/4H		35	20	<0.1	23	67	13.00
CB-89-32-10-3/4H		80	28	<0.1	54	285	12.00
CB-89-32-11-3/4H		86	20	<0.1	164	125	11.00
CB-89-32-12-3/4H		142	51	<0.1	157	49	8.00
CB-89-32-13-3/4H		157	60	0.4	282	35	13.00
CB-89-32-14-3/4H		72	34	<0.1	97	823	16.00
CB-89-32-15-3/4H		56	21	<0.1	38	17	9.00
CB-89-32-16-3/4H		85	21	<0.1	43	<6	8.00
CB-89-32-17-3/4H		40	28	<0.1	76	436	19.00
CB-89-32-18-3/4H		102	49	<0.1	63	434	13.00
CB-89-34-01-3/4H		152	38	0.1	816	195	10.00
CB-89-34-02-3/4H		92	37	<0.1	720	676	13.00
CB-89-34-03-3/4H		78	25	<0.1	760	240	9.00
CB-89-34-04-3/4H		72	29	<0.1	80	163	9.00
CB-89-34-05-3/4H		74	40	<0.1	76	51	7.00
CB-89-34-06-3/4H		75	44	<0.1	130	220	6.00
CB-89-34-07-3/4H		90	31	<0.1	117	210	10.00
CB-89-34-08-3/4H		84	28	<0.1	81	73	9.00
CB-89-34-09-3/4H		75	46	0.1	69	120	6.00
CB-89-34-10-3/4H		47	17	<0.1	61	33	11.00
CB-89-34-11-3/4H		44	16	<0.1	59	368	8.00
CB-89-34-12-3/4H		106	15	<0.1	800	87	11.00
CB-89-34-13-3/4H		34	16	<0.1	24	60	12.00
CB-89-34-14-3/4H		74	31	0.4	141	55	12.00
CB-89-34-15-3/4H		64	26	<0.1	55	38	12.00
CB-89-34-16-3/4H		75	18	<0.1	71	424	8.00
CB-89-34-17-3/4H		143	21	<0.1	89	191	8.00
CB-89-34-18-3/4H		76	24	<0.1	65	134	11.00
CB-89-34-19-3/4H		134	41	0.2	103	1443	9.00

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REPORT: 089-50228.0

PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB
C889-25-01-3/4H		133	46	<0.1	160	70
C889-27-01-3/4H		102	53	<0.1	119	129
C889-27-02-3/4H		225	127	0.4	>2000	508
C889-27-03-3/4H		388	122	4.4	>2000	372
C889-31-01-3/4H		137	70	0.3	246	105
C889-31-02-3/4H		92	56	0.3	232	16
C889-31-03-3/4H		105	60	<0.1	102	124
C889-31-04-3/4H		81	53	<0.1	108	89
C889-31-05-3/4H		295	91	0.4	>2000	265
C889-31-06-3/4H		199	104	0.3	>2000	365
C889-33-01-3/4H		88	53	0.2	238	130
C889-33-02-3/4H		266	81	0.1	664	240
C889-34-20-3/4H		78	31	<0.1	71	33
C889-34-21-3/4H		97	37	0.1	89	147
C889-34-22-3/4H		95	55	0.4	118	184
C889-34-23-3/4H		95	67	0.1	153	55
C889-34-24-3/4H		145	143	0.8	346	51
C889-34-25-3/4H		84	52	0.3	290	47
C889-34-27-3/4H		47	35	<0.1	44	555
C889-34-28-3/4H		48	31	<0.1	11	466
C889-34-29-3/4H		61	43	<0.1	38	189
C889-34-30-3/4H		143	123	0.6	124	36
C889-34-31-3/4H		126	86	<0.1	151	313
C889-34-32-3/4H		207	113	0.5	304	58
C889-34-33-3/4H		178	106	0.4	326	81
C889-34-34-3/4H		193	157	0.7	552	516
C889-34-35-3/4H		181	156	0.6	552	718
C889-34-36-3/4H		264	208	0.9	712	144
C889-35-01-3/4H		120	81	<0.1	116	31
C889-35-02-3/4H		100	61	<0.1	75	267
C889-35-03-3/4H		101	73	<0.1	64	338
C889-35-04-3/4H		90	60	<0.1	93	112
C889-35-05-3/4H		106	75	<0.1	76	69
C889-35-06-3/4H		122	73	<0.1	210	19
C889-36-01-3/4H		167	91	0.5	>2000	58
C889-37-01-3/4H		104	78	0.5	121	17
C889-37-02-3/4H		105	97	0.8	382	152
C889-38-01-3/4H		89	122	0.4	42	<25
C889-38-02-3/4H		102	72	0.1	>2000	384
C889-38-03-3/4H		114	73	0.2	>2010	240

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REPORT: 089-50228.0

PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB
CB89-38-04-3/4H		159	71	0.2	>2000	152
CB89-38-05-3/4H		131	51	0.2	181	74
CB89-38-06-3/4H		134	55	0.3	174	56
CB89-38-07-3/4H		95	44	<0.1	176	17
CB89-38-08-3/4H		134	53	0.1	276	141
CB89-38-09-3/4H		130	48	<0.1	167	80
CB89-38-10-3/4H		78	45	<0.1	298	1110
CB89-38-11-3/4H		137	56	<0.1	544	286
CB89-38-12-3/4H		171	74	<0.1	264	59
CB89-38-13-3/4H		49	47	<0.1	74	71
CB89-38-14-3/4H		150	271	0.2	268	303
CB89-39-01-3/4H		235	374	3.6	103	190
CB89-40-01-3/4H		100	71	0.2	968	430
CB89-40-02-3/4H		84	64	0.1	784	217
CB89-40-03-3/4H		112	59	0.1	516	54
CB89-40-04-3/4H		93	68	0.1	354	31
CB89-40-05-3/4H		166	83	<0.1	1288	197
CB89-40-06-3/4H		107	69	<0.1	180	140
CB89-40-07-3/4H		91	54	<0.1	278	95
CB89-40-08-3/4H		66	43	0.1	294	105
CB89-40-09-3/4H		114	60	<0.1	314	82
CB89-40-10-3/4H		115	56	1.5	276	222
CB89-40-11-3/4H		97	69	<0.1	340	295
CB89-40-12-3/4H		79	55	<0.1	306	39
CB89-40-13-3/4H		87	50	<0.1	156	32
CB89-40-14-3/4H		64	54	<0.1	160	36
CB89-40-15-3/4H		78	37	<0.1	127	190
CB89-40-16-3/4H		65	31	<0.1	100	2010
CB89-40-17-3/4H		144	142	0.4	336	1436

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REPORT: 089-50229.0

PROJECT: NONE

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au-150 PPM	Au+150 PPM	Au Av PPM	Testwt grs	-150wt grs	+150wt grs
C889-34-26-3/4H		115	37	0.1	137	0.05	0.60	0.39	2.50	4.93	7.75
C889-35-07-3/4H		127	136	0.9	896	2.85	68.86	26.60	7.00	9.36	5.26
C889-40-18-3/4H		111	64	0.5	252	0.30	3.91	1.26	15.00	17.84	6.44

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Geochemical Lab Report

REPORT: 089-50303.0

PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB
CB89-40-19-3/4H		129	60	0.4	298	117
CB89-41-01-3/4H		624	70	<0.1	328	505
CB89-42-01-3/4H		112	49	0.1	15	68
CB89-42-02-3/4H		271	89	<0.1	144	239
CB89-42-03-3/4H		184	150	0.5	824	587
CB89-42-04-3/4H		396	120	0.1	334	82
CB89-43-01-3/4H		183	349	3.8	66	12
CB89-43-02-3/4H		85	103	0.4	196	80
CB89-43-03-3/4H		131	71	1.9	137	172
CB89-43-04-3/4H		90	66	<0.1	152	40
CB89-43-05-3/4H		137	74	0.6	180	337
CB89-44-01-3/4H		60	26	<0.1	143	43
CB89-45-01-3/4H		84	48	<0.1	133	46
CB89-45-02-3/4H		64	55	<0.1	98	424
CB89-45-03-3/4H		124	44	0.2	153	397
CB89-45-04-3/4H		109	39	0.4	75	67
CB89-46-01-3/4H		117	60	<0.1	266	72
CB89-46-02-3/4H		77	38	<0.1	169	7
CB89-46-03-3/4H		121	86	<0.1	680	228
CB89-46-04-3/4H		62	54	<0.1	308	188
CB89-46-05-3/4H		101	62	0.3	360	212
CB89-46-06-3/4H		71	35	<0.1	139	123
CB89-46-07-3/4H		191	58	<0.1	132	21
CB89-48-01-3/4H		124	52	<0.1	17	152
CB89-48-02-3/4H		103	52	<0.1	18	53
CB89-48-03-3/4H		124	59	0.1	14	<5
CB89-48-04-3/4H		120	71	<0.1	28	33
CB89-48-05-3/4H		182	120	<0.1	49	<17
CB89-48-06-3/4H		140	84	<0.1	35	28
CB89-48-07-3/4H		97	68	<0.1	84	60
CB89-48-08-3/4H		25	26	<0.1	109	58
CB89-48-09-3/4H		52	62	<0.1	107	118
CB89-48-10-3/4H		66	39	<0.1	140	276
CB89-48-11-3/4H		32	29	<0.1	91	144
CB89-48-12-3/4H		60	33	0.1	280	339
CB89-48-13-3/4H		94	101	0.3	252	144
CB89-48-14-3/4H		66	34	<0.1	126	136
CB89-48-15-3/4H		16	20	<0.1	6	38
CB89-48-16-3/4H		21	24	0.1	16	501
CB89-48-17-3/4H		31	32	<0.1	35	6

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PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB
CB89-50-01-3/4H		118	68	<0.1	18	31
CB89-50-02-3/4H		140	72	1.2	21	<5
CB89-50-03-3/4H		168	112	<0.1	30	<17
CB89-50-04-3/4H		151	83	<0.1	29	<10

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REPORT: 089-50304.0

PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au-150 PPM	Au+150 PPM	Au Av PPM	TestWt gms	-150Wt gms	+150Wt gms
CB89-40-20-3/4H		171	148	1.7	768	0.48	4.25	1.42	20.00	24.28	8.05

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PROJECT: CASA BERARDI PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB
CB89-39-02-3/4H		132	64	0.2	54	210
CB89-39A-01-3/4H		111	58	0.2	34	87
CB89-39A-02-3/4H		80	45	0.5	33	9
CB89-39A-03-3/4H		111	53	1.3	56	66
CB89-39A-04-3/4H		147	47	0.2	83	19
CB89-39A-05-3/4H		199	48	0.3	31	75
CB89-39A-06-3/4H		109	39	<0.1	82	38
CB89-39A-07-3/4H		167	42	0.2	44	20
CB89-47-01-3/4H		120	57	0.3	720	188
CB89-47-02-3/4H		138	75	1.4	325	166
CB89-47-03-3/4H		129	56	0.3	179	94
CB89-47-04-3/4H		68	27	<0.1	154	43
CB89-47-05-3/4H		35	23	0.3	84	37
CB89-49-01-3/4H		49	41	<0.1	105	16
CB89-49-02-3/4H		50	43	<0.1	60	42
CB89-49-03-3/4H		59	44	0.1	123	34
CB89-49-04-3/4H		76	48	0.2	167	614
CB89-49-05-3/4H		75	29	0.4	167	134
CB89-49-06-3/4H		56	34	<0.1	163	49
CB89-49-07-3/4H		62	31	0.5	328	147
CB89-49-08-3/4H		51	30	<0.1	161	54
CB89-49-09-3/4H		56	30	0.3	147	507
CB89-49-10-3/4H		67	30	<0.1	132	268
CB89-49-11-3/4H		86	130	<0.1	93	31
CB89-50-05-3/4H		120	53	<0.1	17	13
CB89-50-06-3/4H		138	81	0.3	26	28
CB89-50-07-3/4H		72	59	0.3	180	666
CB89-50-08-3/4H		105	56	<0.1	163	161
CB89-50-09-3/4H		99	39	<0.1	138	734
CB89-50-10-3/4H		290	169	0.8	528	61
CB89-50-11-3/4H		327	192	1.0	608	44
CB89-50-12-3/4H		393	294	1.5	800	65
CB89-50-13-3/4H		416	501	1.0	680	58
CB89-50-14-3/4H		448	687	1.0	528	57
CB89-51-01-3/4H		15	12	<0.1	3	<6
CB89-51-02-3/4H		13	16	0.1	2	<8
CB89-51-03-3/4H		111	79	0.1	35	<25
CB89-51-04-3/4H		242	55	0.6	79	<17
CB89-52-01-3/4H		110	63	0.1	248	29
CB89-52-02-3/4H		192	67	0.4	238	950

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PROJECT: CASA BERARDI

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB
CB89-52-03-3/4H		121	37	<0.1	155	97
CB89-52-04-3/4H		56	32	0.1	163	81
CB89-52-05-3/4H		59	32	<0.1	164	49
CB89-52-06-3/4H		128	146	0.2	318	59
CB89-53-01-3/4H		59	21	<0.1	69	36
CB89-53-02-3/4H		136	46	0.4	360	154
CB89-53-03-3/4H		186	47	<0.1	152	32
CB89-53-04-3/4H		85	22	0.3	81	93
CB89-53-05-3/4H		69	25	<0.1	59	61
CB89-53-06-3/4H		100	25	<0.1	69	62
CB89-53-07-3/4H		100	51	0.1	181	1213
CB89-54-01-3/4H		87	60	0.3	508	103
CB89-54-02-3/4H		71	56	0.4	280	159
CB89-54-03-3/4H		65	115	<0.1	168	53
CB89-54-04-3/4H		68	44	0.5	252	57
CB89-54-05-3/4H		59	35	0.4	169	84
CB89-54-06-3/4H		83	33	0.1	133	63
CB89-54-07-3/4H		64	29	<0.1	132	33
CB89-54-08-3/4H		38	31	0.2	116	62
CB89-54-09-3/4H		61	31	0.1	46	42
CB89-54-10-3/4H		79	30	0.1	55	72
CB89-54-11-3/4H		86	29	<0.1	45	59
CB89-54-12-3/4H		19	16	<0.1	5	761
CB89-54-13-3/4H		24	15	<0.1	31	135
CB89-54-14-3/4H		24	21	0.1	14	271
CB89-54-15-3/4H		53	40	<0.1	82	96
CB89-54-16-3/4H		184	667	0.5	316	323
CB89-56-01-3/4H		94	44	<0.1	536	264
CB89-56-02-3/4H		54	31	0.2	342	323
CB89-56-03-3/4H		101	23	0.6	210	707
CB89-56-04-3/4H		55	55	<0.1	272	34
CB89-56-05-3/4H		136	33	0.2	114	624
CB89-56-06-3/4H		110	38	<0.1	142	30
CB89-56-07-3/4H		78	32	<0.1	86	15
CB89-56-08-3/4H		73	30	<0.1	80	51
CB89-56-09-3/4H		68	24	<0.1	115	83
CB89-56-10-3/4H		77	28	<0.1	134	66
CB89-56-11-3/4H		49	29	<0.1	92	66
CB89-56-12-3/4H		64	70	<0.1	142	94
CB89-57-01-3/4H		90	46	<0.1	856	92

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PROJECT: CASA BERARDI

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB
CB89-57-02-3/4H		112	51	0.1	584	207
CB89-57-03-3/4H		74	37	0.1	290	57
CB89-57-04-3/4H		109	22	0.1	200	75
CB89-57-05-3/4H		35	16	<0.1	76	302
CB89-57-06-3/4H		262	24	<0.1	115	281
CB89-57-07-3/4H		81	60	0.4	142	162
CB89-57-08-3/4H		302	127	0.9	1200	233
CB89-58-01-3/4H		149	236	0.2	440	135
CB89-60-01-3/4H		230	45	0.1	720	242
CB89-62-01-3/4H		167	176	0.9	160	34
CB89-64-01-3/4H		148	333	1.0	98	253
CB89-64-02-3/4H		236	33	<0.1	560	393
CB89-66-01-3/4H		83	41	0.5	568	397
CB89-66-02-3/4H		108	39	0.1	1240	179
CB89-66-03-3/4H		70	28	<0.1	584	233
CB89-66-04-3/4H		69	25	<0.1	162	25
CB89-66-05-3/4H		70	20	0.3	91	13
CB89-66-06-3/4H		102	23	0.2	100	55
CB89-66-07-3/4H		53	20	<0.1	50	50
CB89-66-08-3/4H		79	18	<0.1	83	737
CB89-66-09-3/4H		63	16	<0.1	52	29
CB89-66-10-3/4H		104	33	0.1	129	187
CB89-66-11-3/4H		141	26	0.1	87	39
CB89-66-12-3/4H		81	24	0.2	74	135
CB89-66-13-3/4H		116	25	<0.1	208	37
CB89-66-14-3/4H		20	10	<0.1	20	28
CB89-66-15-3/4H		20	10	<0.1	16	77

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	TestWt gms
CB-89-59-01-3/4H		111	39	0.1	358	731	14.00
CB-89-59-02-3/4H		74	55	0.2	302	243	10.00
CB-89-59-03-3/4H		165	50	0.3	288	99	10.00
CB-89-61-01-3/4H		91	52	<0.1	146	180	2.50
CB-89-61-02-3/4H		100	79	0.6	904	140	6.00
CB-89-63-01-3/4H		136	38	0.4	944	90	10.00
CB-89-63-02-3/4H		133	33	<0.1	196	27	11.00
CB-89-63-03-3/4H		54	30	<0.1	131	<6	8.00
CB-89-63-04-3/4H		111	28	0.1	126	33	11.00
CB-89-63-05-3/4H		64	226	<0.1	143	210	10.00
CB-89-63-06-3/4H		69	35	<0.1	105	27	10.00
CB-89-63-07-3/4H		59	30	<0.1	107	570	8.00
CB-89-63-08-3/4H		57	42	0.4	197	28	12.00
CB-89-63-09-3/4H		71	106	<0.1	130	276	10.00
CB-89-63-10-3/4H		199	46	0.2	270	34	8.00
CB-89-65-01-3/4H		157	24	<0.1	166	373	9.00
CB-89-65-02-3/4H		65	34	10.2	156	2951	8.00
CB-89-65-03-3/4H		105	31	0.1	160	59	20.00
CB-89-65-04-3/4H		126	31	<0.1	104	<5	14.00
CB-89-66-16-3/4H		17	15	<0.1	14	<5	16.00
CB-89-66-17-3/4H		21	17	<0.1	39	146	14.00
CB-89-66-18-3/4H		44	20	<0.1	48	205	13.00
CB-89-66-19-3/4H		53	36	0.3	53	120	12.00
CB-89-66-20-3/4H		68	27	0.1	61	595	8.00
CB-89-66-21-3/4H		70	35	0.2	83	128	4.00
CB-89-66-22-3/4H		57	24	0.2	65	101	11.00
CB-89-66-23-3/4H		60	31	0.1	46	30	12.00
CB-89-66-24-3/4H		63	28	0.2	67	19	11.00
CB-89-66-25-3/4H		58	25	<0.1	81	287	7.00
CB-89-66-26-3/4H		47	29	<0.1	47	<5	10.00
CB-89-66-27-3/4H		69	34	0.2	80	<53	1.50
CB-89-66-28-3/4H		745	416	0.2	326	152	28.00
CB-89-66-29-3/4H		59	32	0.1	85	159	14.00
CB-89-66-30-3/4H		53	28	<0.1	51	<6	9.00
CB-89-66-31-3/4H		49	29	0.3	68	325	6.00
CB-89-66-32-3/4H		55	24	<0.1	23	147	10.00
CB-89-66-33-3/4H		55	27	0.3	141	237	20.00
CB-89-66-34-3/4H		58	62	<0.1	146	229	22.00
CB-89-66-36-3/4H		174	284	1.2	272	106	30.00
CB-89-66-37-3/4H		225	311	1.1	296	31	23.00

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB-89-67-01-3/4H		132	49	0.3	656	105	10.00
CB-89-67-02-3/4H		286	103	1.1	992	284	11.00
CB-89-67-03-3/4H		105	38	0.5	322	1440	8.00
CB-89-67-04-3/4H		64	29	<0.1	64	222	10.00
CB-89-67-05-3/4H		327	36	<0.1	40	175	6.00
CB-89-67-06-3/4H		91	32	<0.1	36	81	10.00
CB-89-67-07-3/4H		100	34	0.1	752	126	5.00
CB-89-67-08-3/4H		80	41	0.3	126	1365	6.00
CB-89-67-09-3/4H		58	29	<0.1	76	1377	10.00
CB-89-67-10-3/4H		41	24	<0.1	42	21	10.00
CB-89-67-11-3/4H		871	72	0.3	120	57	10.00
CB-89-67-12-3/4H		109	43	<0.1	170	<33	1.50
CB-89-68-01-3/4H		63	42	<0.1	848	128	15.00
CB-89-68-03-3/4H		93	42	<0.1	832	162	15.00
CB-89-68-04-3/4H		76	42	0.2	928	208	18.00
CB-89-68-05-3/4H		39	33	<0.1	776	152	13.00
CB-89-68-06-3/4H		72	40	0.1	960	210	12.00
CB-89-68-07-3/4H		132	34	0.1	1068	268	12.00
CB-89-68-08-3/4H		257	40	<0.1	984	143	13.00
CB-89-68-09-3/4H		101	36	<0.1	784	785	20.00
CB-89-68-10-3/4H		102	31	<0.1	952	102	15.00
CB-89-68-11-3/4H		66	32	<0.1	141	95	12.00
CB-89-68-12-3/4H		80	36	<0.1	165	148	12.00
CB-89-68-13-3/4H		127	33	0.1	177	42	17.00
CB-89-68-14-3/4H		94	39	<0.1	111	83	17.00
CB-89-68-15-3/4H		117	56	0.2	134	129	17.00
CB-89-68-16-3/4H		77	63	0.3	95	117	20.00
CB-89-68-17-3/4H		144	41	<0.1	136	45	16.00
CB-89-68-18-3/4H		108	49	0.1	196	55	13.00
CB-89-68-19-3/4H		172	43	<0.1	72	160	15.00

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SAMPLE NUMBER	ELEMENT UNITS	Au-150 PPM	Au+150 PPM	Au Av PPM	TestWt gms	-150Wt gms	+150Wt gms	Cu PPM	Zn PPM	Ag PPM	As PPM
CB-89-66-35-3/4H		0.08	2.00	0.45	13.00	17.27	4.10	157	43	0.5	147
CB-89-68-02-3/4H		0.14	20.93	2.83	10.00	13.72	2.04	80	63	0.4	1016

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB
CB-89-68-20-3/4H		393	692	4.1	1504	334
CB-89-69-01/02-3/4H		94	70	0.5	338	1177
CB-89-69-03-3/4H		75	44	0.1	106	73
CB-89-69-04-3/4H		74	36	<0.1	77	43
CB-89-69-05-3/4H		102	39	<0.1	104	240
CB-89-69-06-3/4H		97	41	0.4	162	60
CB-89-69-07-3/4H		81	47	0.2	103	105
CB-89-69-08-3/4H		95	97	0.2	356	93
CB-89-69-09-3/4H		92	131	0.3	131	75
CB-89-69-10-3/4H		216	116	1.9	556	4830
CB-89-69-11-3/4H		183	110	0.5	358	398
CB-89-69-12-3/4H		158	111	0.6	632	313
CB-89-69-13-3/4H		182	111	0.4	350	155
CB-89-69-14-3/4H		146	91	0.2	286	162
CB-89-69-15-3/4H		164	172	0.6	254	136
CB-89-69-16-3/4H		127	70	0.2	222	179
* CB-89-69-17-3/4H		167	81	0.6	254	348 * Bedrock -10 fraction, accidentally processed as overburden sample
CB-89-70-01-3/4H		71	42	<0.1	612	225
CB-89-70-02-3/4H		56	41	0.4	736	378
CB-89-70-03-3/4H		41	36	<0.1	800	1191
CB-89-70-04-3/4H		84	55	<0.1	384	334
CB-89-70-05-3/4H		85	64	<0.1	354	117
CB-89-70-06-3/4H		64	34	<0.1	157	154
CB-89-70-07-3/4H		44	29	<0.1	46	53
CB-89-70-08-3/4H		70	27	0.2	52	30
CB-89-70-09-3/4H		72	39	<0.1	75	221
CB-89-70-10-3/4H		110	38	<0.1	110	155
CB-89-71-01-3/4H		104	51	<0.1	294	122
CB-89-71-02-3/4H		79	63	<0.1	344	225
CB-89-71-03-3/4H		238	37	<0.1	79	210
CB-89-71-04-3/4H		73	33	0.3	85	100
CB-89-71-05-3/4H		243	44	0.4	65	309
CB-89-71-06-3/4H		140	53	<0.1	109	72
CB-89-71-07-3/4H		93	58	<0.1	105	787
CB-89-71-08-3/4H		74	39	0.2	122	240
CB-89-71-09-3/4H		111	56	0.5	190	105
CB-89-71-10-3/4H		128	82	0.1	165	152
CB-89-71-11-3/4H		139	85	0.3	304	120
CB-89-72-01-3/4H		126	62	0.2	960	1560
CB-89-72-02-3/4H		96	50	<0.1	322	49

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB
CB-89-72-03-3/4H		92	55	<0.1	576	120
CB-89-72-04-3/4H		61	46	0.3	274	53
CB-89-72-05-3/4H		91	46	0.2	310	169
CB-89-72-06-3/4H		71	48	0.2	313	84
CB-89-72-07-3/4H		110	43	<0.1	234	94
CB-89-72-08-3/4H		70	42	0.2	119	53
CB-89-72-09-3/4H		92	39	0.3	128	130
CB-89-72-10-3/4H		106	56	<0.1	46	94
CB-89-72-12-3/4H		71	32	0.2	35	68
CB-89-72-13-3/4H		107	47	0.2	91	441
CB-89-72-14-3/4H		68	39	<0.1	63	105
CB-89-72-15-3/4H		217	55	0.1	177	45
CB-89-72-16-3/4H		195	51	0.2	160	42
CB-89-73-1-3/4H		88	48	0.1	1184	276
CB-89-73-2-3/4H		62	45	<0.1	350	47
CB-89-73-3-3/4H		164	46	<0.1	187	189
CB-89-73-4-3/4H		87	75	<0.1	304	35
CB-89-79-07-3/4H		121	84	0.4	396	214
CB-89-81-01-3/4H		109	58	0.1	342	248
CB-89-81-02-3/4H		121	90	0.2	376	226

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au-150 PPM	Au+150 PPM	Au Av PPM	TestWt grs	-150Wt grs	+150Wt grs
CB-89-72-11-3/4H		151	20	<0.1	88	0.46	0.02	0.35	5.00	8.32	2.69

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB-89-73-05-3/4H		86	136	0.5	354	144	10.00
CB-89-73-06-3/4H		355	73	0.2	148	398	8.00
CB-89-74-06-3/4H		67	32	1.0	193	42	13.00
CB-89-74-07-3/4H		60	36	<0.1	124	23	9.00
CB-89-74-08-3/4H		60	32	<0.1	118	93	1.00
CB-89-74-09-3/4H		63	35	<0.1	568	47	7.00
CB-89-74-10-3/4H		139	38	0.3	97	35	6.00
CB-89-74-11-3/4H		79	60	0.2	51	86	7.00
CB-89-74-12-3/4H		111	37	0.3	59	1556	8.00
CB-89-74-13-3/4H		86	33	0.1	83	443	9.00
CB-89-74-14-3/4H		90	35	<0.1	56	99	13.00
CB-89-74-15-3/4H		124	46	0.3	73	400	12.00
CB-89-74-16-3/4H		138	32	0.1	75	101	11.00
CB-89-74-17-3/4H		107	35	0.2	68	62	13.00
CB-89-74-18-3/4H		97	44	0.3	172	23	13.00
CB-89-74-19-3/4H		105	75	<0.1	50	47	9.00
CB-89-74-20-3/4H		129	64	<0.1	57	<7	7.00
CB-89-74-21-3/4H		174	56	0.2	82	225	10.00
CB-89-74-22-3/4H		180	39	0.2	76	56	8.00
CB-89-74-23-3/4H		144	55	<0.1	302	132	10.00
CB-89-74-24-3/4H		86	48	<0.1	109	53	9.00
CB-89-74-25-3/4H		72	32	0.3	50	<7	7.00
CB-89-74-26-3/4H		271	173	0.6	824	180	14.00
CB-89-74-27-3/4H		49	71	0.2	118	144	5.00
CB-89-74-28-3/4H		227	168	0.5	1024	236	21.00
CB-89-74-29-3/4H		204	238	1.2	>2000	802	15.00
CB-89-75-1-3/4H		108	54	0.4	380	110	3.00
CB-89-75-2-3/4H		66	39	0.1	189	65	17.00
CB-89-75-3-3/4H		105	128	2.1	302	50	3.00
CB-89-75-4-3/4H		77	71	0.6	64	122	14.00
CB-89-75-5-3/4H		88	46	0.4	294	480	16.00
CB-89-75-6-3/4H		78	48	0.1	95	43	14.00
CB-89-75-7-3/4H		256	41	0.4	75	41	8.00
CB-89-77-1-3/4H		102	60	0.1	154	30	6.00
CB-89-77-2-3/4H		150	135	0.4	1316	714	10.00
CB-89-77-3-3/4H		204	112	0.4	1304	90	10.00
CB-89-79-1-3/4H		78	62	0.2	28	<8	6.00
CB-89-79-2-3/4H		111	86	0.3	131	<17	3.00
CB-89-79-3-3/4H		108	50	0.4	127	110	3.00
CB-89-79-4-3/4H		147	142	0.5	1328	194	15.00

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB-89-79-5-3/4H		133	111	0.3	364	281	20.00
CB-89-79-6-3/4H		117	116	0.4	344	50	3.00
CB-89-81-3-3/4H		129	54	0.1	172	243	9.00
CB-89-81-4-3/4H		126	59	0.1	261	490	3.00
CB-89-81-5-3/4H		39	39	<0.1	15	30	5.00
CB-89-81-6-3/4H		221	106	0.5	680	156	15.00
CB-89-81-7-3/4H		162	121	0.8	656	1250	15.00
CB-89-83-01-3/4H		138	69	<0.1	96	54	10.00
CB-89-83-02-3/4H		126	54	0.2	264	648	10.00
CB-89-83-03-3/4H		117	46	0.1	169	195	14.00
CB-89-83-04-3/4H		87	52	<0.1	104	235	12.00
CB-89-83-05-3/4H		98	52	<0.1	141	83	12.00
CB-89-83-06-3/4H		79	37	<0.1	112	75	12.00
CB-89-83-07-3/4H		81	34	<0.1	85	72	13.00
CB-89-83-08-3/4H		131	35	0.1	49	960	15.00
CB-89-83-09-3/4H		123	49	0.2	73	180	8.00
CB-89-83-10-3/4H		82	42	<0.1	63	259	8.00
CB-89-83-11-3/4H		86	38	<0.1	59	35	6.00
CB-89-83-12-3/4H		130	49	<0.1	188	85	6.00
CB-89-85-1-3/4H		101	57	0.1	191	117	10.00
CB-89-85-2-3/4H		71	51	<0.1	288	630	9.00
CB-89-85-3-3/4H		174	89	<0.1	384	78	10.00
CB-89-87-05-3/4H		84	39	<0.1	58	888	12.00
CB-89-87-06-3/4H		44	37	<0.1	49	216	14.00
CB-89-87-07-3/4H		68	42	0.2	74	82	11.00
CB-89-87-08-3/4H		59	33	0.2	62	309	14.00
CB-89-87-09-3/4H		52	31	<0.1	144	108	15.00
CB-89-87-10-3/4H		48	44	<0.1	65	196	15.00

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PROJECT: CASA BERARDI

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au-150 PPM	Au+150 PPM	Au Av PPM	-150Wt gms	+150Wt gms
CB-89-85-04-3/4H		102	42	<0.1	171	0.58	32.41	7.39	13.41	3.65

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB-89-87-01-3/4H		123	60	0.3	265	300	5.00
CB-89-89-01-3/4H		131	66	<0.1	568	745	6.00
CB-89-91-1-3/4H		102	55	0.5	366	378	10.00
CB-89-91-2-3/4H		110	71	0.3	180	68	11.00
CB-89-91-3-3/4H		109	48	<0.1	128	27	9.00
CB-89-91-4-3/4H		149	147	0.1	>2000	164	11.00
CB-89-91-5-3/4H		202	346	0.5	>2000	845	20.00
CB-89-93-01-3/4H		156	72	<0.1	>2000	108	5.00
CB-89-93-02-3/4H		140	63	0.1	1040	160	11.00
CB-89-93-03-3/4H		151	85	0.6	384	261	10.00
CB-89-95-01-3/4H		601	41	0.3	388	<50	1.00
CB-89-97-01-3/4H		126	73	0.4	1256	450	14.00
CB-89-97-02-3/4H		79	49	0.9	712	255	18.00
CB-89-97-03-3/4H		486	41	<0.1	1072	94	16.00
CB-89-99-01-3/4H		112	54	0.1	608	81	17.00
CB-89-101-01-3/4H		85	38	0.1	382	118	24.00
CB-89-101-02-3/4H		48	29	0.5	256	61	21.00
CB-89-101-03-3/4H		214	58	<0.1	112	19	17.00
CB-89-101-04-3/4H		65	32	<0.1	44	12	15.00
CB-89-101-05-3/4H		97	55	<0.1	292	125	19.00
CB-89-101-06-3/4H		100	50	<0.1	174	167	9.00
CB-89-101-07-3/4H		309	53	0.2	173	53	20.00
CB-89-101-09-3/4H		190	48	0.2	175	66	21.00
CB-89-101-10-3/4H		204	43	0.2	157	50	20.00
CB-89-101-11-3/4H		106	39	0.2	79	17	16.00
CB-89-103-01-3/4H		83	44	<0.1	181	105	22.00
CB-89-103-02-3/4H		113	65	0.1	720	82	11.00
CB-89-103-03-3/4H		196	61	0.2	123	420	7.00
CB-89-103-04-3/4H		149	47	0.2	848	60	14.00
CB-89-103-05-3/4H		98	40	0.6	109	146	17.00
CB-89-103-06-3/4H		91	41	0.1	146	176	22.00
CB-89-105-01-3/4H		131	59	<0.1	864	480	18.00
CB-89-105-02-3/4H		195	107	0.6	192	83	18.00
CB-89-105-03-3/4H		156	54	0.2	298	84	5.00
CB-89-107-01-3/4H		116	47	0.2	1168	128	15.00
CB-89-107-02-3/4H		109	52	<0.1	608	123	18.00
CB-89-107-03-3/4H		63	45	<0.1	262	90	21.00
CB-89-107-04-3/4H		139	355	5.1	114	146	17.00
CB-89-107-05-3/4H		83	44	0.3	151	37	17.00
CB-89-107-06-3/4H		93	46	0.2	182	266	16.00

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB-89-107-07-3/4H		175	48	0.1	187	212	14.00
CB-89-107-08-3/4H		83	44	0.2	600	186	20.00
CB-89-107-09-3/4H		192	87	0.2	856	370	6.00
CB-89-109-01-3/4H		101	65	0.3	536	315	4.00
CB-89-109-02-3/4H		135	56	0.5	388	276	21.00
CB-89-109-04-3/4H		143	74	0.4	632	381	13.00
CB-89-109-05-3/4H		154	72	0.5	832	170	18.00
CB-89-109-06-3/4H		129	101	0.4	304	53	13.00
CB-89-109-07-3/4H		83	41	0.2	198	97	13.00
CB-89-109-08-3/4H		66	50	<0.1	320	182	13.00

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au-150 PPM	Au+150 PPM	Au Av PPM	TestWt grs	-150Wt grs	+150Wt grs
CB-89-87-02-3/4H		114	97	0.3	844	0.26	7.46	0.93	15.00	26.83	2.77
CB-89-101-08-3/4H		159	54	0.2	656	0.15	34.54	2.24	20.00	27.50	1.78
CB-89-109-03-3/4H		148	52	0.4	808	0.49	15.12	1.49	10.00	18.70	1.37

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PROJECT: CASA BERARDI

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB-89-76-17-3/4H		59	31	<0.1	36	342	13.00
CB-89-76-18-19-3/4H		52	29	0.3	117	103	18.00
CB-89-76-20-3/4H		76	25	<0.1	104	87	11.00
CB-89-76-21-3/4H		59	33	0.2	68	95	12.00
CB-89-76-22-3/4H		62	25	0.5	83	36	15.00
CB-89-76-23-3/4H		56	27	<0.1	49	20	18.00
CB-89-76-24-3/4H		98	32	<0.1	85	248	12.00
CB-89-76-25-3/4H		105	51	<0.1	128	335	12.00
CB-89-76-26-3/4H		103	57	<0.1	117	196	13.00
CB-89-76-27-3/4H		71	39	<0.1	42	122	13.00
CB-89-76-28-3/4H		62	31	<0.1	39	78	17.00
CB-89-76-29-3/4H		96	46	0.3	71	30	12.00
CB-89-76-30-3/4H		99	48	0.1	86	<5	14.00
CB-89-76-31-3/4H		84	26	<0.1	72	<5	10.00
CB-89-76-32-3/4H		62	22	0.1	40	208	17.00
CB-89-76-33-3/4H		128	65	0.1	135	106	17.00
CB-89-78-1-3/4H		141	82	0.6	856	144	15.00
CB-89-78-2-3/4H		91	50	0.2	560	357	10.00
CB-89-78-3-3/4H		252	43	0.4	286	403	12.00
CB-89-78-4-3/4H		68	34	<0.1	165	<6	8.00
CB-89-78-5-3/4H		83	38	0.1	119	51	7.00
CB-89-78-6-3/4H		99	39	<0.1	54	455	6.00
CB-89-78-7-3/4H		120	38	<0.1	56	80	15.00
CB-89-78-8-3/4H		144	30	0.9	69	2724	10.00
CB-89-78-9-3/4H		64	34	<0.1	53	34	8.00
CB-89-78-10-3/4H		58	29	<0.1	18	345	6.00
CB-89-78-11-3/4H		81	24	<0.1	29	75	4.00
CB-89-78-12-3/4H		95	22	<0.1	35	158	8.00
CB-89-78-13-3/4H		43	26	<0.1	22	48	5.00
CB-89-78-14-3/4H		62	20	<0.1	23	210	3.00
CB-89-78-15-3/4H		75	37	<0.1	65	50	6.00
CB-89-78-16-3/4H		83	35	<0.1	66	25	6.00
CB-89-78-17-3/4H		117	60	0.2	114	35	12.00
CB-89-78-18-3/4H		97	39	0.1	53	22	11.00
CB-89-78-19-3/4H		89	37	0.2	69	32	18.00
CB-89-78-20-3/4H		43	21	<0.1	19	737	14.00
CB-89-78-21-3/4H		47	22	<0.1	45	102	13.00
CB-89-78-22-3/4H		71	30	0.1	142	558	17.00
CB-89-78-23-3/4H		114	40	0.6	182	52	22.00
CB-89-78-24-3/4H		117	47	<0.1	135	218	12.00

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB-89-78-25-3/4H		333	84	0.1	172	28	15.00
CB-89-78-26-3/4H		112	72	<0.1	148	19	8.00
CB-89-78-27-3/4H		151	107	<0.1	135	219	24.00
CB-89-78-28-3/4H		241	174	0.6	920	49	14.00
CB-89-80-21-3/4H		141	36	<0.1	70	18	13.00
CB-89-80-22-3/4H		170	121	0.2	183	23	17.00
CB-89-80-23-3/4H		198	133	0.5	358	56	14.00
CB-89-80-24-3/4H		431	199	0.6	624	90	10.00
CB-89-82-20-3/4H		137	82	0.3	175	45	14.00
CB-89-82-21-3/4H		97	58	0.3	185	69	17.00
CB-89-82-22-3/4H		146	136	0.7	302	82	15.00
CB-89-82-23-3/4H		236	192	0.8	700	<29	1.70
CB-89-84-26-3/4H		206	176	0.2	170	130	22.00
CB-89-84-27-3/4H		268	205	0.3	195	247	22.00
CB-89-84-28-3/4H		291	180	1.1	376	159	17.00
CB-89-84-29-3/4H		552	193	1.0	332	62	16.00
CB-89-84-30-3/4H		179	141	0.2	128	111	28.00
CB-89-84-31-3/4H		201	171	0.7	294	221	14.00
CB-89-84-32-3/4H		92	107	0.6	392	30	15.00
CB-89-84-33-3/4H		82	95	<0.1	366	<5	15.00
CB-89-86-05-3/4H		62	51	<0.1	122	223	14.00
CB-89-86-06-3/4H		142	126	0.1	276	363	10.00
CB-89-86-07-3/4H		205	183	0.2	168	140	18.00
CB-89-86-08-3/4H		242	193	0.2	262	56	20.00
CB-89-86-09-3/4H		229	186	0.2	342	27	23.00
CB-89-86-10-3/4H		195	311	0.7	904	118	15.00
CB-89-88-1-3/4H		71	57	<0.1	752	165	20.00
CB-89-88-2-3/4H		60	50	<0.1	154	154	14.00
CB-89-88-3-3/4H		91	60	<0.1	336	248	11.00
CB-89-88-4-3/4H		285	820	1.6	1032	52	18.00
CB-89-90-08-3/4H		57	33	<0.1	54	165	10.00
CB-89-90-09-3/4H		69	33	0.1	179	54	14.00
CB-89-90-10-3/4H		167	35	0.1	75	<5	13.00
CB-89-90-11-3/4H		74	29	<0.1	53	65	18.00
CB-89-94-30-3/4H		33	22	<0.1	121	115	19.00
CB-89-94-31-3/4H		128	82	0.2	185	212	16.00
CB-89-94-32-3/4H		188	220	0.3	360	47	14.00
CB-89-94-33-3/4H		135	132	<0.1	320	41	14.00
CB-89-96-36-3/4H		69	68	<0.1	167	14	23.00
CB-89-96-37-3/4H		145	134	0.7	348	462	22.00

Chemex Labs Ltd.
Analytical Chemists * Geochemists * Registered Assayers
450 MATHESON BLVD. E., UNIT 54, MISSISSAUGA, ONTARIO, CANADA L4Z-1R5
PHONE (416) 890-0310

To : OVERBURDEN DRILLING MANAGMENT LTD.
107 - 15 CAPELLA CT.
NEPEAN , ON
K2E 7X1
Project :
Comments: ATTN: HAC CC: FAX TORONTO

**Page No. : 1
Tot. Pages: 1
Date : 6-FEB-89
Invoice # : I-8911122
P.O. # :

CERTIFICATE OF ANALYSIS A8911122

SAMPLE DESCRIPTION	PREP CODE		Au tot oz/t	Au - oz/t	Au + mg	Wt. + grams	Wt. - grams					
CB89-84-33-H-1/6	205	--	< 0.003	< 0.003	< 0.002	0.67	13					
1/6 split of table conc. of CB-89-84-33												

ALL ASSAY DETERMINATIONS ARE PERFORMED OR SUPERVISED BY B.C. CERTIFIED ASSAYERS

CERTIFICATION :

Bondar-Clegg & Company Ltd.
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BONDAR-CLEGG

Geochemical Lab Report

REPORT: 089-50618.0

PROJECT: CASA BERARDI

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB-89-96-38-3/4H		143	197	0.7	352	59	24.00
CB-89-96-39-3/4H		195	206	1.1	744	67	17.00
CB-89-98-01-3/4H		240	76	<0.1	632	<25	2.00

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Geochemical Lab Report

REPORT: 089-50663.0

PROJECT: CASA BERARDI PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt grs
CB89-76-01-3/4H		101	50	0.5	1328	113	8.00
CB89-76-02-3/4H		77	34	0.2	576	169	8.00
CB89-76-03-3/4H		62	38	0.2	155	123	10.00
CB89-76-04-3/4H		74	46	<0.1	198	142	11.00
CB89-76-05-3/4H		100	60	0.4	61	128	8.00
CB89-76-06-3/4H		62	33	<0.1	188	1530	8.00
CB89-76-07-3/4H		66	145	0.2	108	118	12.00
CB89-76-08-3/4H		85	43	0.2	528	1650	12.00
CB89-76-09-3/4H		92	35	0.2	170	107	18.00
CB89-76-10-3/4H		79	35	<0.1	196	76	11.00
CB89-76-11-3/4H		169	47	0.2	141	436	11.00
CB89-76-12-3/4H		103	30	0.1	131	349	17.00
CB89-76-13-3/4H		37	37	<0.1	3	37	17.00
CB89-76-14-3/4H		31	41	<0.1	39	113	9.00
CB89-76-15-3/4H		95	64	0.1	90	106	11.00
CB89-76-16-3/4H		125	63	<0.1	320	124	8.00
CB89-80-01-3/4H		100	65	0.2	191	21	13.00
CB89-80-02-3/4H		109	82	0.1	350	42	10.00
CB89-80-03-3/4H		118	72	<0.1	396	183	10.00
CB89-80-04-3/4H		106	90	0.3	680	189	14.00
CB89-80-05-3/4H		160	90	0.4	1080	2160	6.00
CB89-80-06-3/4H		148	66	0.1	380	71	14.00
CB89-80-07-3/4H		111	74	0.3	792	125	11.00
CB89-80-08-3/4H		94	64	0.3	600	2983	12.00
CB89-80-09-3/4H		75	44	<0.1	140	123	9.00
CB89-80-10-3/4H		94	43	0.5	100	829	8.00
CB89-80-11-3/4H		72	45	<0.1	72	158	12.00
CB89-80-12-3/4H		104	37	<0.1	76	439	11.00
CB89-80-13-3/4H		121	46	0.5	106	117	9.00
CB89-80-14-3/4H		184	55	0.1	127	1525	13.00
CB89-80-15-3/4H		478	94	0.7	96	21	13.00
CB89-80-16-3/4H		345	46	0.2	38	96	14.00
CB89-80-17-3/4H		158	50	<0.1	49	441	13.00
CB89-80-18-3/4H		81	51	<0.1	72	63	10.00
CB89-80-19-3/4H		60	39	0.4	31	<5	10.00
CB89-80-20-3/4H		86	50	<0.1	54	127	9.00
CB89-109-09-3/4H		77	73	0.2	356	252	13.00
CB89-109-10-3/4H		102	41	0.1	300	216	15.00
CB89-109-11-3/4H		125	56	0.4	712	280	18.00
CB89-109-12-3/4H		235	68	0.6	1032	595	23.00

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Geochemical Lab Report

REPORT: 089-50663.0

PROJECT: CASA BERARDI PAGE 2

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB89-113-01-3/4H		50	51	<0.1	27	<17	3.00
CB89-113-02-3/4H		39	39	<0.1	14	330	11.00
CB89-115-01-3/4H		321	43	0.2	151	<5	
CB89-117-01-3/4H		61	36	<0.1	35	290	3.00
CB89-117-02-3/4H		145	77	0.1	149	198	10.00
CB89-117-03-3/4H		150	56	0.1	278	244	8.00
CB89-117-04-3/4H		233	40	<0.1	>2000	159	30.00
CB89-119-01-3/4H		167	86	0.3	1850	115	18.00
CB89-121-01-3/4H		181	72	0.3	>2000	420	6.00
CB89-121-02-3/4H		452	152	0.6	>2000	1428	30.00
CB89-123-01-3/4H		142	140	0.4	>2000	92	15.00
CB89-123-02-3/4H		168	138	0.5	764	100	22.00
CB89-123-03-3/4H		134	82	0.3	314	135	30.00
CB89-123-04-3/4H		165	99	0.6	1048	90	20.00
CB89-123-05-3/4H		151	111	0.9	1048	217	30.00
CB89-125-01-3/4H		63	87	0.1	308	317	19.00
CB89-125-02-3/4H		51	38	<0.1	169	51	17.00
CB89-125-03-3/4H		60	38	0.1	64	282	13.00
CB89-127-01-3/4H		158	66	0.4	144	292	15.00
CB89-127-02-3/4H		124	61	0.1	86	122	19.00
CB89-127-03-3/4H		101	43	<0.1	90	69	17.00
CB89-127-04-3/4H		79	39	<0.1	66	113	12.00
CB89-127-05-3/4H		63	48	0.1	37	49	11.00
CB89-127-06-3/4H		94	44	0.1	48	63	9.00
CB89-127-07-3/4H		68	42	0.1	33	86	8.00
CB89-127-08-3/4H		52	37	<0.1	32	14	13.00
CB89-127-09-3/4H		40	29	<0.1	21	282	20.00
CB89-127-10-3/4H		36	30	0.5	16	251	16.00
CB89-127-11-3/4H		45	32	1.3	12	85	13.00

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Geochemical Lab Report

REPORT: 089-50664.0

PROJECT: CASA BERARDI PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au-150 PPM	Au+150 PPM	Au Av PPM	TestWt grs	-150Wt grs	+150Wt grs
CB-89-127-12-3/4H		39	20	<0.1	10	0.13	17.57	4.09	8.00	12.48	3.67

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Geochemical Lab Report

REPORT: 089-50691.0

PROJECT: CASA BERARDI PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB-89-74-01-3/4H		110	47	<0.1	340	582	5.00
CB-89-74-02-3/4H		175	61	0.1	338	384	10.00
CB-89-74-03-3/4H		107	50	<0.1	472	349	11.00
CB-89-74-04-3/4H		114	65	0.1	736	664	14.00
CB-89-74-05-3/4H		101	78	0.5	960	141	10.00
CB-89-82-01-3/4H		102	76	0.6	696	95	12.00
CB-89-82-02-3/4H		90	72	0.5	704	275	11.00
CB-89-82-03-3/4H		117	63	0.2	172	78	13.00
CB-89-82-04-3/4H		98	50	0.4	512	86	7.00
CB-89-82-05-3/4H		114	81	0.2	664	60	6.00
CB-89-82-06-3/4H		86	52	<0.1	159	73	7.00
CB-89-82-07-3/4H		94	50	<0.1	80	38	11.00
CB-89-82-08-3/4H		56	34	<0.1	46	128	11.00
CB-89-82-09-3/4H		75	36	0.4	33	3328	12.00
CB-89-82-10-3/4H		72	46	<0.1	37	103	9.00
CB-89-82-11-3/4H		54	26	<0.1	27	256	11.00
CB-89-82-12-3/4H		84	32	<0.1	44	21	10.00
CB-89-82-13-3/4H		71	23	<0.1	53	28	17.00
CB-89-82-14-3/4H		102	27	<0.1	60	75	10.00
CB-89-82-15-3/4H		161	45	0.2	145	51	10.00
CB-89-82-16-3/4H		89	33	<0.1	142	46	13.00
CB-89-82-17-3/4H		72	30	0.1	43	189	13.00
CB-89-82-18-3/4H		100	44	<0.1	126	10	15.00
CB-89-82-19-3/4H		175	77	0.1	504	122	14.00
CB-89-84-01-3/4H		93	35	0.1	193	51	10.00
CB-89-84-02-3/4H		55	44	4.1	180	90	11.00
CB-89-84-03-3/4H		88	35	<0.1	167	191	11.00
CB-89-84-04-3/4H		128	41	0.1	648	1778	19.00
CB-89-84-05-3/4H		173	45	<0.1	544	865	22.00
CB-89-84-06-3/4H		124	43	0.3	392	369	19.00
CB-89-84-08-3/4H		140	36	0.6	278	1155	22.00
CB-89-84-09-3/4H		126	50	0.1	326	1434	14.00
CB-89-84-10-3/4H		113	61	0.4	344	30	16.00
CB-89-84-11-3/4H		120	52	0.2	244	425	18.00
CB-89-84-12-3/4H		82	64	<0.1	105	165	10.00
CB-89-84-13-3/4H		175	46	<0.1	56	95	17.00
CB-89-84-14-3/4H		90	38	0.5	48	317	14.00
CB-89-84-15-3/4H		100	42	0.1	116	1247	20.00
CB-89-84-16-3/4H		109	58	<0.1	137	153	18.00
CB-89-84-17-3/4H		88	41	0.1	71	30	10.00

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Geochemical Lab Report

REPORT: 089-50691.0

PROJECT: CASA BERARDI PAGE 2

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB-89-84-18-3/4H		135	100	0.4	294	62	13.00
CB-89-84-19-3/4H		152	90	0.9	274	2471	14.00
CB-89-84-20-3/4H		149	125	0.8	328	90	15.00
CB-89-84-21-3/4H		123	83	0.5	172	1020	14.00
CB-89-84-22-3/4H		121	82	0.1	188	150	10.00
CB-89-84-23-3/4H		153	109	0.1	114	60	8.00
CB-89-84-24-3/4H		155	86	<0.1	80	88	25.00
CB-89-84-25-3/4H		205	120	0.1	112	36	16.00
CB-89-127-13-3/4H		45	27	<0.1	11	60	9.00
CB-89-127-14-3/4H		30	21	<0.1	5	12	15.00
CB-89-127-15-3/4H		38	26	<0.1	7	98	8.00
CB-89-127-16-3/4H		24	19	0.1	6	60	10.00
CB-89-127-17-3/4H		38	24	<0.1	11	129	10.00
CB-89-127-18-3/4H		40	27	<0.1	10	251	8.00

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Geochemical Lab Report

REPORT: 089-50692.0

PROJECT: CASA BERARDI

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au-150 PPM	Au+150 PPM	Au Av PPM	TestWt gms	-150Wt gms	+150Wt gms
CB-89-84-07-3/4H		139	39	0.6	376	0.20	0.28	0.25	20.00	29.99	14.00

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Geochemical Lab Report

REPORT: 089-50722.0

PROJECT: CASA BERARDI PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB-89-86-01-3/4H		99	40	0.1	203	188	18.00
CB-89-86-02-3/4H		90	45	0.2	162	609	16.00
CB-89-86-03-3/4H		97	56	<0.1	118	450	12.00
CB-89-86-04-3/4H		71	68	0.2	89	126	10.00
CB-89-90-01-3/4H		85	51	0.4	260	128	8.00
CB-89-90-02-3/4H		94	49	0.1	340	96	14.00
CB-89-90-03-3/4H		75	39	<0.1	228	<6	9.00
CB-89-90-04-3/4H		81	46	0.2	896	88	13.00
CB-89-90-05-3/4H		79	38	0.1	144	80	12.00
CB-89-90-06-3/4H		118	56	0.4	152	17	9.00
CB-89-90-07-3/4H		109	29	<0.1	59	157	13.00
CB-89-92-01-3/4H		48	41	<0.1	132	484	14.00
CB-89-92-02-3/4H		55	38	<0.1	31	<6	8.00
CB-89-92-03-3/4H		100	43	<0.1	37	75	6.00
CB-89-92-04-3/4H		112	33	<0.1	52	<6	8.00
CB-89-92-05-3/4H		128	45	0.1	55	56	7.00
CB-89-92-06-3/4H		147	42	0.1	175	<6	9.00
CB-89-92-07-3/4H		145	59	0.2	136	165	10.00
CB-89-92-08-3/4H		101	47	0.3	128	60	17.00
CB-89-114-01-3/4H		83	64	3.4	318	140	9.00
CB-89-114-02-3/4H		63	39	<0.1	109	345	12.00
CB-89-114-03-3/4H		49	33	<0.1	138	142	11.00
CB-89-114-05-3/4H		36	32	<0.1	101	62	14.00
CB-89-114-06-3/4H		44	31	<0.1	368	63	11.00
CB-89-114-07-3/4H		40	30	<0.1	156	34	15.00
CB-89-114-08-3/4H		202	59	0.1	354	79	14.00
CB-89-114-09-3/4H		53	42	0.2	127	200	12.00
CB-89-114-10-3/4H		57	37	<0.1	87	56	16.00
CB-89-114-11-3/4H		95	59	0.3	106	309	13.00
CB-89-114-12-3/4H		124	124	0.2	182	378	10.00
CB-89-114-13-3/4H		138	88	0.4	356	43	9.00
CB-89-114-14-3/4H		101	86	0.2	320	68	8.00
CB-89-116-01-3/4H		102	63	0.4	18	<8	6.00
CB-89-116-02-3/4H		81	47	<0.1	10	<5	17.00
CB-89-116-03-3/4H		96	69	0.3	16	12	18.00
CB-89-116-04-3/4H		78	50	<0.1	11	24	15.00
CB-89-116-05-3/4H		57	39	<0.1	53	23	13.00
CB-89-116-06-3/4H		23	28	<0.1	30	58	15.00
CB-89-131-12-3/4H		216	189	0.5	94	60	12.00
CB-89-133-01-3/4H		69	55	0.1	72	48	10.00

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Geochemical Lab Report

REPORT: 089-50722.0

PROJECT: CASA BERARDI

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB-89-133-02-3/4H		63	50	<0.1	74	45	8.00
CB-89-133-03-3/4H		48	51	0.1	96	38	8.00
CB-89-133-04-3/4H		78	56	0.2	92	1513	9.00
CB-89-133-05-3/4H		38	44	<0.1	58	127	9.00
CB-89-133-06-3/4H		33	48	<0.1	23	38	12.00
CB-89-133-07-3/4H		50	49	<0.1	80	248	8.00
CB-89-133-08-3/4H		42	52	<0.1	224	165	8.00
CB-89-133-09-3/4H		58	47	0.1	34	96	10.00
CB-89-133-10-3/4H		38	55	<0.1	28	110	12.00
CB-89-133-11-3/4H		26	44	0.1	37	13	12.00
CB-89-133-13-3/4H		68	39	<0.1	47	78	13.00
CB-89-133-14-3/4H		64	44	0.2	57	18	12.00
CB-89-133-15-3/4H		648	206	0.4	65	120	12.00
CB-89-133-16-3/4H		75	55	0.4	71	85	12.00
CB-89-133-17-3/4H		86	57	0.2	85	27	11.00
CB-89-133-18-3/4H		82	59	0.1	54	195	12.00
CB-89-133-19-3/4H		100	63	0.4	84	<8	6.00
CB-89-134-07-3/4H		25	36	<0.1	17	153	10.00
CB-89-134-08-3/4H		55	55	<0.1	328	78	15.00
CB-89-142-01-3/4H		93	72	0.6	310	606	5.00
CB-89-142-02-3/4H		139	119	1.1	324	303	20.00
CB-89-144-01-3/4H		88	62	0.2	298	739	16.00
CB-89-144-02-3/4H		88	72	0.2	332	262	18.00
CB-89-144-03-3/4H		70	65	0.1	216	76	15.00
CB-89-144-04-3/4H		50	54	0.2	123	542	15.00
CB-89-144-05-3/4H		38	41	<0.1	43	350	21.00
CB-89-144-06-3/4H		153	52	0.5	136	172	22.00
CB-89-146-01-3/4H		93	50	<0.1	160	162	20.00
CB-89-146-02-3/4H		35	40	<0.1	211	109	19.00
CB-89-146-03-3/4H		82	43	<0.1	230	120	16.00
CB-89-146-04-3/4H		86	54	<0.1	368	342	10.00
CB-89-148-01-3/4H		120	137	2.7	230	930	15.00
CB-89-148-02-3/4H		119	115	0.3	157	113	18.00
CB-89-150-01-3/4H		59	47	<0.1	87	1208	12.00
CB-89-150-02-3/4H		29	39	<0.1	13	93	12.00
CB-89-150-03-3/4H		28	30	<0.1	19	21	14.00
CB-89-150-04-3/4H		31	28	<0.1	18	351	10.00
CB-89-150-05-3/4H		48	34	<0.1	127	25	11.00
CB-89-150-06-3/4H		91	166	0.1	354	25	13.00
CB-89-191-01-3/4H		37	32	<0.1	31	593	16.00

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB-89-191-02-3/4H		19	34	<0.1	61	92	13.00
CB-89-191-03-3/4H		31	27	<0.1	19	177	10.00
CB-89-191-04-3/4H		29	29	<0.1	190	103	12.00
CB-89-191-05-3/4H		78	36	<0.1	824	85	11.00
CB-89-192-01-3/4H		475	139	0.6	1144	96	5.00
CB-89-194-01-3/4H		119	71	0.1	318	65	6.00
CB-89-194-02-3/4H		102	62	<0.1	292	295	12.00
CB-89-194-03-3/4H		100	73	0.1	304	330	9.00
CB-89-194-04-3/4H		128	92	0.2	936	1192	11.00
CB-89-194-05-3/4H		92	50	<0.1	512	105	12.00
CB-89-194-06-3/4H		99	46	0.1	520	152	16.00
CB-89-196-01-3/4H		151	100	0.3	360	294	10.00
CB-89-197-01-3/4H		49	62	<0.1	137	53	12.00
CB-89-197-02-3/4H		58	52	<0.1	153	48	5.00

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au-150 PPM	Au+150 PPM	Au Av PPM	TestWt gms	-150Wt gms	+150Wt gms
CB-89-114-04-3/4H		70	35	<0.1	216	0.44	2.17	1.23	7.00	10.09	8.46
CB-89-133-12-3/4H		52	27	0.2	16	0.23	2.66	0.73	12.00	14.92	3.82

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB
CB89-94-1-3/4H		148	45	0.2	752	266
CB89-94-2-3/4H		98	33	0.2	552	100
CB89-94-3-3/4H		124	40	0.3	632	1990
CB89-94-4-3/4H		67	26	0.1	33	22
CB89-94-5-3/4H		104	28	<0.1	44	60
CB89-94-6-3/4H		49	25	0.1	39	225
CB89-94-7-3/4H		41	23	0.3	32	20
CB89-94-8-3/4H		115	30	<0.1	38	135
CB89-94-9-3/4H		66	38	<0.1	35	45
CB89-94-10-3/4H		82	55	<0.1	40	85
CB89-94-11-3/4H		81	88	0.3	54	100
CB89-94-12-3/4H		90	115	0.3	66	68
CB89-94-13-3/4H		101	41	0.3	69	675
CB89-94-14-3/4H		51	23	0.5	31	52
CB89-94-15-3/4H		59	26	0.2	55	55
CB89-94-16-3/4H		61	55	0.4	50	233
CB89-94-17-3/4H		61	30	<0.1	26	33
CB89-94-18-3/4H		50	24	0.2	42	90
CB89-94-19-3/4H		52	24	<0.1	37	147
CB89-94-20-3/4H		60	26	0.1	35	75
CB89-94-21-3/4H		78	30	<0.1	40	158
CB89-94-22-3/4H		58	28	0.1	38	132
CB89-94-23-3/4H		52	24	0.1	36	129
CB89-94-24-3/4H		70	30	0.3	58	109
CB89-94-25-3/4H		88	30	0.1	79	110
CB89-94-26-3/4H		74	45	0.1	150	33
CB89-94-27-3/4H		44	25	0.1	55	<5
CB89-94-28-3/4H		21	17	0.1	23	52
CB89-94-29-3/4H		24	21	0.1	59	24
CB89-133-20-3/4H		83	36	0.2	74	55
CB89-133-21-3/4H		81	48	0.3	91	37
CB89-133-22-3/4H		79	38	<0.1	71	23
CB89-133-23-3/4H		81	38	<0.1	113	66
CB89-133-24-3/4H		75	33	0.4	144	15
CB89-133-25-3/4H		148	55	0.4	124	60
CB89-133-26-3/4H		107	54	0.1	109	9
CB89-133-27-3/4H		243	138	0.8	260	144
CB89-133-28-3/4H		262	99	0.6	170	77
CB89-133-29-3/4H		209	160	0.3	190	53
CB89-137-10-3/4H		185	59	<0.1	103	572

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB
CB89-137-11-3/4H		74	40	<0.1	104	33
CB89-137-12-3/4H		69	36	<0.1	67	18
CB89-137-13-3/4H		123	25	<0.1	53	94
CB89-137-14-3/4H		71	27	<0.1	60	79
CB89-137-15-3/4H		36	26	<0.1	29	<5
CB89-137-16-3/4H		40	31	<0.1	37	60
CB89-137-17-3/4H		77	38	<0.1	31	192
CB89-137-18-3/4H		105	43	0.4	33	79
CB89-137-19-3/4H		125	33	0.3	19	643
CB89-137-20-3/4H		112	47	<0.1	79	122
CB89-137-21-3/4H		144	50	<0.1	68	125
CB89-139-1-3/4H		75	36	0.2	171	168
CB89-139-2-3/4H		74	48	0.3	179	90
CB89-139-3-3/4H		104	54	0.5	165	41
CB89-139-4-3/4H		82	34	0.3	155	133
CB89-139-5-3/4H		66	59	0.2	51	72
CB89-139-6-3/4H		41	30	0.3	20	58
CB89-139-7-3/4H		56	41	0.2	32	49
CB89-139-8-3/4H		73	33	<0.1	33	30
CB89-139-10-3/4H		62	34	0.1	43	<5
CB89-139-11-3/4H		59	28	0.2	52	60
CB89-139-12-3/4H		47	27	<0.1	29	<6
CB89-139-13-3/4H		44	33	0.2	41	1330
CB89-139-14-3/4H		89	36	0.1	36	35
CB89-139-15-3/4H		49	33	0.1	63	15
CB89-139-16-3/4H		45	32	<0.1	59	130
CB89-139-17-3/4H		70	43	0.2	115	132
CB89-139-18-3/4H		70	57	<0.1	91	28

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au-150 PPM	Au+150 PPM	Au Av PPM	TestWt gms	-150Wt gms	+150Wt gms
CB89-139-9-3/4R		67	30	0.2	43	0.04	12.66	1.61	6.00	10.44	1.48

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	TestWt gms
CB-89-96-01-3/4H		55	45	<0.1	95	945	12.00
CB-89-96-02-3/4H		54	31	<0.1	188	268	16.00
CB-89-96-03-3/4H		69	51	<0.1	137	192	15.00
CB-89-96-04-3/4H		69	42	<0.1	78	<6	9.00
CB-89-96-05-3/4H		52	30	<0.1	35	37	17.00
CB-89-96-06-3/4H		72	35	<0.1	79	30	12.00
CB-89-96-07-3/4H		74	56	<0.1	119	125	22.00
CB-89-96-08-3/4H		55	47	<0.1	133	27	18.00
CB-89-96-09-3/4H		48	34	<0.1	60	139	16.00
CB-89-96-10-3/4H		56	42	0.7	89	<5	13.00
CB-89-96-11-3/4H		54	46	0.1	48	16	10.00
CB-89-96-12-3/4H		63	34	<0.1	39	12	17.00
CB-89-96-13-3/4H		62	49	<0.1	18	248	12.00
CB-89-96-14-3/4H		67	52	<0.1	45	80	12.00
CB-89-96-15-3/4H		85	51	<0.1	356	549	7.00
CB-89-96-16-3/4H		72	51	<0.1	45	63	9.00
CB-89-96-17-3/4H		55	42	<0.1	14	39	10.00
CB-89-96-18-3/4H		55	60	<0.1	18	<10	5.00
CB-89-96-19-3/4H		138	963	0.4	23	13260	7.00
CB-89-96-20-3/4H		210	155	0.9	36	135	2.00
CB-89-96-21-3/4H		81	60	<0.1	18	21	10.00
CB-89-96-22-3/4H		80	111	0.3	13	69	14.00
CB-89-96-23-3/4H		71	58	<0.1	13	45	14.00
CB-89-96-24-3/4H		131	59	0.1	15	60	8.00
CB-89-96-25-3/4H		79	34	<0.1	28	13	12.00
CB-89-96-26-3/4H		49	30	<0.1	9	30	16.00
CB-89-96-27-3/4H		62	32	<0.1	14	25	12.00
CB-89-96-28-3/4H		60	24	<0.1	11	258	13.00
CB-89-96-29-3/4H		50	38	<0.1	28	16	13.00
CB-89-96-30-3/4H		62	45	<0.1	30	289	14.00
CB-89-96-31-3/4H		65	39	<0.1	37	56	14.00
CB-89-96-32-3/4H		57	38	<0.1	34	14	22.00
CB-89-96-33-3/4H		103	95	<0.1	67	19	14.00
CB-89-96-34-3/4H		77	39	<0.1	53	266	16.00
CB-89-96-35-3/4H		89	43	<0.1	60	146	16.00
CB-89-100-01-3/4H		163	81	0.1	284	220	18.00
CB-89-100-02-3/4H		69	42	<0.1	58	101	14.00
CB-89-100-03-3/4H		83	46	<0.1	78	60	8.00
CB-89-100-04-3/4H		90	76	<0.1	57	330	8.00
CB-89-100-05-3/4H		106	41	<0.1	63	19	11.00

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB-89-100-06-3/4H		60	44	<0.1	113	572	14.00
CB-89-100-07-3/4H		79	60	<0.1	152	170	9.00
CB-89-100-08-3/4H		82	55	<0.1	139	142	11.00
CB-89-100-09-3/4H		48	41	<0.1	92	125	13.00
CB-89-100-10-3/4H		218	148	0.4	312	145	18.00
CB-89-100-11-3/4H		290	121	0.2	362	356	24.00
CB-89-102-01-3/4H		114	59	0.1	1240	476	16.00
CB-89-102-02-3/4H		98	69	<0.1	1040	222	15.00
CB-89-102-03-3/4H		109	62	0.3	1496	156	15.00
CB-89-102-04-3/4H		110	70	<0.1	928	169	11.00
CB-89-102-05-3/4H		101	72	<0.1	648	34	15.00
CB-89-102-07-3/4H		43	48	<0.1	124	60	11.00
CB-89-102-08-3/4H		107	62	0.2	768	775	30.00
CB-89-102-09-3/4H		152	66	<0.1	960	205	12.00
CB-89-102-10-3/4H		248	48	<0.1	161	125	13.00
CB-89-102-11-3/4H		88	51	0.3	165	145	13.00
CB-89-102-12-3/4H		53	35	<0.1	25	83	13.00
CB-89-102-13-3/4H		105	42	<0.1	51	338	12.00
CB-89-102-14-3/4H		112	45	<0.1	61	30	15.00
CB-89-102-15-3/4H		79	52	<0.1	61	58	15.00
CB-89-102-16-3/4H		135	320	<0.1	138	125	13.00
CB-89-104-01-3/4H		61	61	0.6	328	413	8.00
CB-89-104-02-3/4H		86	57	<0.1	776	54	16.00
CB-89-104-03-3/4H		85	54	0.1	840	145	12.00
CB-89-104-04-3/4H		49	58	<0.1	161	135	10.00
CB-89-104-05-3/4H		109	77	<0.1	536	27	9.00
CB-89-104-06-3/4H		246	50	<0.1	266	330	10.00
CB-89-104-07-3/4H		95	53	<0.1	181	162	10.00
CB-89-104-08-3/4H		98	67	<0.1	118	30	8.00
CB-89-104-09-3/4H		76	53	<0.1	71	113	12.00
CB-89-104-10-3/4H		71	55	<0.1	54	269	8.00

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au-150 PPM	Au+150 PPM	Au Av PPM	TestWt grs	-150Wt grs	+150Wt grs
CB-9-102-06-3/4H		74	41	0.1	155	0.88	94.31	16.57	8.00	10.75	2.17

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB-89-104-11-3/4H		102	145	0.2	108	135	2.00
CB-89-104-12-3/4H		52	37	<0.1	37	75	10.00
CB-89-104-13-3/4H		51	34	<0.1	66	226	11.00
CB-89-104-14-3/4H		107	40	<0.1	76	562	11.00
CB-89-104-15-3/4H		112	107	<0.1	338	60	13.00
CB-89-104-16-3/4H		107	73	<0.1	124	309	13.00
CB-89-104-17-3/4H		113	91	<0.1	177	166	13.00
CB-89-106-01-3/4H		87	63	<0.1	350	1578	10.00
CB-89-106-02-3/4H		49	39	<0.1	148	52	11.00
CB-89-106-03-3/4H		69	56	<0.1	318	184	7.00
CB-89-106-04-3/4H		55	54	<0.1	165	154	8.00
CB-89-106-05-3/4H		74	50	<0.1	316	308	8.00
CB-89-106-06-3/4H		71	43	<0.1	181	146	7.00
CB-89-106-07-3/4H		65	38	<0.1	172	73	7.00
CB-89-106-08-3/4H		48	31	<0.1	69	341	8.00
CB-89-106-09-3/4H		69	35	<0.1	100	36	5.00
CB-89-106-10-3/4H		42	38	<0.1	49	248	12.00
CB-89-106-11-3/4H		29	28	0.7	51	152	13.00
CB-89-106-12-3/4H		39	56	0.1	78	1247	7.00
CB-89-106-13-3/4H		45	36	0.6	91	1211	14.00
CB-89-106-14-3/4H		96	96	0.8	77	256	19.00
CB-89-108-01-3/4H		42	44	0.3	145	21	14.00
CB-89-108-02-3/4H		42	37	<0.1	163	73	12.00
CB-89-108-03-3/4H		43	38	0.1	83	43	14.00
CB-89-108-04-3/4H		191	773	0.5	1932	1584	15.00
CB-89-110-01-3/4H		16	30	0.1	21	84	14.00
CB-89-110-02-3/4H		17	29	<0.1	11	50	9.00
CB-89-110-03-3/4H		19	27	<0.1	21	100	9.00
CB-89-110-04-3/4H		17	27	<0.1	3	30	9.00
CB-89-110-05-3/4H		17	26	<0.1	3	42	10.00
CB-89-110-06-3/4H		53	47	<0.1	2	109	14.00
CB-89-110-07-3/4H		78	49	0.5	17	15	14.00
CB-89-110-08-3/4H		87	47	0.1	181	127	18.00
CB-89-110-09-3/4H		131	61	0.2	302	1425	20.00
CB-89-110-10-3/4H		84	56	0.2	190	91	24.00
CB-89-112-01-3/4H		49	35	<0.1	112	77	14.00
CB-89-112-02-3/4H		36	28	<0.1	27	90	10.00
CB-89-112-03-3/4H		59	39	<0.1	118	138	30.00
CB-89-112-04-3/4H		79	35	<0.1	139	77	30.00
CB-89-112-05-3/4H		62	32	0.1	121	2045	18.00

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BONDAR-CLEGG

Geochemical Lab Report

REPORT: 089-50776.0

PROJECT: CASA BERARDI

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	TestWt gms
CB-89-112-06-3/4H		69	39	<0.1	169	96	19.00
CB-89-112-07-3/4H		56	27	<0.1	38	102	15.00
CB-89-112-08-3/4H		36	32	<0.1	12	128	15.00
CB-89-112-09-3/4H		76	82	0.3	287	79	14.00
CB-89-112-10-3/4H		114	45	0.2	322	200	3.00
CB-89-127-19-3/4H		35	25	<0.1	29	52	11.00
CB-89-127-20-3/4H		33	22	0.1	23	49	11.00
CB-89-127-21-3/4H		60	34	<0.1	90	84	14.00
CB-89-127-22-3/4H		62	36	0.2	99	129	21.00
CB-89-127-23-3/4H		58	38	0.1	101	49	19.00
CB-89-127-24-3/4H		72	38	0.2	121	162	20.00
CB-89-127-25-3/4H		51	31	<0.1	84	141	26.00
CB-89-127-26-3/4H		83	52	<0.1	157	50	15.00
CB-89-127-27-3/4H		127	77	0.1	118	40	15.00
CB-89-127-28-3/4H		128	68	<0.1	113	34	14.00
CB-89-127-29-3/4H		164	91	0.2	168	139	11.00
CB-89-127-30-3/4H		261	215	0.4	370	56	16.00
CB-89-127-31-3/4H		283	213	0.8	592	395	22.00
CB-89-127-32-3/4H		193	105	1.1	680	2589	23.00
CB-89-127-33-3/4H		255	171	1.4	1208	9895	30.00
CB-89-127-34-3/4H		219	133	1.1	1200	154	24.00
CB-89-127-35-3/4H		239	125	1.5	1304	320	30.00
CB-89-129-01-3/4H		96	65	<0.1	70	38	8.00
CB-89-129-02-3/4H		60	35	<0.1	36	95	13.00
CB-89-129-03-3/4H		887	27	1.2	28	25	13.00
CB-89-129-04-3/4H		62	35	0.4	47	35	11.00
CB-89-129-05-3/4H		58	39	0.2	61	101	14.00
CB-89-129-06-3/4H		59	39	<0.1	72	332	14.00
CB-89-129-07-3/4H		90	55	0.2	102	30	11.00
CB-89-129-08-3/4H		92	50	0.1	1120	<6	9.00
CB-89-129-09-3/4H		62	28	<0.1	65	37	9.00
CB-89-129-10-3/4H		41	27	<0.1	36	<7	7.00
CB-89-129-11-3/4H		34	26	<0.1	35	34	8.00
CB-89-129-12-3/4H		97	41	0.3	145	270	10.00
CB-89-129-13-3/4H		123	64	0.1	133	41	11.00
CB-89-129-14-3/4H		141	85	0.4	193	88	15.00
CB-89-129-15-3/4H		90	51	0.1	191	38	19.00
CB-89-129-16-3/4H		145	758	0.7	133	35	22.00
CB-89-129-17-3/4H		128	65	0.8	298	26	15.00
CB-89-129-18-3/4H		176	82	0.2	338	466	11.00

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REPORT: 089-50776.0

PROJECT: CASA BERARDI

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt grs
CB-89-129-19-3/4H		162	79	0.4	290	80	15.00
CB-89-129-20-3/4H		140	77	0.5	278	448	12.00
CB-89-131-01-3/4H		87	37	0.1	254	231	13.00
CB-89-131-02-3/4H		553	38	0.4	284	261	17.00
CB-89-131-03-3/4H		71	34	0.1	150	54	14.00
CB-89-136-01-3/4H		132	114	0.1	97	21	7.00
CB-89-136-02-3/4H		82	60	<0.1	115	38	15.00
CB-89-136-03-3/4H		76	45	0.1	77	105	16.00
CB-89-136-04-3/4H		69	49	<0.1	142	733	14.00
CB-89-136-05-3/4H		71	74	0.1	97	257	14.00
CB-89-136-06-3/4H		69	47	0.2	165	122	13.00
CB-89-136-07-3/4H		114	54	0.1	189	196	13.00
CB-89-136-08-3/4H		100	56	0.1	680	124	14.00
CB-89-136-09-3/4H		113	73	0.8	912	185	13.00
CB-89-138-01-3/4H		134	97	0.1	338	763	12.00
CB-89-140-01-3/4H		99	67	0.3	388	80	12.00
CB-89-140-02-3/4H		68	48	0.1	374	77	14.00
CB-89-140-03-3/4H		117	46	0.2	183	1272	13.00
CB-89-140-04-3/4H		68	37	<0.1	280	255	22.00
CB-89-140-05-3/4H		104	41	0.8	1360	743	16.00
CB-89-140-06-3/4H		86	47	0.1	328	246	16.00
CB-89-140-07-3/4H		64	42	<0.1	278	228	13.00
CB-89-140-08-3/4H		71	51	0.2	314	177	11.00
CB-89-140-09-3/4H		109	74	0.6	324	263	13.00
CB-89-140-10-3/4H		236	233	2.0	856	272	15.00

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REPORT: 089-50805.0

PROJECT: CASA BERARDI PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	TestWt grs
CB-89-137-22-3/4H		107	72	0.4	270	294	14.00
CB-89-137-23-3/4H		255	226	1.4	848	995	10.00
CB-89-137-24-3/4H		258	255	1.4	1096	114	10.00
CB-89-139-19-3/4H		68	46	0.2	116	144	21.00
CB-89-139-20-3/4H		81	47	0.3	129	72	17.00
CB-89-139-21-3/4H		92	49	0.4	163	205	12.00
CB-89-139-22-3/4H		70	46	<0.1	131	30	13.00
CB-89-139-23-3/4H		117	45	<0.1	528	160	12.00
CB-89-139-24-3/4H		90	38	0.2	95	33	11.00
CB-89-139-25-3/4H		79	40	0.2	73	141	10.00
CB-89-139-26-3/4H		119	53	0.2	94	21	10.00
CB-89-139-27-3/4H		368	101	0.3	280	17	9.00
CB-89-139-28-3/4H		397	123	0.7	304	30	10.00
CB-89-139-29-3/4H		209	126	1.2	664	57	10.00
CB-89-139-30-3/4H		184	119	1.2	1208	84	10.00
CB-89-141-01-3/4H		106	61	0.1	364	70	12.00
CB-89-141-02-3/4H		57	46	<0.1	96	45	16.00
CB-89-141-03-3/4H		944	33	<0.1	67	327	11.00
CB-89-141-04-3/4H		125	47	0.4	89	19	11.00
CB-89-141-05-3/4H		77	103	0.2	176	93	11.00
CB-89-141-06-3/4H		46	53	<0.1	149	642	17.00
CB-89-150-07-3/4H		98	86	0.3	720	137	9.00
CB-89-152-01-3/4H		269	1405	2.3	960	80	3.00
CB-89-152-02-3/4H		289	943	2.1	1112	135	2.00
CB-89-154-01-3/4H		88	83	<0.1	284	102	5.00
CB-89-154-02-3/4H		91	74	0.5	372	80	17.00
CB-89-154-03-3/4H		110	67	<0.1	316	1945	11.00
CB-89-154-04-3/4H		72	47	0.8	256	656	14.00
CB-89-154-05-3/4H		52	35	0.6	31	2862	10.00
CB-89-154-06-3/4H		64	37	0.1	72	90	10.00
CB-89-154-07-3/4H		37	37	0.4	28	302	14.00
CB-89-154-08-3/4H		94	72	<0.1	75	65	18.00
CB-89-154-09-3/4H		86	103	0.3	82	335	17.00
CB-89-156-01-3/4H		14	24	<0.1	3	102	20.00
CB-89-156-02-3/4H		43	24	<0.1	29	44	11.00
CB-89-156-03-3/4H		50	24	<0.1	60	35	13.00
CB-89-156-04-3/4H		11	18	<0.1	3	18	18.00
CB-89-156-05-3/4H		47	24	<0.1	14	20	22.00
CB-89-156-06-3/4H		30	40	<0.1	30	128	22.00
CB-89-156-07-3/4H		30	27	<0.1	11	76	13.00

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REPORT: 089-50605.0

PROJECT: CASA BERARDI PAGE 2

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB-89-156-08-3/4H		59	168	<0.1	67	13	16.00
CB-89-156-09-3/4H		66	38	0.1	240	87	19.00
CB-89-156-10-3/4H		82	48	0.2	236	138	12.00
CB-89-158-01-3/4H		155	90	0.2	648	318	13.00
CB-89-158-02-3/4H		83	60	0.6	594	64	22.00
CB-89-160-01-3/4H		95	32	<0.1	234	197	27.00
CB-89-160-02-3/4H		85	43	<0.1	179	565	23.00
CB-89-160-03-3/4H		113	39	<0.1	117	105	16.00
CB-89-160-04-3/4H		67	57	<0.1	172	162	18.00
CB-89-168-07-3/4H		173	208	0.6	1932	168	20.00
CB-89-168-08-3/4H		217	262	0.6	1694	228	30.00
CB-89-168-09-3/4H		338	293	0.4	1729	256	25.00
CB-89-169-01-3/4H		86	50	0.1	107	63	18.00
CB-89-169-02-3/4H		95	37	0.1	258	83	17.00
CB-89-169-03-3/4H		85	43	0.1	276	397	13.00
CB-89-169-04-3/4H		84	47	<0.1	260	79	19.00
CB-89-169-05-3/4H		194	49	<0.1	166	485	6.00
CB-89-169-06-3/4H		87	49	<0.1	164	190	15.00
CB-89-169-07-3/4H		126	64	0.1	896	14817	22.00
CB-89-170-01-3/4H		96	63	<0.1	154	923	16.00

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Geochemical Lab Report

REPORT: 089-50821.0

PROJECT: CASA BERARDI

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt grs
CB-89-116-07-3/4H		20	20	0.3	18	77	23.00
CB-89-116-08-3/4H		48	21	0.1	85	63	23.00
CB-89-116-09-3/4H		39	23	0.4	55	62	30.00
CB-89-116-10-3/4H		93	44	<0.1	137	26	16.00
CB-89-116-11-3/4H		79	45	0.2	254	64	16.00
CB-89-116-12-3/4H		92	41	0.2	163	78	20.00
CB-89-116-13-3/4H		89	52	0.4	168	663	11.00
CB-89-116-14-3/4H		217	339	1.5	362	56	15.00
CB-89-116-15-3/4H		202	123	1.4	390	90	15.00
CB-89-116-16-3/4H		220	151	1.0	692	33	15.00
CB-89-116-17-3/4H		203	156	1.3	592	274	15.00
CB-89-118-01-3/4H		110	52	<0.1	19	125	15.00
CB-89-118-02-3/4H		126	81	0.6	330	93	11.00
CB-89-118-03-3/4H		120	96	0.4	318	74	11.00
CB-89-118-04-3/4H		95	69	0.2	330	213	20.00
CB-89-118-05-3/4H		163	83	0.7	600	544	28.00
CB-89-118-07-3/4H		113	53	0.8	520	39	10.00
CB-89-118-08-3/4H		18	23	<0.1	19	<5	11.00
CB-89-118-09-3/4H		173	310	0.4	736	310	3.00
CB-89-118-10-3/4H		146	379	0.3	390	40	12.00
CB-89-120-01-3/4H		164	100	0.2	32	25	6.00
CB-89-120-02-3/4H		215	77	0.3	22	<7	7.00
CB-89-120-03-3/4H		90	51	0.1	284	380	25.00
CB-89-120-04-3/4H		115	87	0.1	720	235	20.00
CB-89-122-01-3/4H		115	51	0.2	284	618	12.00
CB-89-122-02-3/4H		176	595	0.4	768	79	8.00
CB-89-124-01-3/4H		102	51	0.2	282	368	11.00
CB-89-124-02-3/4H		124	47	0.5	640	399	20.00
CB-89-124-03-3/4H		247	37	<0.1	274	1006	11.00
CB-89-124-04-3/4H		135	31	0.3	316	<5	10.00
CB-89-124-05-3/4H		74	33	0.1	58	96	15.00
CB-89-124-06-3/4H		167	90	0.3	280	112	15.00
CB-89-126-02-3/4H		169	54	0.5	1008	447	22.00
CB-89-128-01-3/4H		98	55	<0.1	100	2824	7.00
CB-89-128-02-3/4H		89	37	<0.1	30	165	6.00
CB-89-128-03-3/4H		205	56	0.7	268	709	11.00

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PROJECT: CASA BERARDI PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au-150 PPM	Au+150 PPM	Au AV PPM	Testwt grs	-150wt grs	+150wt grs
CB-89-118-06		160	79	0.2	354	0.20	13.01	1.61	17.00	19.71	2.43
CB-89-126-01		101	99	<0.1	752	0.13	18.74	1.51	15.00	17.14	1.37
CB-89-126-03		199	74	0.2	1184	0.42	2.64	0.82	19.00	21.18	4.60
CB-89-128-04		162	30	<0.1	39	0.10	4.01	0.76	17.00	19.76	4.03

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Geochemical Lab Report

REPORT: 089-50844.0

PROJECT: CASA BERARDI

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt grs
CB-89-128-05		134	25	0.5	70	33	11.00
CB-89-128-06		54	36	<0.1	37	28	12.00
CB-89-128-07		51	29	<0.1	63	72	10.00
CB-89-128-08		153	28	<0.1	124	38	12.00
CB-89-128-09		59	29	0.2	127	330	10.00
CB-89-128-10		65	30	<0.1	170	198	10.00
CB-89-128-11		400	132	0.6	648	1223	9.00
CB-89-128-12		179	50	1.3	212	8618	12.00
CB-89-128-13		151	58	0.5	600	443	9.00
CB-89-128-14		141	75	0.3	314	347	7.00
CB-89-128-15		226	90	0.6	424	137	9.00
CB-89-128-16		188	153	1.1	504	281	14.00
CB-89-128-17		187	69	0.7	368	255	8.00
CB-89-128-18		236	237	1.3	616	324	10.00
CB-89-130-01		149	117	0.2	42	947	7.00
CB-89-130-02		146	97	0.6	43	85	6.00
CB-89-130-03		124	54	0.3	25	514	8.00
CB-89-130-04		161	66	0.2	95	300	13.00
CB-89-130-05		210	68	0.2	228	98	16.00
CB-89-130-06		114	86	<0.1	272	411	10.00
CB-89-131-04		64	35	<0.1	96	270	15.00
CB-89-131-05		85	39	<0.1	112	191	17.00
CB-89-131-06		58	29	<0.1	57	61	25.00
CB-89-131-07		59	28	<0.1	61	61	21.00
CB-89-131-08		66	31	<0.1	87	36	15.00
CB-89-131-09		644	107	0.8	115	240	18.00
CB-89-131-10		114	53	0.3	208	125	11.00
CB-89-131-11		144	95	<0.1	306	108	15.00
CB-89-133-30		213	164	0.2	214	39	17.00
CB-89-135-01		68	39	<0.1	145	58	17.00
CB-89-135-02		48	39	0.1	178	70	15.00
CB-89-135-03		46	38	<0.1	122	380	9.00
CB-89-135-04		88	61	<0.1	324	681	14.00
CB-89-135-05		35	26	<0.1	78	360	10.00
CB-89-135-06		51	29	<0.1	88	<6	8.00
CB-89-135-07		99	29	<0.1	115	252	10.00
CB-89-135-08		52	28	<0.1	98	426	10.00
CB-89-137-01		34	35	<0.1	62	163	19.00
CB-89-137-02		64	35	<0.1	>2000	147	11.00
CB-89-137-03		61	37	<0.1	65	45	10.00

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PROJECT: CASA BERARDI PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt grs
CB-89-130-07-3/4H		128	230	1.7	624	116	7.00
CB-89-132-01-3/4H		84	60	0.3	66	608	8.00
CB-89-132-02-3/4H		64	73	0.1	130	217	13.00
CB-89-132-03-3/4H		164	71	0.7	1160	212	13.00
CB-89-132-04-3/4H		173	85	0.8	744	967	13.00
CB-89-132-05-3/4H		140	48	1.2	616	1299	16.00
CB-89-134-01-3/4H		38	44	0.6	109	65	13.00
CB-89-134-02-3/4H		75	50	0.5	222	158	15.00
CB-89-134-03-3/4H		113	57	0.2	100	112	15.00
CB-89-134-04-3/4H		93	66	0.2	536	385	12.00
CB-89-134-05-3/4H		61	35	0.2	143	417	11.00
CB-89-134-06-3/4H		49	40	0.1	129	39	7.00
CB-89-160-05-3/4H		95	85	0.5	320	218	12.00
CB-89-162-01-3/4H		131	104	1.1	270	1396	15.00
CB-89-164-01-3/4H		86	74	0.2	680	162	10.00
CB-89-164-02-3/4H		93	81	0.3	86	16	11.00
CB-89-164-03-3/4H		90	71	0.8	161	476	8.00
CB-89-164-04-3/4H		85	70	0.2	161	454	7.00
CB-89-164-05-3/4H		75	87	0.5	334	56	8.00
CB-89-164-06-3/4H		82	75	0.2	600	23	8.00
CB-89-164-07-3/4H		20	26	0.2	82	<5	10.00
CB-89-164-08-3/4H		19	28	0.7	29	565	6.00
CB-89-164-09-3/4H		16	24	0.2	6	<6	9.00
CB-89-164-10-3/4H		28	34	0.2	3	115	6.00
CB-89-164-11-3/4H		23	29	<0.1	4	28	12.00
CB-89-164-12-3/4H		34	30	0.2	9	23	13.00
CB-89-164-13-3/4H		12	19	0.6	3	84	15.00
CB-89-164-14-3/4H		27	25	<0.1	5	189	14.00
CB-89-164-15-3/4H		183	105	1.0	1216	122	15.00
CB-89-166-01-3/4H		116	85	0.5	158	1760	3.00
CB-89-168-01-3/4H		80	53	0.3	149	105	8.00
CB-89-168-02-3/4H		81	51	0.4	298	56	8.00
CB-89-168-03-3/4H		74	39	0.4	316	249	10.00
CB-89-168-04-3/4H		59	35	<0.1	182	633	10.00
CB-89-168-05-3/4H		73	49	<0.1	287	1027	9.00
CB-89-168-06-3/4H		80	43	0.3	358	219	10.00
CB-89-170-02-3/4H		83	60	0.5	238	128	8.00
CB-89-174-01-3/4H		50	145	<0.1	143	70	6.00
CB-89-174-02-3/4H		109	35	0.1	80	42	5.00
CB-89-174-03-3/4H		37	23	0.1	19	114	10.00

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PROJECT: CASA BERARDI

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB-89-174-04-3/4H		86	28	0.2	34	80	9.00
CB-89-174-06-3/4H		31	24	<0.1	20	<5	13.00
CB-89-174-08-3/4H		27	27	<0.1	8	240	8.00
CB-89-174-09-3/4H		302	27	<0.1	153	957	10.00
CB-89-176-01-3/4H		118	45	0.3	252	102	13.00
CB-89-176-02-3/4H		143	491	0.1	324	1061	25.00
CB-89-178-01-3/4H		63	57	<0.1	140	190	12.00
CB-89-178-02-3/4H		57	44	0.3	135	1135	11.00
CB-89-178-03-3/4H		59	55	1.3	252	489	10.00
CB-89-178-04-3/4H		71	53	0.7	360	62	17.00
CB-89-178-05-3/4H		48	34	0.2	70	219	10.00
CB-89-178-06-3/4H		42	33	<0.1	57	40	12.00
CB-89-178-07-3/4H		55	23	0.4	162	74	17.00
CB-89-178-08-3/4H		55	34	<0.1	70	87	9.00
CB-89-178-09-3/4H		63	42	0.1	94	68	8.00
CB-89-178-10-3/4H		99	40	0.1	140	337	9.00
CB-89-178-11-3/4H		70	393	<0.1	125	<5	20.00
CB-89-180-01-3/4H		51	43	0.4	62	187	9.00

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au-150 PPM	Au+150 PPM	Au Av PPM	TestWt grs	-150Wt grs	+150Wt grs
CB-89-174-05-3/4H		63	38	0.1	17	0.65	1.45	0.93	6.00	10.71	5.86
CB-89-174-07-3/4H		97	55	<0.1	22	0.14	30.98	8.21	7.00	11.59	4.11

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt grs
CB-89-137-04-3/4H		28	25	<0.1	37	<6	8.00
CB-89-137-05-3/4H		44	23	<0.1	33	85	11.00
CB-89-137-06-3/4H		49	26	<0.1	30	177	9.00
CB-89-137-07-3/4H		67	60	<0.1	35	189	7.00
CB-89-137-08-3/4H		90	32	0.1	53	75	8.00
CB-89-137-09-3/4H		236	61	0.5	72	<13	4.00
CB-89-141-07-3/4H		90	40	0.3	102	73	7.00
CB-89-141-08-3/4H		55	27	<0.1	33	130	6.00
CB-89-141-09-3/4H		154	40	0.2	54	330	4.00
CB-89-141-10-3/4H		77	35	<0.1	65	1635	8.00
CB-89-141-11-3/4H		132	29	<0.1	36	80	9.00
CB-89-141-12-3/4H		78	77	<0.1	46	45	10.00
CB-89-141-13-3/4H		52	30	<0.1	33	205	6.00
CB-89-141-14-3/4H		44	28	<0.1	17	<8	6.00
CB-89-141-15-3/4H		76	26	0.1	35	<6	8.00
CB-89-141-16-3/4H		46	25	<0.1	34	83	9.00
CB-89-141-17-3/4H		33	27	<0.1	40	74	11.00
CB-89-141-18-3/4H		31	34	0.2	45	167	7.00
CB-89-141-19-3/4H		65	29	0.1	45	94	8.00
CB-89-141-20-3/4H		56	28	<0.1	37	154	7.00
CB-89-141-21-3/4H		35	24	0.4	6	25	6.00
CB-89-141-22-3/4H		30	30	0.1	4	103	3.50
CB-89-141-23-3/4H		62	29	0.1	10	500	6.00
CB-89-141-24-3/4H		160	31	0.2	63	<8	6.00
CB-89-143-01-3/4H		55	39	0.3	266	17557	9.00
CB-89-143-02-3/4H		42	32	<0.1	41	73	7.00
CB-89-143-03-3/4H		64	40	<0.1	64	55	6.00
CB-89-143-04-3/4H		47	38	<0.1	46	<17	3.00
CB-89-143-05-3/4H		55	31	<0.1	36	<25	2.00
CB-89-143-06-3/4H		65	34	0.1	72	495	4.00
CB-89-143-07-3/4H		77	39	0.4	302	1008	10.00
CB-89-143-08-3/4H		68	25	0.1	94	81	10.00
CB-89-143-09-3/4H		82	27	0.3	67	52	11.00
CB-89-143-10-3/4H		79	24	0.1	71	155	11.00
CB-89-143-11-3/4H		96	54	0.3	73	497	7.00
CB-89-143-12-3/4H		72	25	0.2	58	68	12.00
CB-89-143-13-3/4H		60	21	<0.1	22	<13	4.00
CB-89-143-14-3/4H		112	54	<0.1	100	90	12.00
CB-89-143-15-3/4H		167	64	<0.1	129	175	17.00
CB-89-143-16-3/4H		186	156	0.1	262	143	17.00

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB-89-180-02-3/4H		43	46	<0.1	80	405	12.00
CB-89-180-03-3/4H		40	37	0.1	246	53	9.00
CB-89-180-04-3/4H		44	31	<0.1	143	95	11.00
CB-89-180-05-3/4H		39	35	<0.1	127	154	8.00
CB-89-180-06-3/4H		38	35	<0.1	160	96	14.00
CB-89-180-07-3/4H		39	25	<0.1	87	81	13.00
CB-89-180-08-3/4H		61	36	0.2	71	262	11.00
CB-89-180-09-3/4H		61	36	0.3	112	77	7.00
CB-89-180-10-3/4H		49	25	0.1	94	63	12.00
CB-89-180-11-3/4H		37	38	<0.1	62	189	16.00
CB-89-180-12-3/4H		42	34	<0.1	80	219	16.00
CB-89-180-13-3/4H		63	37	<0.1	141	101	19.00
CB-89-180-14-3/4H		188	93	0.2	101	43	9.00
CB-89-180-15-3/4H		109	79	0.7	310	93	9.00
CB-89-182-01-3/4H		160	56	0.4	140	48	10.00
CB-89-182-02-3/4H		104	49	0.4	137	305	11.00
CB-89-182-03-3/4H		68	44	0.2	83	212	15.00
CB-89-182-04-3/4H		69	46	<0.1	111	46	13.00
CB-89-184-01-3/4H		89	46	0.2	163	908	12.00
CB-89-186-01-3/4H		68	31	0.3	109	43	9.00
CB-89-186-03-3/4H		33	26	<0.1	81	17	9.00
CB-89-186-04-3/4H		158	23	0.2	27	66	10.00
CB-89-186-05-3/4H		65	26	<0.1	89	375	14.00
CB-89-186-06-3/4H		88	32	0.1	127	<6	8.00
CB-89-186-07-3/4H		73	64	0.1	234	195	12.00
CB-89-186-08-3/4H		78	35	0.1	125	319	11.00
CB-89-186-09-3/4H		54	31	0.5	71	84	10.00
CB-89-188-01-3/4H		110	51	0.1	105	93	11.00
CB-89-188-02-3/4H		108	45	<0.1	259	<5	11.00
CB-89-188-03-3/4H		117	53	<0.1	120	343	9.00
CB-89-188-04-3/4H		141	64	0.1	246	213	11.00
CB-89-188-05-3/4H		148	61	0.1	560	38	11.00
CB-89-188-06-3/4H		191	74	0.2	306	615	12.00
CB-89-188-07-3/4H		110	45	<0.1	316	208	13.00
CB-89-188-08-3/4H		79	46	<0.1	256	305	13.00
CB-89-188-09-3/4H		75	49	<0.1	111	207	11.00
CB-89-188-10-3/4H		91	56	0.5	334	49	8.00
CB-89-188-11-3/4H		49	30	<0.1	96	38	8.00

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au-150 PPM	Au+150 PPM	Au Av PPM	TestWt gms	-150Wt gms	+150Wt gms
CB-89-186-02-3/4H		44	25	<0.1	46	0.07	0.03	0.06	5.00	6.77	2.83

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB-89-143-17		187	164	0.3	273	60	20.00
CB-89-143-18		165	143	0.2	270	96	15.00
CB-89-145-01		93	46	<0.1	167	43	9.00
CB-89-145-02		51	43	<0.1	91	26	8.00
CB-89-145-03		161	35	<0.1	123	111	7.00
CB-89-145-04		61	39	<0.1	99	66	10.00
CB-89-145-05		56	39	<0.1	96	345	6.00
CB-89-145-06		77	56	0.3	147	51	10.00
CB-89-145-07		51	37	<0.1	62	270	12.00
CB-89-145-08		84	40	0.3	177	123	9.00
CB-89-145-09		80	38	0.2	117	30	10.00
CB-89-145-10		68	44	<0.1	76	52	11.00
CB-89-145-11		62	32	<0.1	63	26	8.00
CB-89-145-12		67	42	<0.1	51	68	8.00
CB-89-145-13		55	30	<0.1	29	125	12.00
CB-89-145-14		61	35	<0.1	69	78	10.00
CB-89-147-01		77	34	<0.1	151	78	5.00
CB-89-149-01		78	35	<0.1	81	206	7.00
CB-89-149-02		63	34	<0.1	168	<10	8.00
CB-89-149-03		110	34	<0.1	141	214	7.00
CB-89-149-04		48	32	<0.1	96	90	7.00
CB-89-149-05		61	37	<0.1	326	87	9.00
CB-89-151-01		56	25	<0.1	70	19	8.00
CB-89-151-02		35	20	<0.1	21	<10	8.00
CB-89-155-01		153	59	<0.1	632	291	13.00
CB-89-155-02		181	50	<0.1	308	338	11.00
CB-89-155-03		186	71	<0.1	728	673	12.00
CB-89-155-04		125	46	<0.1	310	143	9.00
CB-89-155-05		56	36	<0.1	124	90	11.00
CB-89-155-06		57	30	<0.1	98	158	4.00
CB-89-155-07		63	39	<0.1	336	1183	12.00
CB-89-155-08		334	40	<0.1	286	57	30.00
CB-89-157-01		142	43	<0.1	254	118	15.00
CB-89-157-02		113	48	<0.1	364	105	12.00
CB-89-157-03		66	35	<0.1	140	<5	6.00
CB-89-157-04		57	24	<0.1	75	99	7.00
CB-89-157-05		117	43	<0.1	96	<10	5.00
CB-89-157-06		40	26	<0.1	57	484	7.00
CB-89-157-07		31	23	0.2	64	267	9.00
CB-89-157-08		68	28	<0.1	56	30	6.00

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB-89-157-09		59	35	<0.1	65	498	10.00
CB-89-157-10		58	33	<0.1	55	98	8.00
CB-89-157-11		47	28	<0.1	43	33	12.00
CB-89-157-12		63	34	<0.1	45	123	11.00
CB-89-157-13		62	29	<0.1	78	128	11.00
CB-89-157-14		86	40	<0.1	127	273	12.00
CB-89-157-15		102	221	<0.1	161	495	10.00
CB-89-159-01		94	60	<0.1	165	288	10.00
CB-89-159-02		92	43	<0.1	159	1280	9.00
CB-89-159-04		82	38	4.9	326	330	8.00
CB-89-159-05		51	34	<0.1	110	215	6.00
CB-89-159-06		131	52	<0.1	154	<5	2.50
CB-89-159-07		126	90	0.3	143	315	4.00
CB-89-159-08		39	30	<0.1	66	168	5.00
CB-89-159-09		47	31	<0.1	55	45	8.00
CB-89-159-10		64	35	<0.1	108	66	14.00
CB-89-159-11		158	80	0.3	260	<25	2.00
CB-89-159-12		264	39	0.3	147	100	12.00

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au-150 PPM	Au+150 PPM	Au Av PPM	TestWt grs	-150Wt grs	+150Wt grs
CB-89-157-16		135	88	0.5	242	0.18	47.46	9.46	9.00	10.81	2.64
CB-89-159-03		113	41	0.2	350	0.22	7.23	1.46	10.00	11.55	2.48

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB-89-159-13-3/4H		26	35	<0.1	16	80	6.00
CB-89-159-14-3/4H		24	22	<0.1	13	698	4.00
CB-89-159-15-3/4H		31	23	<0.1	23	39	7.00
CB-89-159-16-3/4H		127	27	<0.1	150	143	8.00
CB-89-159-17-3/4H		133	35	0.3	242	48	5.00
CB-89-159-18-3/4H		132	37	<0.1	192	85	6.00
CB-89-159-20-3/4H		62	41	0.2	768	522	5.00
CB-89-159-21-3/4H		69	47	0.5	696	600	5.00
CB-89-159-22-3/4H		62	106	0.3	536	125	13.00
CB-89-161-01-3/4H		196	56	0.3	225	2348	12.00
CB-89-161-02-3/4H		71	37	<0.1	206	113	16.00
CB-89-161-03-3/4H		63	35	<0.1	122	80	15.00
CB-89-161-04-3/4H		63	40	0.3	87	473	13.00
CB-89-163-01-3/4H		51	34	<0.1	99	442	15.00
CB-89-163-02-3/4H		64	38	<0.1	222	135	14.00
CB-89-163-03-3/4H		69	50	<0.1	153	198	10.00
CB-89-163-04-3/4H		77	54	<0.1	116	150	7.00
CB-89-163-05-3/4H		74	40	<0.1	116	135	8.00
CB-89-163-06-3/4H		59	38	<0.1	88	235	12.00
CB-89-163-07-3/4H		77	44	<0.1	93	177	11.00
CB-89-163-09-3/4H		47	41	<0.1	52	163	12.00
CB-89-163-10-3/4H		47	26	<0.1	29	51	17.00
CB-89-163-11-3/4H		63	27	<0.1	76	96	10.00
CB-89-163-12-3/4H		120	37	<0.1	66	143	17.00
CB-89-163-13-3/4H		65	51	<0.1	101	261	10.00
CB-89-163-14-3/4H		89	31	<0.1	304	55	17.00
CB-89-163-15-3/4H		49	25	<0.1	116	157	13.00
CB-89-163-17-3/4H		54	116	<0.1	69	150	13.00
CB-89-163-18-3/4H		41	36	<0.1	116	297	9.00
CB-89-165-01-3/4H		55	40	0.2	77	324	14.00
CB-89-165-02-3/4H		53	30	0.2	138	93	10.00
CB-89-165-03-3/4H		62	36	0.2	124	303	9.00
CB-89-165-05-3/4H		82	26	<0.1	83	695	11.00
CB-89-165-06-3/4H		147	47	<0.1	139	185	10.00
CB-89-165-07-3/4H		58	34	<0.1	73	112	11.00
CB-89-165-08-3/4H		57	29	<0.1	58	292	11.00

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au-150 PPM	Au+150 PPM	Au Av PPM	TestWt gms	-150Wt gms	+150Wt gms
CB-89-159-19-3/4H		103	41	0.3	289	3.15	6.97	4.08	3.00	6.09	1.96
CB-89-163-08-3/4H		83	36	<0.1	98	0.12	9.20	1.74	10.00	13.54	2.93
CB-89-163-16-3/4H		50	45	0.6	208	0.03	7.27	1.64	8.00	11.39	3.27
CB-89-165-04-3/4H		112	37	1.4	104	0.15	5.84	0.99	10.00	14.12	2.43

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt grs
CB-89-165-09-3/4H		74	36	0.9	85	82	11.00
CB-89-167-01-3/4H		94	42	0.4	146	33	10.00
CB-89-167-02-3/4H		102	39	0.2	107	71	11.00
CB-89-167-03-3/4H		49	34	<0.1	75	102	10.00
CB-89-167-04-3/4H		48	29	0.1	47	63	11.00
CB-89-167-05-3/4H		61	47	0.1	45	551	8.00
CB-89-167-06-3/4H		67	34	0.1	36	168	10.00
CB-89-167-07-3/4H		99	48	<0.1	35	<10	6.00
CB-89-167-08-3/4H		85	48	0.3	92	884	11.00
CB-89-167-09-3/4H		68	40	<0.1	35	20	6.00
CB-89-167-10-3/4H		43	36	0.1	5	1320	7.00
CB-89-167-11-3/4H		36	31	<0.1	11	274	7.00
CB-89-167-12-3/4H		209	32	0.1	13	137	7.00
CB-89-171-01-3/4H		67	48	0.1	142	55	11.00
CB-89-171-02-3/4H		72	48	0.2	320	256	11.00
CB-89-171-03-3/4H		77	52	0.1	304	503	13.00
CB-89-171-04-3/4H		83	41	0.5	236	459	14.00
CB-89-171-05-3/4H		191	57	0.5	257	398	11.00
CB-89-171-06-3/4H		159	55	0.3	17	195	11.00
CB-89-171-07-3/4H		104	52	0.4	228	230	6.00
CB-89-171-08-3/4H		80	43	0.2	126	248	11.00
CB-89-171-09-3/4H		117	57	0.5	122	43	12.00
CB-89-171-10-3/4H		154	46	0.2	314	214	8.00
CB-89-171-11-3/4H		125	60	0.3	177	41	8.00
CB-89-171-12-3/4H		280	367	1.6	808	735	16.00
CB-89-171-13-3/4H		426	550	2.0	968	464	11.00
CB-89-172-01-3/4H		102	71	0.8	127	81	13.00
CB-89-173-01-3/4H		102	61	0.3	24	159	10.00
CB-89-173-02-3/4H		527	167	1.4	720	105	18.00
CB-89-175-01-3/4H		347	114	0.1	158	80	3.00
CB-89-177-01-3/4H		94	57	0.3	156	1770	7.00
CB-89-177-02-3/4H		279	42	0.4	173	565	17.00
CB-89-179-01-3/4H		167	66	0.2	101	235	12.00
CB-89-179-02-3/4H		157	72	0.2	124	110	6.00
CB-89-179-03-3/4H		153	44	0.8	72	340	9.00
CB-89-179-04-3/4H		104	39	0.1	300	206	8.00
CB-89-179-05-3/4H		104	54	0.3	138	68	4.00
CB-89-179-06-3/4H		69	40	0.1	93	300	6.00
CB-89-179-07-3/4H		135	54	0.2	75	30	12.00
CB-89-179-08-3/4H		62	41	0.1	70	138	10.00

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REPORT: 089-51157.0

PROJECT: CASA BERARDI

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	Ag PPM	As PPM	Au PPB	Testwt gms
CB-89-179-09-3/4H		54	33	0.1	64	154	8.00
CB-89-179-10-3/4H		56	34	0.3	99	88	13.00
CB-89-179-11-3/4H		80	48	0.3	94	198	12.00
CB-89-179-12-3/4H		428	55	0.6	172	109	22.00
CB-89-179-13-3/4H		204	42	0.4	152	102	18.00
CB-89-179-14-3/4H		114	54	0.2	260	434	15.00
CB-89-179-15-3/4H		198	69	0.3	173	270	9.00
CB-89-179-16-3/4H		140	78	0.6	326	93	10.00
CB-89-179-17-3/4H		91	49	0.4	83	30	10.00
CB-89-181-01-3/4H		71	50	0.6	128	171	7.00
CB-89-181-02-3/4H		68	54	0.1	48	<10	5.00
CB-89-181-03-3/4H		83	50	<0.1	50	307	9.00
CB-89-181-04-3/4H		82	42	0.1	86	49	11.00
CB-89-181-05-3/4H		88	60	0.1	163	19	8.00
CB-89-181-06-3/4H		101	48	0.3	65	58	12.00
CB-89-181-07-3/4H		78	47	0.2	156	37	9.00
CB-89-181-08-3/4H		135	78	0.1	69	753	10.00
CB-89-181-09-3/4H		85	43	0.2	85	159	10.00
CB-89-181-10-3/4H		102	51	<0.1	91	34	8.00
CB-89-183-01-3/4H		118	67	0.3	150	49	8.00
CB-89-183-02-3/4H		148	52	0.4	149	146	8.00
CB-89-183-03-3/4H		147	90	0.5	368	407	16.00
CB-89-185-01-3/4H		132	65	0.3	258	60	12.00
CB-89-185-02-3/4H		104	56	0.1	102	224	11.00
CB-89-185-03-3/4H		142	50	0.2	324	230	12.00
CB-89-187-01-3/4H		153	246	1.3	127	73	12.00
CB-89-187-02-3/4H		112	93	0.3	314	27	9.00
CB-89-187-03-3/4H		128	60	0.2	158	79	8.00
CB-89-189-01-3/4H		48	39	<0.1	101	<10	8.00

APPENDIX G

ANOMALY TESTING INVESTIGATIONS

1/4 Concentrate Panning Counts for
Selected Samples Anomalous in Gold

1/4 Concentrate INA Assay for
Selected Samples Anomalous in Gold

1/4 Concentrate Binocular Examination for
Selected Samples Anomalous in Cu, Zn and Ag

GOLD CLASSIFICATION
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VI: GOLD FROM SHAKING TABLE AND PANNING

CAMBIORL.WR1
TOTAL # OF PANNINGS

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
34-26	Y	200 X 300	46 C		1					1			EST. 1% PYRITE
										1			
42-03	Y	25 X 75	0 C		1					1			EST. 25% PYRITE
		75 X 150	0 C		1					1			50 GRAINS ARSENOPYRITE
										2			
42-04	Y	25 X 50	8 C		1					1			EST. 70% PYRITE
		50 X 50	10 C		1					1			
		75 X 100	18 C		1					1			
		100 X 100	20 C		1					1			
		125 X 275	38 C		1					1			
										5			
[illegible]1	Y	250 X 375	56 C		1					1			EST. 0.5% PYRITE
										1			
66-35	Y	750 X 825	103 C		1					1			EST. 1% PYRITE
										1			
72-11	Y	125 X 225	34 C		1					1			EST. 10% PYRITE
										1			
84-22	Y	NO VISIBLE GOLD											EST. 5% PYRITE
112-04	Y	75 X 100	18 C		1					1			EST. 2% PYRITE
		375 X 525	100 M		1					1			
										2			
126-03	Y	75 X 100	18 C		1					1			EST. 5% PYRITE
		75 X 225	75 M		1					1			
										2			
1[illegible]	Y	NO VISIBLE GOLD											EST. 0.5% PYRITE

GOLD CLASSIFICATION
===================

SIBLE GOLD FROM SHAKING TABLE AND PANNING

CAMBIORH.WR1
TOTAL # OF PANNINGS

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS: ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
11-02	Y	NO VISIBLE GOLD											EST. 0.5% PYRITE 50 GRAINS ARSENOPYRITE
15-04	Y	50 X 50	10 C		1					1			EST. 1% PYRITE
										1	5.7	34	
20-11	Y	25 X 50	8 C		1					1			EST. 1% PYRITE
		50 X 75	13 C		1					1			
		75 X 100	18 C		1					1			
										3	6.6	222	
34-19	Y	75 X 75	15 C		1					1			EST. 1% PYRITE
										1	3.6	178	
35-07	Y	NO VISIBLE GOLD											EST. 60% PYRITE
40-16	Y	NO VISIBLE GOLD											EST. 0.25% PYRITE
40-17	Y	NO VISIBLE GOLD											EST. 5% PYRITE
53-07	Y	NO VISIBLE GOLD											EST. 2% PYRITE 1% MARCASITE
65-02	Y	NO VISIBLE GOLD											EST. 1% PYRITE
67-03	Y	NO VISIBLE GOLD											EST. 1% PYRITE
67-08	Y	25 X 50	8 C		1					1			EST. 2% PYRITE
										1	3.7	22	
67-09	Y	NO VISIBLE GOLD											EST. 2% PYRITE
69-01.02	Y	NO VISIBLE GOLD											EST. 3% PYRITE
69-10	Y	25 X 25	5 C				2		5	7			EST. 50% PYRITE
		25 X 50	8 C						5	5			
		50 X 50	10 C						5	5			
		75 X 100	18 C				1			1			
		75 X 125	20 C						1	1			
										19	2.5	1620	
69-10	Y	25 X 50	8 C						3	3			ALL BUT 3 GOLD GRAINS REMOVED PRIOR TO SUBMISSION FOR INA
										3	2.5	98	

GOLD CLASSIFICATION
===================

SIBLE GOLD FROM SHAKING TABLE AND PANNING

CAMBIORH.WR1
TOTAL # OF PANNINGS

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
70-03	Y	NO VISIBLE GOLD											EST. 25% PYRITE 50 GRAINS ARSENOPYRITE
74-12	Y	NO VISIBLE GOLD											EST. 1% PYRITE
76-06	Y	NO VISIBLE GOLD											EST. 1% PYRITE
76-08	Y	NO VISIBLE GOLD											EST. 2% PYRITE
78-08	Y	NO VISIBLE GOLD											EST. 2% PYRITE
80-05	Y	NO VISIBLE GOLD											EST. 5% PYRITE
80-08	Y	NO VISIBLE GOLD											EST. 5% PYRITE 10 GRAINS ARSENOPYRITE
80-14	Y	NO VISIBLE GOLD											EST. 0.5% PYRITE
81-07	Y	NO VISIBLE GOLD											EST. 60% PYRITE
84-04	Y	25 X 75	10 C		1					1			EST. 15% PYRITE
		50 X 50	10 C		1					1			
		75 X 75	15 C		1					1			
		75 X 100	18 C		1					1			
										4	7.7	264	
84-08	Y	50 X 50	10 C		1					1			EST. 5% PYRITE
		75 X 100	18 C		1					1			
										2	9.2	131	
84-15	Y	50 X 100	15 C		1					1			EST. 2% PYRITE
										1	6.6	97	
84-19	Y	50 X 50	10 C		1					1			EST. 5% PYRITE
		100 X 150	25 C		1					1			
										2	4.8	643	
84-21	Y	NO VISIBLE GOLD											EST. 10% PYRITE
85-04	Y	50 X 50	10 C		1					1			EST. 2% PYRITE
										1	5.5	35	
94-03	Y	NO VISIBLE GOLD											EST. 5% PYRITE

GOLD CLASSIFICATION
===================
SIBLE GOLD FROM SHAKING TABLE AND PANNING

CAMBIORH.WR1
TOTAL # OF PANNINGS

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
96-19	Y	NO VISIBLE GOLD											EST. 1% PYRITE
101-08	Y	NO VISIBLE GOLD											EST. 1% PYRITE 50 GRAINS ARSENOPYRITE
102-06	Y	100 X 250	34 C		1					1			EST. 0.5% PYRITE
										1	4.8	1612	
106-01	Y	NO VISIBLE GOLD											EST. 3% PYRITE
106-12	Y	NO VISIBLE GOLD											EST. 1% PYRITE
106-13	Y	NO VISIBLE GOLD											EST. 0.5% PYRITE
108-34	Y	50 X 100	15 C		1					1			EST. 70% PYRITE
										1	15.2	42	
121-02	Y	NO VISIBLE GOLD											EST. 80% PYRITE 2% ARSENOPYRITE
124-03	Y	25 X 50	8 C		1					1			EST. 1% PYRITE
		50 X 50	10 C		1					1			
										2	4.3	64	
127-32	Y	25 X 25	5 C		1					1			EST. 15% PYRITE 50 GRAINS MARCASITE
										1	7.8	3	
128-01	Y	NO VISIBLE GOLD											EST. 0.5% PYRITE
128-11	Y	NO VISIBLE GOLD											EST. 3% PYRITE
128-12	Y	25 X 25	5 C				1		1	2			EST. 5% PYRITE
		50 X 50	10 C		1					1			
		50 X 75	13 C						1	1			
										4	6.1	101	
132-05	Y	NO VISIBLE GOLD											EST. 60% PYRITE
140-03	Y	NO VISIBLE GOLD											EST. 1% PYRITE
143-07	Y	NO VISIBLE GOLD											EST. 1% PYRITE
150-01	Y	25 X 50	8 C		1					1			EST. 2% PYRITE

GOLD CLASSIFICATION
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SIBLE GOLD FROM SHAKING TABLE AND PANNING

CAMBIORH.WR1
TOTAL # OF PANNINGS

SAMPLE #	PANNED Y/N	DIAMETER	THICKNESS	NUMBER OF GRAINS ABRADED T	ABRADED P	IRREGULAR T	IRREGULAR P	DELICATE T	DELICATE P	TOTAL	NON MAG GMS	CALC V.G. ASSAY PPB	REMARKS
CB-89													
		75 X 125	20 C		1					1			
										2	5.9	268	
154-03	Y	NO VISIBLE GOLD											EST. 10% PYRITE
154-05	Y	NO VISIBLE GOLD											EST. 0.5% PYRITE
155-07	Y	25 X 50	5 C		1					1			EST. 2% PYRITE 150 GRAINS ARSENOPYRITE
										1	5.4	5	
159-02	Y	50 X 75	8 C		1					1			EST. 7% PYRITE
										1	4.8	17	
61-01	Y	NO VISIBLE GOLD											EST. 3% PYRITE
166-01	Y	NO VISIBLE GOLD											EST. 0.5% PYRITE
167-10	Y	NO VISIBLE GOLD											EST. 15% PYRITE
168-05	Y	NO VISIBLE GOLD											EST. 5% PYRITE
169-07	Y	NO VISIBLE GOLD											EST. 20% PYRITE
174-07	Y	NO VISIBLE GOLD											EST. 0.5% PYRITE
177-01	Y	NO VISIBLE GOLD											EST. 10% PYRITE
178-02	Y	NO VISIBLE GOLD											EST. 5% PYRITE
194-04	Y	50 X 75	13 C		1					1			EST. 7% PYRITE
										1	4.5	73	

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REPORT: 089-50929.0

PROJECT: CASA BERARDI PAGE 1

SAMPLE NUMBER	ELEMENT UNITS Au PPB	WT g	SAMPLE NUMBER	ELEMENT UNITS Au PPB	WT g
CB-89-11-02-1/4H	63	4.98	CB-89-139-13-1/4H	<5	4.77
CB-89-15-04-1/4H	130	5.80	CB-89-140-03-1/4H	32	4.59
CB-89-20-11-1/4H	190	6.54	CB-89-150-01-1/4H	260	5.71
CB-89-34-19-1/4H	520	3.76	CB-89-154-03-1/4H	100	5.32
CB-89-35-07-1/4H	310	5.37	CB-89-154-05-1/4H	60	4.36
CB-89-40-16-1/4H	20	5.81	CB-89-194-04-1/4H	130	4.79
CB-89-40-17-1/4H	36	8.12			
CB-89-53-07-1/4H	59	6.37			
CB-89-65-02-1/4H	2240	3.72			
CB-89-67-03-1/4H	190	3.44			
CB-89-67-08-1/4H	92	3.52			
CB-89-67-09-1/4H	38	4.39			
CB-89-69-01,02-1/4H	93	10.68			
CB-89-69-10-1/4H	490	2.51			
CB-89-70-03-1/4H	679	5.26			
CB-89-74-12-1/4H	25	3.98			
CB-89-76-06-1/4H	55	3.79			
CB-89-76-08-1/4H	120	4.37			
CB-89-78-08-1/4H	22	3.63			
CB-89-80-05-1/4H	81	3.09			
CB-89-80-08-1/4H	47	4.60			
CB-89-80-14-1/4H	14	5.55			
CB-89-81-07-1/4H	390	9.80			
CB-89-84-04-1/4H	1660	7.53			
CB-89-84-08-1/4H	310	8.89			
CB-89-84-15-1/4H	83	6.67			
CB-89-84-19-1/4H	626	4.69			
CB-89-85-04-1/4H	110	5.53			
CB-89-94-03-1/4H	88	2.11			
CB-89-96-19-1/4H	24	2.66			
CB-89-102-05-1/4H	793	4.84			
CB-89-106-01-1/4H	150	4.48			
CB-89-106-12-1/4H	15	3.05			
CB-89-106-13-1/4H	96	4.76			
CB-89-108-04-1/4H	1970	15.15			
CB-89-121-02-1/4H	1690	17.68			
CB-89-124-03-1/4H	200	4.31			
CB-89-127-32-1/4H	87	7.83			
CB-89-128-01-1/4H	19	2.93			
CB-89-133-04-1/4H	220	4.48			

TLE 04-05-89 15:25:25 089-51187.0 ODM 2

CLIENT CAMBIOR INC.

PROJECT CASA BERARDI #SAMPLES: 14

SPECIAL VALUES

IS Insufficient Sample

-9 No Value Reported

Values above the upper limit are shown as +uplimt

Values below the lower limit are shown as -lolmt (ie not

DETERMINATIONS

	ELNAME	METHO	ECO	UNI	#SAM	LOLMT	UPLIMT	COMMENTS
01	Au	INAA		PPB	14	5	90000	Results Reported
02	WT			G	14	0.01	999.99	Results Reported

SAMPLE PREPS

40 SAMPLE TYPE=H HEAVY MINERAL CONC.

41 P86= 14 As Received, No SF

xxxx

FORMAT (A8.1X.A1.A1.1X.A20.2(1X.A7.A1))

BEGIN	Type	Frac	Sample ID	Au	WT
11870001			CB-89-64-21-3/4	269	5.28
11870002			CB-89-128-11-3/	68	4.61
11870003			CB-89-128-12-3/	3510	5.96
11870004			CB-89-132-05-3/	86	7.93
11870005			CB-89-143-07-3/	39	4.76
11870006			CB-89-155-07-3/	71	5.29
11870007			CB-89-159-02-3/	200	4.58
11870008			CB-89-161-01-3/	200	4.91
11870009			CB-89-166-01-3/	57	2.33
11870010			CB-89-167-10-3/	-5	3.61
11870011			CB-89-168-05-3/	190	4.64
11870012			CB-89-169-07-3/	95	9
11870013			CB-89-177-01-3/	42	3.09
11870014			CB-89-178-02-3/	61	5.8

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PROJECT: CASA BERARDI PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	WT g
CB-89-174-07-1/4H		7	5.47

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Geochemical Lab Report

REPORT: 089-50395.1

PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Testwt gms
CB-89-65-02-3/4H		3455	2.64

COPY

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Geochemical Lab Report

REPORT: 089-50691.1

PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Testwt gms
CB-89-84-04-3/4H		<35	1.44

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Geochemical Lab Report

REPORT: 089-50776.1

PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Testwt grs
CB-89-108-04-3/4H		2284	18.82

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Geochemical Lab Report

REPORT: 089-50663.1

PROJECT: NONE PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Testwt grs
CB-89-121-02-3/4H		1485	3.27

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BONDAR-CLEGG

Geochemical Lab Report

REPORT: 089-50844.1

PROJECT: NONE

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Testwt gms
CB-89-128-12-3/4H		6294	10.25

COPY

Cambior -- Casa-Berardi

1/4 Concentrate Binocular Examination for Samples Anomalous in Cu, Zn and/or Ag

Sample No.	Anomaly (ppm)	Examination
CB-89		
19-05	Cu=877	- No chalcopyrite - No brass contamination - 50% pyrite, mostly attached to dark greyrock chips
22-01	Ag=4.4	- No silver minerals - 5% pyrite - 2% oolitic marcasite - 1 grain cobaltite - Enrichment of detrital grains
-02	Ag=3.9	- No silver minerals - 4% pyrite - 4% oolitic marcasite - 1 grain cobaltite - Enrichment of detrital grains
27-03	Ag=4.4 As=>2000	- No silver minerals - 1% coarse arsenopyrite - 70% pyrite (often attached to light grey rock chips)
39-01	Ag=3.6	- No silver minerals - 2% pyrite - 4% oolitic marcasite - 5 grains cobaltite - Enrichment of polished garnet
43-01	Ag=3.8	- No silver minerals - 7% massive pyrite - 3% oolitic marcasite - enrichment of detrital grains

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Sample No.	Anomaly (ppm)	Examination
CB-89		
65-02	Ag=10.2 As=2951	- 1/4 concentrate sent for INA - No silver or arsenic minerals observed during panning for gold
67-11	Cu=871	- 6 brass filings - 2% pyrite
68-20	Ag=4.1 As=1504	- No silver minerals - No arsenopyrite - 75% pyrite, some attached to light grey rock chips
75-03	Ag=2.1	- No silver minerals - 7% pyrite, most attached to light green rock chips
84-02	Ag=4.1	- No silver minerals - 1% pyrite - 1 grain bornite - 1 grain arsenopyrite
88-04	Zn=820 As=1032	- No sphalerite - 0.3% cobaltite sufficient to explain arsenic assay - 7% pyrite - 3 grains chalcopyrite
96-19	Zn=963	- sent for INA - no zinc minerals observed during panning for gold
107-04	Ag=5.1	- No silver minerals - 10% pyrite, most attached to quartz - 1 grain arsenopyrite
114-01	Ag=3.4	- No silver minerals - 3% pyrite - 3 grains arsenopyrite
129-03	Cu=887	- 0.3% coarse chalcopyrite - 3% pyrite

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Sample No.	Anomaly (ppm)	Examination
CB-89		
140-10	Ag=2.0 As=856	- No silver minerals - 0.3% crystalline arsenopyrite - 60% pyrite, half attached to rock chips of quartz and grey chlorite
141-03	Cu=944	- 0.3% chalcopyrite, mostly attached to coarse, dark green rock chips - 3% pyrite - 2% pyrrhotite
148-01	Ag=2.7	- No silver minerals - 10% pyrite
152-01	Zn=1405 Ag=2.3 As=960	- 0.5% dark brown sphalerite - No silver minerals - 0.2% cobaltite - 60% pyrite, most attached to grey rock chips - 600X300 micron filling contamination of unidentified metal
-02	Zn=943 Ag=2.1 As=1112	- 0.2% sphalerite - No silver minerals - 0.3% arsenopyrite - 60% pyrite, as in 01
159-04	Ag=4.9	- No silver minerals - 6% pyrite - 2 grains cobaltite
171-13	Ag=2.0 As=968	- No silver minerals - No arsenic minerals - 60% pyrite