GM 59889

ANALYSIS OF HEAVY MINERAL CONCENTRATE FOR KIMBERLITE INDICATOR MINERALS, UPPER BULL PROJECT

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Énergie et Ressources naturelles
Québec

TM02345 012

ANALYSIS OF HEAVY MINERAL CONCENTRATE FOR KIMBERLITE INDICATOR MINERALS

SAMPLE NUMBER: 27439 **SAMPLE SUBMISSION DATE: AUGUST 15, 2001**

PROJECT: UPPER BULL

CLIENT: **GORDON HENRIKSEN**
850 ROUTE DES PIONNIERS
BELLECOMBE, QC
JOZ 1K0
PHONE (819) 762-9642 FAX: (819) 762-3164

HEAVY MINERAL CONCENTRATING AND PETROLOGY:
ROBERT J. DILLMAN
ARJADEE PROSPECTING
8901 REILY DRIVE
MOUNT BRYDGES, ONTARIO
PHONE/FAX (519) 264-9278

ELECTRON MICROPROBE: R.L. BARNETT GEOLOGICAL CONSULTING
9684 LONGWOODS ROAD
RR#2 LONDON, ONTARIO
PHONE (519) 652-1498 FAX (519) 652-1475

VOLUME OF SAMPLE: Approximately 10 litres 10 to 100 mesh

SAMPLE TYPE: ~~STREAM GRAVEL~~ TILL

PROCEDURE OF HEAVY MINERAL CONCENTRATING AND SAMPLE ANALYSES:

1.) 10 litre field sample: -2.0 mm unsorted material
2.) separation by screening: -2.0 to +1.0 mm fraction
-1.0 to +0.14 mm fraction
-0.14 fraction discarded
3.) concentration of screened fractions by gravity methods using mechanical jig
4.) concentration of magnetic minerals using magnetic tray, magnetic minerals stored.
5.) concentration of non-magnetic residues to specific gravity of +3.0 (g/cm^3) by density separation using Lithium Metatungstate, -3.0 sp.g. minerals discarded
6.) petrology and electron microprobe analyses of kimberlite minerals

WEIGHT OF HEAVY MINERAL CONCENTRATE (grams)

-2.0 to +1.0 mm fraction:	no concentration
-1.0 to +0.14 mm fraction:	52.9 g
magnetic fraction:	35.2 g
total weight of concentrate:	**88.1 g**

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HEAVY MINERAL CONCENTRATE DESCRIPTION: SAMPLE 27439
GORDON HENRIKSEN

-2.0 to +1.0 mm fraction: no concentrate

-1.0 mm to -0.14 mm fraction:

-80% clay coated grains.
-90% amphibole, abundant black and dark green hornblende many in composite with quartz and light coloured feldspar, lesser light green to yellowish amphibole, trace glassy green amphibole, moderate fresh appearance, <1% clear yellow amphibole.
-10% garnet, mostly orange and dark orange-red almandine with black inclusions, good number of euhedral to anhedral crystals, some pellets or rounded crystals, 1% pink, some small euhedral crystals, 1 slightly brighter orange-red fragment.
-rare metallic grains, mostly weakly magnetic magnetite and ilmenite, several black pelletal grains which could be chromite or Mg-ilmenite.
-1 chrome diopside, small <0.5 mm, somewhat weathered grain.
-2 green clinopyroxene.

POTENTIAL KIMBERLITE, RELATED AND ECONOMIC MINERALS SELECTED

-70 ilmenite/magnetite (30 grains submitted for analysis)
-10 orange almandine (1 grain submitted for analysis)
-3 green amphibole or cpx (3 grains submitted for analysis)
-1 chrome diopside (1 grain submitted for analysis)
-35 grains submitted for microprobe analyses.

ELECTRON MICROPROBE ANALYSES

-2 kimberlite indicator minerals and 2 potentially related kimberlite minerals were detected.
- kimberlite minerals include: 1 G9 pyrope garnet, 1 chrome diopside.
- potential kimberlite mineral or related minerals include: 1 chrome amphibole (riebeckite?), chrome magnetite.
-additional non-kimberlitic mineral grains submitted for analyses include: magnetite, ilmenite, Fe amphibole, rutile and epidote.

CONCLUSIONS AND RECOMMENDATIONS

-sample contains several kimberlite and related indicator minerals.
-sample was collected within a kimberlite indicator mineral anomaly.
-additional sampling is recommended in the vicinity to the sample location.

Sincerely,

Robert J Dillman B.Sc. Geologist
November 10, 2001

Mr. Robert Dillman, September 21, 2001
For:
Mr. G, Henriksen,
RE: Bull Project,
Quebec

R. L. Barnett Geological Consulting,
9684 Longwoods Road,
RR32, London,
Ontario, N6P 1P2 Ph 1-519-652-1498 Fax 1-519-652-1475

Dear Bob,

For your records, the purpose of this letter is provide information concerning the nature and fate of mineral grains for which analyses were not provided in the batch of grains given to me with your letter of September 3, 2001 regarding the batch of grains from the BULL PROJECT, QUEBEC. The grains were identified using the EDS system on the microprobe during the course of mineral analyses

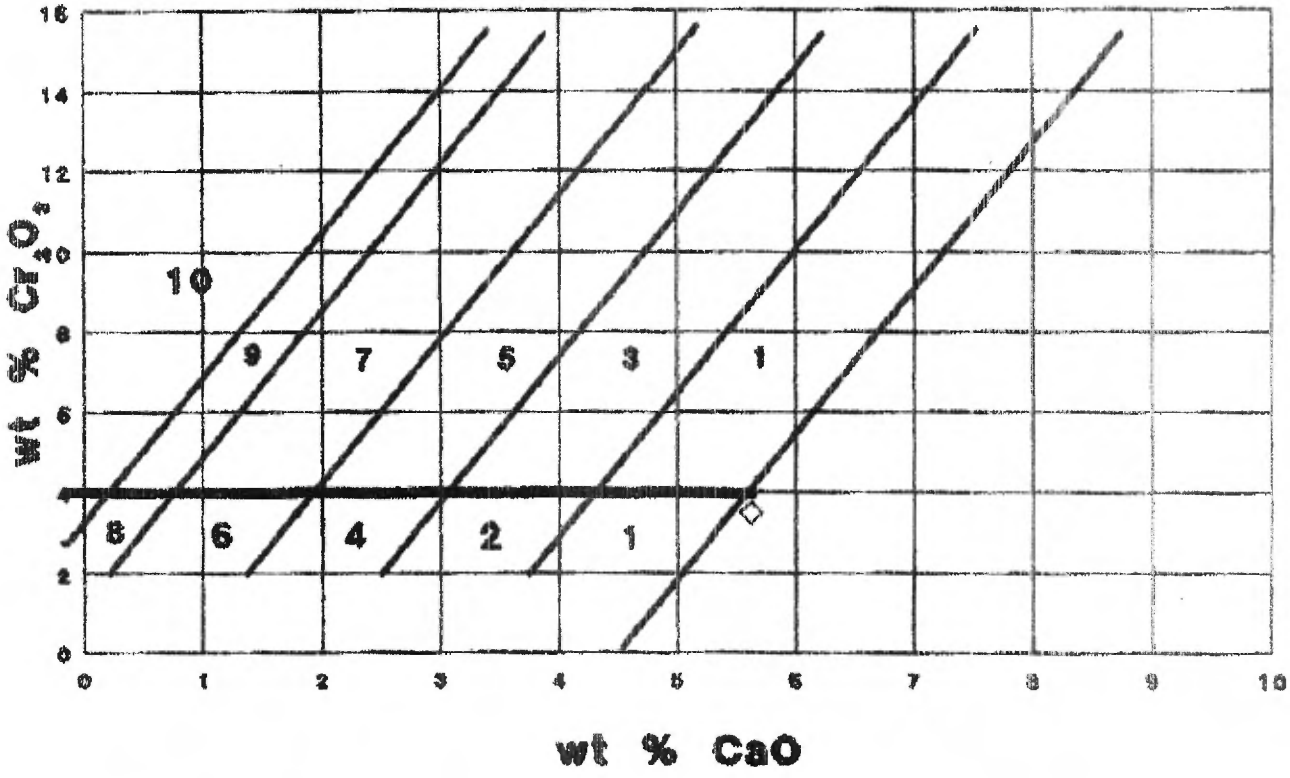
Sample 27439 grains 1,3-13,15-25,27,28,30,31 - magnetite
grains 2,14 - ilmenite
grain 26 - Fe amphibole
grain 29 - rutile
grain 33 - epidote

Sincerely,

R. L. Barnett

PYROPE GARNET – G. HENRIKSEN

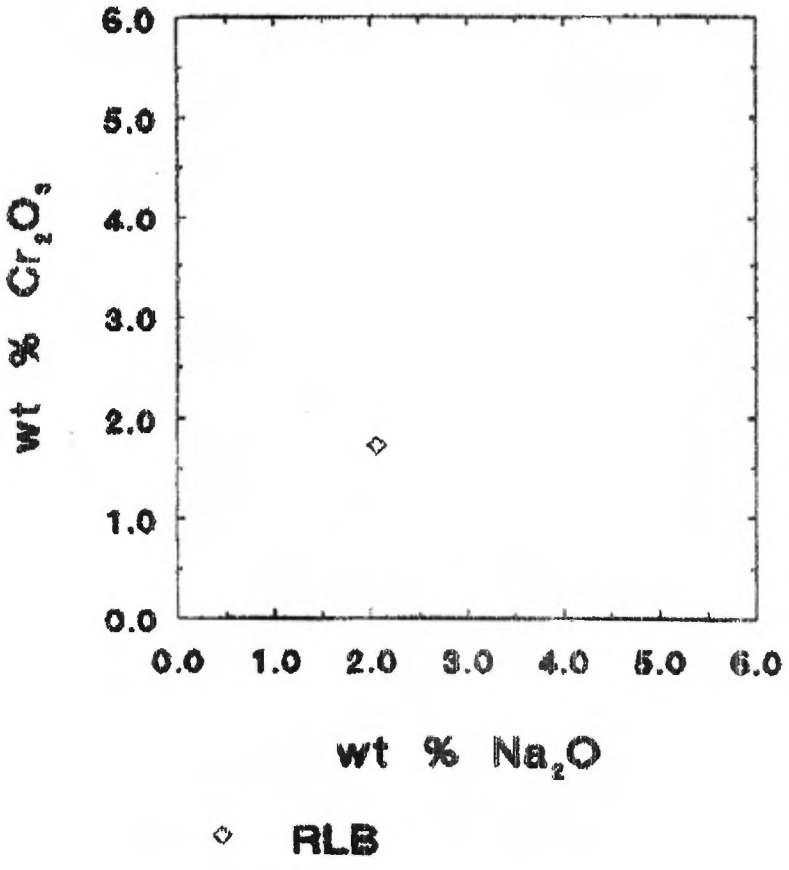
SAMPLE 27439



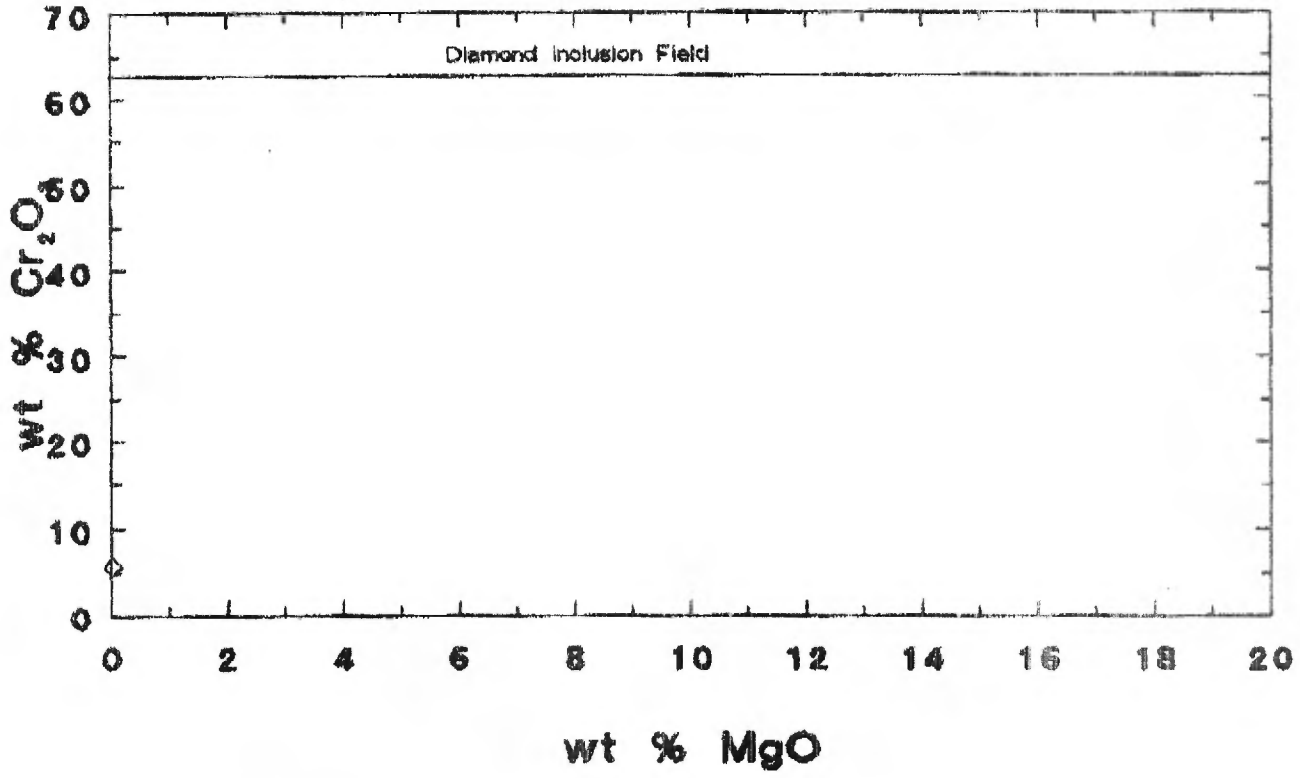
◇ RLB

CLINOPYROXENE – BULL PROJECT, QUEBEC

G. HENRIKSEN (September 3 2001)



CR-MAGNETITE - BULL PROJECT
G. HENRIKSEN (Sept. 3 2001)



◇ RLB

PYROPE, G. HENRIKSEN (DILLMAN), October 20 2001, R.L.B.

	1
SIO2	41.99
TIO2	.11
A203	22.23
C203	3.48
FEO	7.82
MGO	18.57
MNO	.52
CAO	5.63
SUM	100.35

SI	5.989	*
AL	.011	6.000
AL	3.725	*
TI	.012	*
CR	.392	*
FE	.933	*
MN	.063	*
MG	3.948	*
CA	.860	9.933
O	24.000	*
	F/M	.252
	F/FM	.201

1 27439 GRAIN 23

CLINOPYROXENE, G. HENRIKSEN, BULL PROJECT, QUEBEC, September 3 2001, R.L.B.

	1
SIO2	54.50
TIO2	.15
A2O3	3.00
C2O3	1.72
FEO	1.48
MGO	15.83
MNO	.08
CAO	21.54
K2O	.00
NA2O	2.06
SUM	100.36

SI	1.963	*
AL	.037	2.000
AL	.091	*
TI	.004	*
CR	.049	*
FE	.045	*
MG	.850	*
MN	.002	*
CA	.831	*
NA	.144	*
K	.000	2.016
O	6.000	*
	F/M	.055
	F/FM	.052

1 SAMPLE 27439 GRAIN 27

AMPHIBOLE, G. HENRIKSEN, (DILLMAN), October 20 2001, R.L.B.

	1
SIO2	53.84
TIO2	.06
A203	3.92
C203	.76
FEO	7.77
MGO	17.77
MNO	.31
CAO	12.21
K20	.25
NA2O	.85
SUM	97.74

SI	7.601	*
AL	.399	8.000
AL	.253	*
TI	.006	*
CR	.085	*
FE	.917	*
MG	3.739	*
MN	.037	*
CA	1.847	*
NA	.233	*
K	.045	7.163
O	23.000	*
	F/M	.255
	F/Fm	.203

1 27439 GRAIN 21

CR-MAGNETITE, G. HENRIKSEN, BULL PROJECT, QUEBEC, September 3 2001, R.L.B.

	1
SIO2	.21
TIO2	.30
A2O3	.03
C2O3	5.74
FEO	86.77
MNO	.56
MGO	.03
ZNO	.29
NIO	.19
SUM	94.12

SI	.083	*
TI	.089	*
AL	.014	*
CR	1.789	*
FE	28.603	*
MN	.187	*
MG	.018	*
ZN	.084	*
NI	.060	30.927
O	32.000	*
F/M	1633.424	
F/FM	.999	

1 SAMPLE 27439 GRAIN 24

Gordon Henriksen
Upper Bull Project

CLAIM MAP 33F 06
Scale 1:50,000