GM 53039

PREFEASIBILITY STUDY, HORDEN LAKE DEPOSIT, QUEBEC

PREFEASIBILITY STUDY
HORDEN LAKE DEPOSIT, QUEBEC
FOR KINGSWOOD RESOURCES INC.

February 1, 1993
Toronto, Ontario

Watts, Griffis and McOuat Limited
Consulting Geologists and Engineers

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1. SUMMARY

Watts, Griffis and McOuat Limited (WGM) was requested by **Kingswood Resources Inc.** (Kingswood) to prepare a prefeasibility study on its Horden Lake, Quebec deposit.

A conceptual mining program, based on the limited amount of information available, was developed to establish capital and operating costs for a prefeasibility study of the Horden Lake deposit. It is proposed to start mining with a small open pit. Following completion of the open pit, the deposit would be mined by sublevel blasthole mining using a ramp access. To reduce capital costs, the mining plan was based on contract mining.

WGM estimates the in situ geological reserves as 1,238,333 tonnes probable averaging 1.91% Cu and 0.40% Ni and 4,365,428 tonnes possible averaging 1.27% Cu and 0.38% Ni.

The open pit mine reserves include the low grade sections of the deposit and have been estimated by WGM at 241,331 tonnes averaging 1.92% Cu and 0.39% Ni. The diluted (15% at zero grade) mineable reserves are 277,531 tonnes averaging 1.67% Cu and 0.34% Ni.

The pit would operate five days per week and produce 635 tonnes (700 tons) per day. The annual production rate would be 158,000 tonnes.

The open pit mining capital costs have been estimated at $2,125,000. Operating costs have been estimated at $44.07 per tonne.

Following completion of the open pit, the underground operation would commence.

The underground mine reserves include only the high grade sections of the deposit and have been estimated by WGM at 250,256 tonnes averaging 2.01% Cu and 0.45% Ni to the 535 level. The diluted (15% at zero grade) mineable reserves are 287,794 tonnes averaging 1.75% Cu and 0.39% Ni.

The underground mine would operate seven days per week and produce 454 tonnes (500 tons) per day for an annual production of 158,800 tonnes.

The underground mining capital costs have been estimated at $3,786,000. Operating costs have been estimated at $55.09 per tonne.

The infrastructure requirements have been estimated based on the assumption that these would be company owned. The capital costs, including the access road, are estimated at $4,920,000. The operating costs would consist mainly of room and board costs, estimated at $5.51 per tonne.

Custom and on-site milling scenarios were considered. In the custom mill scenario, the material would be trucked from the property to Noranda's Matagami mill. A capital cost allowance of $500,000 has been anticipated for modifications to the Matagami mill to treat the Nemiscau material. Operating costs have been estimated at $37.00 per tonne.

On-site processing eliminates the trucking cost, but will require an increase in the capital costs and a complete environmental assessment. The capital costs for a 500 tonne per day on-site mill using refurbished equipment and constructed on a modular basis have been estimated at $5,000,000. Operating costs have been estimated at $14.50 per tonne.

Environmental permitting of mining projects in the Province of Quebec is administered by the Provincial Ministry of Environment. The cost for completing the baseline studies for the exploration permit will be in the order of $75,000, including preparation of the required documents. Costs to acquire the Processing and Mining permits, including baseline studies, will be in the order of $300,000 to $350,000.

Several cash flow scenarios have been prepared for the Horden Lake deposit. The base case considers a reduced production rate of 79,379 tonnes during the first year, increasing to 158,759 tonnes per year thereafter. Copper grades for the open pit and underground material were estimated at 1.67% and 1.75% respectively. Copper recovery is estimated at 90%.

The nickel contribution was not considered because at a grade in the range of 0.30, it could, depending on the smelter schedule, be treated as a penalty. The net present value of the undiscounted cash flow for the base case is negative $38,666,000.

A break-even scenario was also prepared for the Horden Lake deposit. In this scenario, the copper grade was allowed to be the variable. All other parameters (tonnage, recovery, price, etc.) remained the same as the base case. This scenario illustrates that a copper grade of 6.79% will be required to produce a break-even situation on an undiscounted basis.

The cash flow projections clearly show that the mining reserves outlined from the current geological reserves are not sufficient to support a viable operation.

The results also show the need to direct future exploration efforts to expanding the reserves of the higher grade sections of the deposit and to increase the tonnage through the discovery of new high grade plunging deposits along the Inco horizon, similar to those identified in the existing Horden Lake deposit.

In the opinion of WGM, the Horden Lake property represents an excellent exploration opportunity. The Horden Lake deposit demonstrates that the Inco horizon has the potential to host additional base metal sulphide deposits.

It is our opinion that significant untested exploration potential exists on the Horden Lake property and that further work is warranted.

2. INTRODUCTION

Watts, Griffis and McOuat Limited (WGM) was requested by **Kingswood Resources Inc.** (Kingswood) to prepare a prefeasibility study on its Horden Lake deposit located in Township 1408 in the James Bay District of Quebec, approximately 140 km due north of Matagami.

The prefeasibility study was prepared as per the terms and conditions of the option agreement dated June 23, 1992, between Kingswood (formerly Kingswood Explorations 1985 Limited) and **Nemiscau Mines Limited** (Nemiscau), a subsidiary of Inco Limited.

Metric units have, for the most part, been used throughout the report. In some instances, however, where conversion from Imperial to Metric has been made, some conversion and rounding errors occur.

The format and content of this report are consistent with the criteria outlined in the Ontario Securities Act and Regulations - National Policy 2A.

3. PROPERTY - LOCATION, DESCRIPTION AND ACCESS

3.1 LOCATION

The Horden Lake deposit is located in Township 1408 in the James Bay District of Quebec, 140 km due north of Matagami (Figure 1). It is located approximately 10 km west of kilometre 200 on Route 109, an all-weather road connecting Matagami to the Hydro-Quebec James Bay power complex at Radisson.

3.2 DESCRIPTION

The Horden Lake deposit lies within six unpatented mining claims totalling approximately 98 hectares (Figure 2). The claims, 200814-4, 200814-5, 200815-2, 200815-3, 200815-5 and 200816-2, are held by Nemiscau Mines Limited, a subsidiary of Inco Limited. The claims are subject to an option agreement dated June 23, 1992 between Kingswood (then Kingswood Explorations 1985 Limited) and Nemiscau, whereby Kingswood can earn a 100% interest in the claims, subject to a production royalty equal to 3% of the net smelter returns (NSR).

Kingswood holds a 100% interest in 181 unpatented mining claims surrounding and on strike with the six Nemiscau claims (Figure 2).

WGM has not examined title to the claims nor substantiated their physical boundaries and, accordingly, expresses no opinion as to the validity of the title and property description.

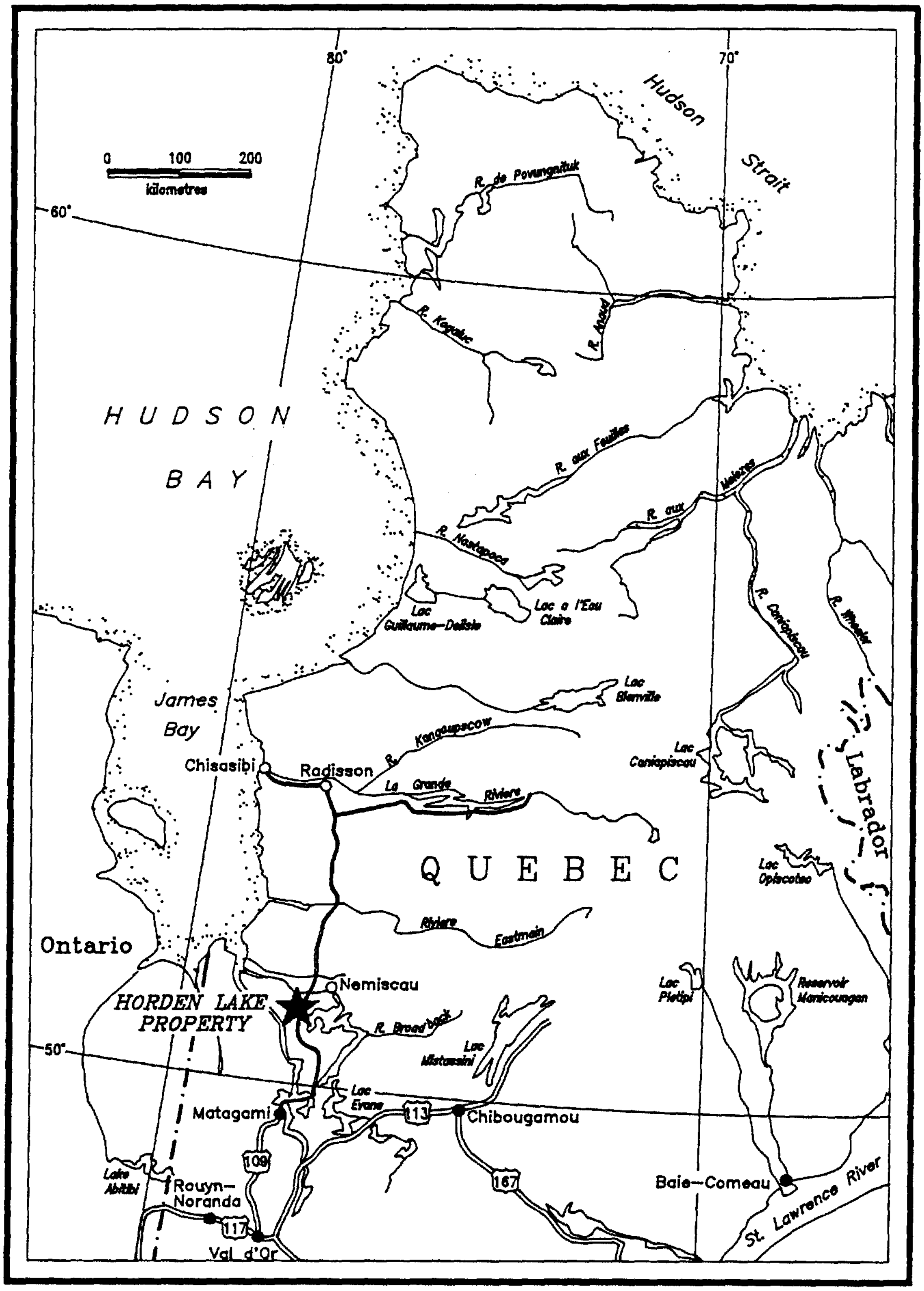

Figure 1. Location map, Horden Lake Property.

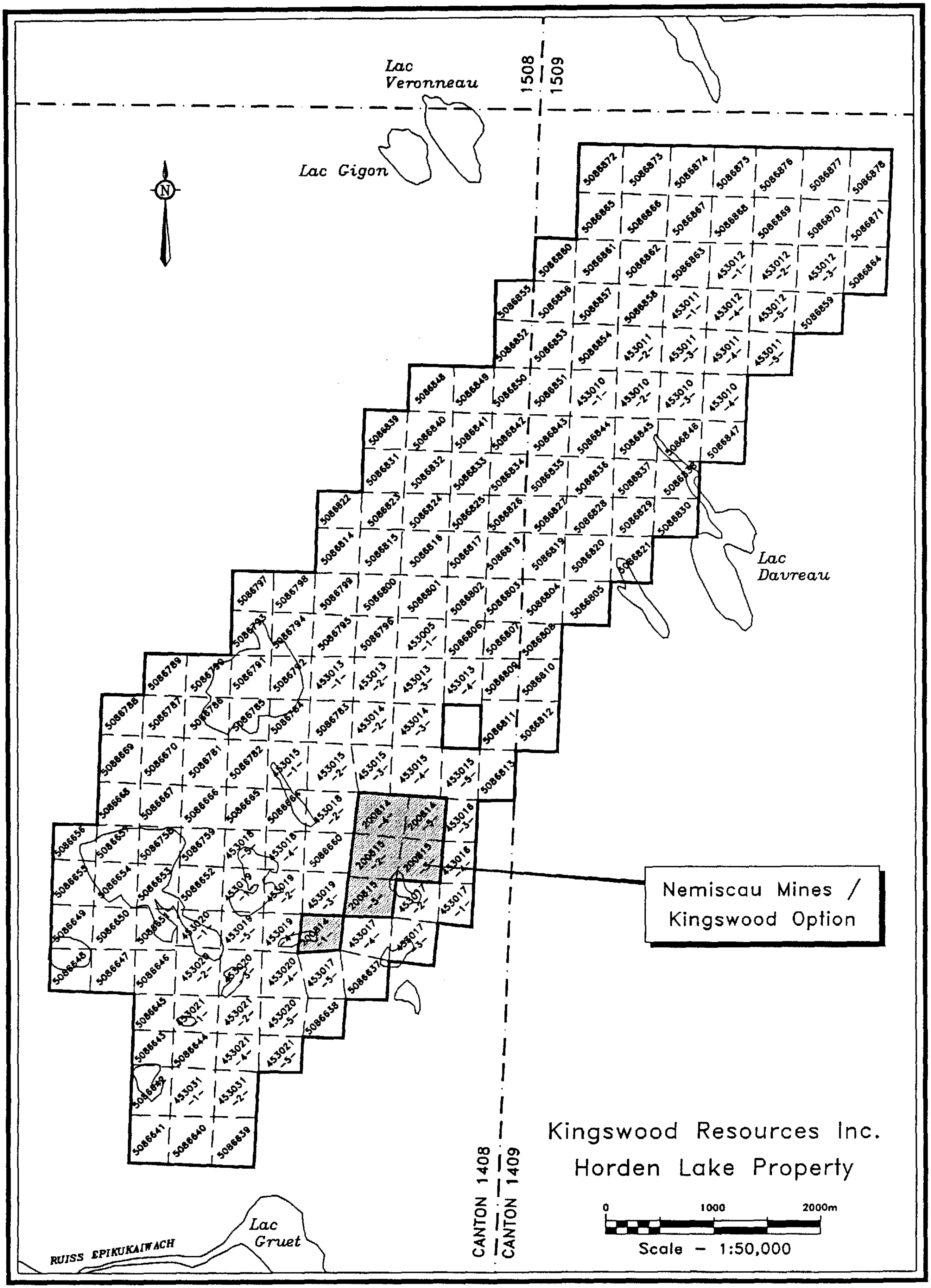

Figure 2. Claim Map

3.3 ACCESS

Access to the area northeast of the property can be achieved by boat on Lac Colomb which is accessible from Route 109. The Horden Lake deposit area is limited to float or ski-equipped fixed-wing aircraft and helicopter access. The former may land on Lac Audru and Lac Chaboullié (Horden Lake).

4. CLIMATE, PHYSIOGRAPHY AND LOCAL RESOURCES

4.1 CLIMATE

The Horden Lake property area experiences a cold temperate climate. Mean January temperatures are between -20 and -30 degrees Celsius and mean July temperatures are between +10 and +20 degrees Celsius. Mean precipitation for the period of November to April is between 125 and 250 mm; between 250 and 500 mm for the period of May to October. Prevailing wind direction is from the west (Atlas of Canada and the World, 1979).

4.2 PHYSIOGRAPHY

Physiographically the property and vicinity is essentially flat except for a few low hills rising up to 30 m above the surrounding terrain. The property is covered by dense bush with areas of open swamp and muskeg. Outcrop is widely scattered and rare, comprising approximately 2% to 3% of the total area.

4.3 LOCAL RESOURCES

The property is located approximately 10 km west of the all-weather, Route 109 and approximately 145 km due west of a hydro-electric transmission corridor. Helicopter and fixed wing aircraft may be chartered from either Joutel or Matagami located 175 km and 140 km to the south-southwest and south respectively.

Local labour and supplies are available from Matagami or Nemiscau, the latter being located 75 km northeast of the property.

5. EXPLORATION HISTORY

Exploration work has been carried out intermittently in the property area since the late 1950s. Noranda carried out the first systematic exploration within the property area in 1957 and 1958. The work included airborne and ground geophysical surveys, surface sampling and packsack drilling (LaForest, 1990).

Inco became active in the region during the early to mid-1960s through a joint venture with Noranda and eventually earned a 75% interest in Noranda's land position at that time. Inco conducted extensive regional airborne and ground geophysical and geological surveys followed by diamond drilling. The exploration was focused on the conductive zones marginal to and within the metagabbro which extends through the property from Horden Lake to northeast of Colomb Lake. One hundred and fifty-seven (157) diamond drill holes totalling 32,229 m were completed by the end of 1969. Several conductive zones were drilled however three principle areas were targeted; the main zone, the Bedard Lake zone and the northwest flank of the gabbro north of Lake Audru. One hundred and twenty-three holes (123) were drilled to test the main zone. One hundred of the holes outlined the Horden Lake deposit (Nemiscau Mines deposit) which is reported by Inco (1974) to have an undiluted in situ geological proven and probable reserve of 6,088,900 tonnes tons grading 1.24% Cu, 0.33% Ni and 18.40 g Ag/t. The deposit underlies the six claims held by Kingswood Resources Inc. under option from Nemiscau Mines Limited.

6. GEOLOGY

6.1 GENERAL GEOLOGY

The Horden Lake deposit area lies at the southwest end of a 40 km long, northeast-trending belt of metavolcanic and metasedimentary rocks intruded by a gabbroic body. The belt is at the southwest end of the Chaboullie-Montagne volcanic-sedimentary zone and extends northeast from Lac Chaboullie (Horden Lake) through Lac Colomb, ending southeast of Riviere Ouasouagami some 10 to 13 km northeast of Lac Colomb (Figure 3).

The area is dominated by a 1 to 1.5 km wide metagabbro complex which forms the hanging wall of the Horden Lake deposit (Figures 4, 5, 6 and 7). Remick (1963) and Inco (1974) interpret the gabbro as a concordant body with inclusions of metasediments. LaForest (1990) describes the complex as a gabbro dominated band which comprises a series of intrusions within metasedimentary and possibly metavolcanic rocks. LaForest describes the gabbro as having variable texture and composition ranging from pyroxenitic to anorthositic suggesting differentiation and multiple intrusion. Inco, based on its detailed drilling on the Horden Lake deposit, describes the gabbro complex as a layered intrusive. Inco describes the layered sequence westward from its eastern margin as comprising:

1) poikilitic gabbro
2) metapyroxenite and mafic metagabbro
3) metagabbro
4) anorthositic metagabbro
5) metagabbro
6) anorthositic metagabbro
7) quartz-bearing metagabbro

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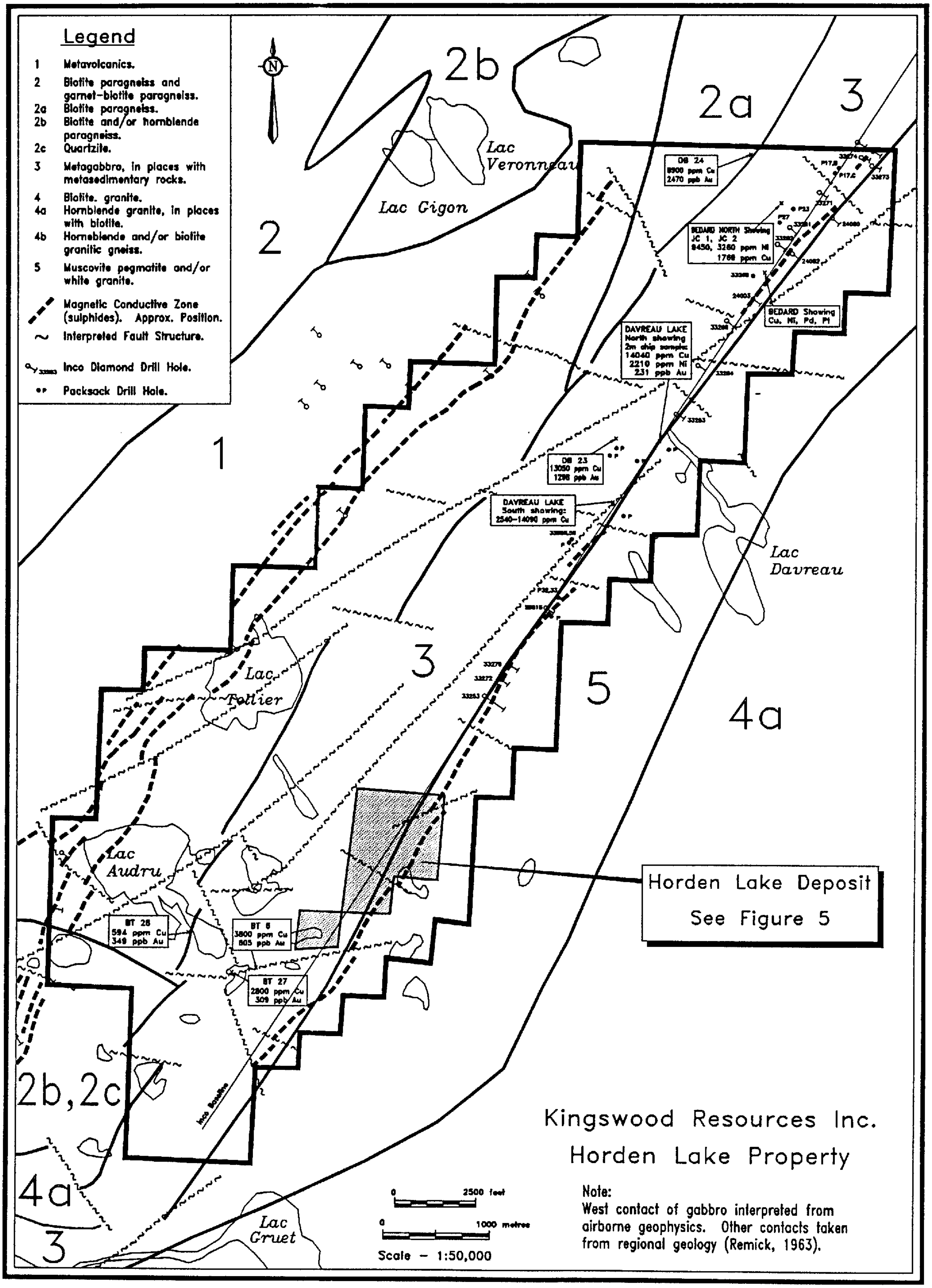

Figure 4. Property Geology

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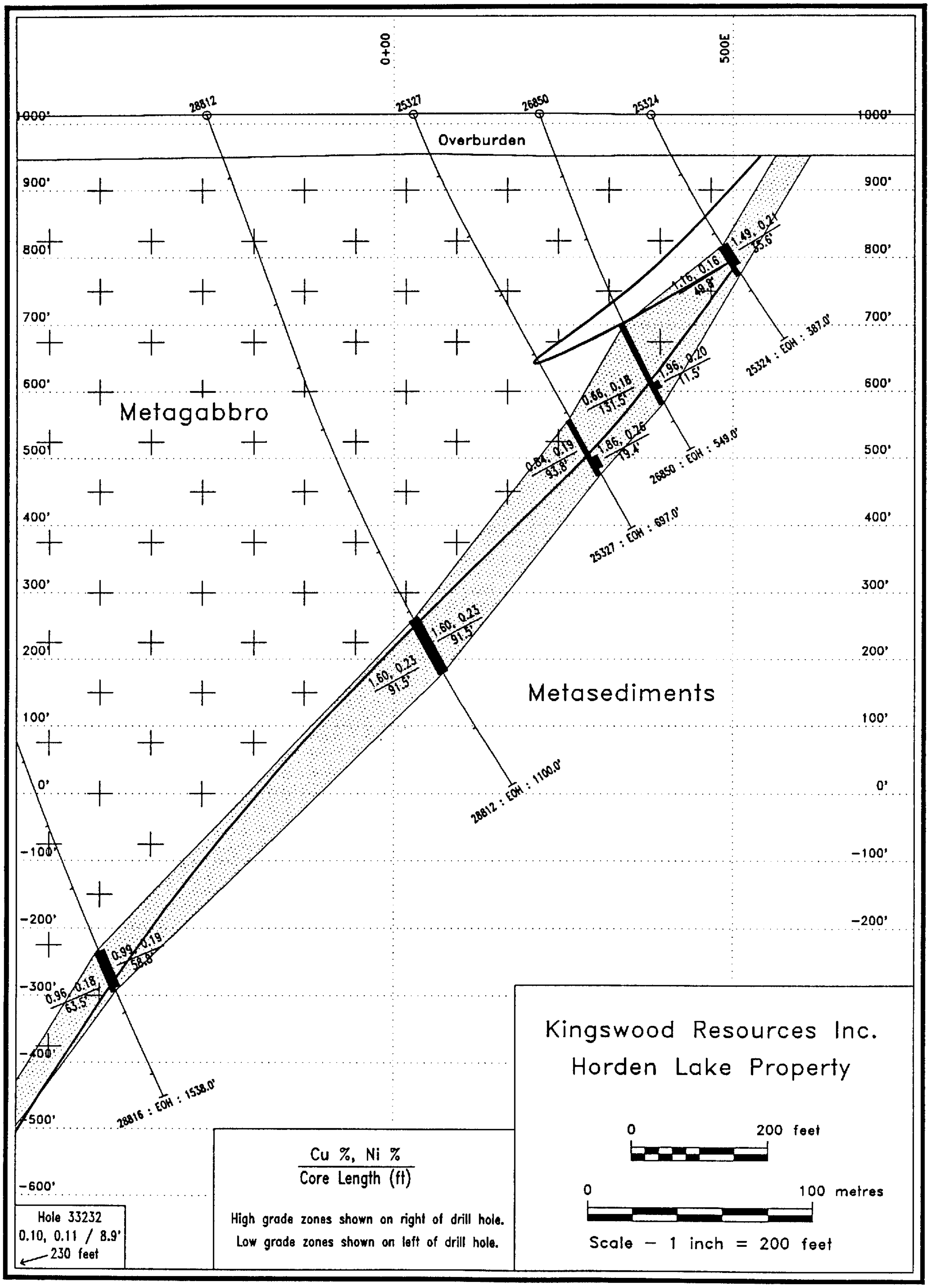

Figure 6. Geological Section 12200N

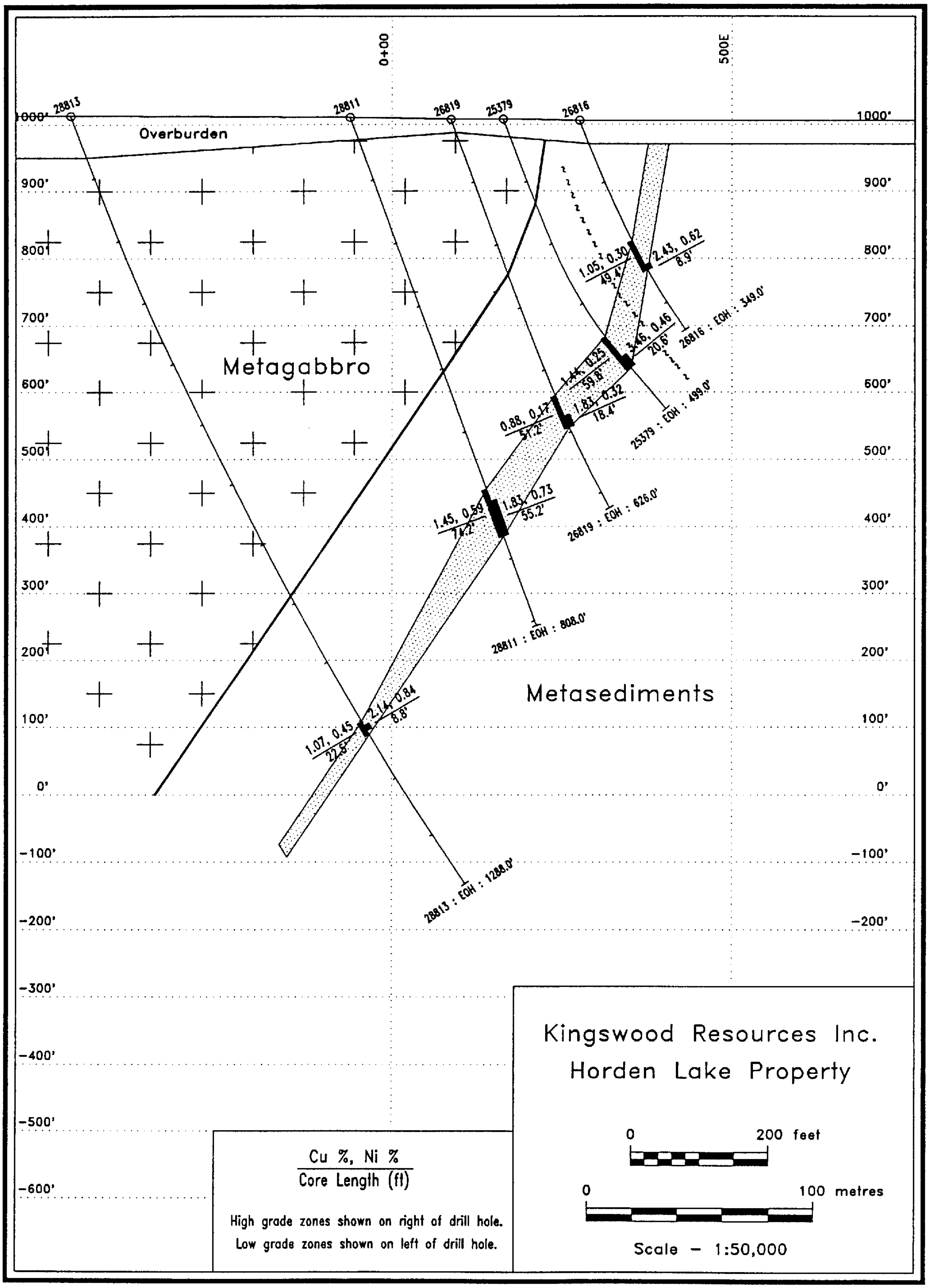

Figure 7. Geological Section 13400N

Each of the units may contain minor layers of the other units except the poikilitic gabbro is restricted to the marginal phase and the quartz gabbro is restricted to the "higher" levels. The layering applies to the southeast margin of the gabbro which is interpreted to dip 45 to 60 degrees to the northwest.

The eastern flank of the gabbro complex is bordered by a narrow band of metasediments which form the footwall of the deposit (Figures 5, 6 and 7). Inco (1974) describes the metasediments as ranging from quartzites to greywacke. Cordierite-anthophyllite-cummingtonite bearing rocks and quartz-rich amphibolites are also considered to be metasedimentary in origin. LaForest (1990), describes the metasediments as being dominated by quartz sericite schist and lesser quartzo-feldspathic rocks rich in biotite, magnetite, amphibole, and locally pyrite and pyrrhotite.

The Horden Lake deposit lies within a conductive sulphide-rich zone informally referred to as the "main zone" or "Inco horizon". The deposit, and consequently the associated portion of the conductor, is related to a northeast trending structure which dips westward at 50 to 60 degrees and lies at or near the southeast contact of the metagabbro and metasediments. The structure is however clearly transgressive to metagabbro/metasediment contact (Figure 5, 6 and 7). In the southern part of the Inco "Imperial unit" grid (8000N to 9600N) the sulphide mineralization lies predominantly within the metagabbro at the contact. At approximately 9800N the mineralization is predominantly within the metasediments immediately below the metagabbro contact and continues at this approximate position to about 13000N. At about 13200N the sulphide zone is within the metasediments, approximately 45 m to 90 m below the metagabbro contact. From about 14200N to northern limits of available drill information at 16000N the mineralized zone is within the metasediments immediately below the metagabbro contact.

The Horden Lake deposit varies from about 1 m to approximately 30 m wide and has a total strike length of 1,950 m. The coincident geophysical conductor ("Inco horizon") extends an additional 2,100 m and 2,000 m northeast and southwest of the deposit respectively.

6.2 MINERALOGY

The Horden Lake sulphide mineralization comprises pyrrhotite, pyrite, chalcopyrite and sphalerite as disseminated grains and stringers. Sphalerite is rare but locally zinc concentrations as high as 5.48% over 150 cm (Inco DDH #24066) have been encountered. Minor concentrations of platinum, palladium, silver and gold are also present within the zones of sulphide mineralization.

The principle metal of interest is copper. Nickel is locally present in concentrations up to 1% with low copper values. There are no significant zones of nickel mineralization. Background concentrations in the metagabbro are 0.3% Cu and 0.02% Ni with much lower background values of 0.1% Cu and 0.01% Ni in the metasediments.

6.3 STRUCTURE

The strongest, best grade and most consistent copper mineralization is predominantly at the footwall of the mineralized zone. Locally a more consistent hanging wall zone appears to be present but this is the exception rather than the rule. The footwall cutoff is very sharp and can be confidently correlated across drill sections. The hanging wall cutoff however is gradational and is defined by assay.

There seems to be little evidence for continuity of high grade copper mineralization for more than 60 m along strike. The drill pattern used makes it difficult to determine possible plunges, however it would appear likely that these high grade copper zones have a vertical or subvertical plunge. The mineralized zone continues between high grade areas, although the higher grade may have disappeared or thinned.

The northward transgression of the main sulphide zone from the metagabbro into the metasediment package suggests that the emplacement of the mineralization is structurally controlled, the mineralization is however likely genetically related to the gabbro intrusion.

The offset, step-like nature of the sulphide mineralization along strike is apparently due to late east trending faults which cut the stratigraphy and mineralized zone into fault blocks. Approximate positions of the faults have been placed the deposit geology plan (Figure 5) based on magnetic interpretation.

7. RESERVES

7.1 HISTORICAL RESERVES

Exploration on the property has identified a zone of sulphide mineralization known as the Horden Lake Deposit, historically referred to as the Nemiscau Mines Deposit. Definition drilling on the deposit was suspended following the 1969 exploration program. Since that time, several geological reserve estimates have been carried out on the deposit.

In 1970, Inco completed a reserve on the Horden Lake deposit which defined an uncategorized geological reserve of 6,349,900 tons (5,760,500) tonnes grading 1.48% Cu, 0.39% Ni and 0.65 oz Ag/ton (22.29 g Ag/t).

Inco recalculated the reserve in 1974 and outlined a total proven and probable reserve of 6,711,750 tons (6,088,900 tonnes) grading 1.24% Cu, 0.33% Ni and 0.54 oz Ag/ton (18.40 g Ag/t). The reserve was further subdivided as to copper content:

TABLE 1

COPPER CONTENT - HORDEN LAKE DEPOSIT

AS CALCULATED BY INCO - 1974

Reserve Block Cutoff Grades	Tons Proven and Probable	Converted to Tonnes	% Cu	% Ni	oz Ag/ton	Converted to g Ag/t
1.5% + Cu	1,929,250	1,750,216	2.31	0.49	0.96	32.91
1.0 - 1.49% Cu	1,050,750	953,240	1.20	0.31	0.51	17.49
0.5 - 0.99% Cu	3,731,750	3,385,444	0.70	0.26	0.33	11.31
	6,711,750	6,088,900	1.24	0.33	0.54	18.40

The following parameters were used by Inco in their 1974 geological reserve estimate:

- Ore cutoff grade of 1.5% Cu used throughout.
- Marginal sub-economic grade range used was 1.00% Cu to 1.49% Cu.
- Sub-economic grade range used was 0.50% Cu to 0.99% Cu.
- A minimum ore width of 8' (2.4 m) was used.
- Ore classification was as follows:

Proven	100' (30 m) horizontally and vertically if ore is continuous; 100' (30 m) vertically and 50' (15 m) horizontally if next section is blank.
Probable	100' (30 m) to 300' (90 m) vertically from borehole intersection; 100' (30 m) horizontally if ore continuous; 50' horizontally if next section is blank.

- Tonnage factor used was 10.0 cu. ft/ton (specific gravity 3.2), calculated from the specific gravities of diamond drill samples.
- Ore considered continuous where next intersection is marginal sub-economic.
- Dilution calculated by allowing 2' (60 cm) on both foot and hanging wall and applying appropriate grades from boreholes.

7.2 GEOLOGICAL RESERVE ESTIMATION

As part of this report, the geological reserves were recalculated and categorized according to industry standards. The reserve estimate is based on WGM's review and evaluation of all available data supplied by Nemiscau Mines (Inco), including drill hole location plan, drill logs, sample assay sheets and drill sections. We have been advised by Inco that the drill core was left on the property following completion of the last drill program in 1969 and unfortunately the core racks and boxes have deteriorated over time and the core is in disarray on the ground. Our reserve estimate is therefore undertaken without the benefit of having reviewed the core.

The definitions, parameters and methodology for reserve calculation are detailed in the following sections.

7.2.1 Definitions

In this report, the terms **Ore, Proven, Probable** and **Possible Reserves** are used as defined in the guidelines set by the Canadian Provincial Securities Administrators and outlined in National Policy 2-A.

Ore means a natural aggregate of one or more minerals which, at a specific time and place, may be mined and sold for a profit, or from which some part may be profitably separated.

Proven or **Measured Ore** means that material for which tonnage is computed from dimensions revealed in outcrops or trenches or underground workings or drill holes and for which the grade is computed from the results of adequate sampling, and for which the sites of inspection, sampling and measurement are so spaced and the geologic character so well defined that the size, shape and mineral content are established, and for which the computed tonnage and grade are judged to be accurate within limits and for which it shall be stated whether the tonnage and grade of Proven or Measured Ore are "in situ" or extractable, with dilution factors clearly shown, and reasons for the use of these dilution factors clearly explained.

Probable or **Indicated Ore** means that material for which tonnage and grade are computed partly from specific measurements, sample or production data, and partly from projection for a reasonable distance on geologic evidence and for which the sites available for inspection, measurement and sampling are too widely or otherwise inappropriately spaced to outline the material completely or establish its grade throughout.

Possible or Inferred Ore means material for which quantitative estimates are based largely on broad knowledge of the geologic character of the deposit and for which there are few, if any, samples or measurements, and for which the estimates are based on assumed continuity or repetition for which there are reasonable geological indications, which indications may include comparison with deposits of similar type, and bodies that are completely concealed if there is specific evidence of their presence, and

i) estimates of Possible or Inferred Ore shall include a statement of conditions within the material occurs, and

ii) since the arithmetic average of any amount of sampling is not necessarily representative unless the distribution of values are properly taken into account, a statement of how samples were taken shall be given, and where mineralization is erratic, the method of treating the erratic values shall be given in the narrative of the report, and

iii) Possible or Inferred reserves must not be added to other categories of reserves and their inclusion is not acceptable in any economic analysis or feasibility study of a project.

7.2.2 Methodology

Estimation of reserves in the Horden Lake deposit has been carried out using the conventional polygonal method on an inclined longitudinal section. Collar coordinates, downhole surveys, assay data for all diamond drill holes in the deposit completed by Inco and Noranda were entered in digital form (Appendices I and II). Drill hole sections were generated in AutoCAD and a geological interpretation completed. The deposit was found to be continuous along strike and downdip but was offset by northwest-southeast striking faults into several discrete blocks. Based on the cross-sectional interpretation an average dip of 55 degrees was used for the inclined longitudinal section.

In the initial review of the mineralized zones both higher and lower grade zones were defined for all drill holes (Appendix III). The higher grade zones are the best grade and most consistently mineralized zones of the deposit whereas the lower grade zone intervals incorporate the full width of the sulphide zone. In general the footwall contact is the same or very nearly the same for both higher and lower grade zones, however the hanging wall contact varies considerably. A strict assay sample cutoff grade could not be applied for zone selection. The lower grade intersections are useful for assessing continuity and outlining areas of exploration potential, however for the reserve estimation only the higher grade intervals have been used as they have the most potential to be mineable.

The following outlines the procedures and methodology employed:

a) Assay Samples

Assay data for Cu% and Ni% were entered in digital form from diamond drill logs prepared by Inco. Lost core, following the practice of Inco, was assigned a grade based on the average grade of adjacent samples. Intervals which were not sampled and assayed were assigned a background grade of 0.30% Cu and 0.03% Ni for metagabbro and 0.1% Cu and 0.01% Ni for metasediments. Assay samples were selected by Inco on the basis of geology hence sample lengths are variable but generally do not exceed 5 feet (1.5 m). Inco also carried out spectrographic analyses of selected composite samples for Au, Ag, Pt, and Pd but there is insufficient data to include these elements in the reserve estimation. All assaying has been carried out by Inco which has many years of analytical experience.

b) Drill Hole Orientation

Diamond drill hole collars and downhole surveys were entered in digital form from diamond drill logs prepared by Inco. The downhole surveys were done using acid tests which are sufficiently accurate as most of the holes are relatively shallow i.e.

less than 1,000 feet (305 m) in depth. Holes were systematically drilled on section. Some azimuth variation is likely in the deeper holes but would not significantly affect pierce point positions.

c) Reserve Definition

Reserves have been estimated on an inclined longitudinal section dipping 55 degrees east. The longitudinal section has been constructed looking west to be consistent with previous drawings prepared by Inco. Faults shown on the longitudinal section are based on geological interpretation of drill hole cross-sections and ground magnetic surveys. Standard polygons have been constructed around drill holes to a maximum radius of 200 feet (60 m). Drill holes intercepts below 1,000 feet (305 m) in depth and south of Section 9200N have not been included in the reserve estimate because although the mineralized zone was intersected, they are too widely spaced for reserve estimation.

d) Reserve Classification

Probable reserves include polygons with a maximum horizontal projection of approximately 100 feet (30 m) either side of a drill hole pierce point and for which drilling has demonstrated horizontal and vertical continuity. Possible reserves include all polygons projected to a maximum 200 feet (60 m) either side of a drill hole pierce point. The confidence level of the grades and widths of the mineralized zones in possible blocks is much lower than that for the probable blocks, however sufficient drilling has been completed to confirm that the mineralized structure is very continuous both along strike and downdip.

e) Cutoff Grade

A strict sample cutoff grade was not applied to selection of reserve intersections, however in general assay samples grading less than 0.5% Cu were not included unless lower grade samples were required to maintain zone continuity. Examination of the distribution of assay values indicates that a mining cutoff grade would have to be selected based on geological as well as assay considerations.

The reserves have been tabulated into three categories based on block grades and following the Inco reserve:

1) Greater than 1.5% Cu
2) Greater than 1.0% Cu
3) Greater than 0.5% Cu

f) **Minimum Thickness**

A minimum true width of 8 feet (2.4 m) has been used based on mining considerations. This is equivalent to a minimum horizontal width of 10 feet (3 m) as used by Inco. Where required, the true width of drill intercepts has been expanded to this width by weight averaging additional assay samples or portions of assay samples.

g) **Dilution**

The reserves presented are undiluted in situ geological reserves. No dilution factor has been applied to the reserve blocks and no low grade blocks have been included as internal dilution.

h) **Specific Gravity**

A tonnage factor of 10.0 cubic feet per ton, equivalent to a specific gravity of 3.2, has been used to convert volume of in situ rock to tons. This factor was determined by Inco based on specific gravity measurements of drill core and is believed to be reasonable.

7.2.3 Results

Probable and possible geological reserves in the Horden Lake deposit, as estimated by WGM, are summarized below for the three categories of block cutoff grades (>1.5%, >1.0%, and >0.5%.

TABLE 2

PROBABLE AND POSSIBLE GEOLOGICAL RESERVES

AS ESTIMATED BY WGM

Reserve Block Cutoff Grades	Probable (tonnes)	Possible (tonnes)	Grade % Cu	% Ni
1.5% + Cu	794,447		2.33	0.43
		1,708,732	1.84	0.43
1.0% - 1.49% Cu	343,014		1.25	0.35
		837,539	1.24	0.47
0.5% - 0.99% Cu	100,872		0.84	0.39
		1,819,157	0.75	0.30
Total Probable	1,238,333		1.91	0.40
Total Possible		4,365,428	1.27	0.38

Figures 8a and 8b are inclined longitudinal sections, north and south sheet respectively, showing diamond drill hole pierce points with reserve polygons. The longitudinal reserve estimate calculations are presented in Appendix IV.

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8. MINING

8.1 GENERAL

A conceptual mining program, based on the limited amount of information available, was developed to establish capital and operating costs for an economic study of the Horden Lake deposit. The mining reserves outlined from the present geological reserves are not of sufficient tonnes and grade to support a viable operation. In addition, information on items such as rock competence or overburden thickness were not available, therefore, simplified assumptions have been made where necessary.

To reduce capital costs, shorten the startup period and avoid the necessity of recruiting and laying off staff for a short term operation, the mining plan was based on contract mining. If further exploration develops sufficient reserves to extend the mine life to a minimum of five to seven years, then the use of contract labour should be revisited.

It is proposed to start mining with a small open pit as the ore has been projected to the bedrock overburden contact. Following completion of the open pit, the ore zone which extends below the pit floor would be mined by sublevel blasthole mining using a ramp access.

8.2 ROCK QUALITY

No rock quality data is available. Noranda's 1973 prefeasibility report suggests that both footwall and hanging wall rocks should be competent. When further drilling is conducted on the deposit rock quality data should be collected.

8.3 OPEN PIT MINING

8.3.1 Description

A small open pit could be developed along the strike of the ore zone from "Imperial" section 13050 to 13850 as shown in Figure 9. At the crest, it would be roughly 800 feet (245 m) long, 300 feet (90 m) wide and 150 feet (46 m) deep with walls sloping at 50 degrees. Overburden cover has been assumed to be an average of 40 feet (12 m) deep over the entire pit and the quantity of overburden to be removed has been calculated using slopes of 20:1. Access to the working faces within the pit would be via a 15% ramp. The faces or benches would be 25 feet (7.6 m) high.

The pit would operate 5 days per week, 2 shifts per day and produce 700 tons (635 tonnes) of ore per day. Annual production would be 175,000 tons (158,800 tonnes) of ore.

8.3.2 Minable Reserves

For the open pit mine, reserves included the low grade sections of the mineralized zone (Figure 10, Appendix V). Ore, waste and overburden tonnages have been calculated using computer assistance. Cross-sections were generated and the area of each material measured using AutoCAD. Multiplying each area by 100 effectively projects the areas 50 feet (15 m) on both sides of the section to create a volume. Calculated volumes were converted to tons (tonnes) using specific gravities of 10 cubic feet per ton (0.25695 $m^{3/t}$) for ore, 12 cubic feet per ton (0.30834 m^3/t) for waste and 15 cubic feet per ton (0.38543 m^3/t) for overburden. Dilution of 15% at zero grade was added to establish the mineable tonnages. Pit tonnages are shown in Table 3.

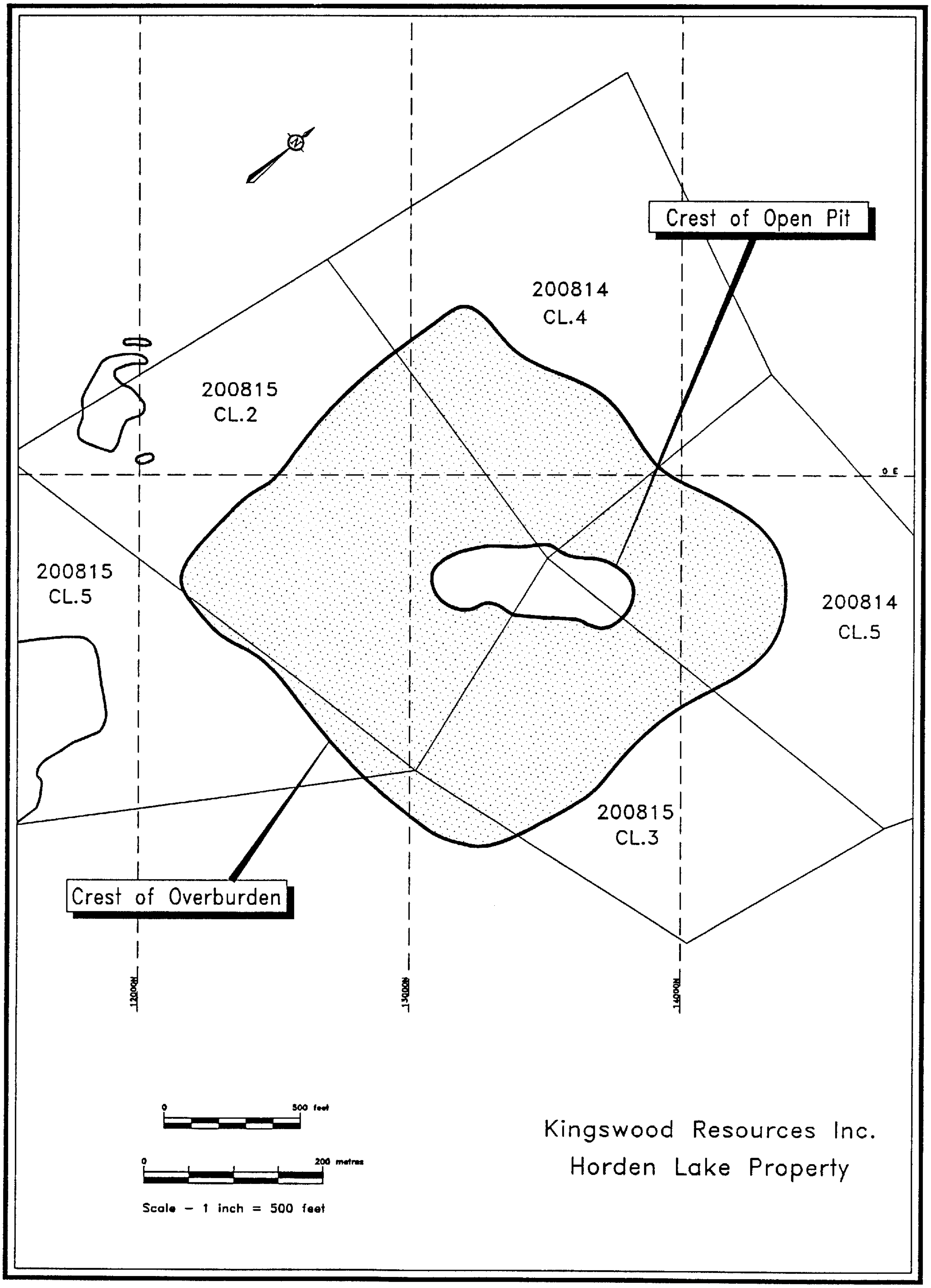

Figure 9. Open Pit Plan

TABLE 3

PIT TONNAGES

Material	Quantity tons	Quantity tonnes	Cu %	Ni %
Overburden	2,929,339	2,658,202		
Waste	774,078	702,430		
Ore (undiluted)	265,947	241,331	1.92	0.39
Ore (diluted)	305,839	277,531	1.67	0.34

A summary of the quantities takeoffs by section as well as the relevant section plans have been included in Appendix V.

8.3.3 Labour/Equipment Requirements

A total labour force of 30 people would be required to mine the pit and would breakdown as follows:

	No. Required
Loader Operators	4
Truck Operators	10
Drillers	2
Blasters	1
Labourers	4
Mechanics	7
Supervision	2

Equipment requirements have been estimated from information obtained from Crother's Ltd and Atlas Copco. The mining equipment is as follows:

	No. Required
7 yard (5.4 m^3) Loaders	2
35 ton (31.8 t) Rock Trucks	5
Airtrac c/w Compressor	1
Pickup	1

8.3.4 Operating Schedule

The pit life is expected to be 22 months in duration. This includes 4 months for preproduction stripping of overburden prior to any drilling and blast of ore or waste.

8.3.5 Capital Costs

Under this scenario, mining capital costs would be minimized. The total amount required would be $2,125,000 which breaks down as follows:

Feasibility Studies	$400,000
Preproduction Stripping	$1,500,000
Contractor's O/H & Profit	$225,000

8.3.6 Pit Operating Costs

Pit operating costs have been estimated at $40 per ton ($44.07/tonne) based on information received from equipment suppliers and a contractor. Detailed calculations are provided in Appendix III and are summarized as follows:

	Operating Cost	
	$/ton	**$/tonne**
Labour	$9.72	$10.71
Equipment (owner, fuel and repairs)	13.54	14.92
Drilling/Blasting	6.45	7.11
Miscellaneous	0.83	0.91
Contractor's O/H and profit	4.46	4.91
Owner's costs	5.00	5.51

8.4 UNDERGROUND MINING

8.4.1 Description

Following completion of the open pit, an underground mining operation capable of sustaining the annual production of 175,000 tons (158,800 tonnes) would be activated. Using the present geological reserve, the most likely section of the orebody to develop would be the down dip extension below the pit operation. The ore is considered to be continuous down dip with smooth regular contacts. Some variation in grade is anticipated along strike. Such low grade areas would not be mined and would be left as pillars.

The underground orebody would be accessed through a 12' x 15' (3.6 m x 4.6 m) ramp driven at 15% from an outcrop located south of the open pit. The layout of the ramp would be designed to minimize haul distances and to connect with the central access on each stoping horizon. During the preproduction period, the ramp would be driven only far enough to access the first two mining levels and to establish a return air raise from the second level to the surface. Extending the ramp and vent raise deeper would be part of the ongoing development carried out during the production period.

Mining horizons would be established every 75 feet (22.8 m) from the bottom of the pit with a sill pillar being left below every second level. These mining horizons are shown on the section plans (Figure 10, Appendix V). From the access heading, a 10' x 10' (3 m x 3 m) drift would be driven along strike to each end of the ore zone and silled out, where necessary, to the ore contacts. This sill drift would be used to drill off the stope below and muck the stope above. Note: The level interval used in this study may need to be adjusted if the ore contacts are not smooth and regular as has been assumed in the study or if dilution can not be maintained at 15%. Conversely, operating costs would be lower if the level interval can be increased.

Once the sill drifts for the first two stoping levels are completed, longhole production drilling would start. Parallel holes 3" (76 mm) in diameter would be drilled down the dip of the ore zone from level to level. Crater blasting techniques would then be used to establish slot

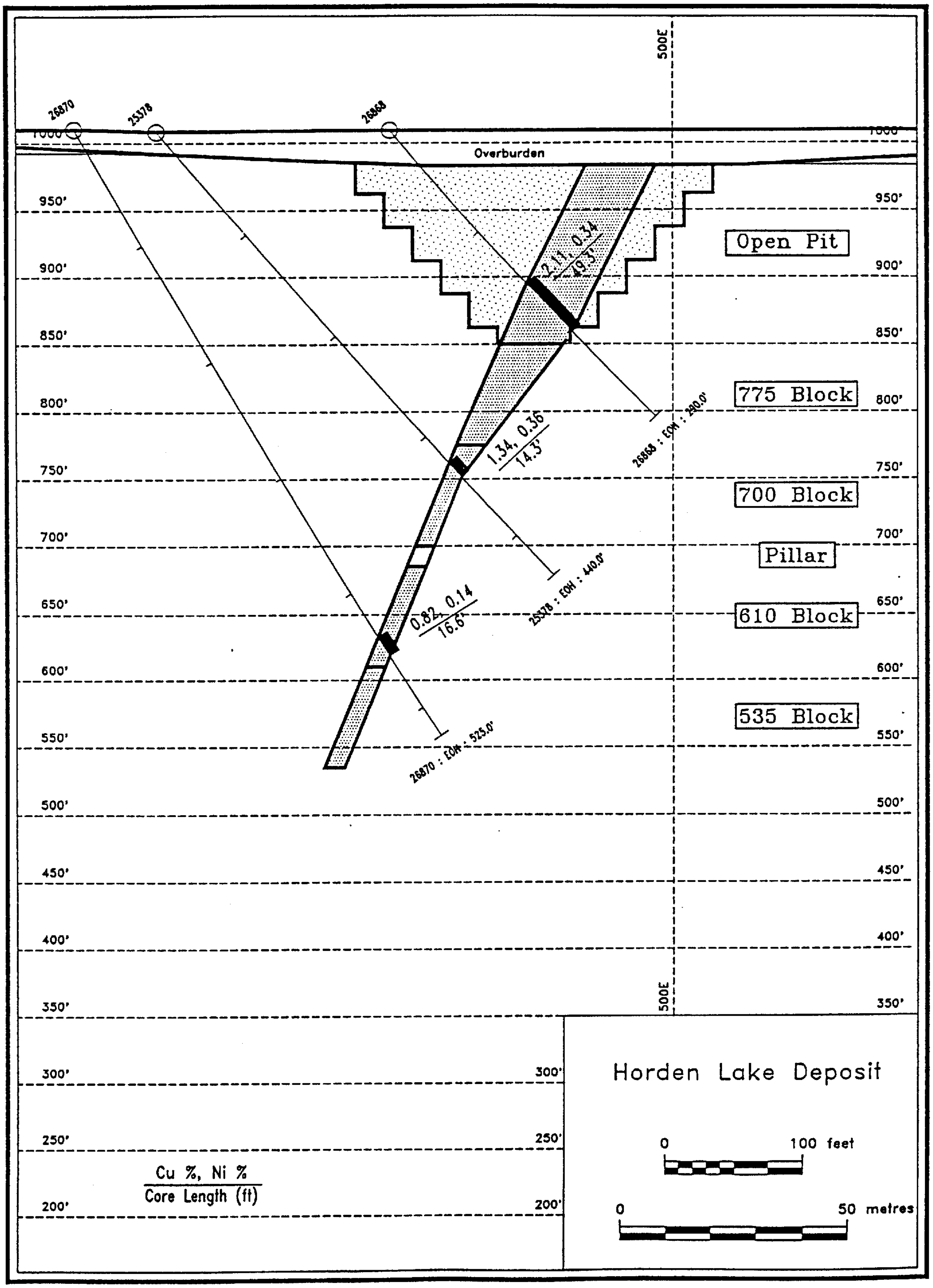

Figure 10. Typical Underground Mine Section 13500N

raises at both the ends of the level. Mucking of ore using remote controlled scooptrams would start and retreat two rows per blast back towards the access.

Initial production would be from the 700 level mining upward to the bottom of the pit.

The underground mine would operate 7 days per week, 2 shifts per day and produce 500 tons (454 tonnes) of ore per day. Annual production would be 175,000 tons (158,800 tonnes).

8.4.2 Minable Reserves

The underground mine reserves included only the high grade sections of the mineralized zone (Figure 10, Appendix V). As with the open pit, reserves have been calculated from the sections using AutoCad. A table showing tons and grade by block and section is included in the Appendix V. The total reserve from the pit bottom down to the 535 level is as follows:

TABLE 4

TOTAL RESERVE FROM PIT BOTTOM TO 535 LEVEL

Material	Quantity tons	Quantity tonnes	Cu %	Ni %
Ore (undiluted)	275,782	250,256	2.01	0.45
Ore (diluted)	317,149	287,794	1.75	0.39

Quantities of waste rock to be removed during the mining cycle are not known, however, for purposes of the study it was assumed to be 200 tons per day.

8.4.3 Operating Schedule

Mining of the underground reserves outlined in Section 7.3.2 above would require 31 months to complete. This would include an 8 month preproduction development program.

8.4.4 Underground Capital Costs

Capital costs for the underground would be limited to the preproduction development work required to access the first two mining levels. A small amount of the feasibility study costs have also been allocated to this portion of the project.

Feasibility Studies	$100,000
Preproduction Development	$3,461,000
Contractor's O/H & Profit	$225,000

8.4.5 Underground Operating Costs

Underground operating costs have been estimated at $50 per ton ($55.09 per tonne) of ore and are summarized below.

	Operating Costs	
	$/ton	**$/tonne**
Stoping	$15.00	$16.53
Haulage	7.00	7.71
Mine General	11.00	12.12
Ongoing Development	6.00	6.61
Contractor's O/H & Profit	6.00	6.61
Owner's costs	5.00	5.51

9. INFRASTRUCTURE

9.1 GENERAL

Infrastructure requirements have been estimated based on the assumption that these would be company owned. However, if contractors are used to mine this deposit, their contract should also include the supply of much of the infrastructure as this would avoid the problems of procurement and construction and reduce the company's rehabilitation costs at the end of mine life.

9.2 CAPITAL COSTS

The cost of infrastructure has been estimated based on information in the Canmet publication "Underground Metal Mining" and from individual government sources. The total amount required would be $4,920,000 which breaks down as follows:

Construct 8 miles of Road	$2,800,000
Site Preparation	$250,000
Camp	$450,000
Site Services	$270,000
Office/Warehouse/Garage	$350,000
Project Management	$800,000

9.3 OPERATING COSTS

Operating costs would consist mainly of room and board costs for all personnel working at the site. A charge of $5.00 per ton ($5.51 per tonne) of ore has been used in the study.

10. PROCESSING

10.1 PREVIOUS WORK

Previous flotation testing was performed on five samples of drill core from the property during the early 1970s. The tests were performed on samples composited from drill core taken at various sections along the strike of the deposits as they are presently known. These tests showed that saleable grades of copper concentrates could be made at recoveries varying from 85% to 96% of copper in the feed. These concentrates also contained quantities of silver and traces of gold and other platinum group metals (PGM).

The details of the testwork program such as grind size, flowsheet and the reagents used in the process were not available in the presently available information. However, from the flotation test results it would appear that the flowsheet consisted the production of a bulk concentrate which was then separated into copper and nickel concentrates. The copper concentrate grades ranged from 21.5% Cu to 30.4% Cu with recoveries ranging from 85% to 96% on the three samples from the northern end of the deposit which can be mined by open pit. These samples also showed some potential for the production of a nickel concentrate.

Based on these preliminary results, WGM believes that the deposit has the potential to produce saleable grades of copper concentrates (Table 5). We would expect copper concentrates assaying 25% Cu to be produced at recoveries in the order of 88% to 90% of the copper in the feed. Silver recoveries to the copper concentrates varied from 95% to 33% and will require further testwork to confirm and optimize these results. A silver recovery of 40% to the copper concentrate is used in the present assessment. Further testwork is required to optimize metal recoveries and determine whether a saleable nickel concentrate can be produced. This assessment would also confirm the deportment of gold and PGM into the copper and nickel concentrates.

TABLE 5

PREDICTED METALLURGY - HORDEN LAKE PROJECT

Product	Weight %	Assays % Cu	% Ni	g Ag/t	Distribution % Cu	Ni	Ag
Head	100.0	1.67	0.33	0.50	100.0	100.0	100.0
Cu Conc	6.0	25.00	0.45	3.50	89.8%	8.2%	42.0%
Ni Conc	1.8	1.00	8.00	2.92	1.1%	43.6%	10.5%
Tailing	92.2	0.16	0.17	0.26	9.1%	48.2%	47.5%

10.2 RECOMMENDED TESTWORK

A metallurgical testwork program to optimize concentrate grades and metal recoveries is recommended to be undertaken in conjunction with the drilling program. Following further delineation drilling and assessment of the various zones within the deposit, the drill core will be composited into samples representative of the deposit. The testwork program will investigate various flowsheets for the production of bulk and sequential copper and nickel concentrates by flotation at various grind sizes. The hardness of the ore will be determined by Bond Work Index testing and the settling and filtration characteristics of the concentrates will be measured.

Baseline data for environmental permitting will be included as part of the metallurgical evaluation. The effluents from the flotation process will be tested for various parameters and the tailings will be tested to determine whether they will be acid producing. The concentrates will be analyzed for trace elements including PGMs and for those elements which may be penalizable.

Cost of the testwork program, including the associated environmental testing, will be approximately $40,000.

One of the objectives of the flotation testing will be to produce copper concentrates that have a low nickel content. It is presently anticipated that the copper concentrates produced from the property will be sold to the smelter in Noranda. A copper concentrate with a high nickel content may not be acceptable to the smelter.

10.3 PROCESSING ALTERNATIVES

With the property being located 220 km north of Matagami, Quebec, there are two potential processing scenarios for material from the Nemiscau property:

- custom or toll milling in an existing mill in the Matagami area
- processing in an On-site mill

Custom or Toll Processing

The material would be trucked from the property to Noranda's Matagami mill. This would involve a truck haul of 500 km round trip for 500 tonnes per day at an estimated cost of $15 per tonne. Modifications may be required to the Matagami mill to allow the recovery of a nickel concentrate if the metallurgical test program shows that the production of such a concentrate is feasible.

The processing cost through the mill will be in the order of $20 per tonne with concentrate shipments to Noranda adding a further $1.50 per tonne to the costs.

The advantage of this alternative compared to the on-site mill is that it reduces the capital cost of the project. The environmental exposure is also reduced in that no Certificate of Authorization is required for the Processing plant and no tailings disposal area has to be acquired and permitted.

On-site Mill

The advantage of an on-site processing facility is that the cost of trucking raw ore to the custom mill is eliminated. However, the on-site processing will require an increase in the capital cost and a complete environmental permit (see section on Environmental Considerations). With the relatively limited life of the property, the mill would be pre-fabricated in modules and installed in an engineered building. Mill equipment would be refurbished used equipment where justified by cost savings. The flotation cells and pumps would be new equipment. The processing flowsheet would be kept as simple as possible to minimize the cost.

Power generation would be provided by on-site diesel generators as the nearest power line is located a distance of 145 km from the project site. Arrangements would be made for a mill water supply from a local source. A tailings area would be designated and permitted to contain the total tailings expected from the mine operation. Other services such as offices and accommodation for mill staff while on site would be provided in portable buildings.

10.4 CAPITAL COSTS

Custom or Toll Milling

The capital cost for modifications for the Matagami mill to treat the Nemiscau material will be the major capital cost involved. This cost will depend on the extent to which circuit modifications are required and whether the present and Nemiscau ore can be intermingled. An allowance of $500,000 has been allowed for modifications.

On-site mill

The capital cost of a 500 tonnes per day on-site mill using refurbished equipment and constructed on a modular basis has been estimated as follows:

Equipment	$2,500,000
Engineered Building and foundations	$1,000,000
Installation	$ 500,000
Services (water, power generation, etc.)	$1,000,000
Total	$5,000,000

These costs do not include any owners costs associated with the project.

10.5 OPERATING COSTS

Custom or Toll Milling

The operating costs incurred with this alternative are as follows:

	Per Tonne Ore
Trucking Nemiscau to Matagami	$15.00
Milling cost	$20.00
Concentrate shipping	$ 1.50
Supervision	$ 1.00
Total	$37.00

The milling cost is estimated based on custom milling costs for gold ores in Northwestern Quebec. No discussions have been held with Noranda concerning the possibility of custom milling and the costs involved.

On-site mill

The operating cost for an on-site mill with a simple flowsheet would be as follows:-

	Per Tonne Ore
Direct milling cost	$12.00
Concentrate shipping	$ 2.50
Total	$14.50

10.6 TAILINGS DISPOSAL

A tailings disposal system will be required if an on-site mill is constructed. With the relatively flat terrain surrounding the location of the Nemiscau deposit, there are no suitable valleys in which the tailings can be deposited. A containment area consisting of non-acid generating waste and imported fill will have to be constructed in which to impound the tailings.

Should environmental testing indicate that the tailings have acid generating potential, then deposition of the tailings under water to reduce the potential for acid generation may be required. Although there are several lakes in the area it is unlikely that they can be used for tailings disposal. The design of the tailings disposal area will have to take this into consideration. The design of the area will also have to accommodate the total tailings volume expected from the deposit.

11. ENVIRONMENTAL CONSIDERATIONS

11.1 GENERAL

The environmental permitting of mining projects in the Province Quebec is administered by the Provincial Ministry of Environment under Directive 019. The objective of this legislation is to prevent the deterioration of the environment, ensure that existing mine sites operate in a safe and responsible manner and require that closure of operating sites are implemented to meet safety standards that require a minimum ongoing maintenance.

Environmental permitting is done in three stages. The first stage is the permit for the Exploration phase which allows for the exploration and the removal of an amount of material for development purposes. A permit is then required for the Process Stage which involve the filing of detailed processing descriptions tailings impoundment and closure plans. The third permit is a Mining permit to allow the removal of material for the commercial processing of ores.

WGM is not aware of any baseline studies that have been completed on the property.

11.2 BASELINE STUDIES

The first permit required is for the Exploration phase. This requires the submission of a document outlining the operation with such details as the nature and expected size of the operation, the amount of water expected to be consumed and discharged and any impacts that are anticipated on the environment. The treatment and disposal of any effluents expected during this initial phase of the project have also to be addressed. This document should also include the data acquired from the baseline studies. These baseline studies include water quality data, an evaluation of the flora, fauna in the vicinity of the project and sediment sampling in the local water courses. In the relatively remote locations of this project site, the acquisition of local meterological data may be required.

If an on-site mill is to be constructed, the second permit required is the Process Permit. Detailed plans for the milling process are required for this permit including process flowsheets, air and water effluent treatment plants, tailings dam design and construction, and closure plans. This permit is simplified if the custom milling alternative is selected.

The third permit required is the Mining Permit. This allows the operation to mine the deposit and requires the submission of operating and closure plans for the mining activities at the site.

Other permits will be required during the development stage such as permits for the sewage treatment facility.

11.3 COSTS

The cost for completing the baseline studies for this project will be in the order of $40,000. A further $35,000 will be spent in the preparation of the documents required for submission for the Exploration Permit.

Costs to acquire the Processing and Mining Permits are dependent on any concerns that are raised during the preparation of the Exploration phase permit. For the permitting of a relatively small straightforward mining operation the total cost of environmental permitting including baseline studies will be in the order of $300,000 to $350,000.

It is recommended that the baseline monitoring be completed in conjunction with the future drilling program in order to provide a minimum of one year of data for the Exploration phase permit.

12. CASH FLOW ANALYSIS

WGM has prepared several cash flow scenarios for the Horden Lake deposit (Appendix VII). The cash flow projections clearly show that the mining reserves outlined from the current geological reserves are not sufficient to support a viable operation.

12.1 BASE CASE

The base case considers a reduced production rate of 79,379 tonnes during the first year, increasing to 158,759 tonnes per year for the life of the mine.

Copper grades for the open pit and underground material reflect diluted grade averaging 1.67% and 1.25% respectively. Copper recovery is estimated at 90% based on earlier test work. The nickel contribution was not considered in the cash flow because at a diluted grade in the range of .30%, it could be treated as a detramental element and, depending on the smelter schedule, considered a penalty.

The net present value of the undiscounted cash flow for the base case is a negative $38,666,000.

12.2 BREAK-EVEN CASE

The break-even scenario was prepared by WGM to determine the grade of copper necessary to make the Horden Lake deposit a viable operation with the current tonnage. In this scenario, the copper grade was allowed to be the variable. All other parameters remained the same as the base case.

The break-even scenario indicates that a copper grade of 6.79% will be required to make the Horden Lake deposit viable.

13. CONCLUSIONS

The results of the cash flow analysis clearly shows that the mining reserves outlined from the current geological reserves are not sufficient to support a viable operation.

The results also show the need to direct future exploration efforts to expanding the reserves of the higher grade sections of the deposit and to increase the tonnage through the discovery of new high grade plunging zones along the Inco horizon similar to those identified in the existing Horden Lake deposit.

In the opinion of WGM, the Horden Lake property represents an excellent exploration opportunity. The Horden Lake deposit demonstrates that the Inco horizon has the potential to host additional base metal sulphide deposits.

It is our opinion that significant untested exploration potential exists on the Horden Lake property and that further work is warranted.

APPENDIX I

HORDEN LAKE DEPOSIT
DRILL HOLE COLLAR DATA

Horden Lake Deposit
Drill Hole Collar Data
January 29, 1993

Section	Hole	Length	Northing	Easting	Elevation
8000N	26820	310.0	8000.0	560.0	988.00
8400N	24067	421.0	8394.0	419.0	1000.00
8400N	24069	98.0	12000.0	322.0	1000.00
8400N	33235	854.0	8394.2	50.0	1000.00
9200N	33241	484.0	9200.0	100.0	1000.00
9200N	33248	1078.0	9200.0	-315.0	1000.00
9400N	33244	880.0	9400.0	-315.0	1000.00
9400N	33236	414.0	9400.0	70.0	1000.00
9600N	24066	423.0	9598.2	207.4	1023.48
9600N	33237	885.0	9597.5	-353.0	1002.00
9800N	33239	603.0	9800.0	-200.0	1000.00
10000N	24029	37.0	10000.0	325.0	1000.00
10000N	24071	81.0	9997.0	325.0	1005.00
10000N	24064	443.0	10001.0	165.0	1009.60
10000N	26818	580.0	9999.0	-9.0	1006.00
10400N	24065	422.0	10400.6	180.0	999.65
10600N	26858	345.0	10600.4	165.5	1011.37
10800N	26815	348.0	10800.0	190.0	1014.00
10800N	26825	898.0	10800.0	-348.0	1011.00
11000N	26857	395.0	11000.2	109.7	1014.75
11200N	24068	407.0	11206.0	145.8	1011.09
11200N	25313	590.0	11205.6	-101.0	1016.00
11200N	25315	977.0	11205.6	-466.3	1015.00
11400N	26860	428.0	11400.4	201.7	1014.17
11600N	24088	419.0	11611.8	350.9	1007.75
11600N	25311	613.0	11612.1	129.3	1015.00
11600N	26812	866.0	11600.0	-125.0	1015.00
11800N	26874	312.0	11801.2	369.1	1016.00
11800N	28814	1204.0	11783.0	-648.0	1010.44
10800N	33228	1898.0	11830.0	-1350.0	1018.00
11900N	26861	341.0	11900.5	335.0	1015.39
12000N	24070	390.0	12016.3	389.3	1012.74
12000N	24087	557.0	12015.2	177.5	1014.60
12000N	26854	702.0	12000.3	52.0	1015.27
12000N	25317	1047.0	12012.8	-454.0	1013.00
12100N	26852	355.0	12100.0	376.0	1013.12
12200N	25324	387.0	12200.0	380.0	1013.00
12200N	26850	549.0	12198.5	215.3	1014.52
12200N	25327	697.0	12200.0	29.0	1014.00
12200N	28812	1100.0	12205.0	-275.0	1013.28
12200N	28816	1538.0	12207.0	-804.0	1009.40
12200N	33232	2041.0	12201.4	-1400.0	1005.00
12300N	26873	274.0	12300.0	433.9	1014.14
12300N	26849	355.0	12300.0	398.2	1014.06
12400N	24085	408.0	12418.2	353.5	1010.99
12400N	25304	550.0	12417.6	149.5	1014.34
12400N	26851	753.0	12400.0	-30.0	1015.05
12400N	25309	1000.0	12420.0	-260.9	1013.67
12500N	26872	253.0	12500.5	429.1	1009.85
12500N	26828	329.0	12500.0	370.3	1011.33

Horden Lake Deposit
Drill Hole Collar Data
January 29, 1993

Section	Hole	Length	Northing	Easting	Elevation
12600N	25319	353.0	12600.0	329.0	1012.00
12600N	25321	700.0	12600.0	-20.0	1015.00
12600N	28817	1020.0	12591.5	-230.0	1014.13
12600N	26863	1381.0	12600.0	-731.3	1015.90
12600N	33227	1791.0	12600.8	-1360.6	1015.00
12800N	25305	492.0	12826.5	52.2	1014.10
12800N	25307	986.0	12818.7	-339.6	1015.50
13000N	25323	403.0	13000.0	275.0	1012.00
13000N	25325	827.0	13000.0	-68.0	1014.00
13000N	28818	1603.0	12981.0	-656.0	1012.59
13000N	33234	1946.0	13004.4	-1300.0	1015.00
13100N	26871	305.0	13100.5	330.3	1013.41
13100N	26853	435.0	13100.0	180.0	1012.97
13100N	26855	634.0	13099.4	68.9	1013.13
13200N	24089	412.0	13221.7	240.6	1010.25
13200N	25303	525.0	13223.9	40.2	1013.25
13200N	25306	810.0	13222.8	-48.0	1012.45
13200N	25329	1084.0	13200.0	-411.0	1014.00
13300N	26867	270.0	13298.1	330.0	1008.50
13300N	26810	361.0	13299.0	265.0	1009.01
13300N	26869	531.0	13300.0	130.6	1011.49
13400N	26816	349.0	13400.0	277.0	1006.00
13400N	25379	499.0	13398.8	164.0	1008.23
13400N	26819	626.0	13400.0	87.0	1008.00
13400N	28811	808.0	13401.0	-62.2	1010.86
13400N	28813	1288.0	13402.0	-473.0	1013.33
13400N	26868	290.0	13501.5	290.7	1009.41
13500N	25378	440.0	13500.2	120.4	1008.39
13500N	26870	525.0	13500.4	60.0	1010.24
13600N	24047	380.0	13611.6	263.0	1009.35
13600N	'25302	514.0	13612.4	64.0	1010.60
13600N	26856	630.0	13600.0	-29.4	1010.85
13600N	26827	1049.0	13600.0	-400.0	1014.00
13600N	25308	856.0	13613.8	-139.1	1012.20
13700N	26865	295.0	13700.0	300.0	1009.35
13700N	26859	443.0	13700.0	150.3	1010.37
13700N	26875	524.0	13700.1	88.9	1012.00
13800N	26821	416.0	13800.0	290.0	1008.00
13800N	26826	562.0	13800.0	100.0	1011.00
14000N	28819	1283.0	14013.0	-448.5	1018.63
14000N	24048	565.0	14013.4	42.1	1012.90
14000N	25310	686.0	14011.3	-43.2	1014.67
14200N	26823	1051.0	14200.0	-215.9	1018.83
14800N	25301	350.0	14817.3	-7.3	1035.85
15000N	33240	416.0	15000.0	-85.0	1035.00
15200N	24049	378.0	15226.6	48.2	1039.81
15200N	33242	738.0	15200.0	-370.0	1036.00
15400N	33246	429.0	15400.0	-85.0	1037.00
15600N	33261	493.0	15600.0	550.0	1035.00
16000N	26866	306.0	16000.0	34.3	1034.93

APPENDIX II

HORDEN LAKE DEPOSIT
DRILL HOLE ASSAY DATA

Horden Lake Deposit
Drill Hole Assay Data
January 29, 1993

From	To	Length	Cu %	Ni %
26820				
101.0	103.8	2.8	0.65	0.19
103.8	105.5	1.7	0.41	0.50
105.5	107.0	1.5	0.27	0.09
107.0	111.9	4.9	0.45	0.29
111.9	113.5	1.6	0.20	0.20
113.5	118.5	5.0	0.41	0.13
118.5	123.5	5.0	0.21	0.08
123.5	126.2	2.7	0.23	0.10
126.2	128.5	2.3	0.13	0.13
128.5	131.3	2.8	1.29	0.31
131.3	136.7	5.4	0.26	0.09
136.7	140.2	3.5	0.32	0.27
140.2	145.5	5.3	0.54	0.20
145.5	147.0	1.5	0.38	0.11
147.0	150.8	3.8	0.23	0.13
150.8	153.0	2.2	0.63	0.18
153.0	156.8	3.8	0.32	0.19
156.8	158.7	1.9	0.43	0.38
EOH				
24067				
198.9	199.9	1.0	1.07	0.07
199.9	201.2	1.3	0.16	0.03
201.2	202.4	1.2	0.73	0.11
202.4	205.0	2.6	0.30	0.19
205.0	207.3	2.3	0.12	0.21
207.3	213.8	6.5	0.11	0.01
213.8	216.0	2.2	0.13	0.06
216.0	221.0	5.0	0.68	0.15
221.0	226.0	5.0	0.45	0.23
EOH				
33235				
559.0	563.9	4.9	0.41	0.31
563.9	566.1	2.2	0.63	0.29
566.1	570.5	4.4	0.29	0.16
570.5	572.0	1.5	0.10	0.90
572.0	576.7	4.7	0.51	0.19
576.7	577.8	1.1	0.54	0.23
577.8	581.6	3.8	0.39	0.21
581.6	585.9	4.3	0.35	0.20
585.9	592.3	6.4	0.26	0.04
592.3	593.9	1.6	1.59	0.09
593.9	597.2	3.3	0.24	0.28
597.2	603.1	5.9	0.16	0.06
603.1	604.5	1.4	0.22	0.44
604.5	609.5	5.0	0.07	0.06
609.5	614.5	5.0	0.34	0.10
614.5	616.9	2.4	0.18	0.02
616.9	618.0	1.1	0.18	0.02
618.0	620.1	2.1	0.25	0.11
620.1	621.9	1.8	0.98	0.23
621.9	624.6	2.7	0.64	0.21

Horden Lake Deposit
Drill Hole Assay Data
January 29, 1993

From	To	Length	Cu %	Ni %
624.6	627.3	2.7	1.17	0.17
EOH				
33241				
358.8	363.5	4.7	0.09	0.02
363.5	364.3	0.8	0.05	0.02
364.3	368.5	4.2	0.05	0.02
368.5	372.8	4.3	0.64	0.05
EOH				
33248				
887.7	891.0	3.3	0.47	0.12
891.0	893.0	2.0	0.47	0.12
893.0	896.5	3.5	0.14	0.14
896.5	900.0	3.5	1.46	0.28
EOH				
33236				
276.2	283.5	7.3	0.41	0.19
283.5	286.6	3.1	0.30	0.83
286.6	290.6	4.0	0.19	0.18
290.6	292.6	2.0	1.83	0.14
292.6	294.7	2.1	3.96	0.33
294.7	295.6	0.9	0.88	0.13
295.6	297.1	1.5	0.18	0.02
297.1	298.8	1.7	1.97	0.54
298.8	300.5	1.7	0.06	0.02
300.5	301.2	0.7	1.92	0.16
301.2	302.4	1.2	0.57	0.11
302.4	306.9	4.5	2.15	0.51
306.9	308.4	1.5	0.96	0.16
308.4	311.0	2.6	0.65	0.19
311.0	311.9	0.9	1.64	0.12
EOH				
33244				
778.9	781.0	2.1	0.93	0.11
781.0	786.1	5.1	1.81	0.66
786.1	788.5	2.4	7.24	0.30
788.5	795.7	7.2	1.21	0.44
EOH				
24066				
163.3	165.9	2.6	0.36	0.97
165.9	168.1	2.2	0.75	0.15
168.1	170.4	2.3	0.34	1.06
170.4	172.0	1.6	0.69	0.12
172.0	172.5	0.5	11.40	0.37
172.5	173.2	0.7	1.80	0.61
173.2	179.2	6.0	0.26	0.16
179.2	184.2	5.0	0.49	0.07
184.2	189.2	5.0	0.59	0.08
189.2	194.2	5.0	0.49	0.04
194.2	199.2	5.0	0.75	0.08
199.2	201.3	2.1	0.06	0.02
201.3	206.3	5.0	1.70	0.25
EOH				

Horden Lake Deposit
Drill Hole Assay Data
January 29, 1993

From	To	Length	Cu %	Ni %
33237				
733.0	734.6	1.6	1.32	0.30
734.6	738.0	3.4	0.14	0.11
738.0	739.6	1.6	1.35	0.24
739.6	742.0	2.4	0.32	0.19
742.0	747.5	5.5	0.24	0.13
747.5	748.5	1.0	0.70	0.23
748.5	755.3	6.8	0.19	0.11
755.3	757.6	2.3	1.08	0.12
757.6	758.9	1.3	2.99	0.31
758.9	761.4	2.5	0.29	0.06
761.4	764.8	3.4	0.90	0.61
EOH				
33239				
500.6	502.6	2.0	2.47	0.23
502.6	506.2	3.6	2.41	0.53
506.2	508.3	2.1	0.17	0.02
508.3	510.2	1.9	0.63	1.12
510.2	516.4	6.2	1.02	0.30
516.4	519.0	2.6	0.24	0.05
519.0	520.5	1.5	0.40	0.02
520.5	524.5	4.0	0.11	0.02
524.5	529.8	5.3	0.07	0.02
529.8	531.6	1.8	0.23	0.06
531.6	540.0	8.4	0.13	0.02
540.0	546.7	6.7	0.10	0.06
546.7	552.6	5.9	0.28	0.02
552.6	558.5	5.9	0.83	0.03
558.5	563.5	5.0	0.02	0.02
563.5	571.2	7.7	0.02	0.02
571.2	572.0	0.8	1.07	0.05
EOH				
24029	Hole Ter			
EOH				
24071				
39.0	44.0	5.0	0.45	0.01
44.0	49.0	5.0	0.25	0.11
49.0	55.0	6.0	0.26	0.02
55.0	60.0	5.0	0.44	0.03
60.0	62.5	2.5	0.50	0.09
62.5	65.0	2.5	0.50	0.09
65.0	68.0	3.0	2.44	0.34
68.0	71.0	3.0	0.74	0.70
71.0	76.0	5.0	0.32	0.06
EOH				
24064				
184.7	186.0	1.3	2.32	0.47
186.0	188.1	2.1	0.18	0.12
188.1	189.4	1.3	0.54	0.91
189.4	194.0	4.6	0.27	0.03
194.0	195.0	1.0	0.25	0.03

Horden Lake Deposit
Drill Hole Assay Data
January 29, 1993

From	To	Length	Cu %	Ni %
195.0	197.0	2.0	0.22	0.03
197.0	199.5	2.5	1.54	1.11
199.5	201.9	2.4	0.31	0.08
201.9	203.9	2.0	1.96	0.42
203.9	205.0	1.1	1.53	0.42
205.0	206.4	1.4	1.10	0.41
EOH				
26818				
402.6	404.4	1.8	1.20	0.11
404.4	406.8	2.4	0.07	0.01
406.8	409.0	2.2	1.41	0.18
409.0	413.9	4.9	0.20	0.02
413.9	414.0	0.1	0.20	0.02
414.0	417.8	3.8	0.41	0.03
417.8	422.3	4.5	0.92	0.42
422.3	423.7	1.4	2.18	0.23
423.7	427.4	3.7	0.20	0.07
427.4	433.8	6.4	0.50	0.03
433.8	436.3	2.5	0.03	0.06
436.3	437.9	1.6	0.87	0.01
EOH				
24065				
154.3	158.0	3.7	0.73	0.05
158.0	160.0	2.0	0.22	0.02
160.0	164.9	4.9	0.36	0.03
164.9	170.0	5.1	0.74	0.03
170.0	175.0	5.0	0.95	0.13
175.0	180.0	5.0	0.43	0.03
180.0	185.0	5.0	0.31	0.02
185.0	188.8	3.8	0.11	0.03
188.8	191.9	3.1	0.12	0.04
191.9	192.5	0.6	0.72	0.30
192.5	194.2	1.7	0.38	0.91
194.2	196.2	2.0	1.00	0.43
196.2	199.2	3.0	0.35	0.14
199.2	201.8	2.6	0.23	0.05
201.8	202.4	0.6	0.68	0.60
202.4	203.7	1.3	0.42	0.48
203.7	208.7	5.0	0.39	0.04
EOH				
26858				
192.3	199.8	7.5	0.37	0.03
199.8	208.7	8.9	0.37	0.02
208.7	210.1	1.4	1.44	0.33
210.1	212.0	1.9	1.06	0.13
212.0	213.9	1.9	0.18	0.12
213.9	221.4	7.5	0.36	0.09
221.4	222.4	1.0	9.72	0.35
222.4	223.9	1.5	3.07	0.08
223.9	227.7	3.8	0.44	Nil
EOH				
26815				

Horden Lake Deposit
Drill Hole Assay Data
January 29, 1993

From	To	Length	Cu %	Ni %
132.9	139.5	6.6	0.32	0.10
139.5	144.5	5.0	0.60	0.07
144.5	147.5	3.0	0.43	0.07
147.5	149.4	1.9	0.64	0.36
149.4	150.6	1.2	0.08	0.05
150.6	155.0	4.4	0.33	0.12
155.0	156.0	1.0	0.54	0.14
156.0	158.5	2.5	0.75	0.16
158.5	160.2	1.7	0.45	0.45
160.2	162.8	2.6	0.25	0.48
162.8	168.3	5.5	0.30	0.48
168.3	173.3	5.0	0.24	0.02
173.3	177.3	4.0	0.12	0.01
177.3	179.0	1.7	0.40	0.02
179.0	184.0	5.0	0.33	0.05
184.0	189.0	5.0	0.07	0.01
189.0	194.0	5.0	0.12	0.02
194.0	195.1	1.1	1.45	0.19
195.1	196.2	1.1	2.00	0.82
196.2	197.0	0.8	0.30	1.63
197.0	198.1	1.1	1.38	1.25
198.1	200.5	2.4	0.36	1.63
200.5	203.9	3.4	1.38	1.25
203.9	204.5	0.6	1.60	0.84
204.5	207.5	3.0	1.81	0.43
207.5	208.5	1.0	5.52	0.25
208.5	210.2	1.7	0.40	0.09
EOH				
26825				
690.1	692.5	2.4	1.34	0.38
692.5	695.6	3.1	0.24	0.12
695.6	698.5	2.9	0.69	0.20
698.5	701.7	3.2	0.32	0.18
701.7	706.0	4.3	0.19	0.12
706.0	708.2	2.2	0.94	0.59
708.2	708.3	0.1	0.94	0.59
708.3	710.4	2.1	0.47	0.04
710.4	711.5	1.1	0.04	1.48
711.5	714.2	2.7	0.96	0.40
714.2	716.4	2.2	0.44	1.05
716.4	717.4	1.0	5.40	0.62
EOH				
26857				
345.2	347.3	2.1	0.03	0.04
347.3	352.3	5.0	0.03	0.04
352.3	354.6	2.3	1.65	0.05
EOH				
24068				
159.3	164.5	5.2	0.52	0.35
164.5	169.1	4.6	2.02	0.16
169.1	172.0	2.9	4.84	0.07
172.0	176.4	4.4	0.85	0.34

Horden Lake Deposit
Drill Hole Assay Data
January 29, 1993

From	To	Length	Cu %	Ni %
176.4	177.5	1.1	2.88	0.43
177.5	182.5	5.0	0.29	0.23
182.5	186.6	4.1	0.74	0.26
186.6	189.0	2.4	0.51	0.06
189.0	192.8	3.8	0.97	0.18
192.8	197.1	4.3	0.76	0.60
197.1	198.3	1.2	0.65	0.39
198.3	203.3	5.0	0.53	0.18
203.3	208.3	5.0	0.60	0.34
208.3	212.2	3.9	0.80	0.21
EOH				
25313				
426.5	427.7	1.2	0.46	0.62
427.7	432.0	4.3	0.44	0.58
432.0	437.0	5.0	0.27	0.32
437.0	439.0	2.0	0.78	0.31
EOH				
25315				
734.0	739.0	5.0	0.60	0.23
739.0	741.3	2.3	0.49	0.37
741.3	746.3	5.0	0.56	0.16
746.3	750.5	4.2	0.48	0.12
750.5	754.0	3.5	0.48	0.12
754.0	758.8	4.8	1.28	0.32
758.8	763.8	5.0	0.31	0.14
763.8	770.8	7.0	0.22	0.12
770.8	773.8	3.0	0.86	0.07
773.8	775.4	1.6	0.32	0.95
EOH				
26860				
280.6	282.7	2.1	0.43	0.09
282.7	292.7	10.0	0.29	0.10
EOH				
24088				
204.0	204.3	0.3	3.22	0.36
204.3	208.0	3.7	0.14	0.05
208.0	208.5	0.5	0.14	0.03
208.5	215.0	6.5	0.15	0.02
215.0	215.5	0.5	4.03	0.83
EOH				
25311				
351.2	353.4	2.2	0.67	0.52
353.4	355.5	2.1	0.08	0.15
355.5	357.6	2.1	0.27	0.12
357.6	360.5	2.9	0.27	0.12
360.5	361.8	1.3	0.80	0.07
361.8	366.0	4.2	0.78	0.84
EOH				
26812				
615.9	618.8	2.9	0.16	0.08
618.8	621.0	2.2	0.19	0.16
621.0	625.1	4.1	0.43	0.63

Horden Lake Deposit
Drill Hole Assay Data
January 29, 1993

From	To	Length	Cu %	Ni %
EOH				
26874				
194.0	195.7	1.7	0.62	0.36
195.7	196.8	1.1	2.79	0.27
196.8	199.0	2.2	0.28	0.08
199.0	200.6	1.6	0.45	0.15
200.6	202.8	2.2	0.68	0.55
202.8	203.6	0.8	0.15	0.05
203.6	207.3	3.7	0.15	0.05
207.3	208.0	0.7	0.66	0.97
208.0	209.9	1.9	0.75	0.27
209.9	213.2	3.3	0.69	0.73
213.2	216.4	3.2	0.25	0.05
216.4	224.6	8.2	0.03	0.02
224.6	226.8	2.2	2.20	0.59
EOH				
28814				
1022.0	1026.5	4.5	1.04	0.65
1026.5	1035.0	8.5	0.97	0.38
1035.0	1041.0	6.0	0.47	0.22
1041.0	1044.7	3.7	0.03	0.02
1044.7	1048.7	4.0	2.40	0.09
1048.7	1053.0	4.3	0.47	0.21
1053.0	1054.0	1.0	4.03	0.42
EOH				
33228				
1718.7	1721.1	2.4	1.44	0.20
1721.1	1723.0	1.9	0.73	0.76
1723.0	1723.9	0.9	0.16	0.06
1723.9	1725.3	1.4	0.16	1.13
1725.3	1726.9	1.6	0.02	0.12
1726.9	1731.8	4.9	0.22	0.02
1731.8	1733.3	1.5	0.50	0.06
1733.3	1736.0	2.7	2.63	0.16
1736.0	1738.5	2.5	1.64	0.67
EOH				
26861				
215.1	226.2	11.1	0.76	0.26
226.2	229.1	2.9	2.04	0.29
229.1	232.3	3.2	0.70	0.25
232.3	233.1	0.8	3.75	0.23
233.1	235.2	2.1	2.74	0.12
235.2	237.7	2.5	1.23	0.26
237.7	238.0	0.3	1.01	0.48
238.0	239.3	1.3	0.78	0.69
239.3	241.0	1.7	1.63	0.17
241.0	242.8	1.8	1.72	0.38
242.8	245.2	2.4	0.44	0.15
245.2	247.8	2.6	1.32	0.47
247.8	249.7	1.9	1.07	0.03
249.7	250.7	1.0	1.50	0.33
250.7	251.9	1.2	0.45	0.04

Horden Lake Deposit
Drill Hole Assay Data
January 29, 1993

From	To	Length	Cu %	Ni %
251.9	252.8	0.9	3.16	0.62
252.8	255.3	2.5	0.32	1.14
255.3	257.2	1.9	0.63	0.30
257.2	258.7	1.5	5.86	0.48
258.7	260.9	2.2	2.11	0.13
260.9	271.3	10.4	0.28	0.03
EOH				
24069	Hole terminated.			
EOH				
24070				
156.1	157.2	1.1	3.61	0.20
157.2	162.2	5.0	0.34	0.12
162.2	168.5	6.3	0.34	0.26
168.5	173.5	5.0	1.30	0.40
173.5	176.4	2.9	1.16	0.18
176.4	181.4	5.0	0.97	0.32
181.4	186.4	5.0	0.86	0.29
186.4	191.4	5.0	0.69	0.25
191.4	196.4	5.0	0.85	0.47
196.4	200.0	3.6	2.47	0.23
200.0	203.8	3.8	1.76	0.81
EOH				
24087				
320.0	325.2	5.2	0.26	0.11
325.2	325.8	0.6	0.29	0.10
325.8	332.0	6.2	0.33	0.09
332.0	332.9	0.9	0.30	0.10
332.9	339.7	6.8	0.27	0.12
339.7	340.6	0.9	0.31	0.14
340.6	343.5	2.9	0.36	0.16
343.5	345.0	1.5	0.42	0.13
345.0	346.6	1.6	0.48	0.10
346.6	347.4	0.8	0.31	0.10
347.4	348.1	0.7	0.14	0.10
348.1	349.8	1.7	1.50	0.44
349.8	351.3	1.5	0.80	0.70
351.3	352.1	0.8	0.56	0.39
352.1	355.0	2.9	0.32	0.09
355.0	355.5	0.5	0.88	0.70
355.5	356.0	0.5	0.05	0.03
356.0	356.6	0.6	0.20	1.16
356.6	357.5	0.9	1.40	0.72
357.5	358.9	1.4	0.16	1.19
358.9	359.5	0.6	0.40	0.76
359.5	363.6	4.1	0.65	0.33
363.6	364.1	0.5	0.35	0.17
364.1	364.5	0.4	0.06	0.02
364.5	365.2	0.7	0.16	0.93
365.2	366.5	1.3	0.12	0.10
366.5	367.1	0.6	1.85	0.02
367.1	367.6	0.5	9.68	0.16
367.6	369.1	1.5	3.47	0.10

Horden Lake Deposit
Drill Hole Assay Data
January 29, 1993

From	To	Length	Cu %	Ni %
369.1	372.5	3.4	0.41	0.07
EOH				
26854				
537.2	545.1	7.9	0.70	0.18
545.1	554.2	9.1	0.20	0.11
554.2	558.5	4.3	0.18	0.24
558.5	563.8	5.3	0.46	0.08
563.8	567.9	4.1	0.36	0.19
567.9	577.9	10.0	0.18	0.17
577.9	585.1	7.2	0.19	0.16
585.1	587.7	2.6	0.63	0.33
587.7	589.1	1.4	0.35	0.18
589.1	597.7	8.6	0.25	0.06
597.7	601.5	3.8	1.05	0.14
601.5	605.1	3.6	0.04	0.01
605.1	608.2	3.1	0.99	0.07
608.2	609.9	1.7	0.58	0.99
609.9	614.2	4.3	0.46	0.46
614.2	615.4	1.2	0.22	0.11
615.4	619.2	3.8	0.03	0.02
619.2	622.4	3.2	0.50	0.91
622.4	624.2	1.8	1.12	0.21
EOH				
25317				
836.0	841.0	5.0	0.85	0.17
841.0	846.0	5.0	0.76	0.25
846.0	849.0	3.0	0.06	0.19
849.0	853.0	4.0	0.41	0.12
853.0	855.7	2.7	0.75	0.28
855.7	860.6	4.9	0.15	0.11
860.6	865.6	5.0	1.63	0.20
865.6	870.6	5.0	0.58	0.24
870.6	877.0	6.4	0.29	0.09
877.0	882.0	5.0	0.42	0.15
882.0	886.7	4.7	0.70	0.35
886.7	891.5	4.8	0.37	0.10
891.5	894.8	3.3	0.47	0.54
894.8	896.2	1.4	0.12	0.18
896.2	897.8	1.6	0.89	0.47
897.8	901.0	3.2	0.14	0.04
901.0	903.3	2.3	1.06	0.22
EOH				
26852				
166.0	176.0	10.0	0.38	0.12
176.0	186.0	10.0	0.55	0.10
186.0	196.0	10.0	0.62	0.19
196.0	199.7	3.7	1.11	0.13
199.7	203.5	3.8	0.36	0.12
203.5	204.6	1.1	0.51	0.15
204.6	214.6	10.0	0.66	0.17
214.6	217.3	2.7	0.37	0.08
217.3	219.6	2.3	2.98	0.16

Horden Lake Deposit
Drill Hole Assay Data
January 29, 1993

From	To	Length	Cu %	Ni %
219.6	227.6	8.0	0.41	0.11
227.6	234.5	6.9	0.79	0.18
234.5	238.7	4.2	0.38	0.10
238.7	241.0	2.3	0.36	0.28
241.0	243.8	2.8	0.09	0.03
243.8	247.7	3.9	0.73	0.17
247.7	249.3	1.6	0.94	0.68
249.3	251.7	2.4	0.78	0.98
251.7	253.7	2.0	1.49	0.09
253.7	258.8	5.1	0.34	0.07
258.8	263.7	4.9	0.46	0.48
263.7	266.5	2.8	0.27	0.04
266.5	268.2	1.7	0.23	0.02
268.2	268.9	0.7	0.23	0.02
268.9	271.9	3.0	2.40	0.33
271.9	274.4	2.5	0.62	0.75
274.4	277.3	2.9	1.17	0.27
EOH				
25324				
222.0	226.0	4.0	0.98	0.39
226.0	230.5	4.5	0.72	0.27
230.5	235.5	5.0	1.11	0.13
235.5	240.5	5.0	0.77	0.14
240.5	246.8	6.3	0.69	0.04
246.8	251.8	5.0	4.42	0.55
251.8	255.5	3.7	0.54	0.04
255.5	257.6	2.1	3.83	0.07
257.6	263.5	5.9	0.17	0.04
263.5	265.0	1.5	0.28	0.04
265.0	268.5	3.5	0.38	0.04
268.5	271.8	3.3	0.56	0.06
EOH				
26850				
309.3	312.4	3.1	0.67	0.05
312.4	314.0	1.6	0.46	0.04
314.0	323.3	9.3	0.25	0.02
323.3	324.0	0.7	0.24	0.03
324.0	326.7	2.7	0.23	0.04
326.7	328.0	1.3	0.33	0.07
328.0	338.0	10.0	0.42	0.09
338.0	348.0	10.0	0.87	0.14
348.0	353.0	5.0	1.03	0.29
353.0	358.0	5.0	0.93	0.50
358.0	362.6	4.6	1.35	0.47
362.6	372.6	10.0	0.36	0.16
372.6	382.6	10.0	0.26	0.13
382.6	392.6	10.0	0.50	0.18
392.6	400.6	8.0	0.60	0.11
400.6	410.6	10.0	0.55	0.15
410.6	416.1	5.5	0.31	0.19
416.1	426.1	10.0	0.34	0.12
426.1	430.7	4.6	0.17	0.09

Horden Lake Deposit
Drill Hole Assay Data
January 29, 1993

From	To	Length	Cu %	Ni %
430.7	435.4	4.7	0.18	0.07
435.4	439.2	3.8	5.02	0.32
439.2	440.7	1.5	0.10	0.05
440.7	445.1	4.4	0.05	0.01
445.1	446.9	1.8	1.74	0.52
446.9	453.4	6.5	0.34	0.04
453.4	455.1	1.7	0.76	0.44
455.1	464.4	9.3	0.45	0.17
464.4	469.5	5.1	0.79	0.17
EOH				
25327				
511.8	516.8	5.0	0.48	0.10
516.8	521.8	5.0	1.19	0.28
521.8	526.8	5.0	0.73	0.35
526.8	532.1	5.3	0.73	0.29
532.1	537.0	4.9	0.38	0.15
537.0	542.0	5.0	0.49	0.14
542.0	544.5	2.5	0.81	0.24
544.5	549.5	5.0	0.44	0.11
549.5	553.3	3.8	0.56	0.12
553.3	556.8	3.5	0.92	0.14
556.8	561.8	5.0	0.53	0.12
561.8	566.8	5.0	0.55	0.14
566.8	571.8	5.0	0.30	0.09
571.8	576.5	4.7	0.27	0.20
576.5	577.5	1.0	0.60	0.26
577.5	579.5	2.0	6.80	0.25
579.5	582.5	3.0	2.40	0.30
582.5	586.1	3.6	0.46	0.36
586.1	587.7	1.6	0.10	Nil
587.7	591.5	3.8	1.08	0.29
591.5	595.1	3.6	1.28	0.07
595.1	596.9	1.8	2.63	0.51
596.9	599.2	2.3	0.13	0.03
599.2	600.6	1.4	0.95	0.27
600.6	605.6	5.0	0.48	0.13
EOH				
28812				
813.5	814.0	0.5	1.06	0.75
814.0	815.0	1.0	0.87	0.50
815.0	817.0	2.0	0.67	0.25
817.0	818.0	1.0	0.67	0.25
818.0	821.0	3.0	0.67	0.25
821.0	822.0	1.0	1.32	0.27
822.0	827.0	5.0	1.97	0.28
827.0	828.5	1.5	1.25	0.37
828.5	835.0	6.5	0.52	0.45
835.0	842.0	7.0	0.39	0.15
842.0	849.6	7.6	1.65	0.15
849.6	850.6	1.0	20.64	0.47
850.6	854.0	3.4	6.12	0.26
854.0	857.0	3.0	5.26	0.96

Horden Lake Deposit
Drill Hole Assay Data
January 29, 1993

From	To	Length	Cu %	Ni %
857.0	866.0	9.0	0.14	0.03
866.0	874.0	8.0	0.47	0.11
874.0	879.0	5.0	0.59	0.05
879.0	885.0	6.0	2.92	0.53
885.0	888.0	3.0	0.97	0.05
888.0	889.9	1.9	2.68	0.81
889.9	895.0	5.1	1.71	0.07
895.0	900.0	5.0	0.58	0.02
900.0	905.0	5.0	1.46	0.07
EOH				
28816				
1301.5	1302.5	1.0	11.30	0.31
1302.5	1308.0	5.5	1.85	0.66
1308.0	1309.0	1.0	3.48	1.06
1309.0	1314.0	5.0	0.66	0.10
1314.0	1319.0	5.0	0.49	0.07
1319.0	1322.0	3.0	0.93	0.07
1322.0	1323.0	1.0	3.09	0.42
1323.0	1329.0	6.0	0.28	0.04
1329.0	1334.0	5.0	1.08	0.14
1334.0	1340.0	6.0	0.35	0.14
1340.0	1345.0	5.0	0.33	0.05
1345.0	1347.0	2.0	0.25	0.46
1347.0	1353.0	6.0	0.65	0.07
1353.0	1358.0	5.0	0.31	0.12
1358.0	1360.3	2.3	2.15	0.39
1360.3	1365.0	4.7	0.63	0.05
EOH				
33232				
1889.7	1897.4	7.7	0.06	0.05
1897.4	1898.6	1.2	0.37	0.53
EOH				
26873				
135.8	141.7	5.9	0.34	0.16
141.7	145.4	3.7	1.01	0.12
145.4	154.4	9.0	0.19	0.08
154.4	162.1	7.7	0.59	0.08
162.1	171.4	9.3	0.66	0.23
171.4	173.1	1.7	0.69	0.15
173.1	174.5	1.4	1.12	1.01
174.5	176.3	1.8	1.44	0.24
176.3	177.5	1.2	0.28	0.91
177.5	178.7	1.2	2.16	0.81
178.7	188.7	10.0	0.02	0.01
188.7	189.0	0.3	0.54	0.10
189.0	191.5	2.5	1.05	0.19
191.5	193.4	1.9	0.30	0.05
193.4	195.1	1.7	1.17	1.55
195.1	197.1	2.0	0.48	0.15
197.1	199.7	2.6	3.12	0.22
199.7	203.5	3.8	0.27	0.09
203.5	204.1	0.6	2.66	0.25

Horden Lake Deposit
Drill Hole Assay Data
January 29, 1993

From	To	Length	Cu %	Ni %
204.1	204.6	0.5	5.05	0.41
EOH				
26849				
206.5	208.5	2.0	0.51	0.60
208.5	211.1	2.6	1.20	0.40
211.1	213.3	2.2	0.20	0.06
213.3	219.0	5.7	0.68	0.22
219.0	222.7	3.7	0.41	0.14
222.7	225.5	2.8	1.35	0.82
225.5	227.0	1.5	0.46	1.08
227.0	229.0	2.0	0.15	0.03
229.0	230.0	1.0	0.10	0.02
230.0	231.6	1.6	0.05	0.01
231.6	232.8	1.2	0.04	0.01
232.8	237.1	4.3	0.03	Nil
237.1	238.3	1.2	0.04	0.01
238.3	239.4	1.1	0.04	0.01
239.4	240.8	1.4	0.04	0.01
240.8	246.0	5.2	0.04	0.01
246.0	248.9	2.9	0.05	0.03
248.9	250.4	1.5	0.36	0.23
250.4	255.4	5.0	0.67	0.42
255.4	261.5	6.1	1.27	0.20
261.5	262.6	1.1	4.07	0.72
262.6	264.2	1.6	0.82	0.04
264.2	265.5	1.3	2.34	0.48
265.5	267.1	1.6	6.74	0.57
267.1	274.1	7.0	0.33	0.05
274.1	276.4	2.3	0.79	0.11
276.4	278.1	1.7	2.10	0.84
278.1	279.5	1.4	5.94	0.53
279.5	283.2	3.7	2.96	0.54
283.2	285.7	2.5	1.52	1.03
EOH				
24085				
185.6	186.4	0.8	0.60	0.56
186.4	192.0	5.6	0.43	0.11
192.0	194.6	2.6	0.88	0.13
194.6	196.3	1.7	0.50	0.54
196.3	199.1	2.8	0.50	0.17
199.1	199.8	0.7	6.84	0.29
199.8	201.3	1.5	2.80	0.79
201.3	202.9	1.6	3.67	0.67
202.9	208.0	5.1	4.54	0.54
208.0	211.1	3.1	2.32	0.97
211.1	214.8	3.7	3.10	0.17
214.8	217.0	2.2	0.15	0.03
217.0	218.7	1.7	1.00	1.05
218.7	219.3	0.6	2.26	0.45
219.3	220.0	0.7	3.06	0.81
220.0	220.9	0.9	4.09	0.29
220.9	225.0	4.1	1.18	0.07

Horden Lake Deposit
Drill Hole Assay Data
January 29, 1993

From	To	Length	Cu %	Ni %
225.0	225.8	0.8	4.23	0.52
225.8	227.6	1.8	2.24	0.19
227.6	228.1	0.5	2.45	0.57
228.1	229.3	1.2	1.53	0.20
229.3	229.7	0.4	0.29	0.92
229.7	231.4	1.7	1.29	0.07
231.4	232.3	0.9	3.43	1.00
EOH				
25304				
362.0	374.4	12.4	0.38	0.10
374.4	380.4	6.0	0.92	0.23
380.4	380.7	0.3	0.98	0.29
380.7	385.0	4.3	1.03	0.35
385.0	385.3	0.3	1.18	0.39
385.3	389.0	3.7	1.34	0.42
389.0	389.5	0.5	0.77	0.28
389.5	400.0	10.5	0.19	0.13
400.0	411.8	11.8	0.21	0.09
411.8	412.1	0.3	0.89	0.26
412.1	413.6	1.5	1.56	0.42
413.6	416.0	2.4	0.23	0.11
416.0	426.0	10.0	0.20	0.02
426.0	431.3	5.3	1.05	0.22
431.3	445.0	13.7	0.20	0.02
445.0	448.7	3.7	0.33	0.03
448.7	457.3	8.6	3.97	0.17
457.3	460.1	2.8	1.41	1.00
460.1	463.0	2.9	0.59	0.08
463.0	465.4	2.4	4.71	0.55
EOH				
26851				
560.6	565.6	5.0	0.88	0.33
565.6	570.5	4.9	0.78	0.34
570.5	571.8	1.3	1.13	0.26
571.8	576.8	5.0	1.48	0.18
576.8	581.5	4.7	0.56	0.39
581.5	591.8	10.3	0.24	0.08
591.8	601.8	10.0	0.18	0.04
601.8	611.8	10.0	0.47	0.12
611.8	621.8	10.0	0.35	0.13
621.8	631.8	10.0	0.31	0.12
631.8	636.9	5.1	0.23	0.49
636.9	641.5	4.6	0.25	0.13
641.5	644.0	2.5	0.34	0.01
644.0	645.5	1.5	0.36	0.09
645.5	647.3	1.8	0.89	0.59
647.3	656.3	9.0	0.32	0.13
656.3	659.3	3.0	1.70	0.09
659.3	663.7	4.4	1.84	0.55
663.7	666.4	2.7	1.57	0.09
666.4	670.5	4.1	0.43	0.03
EOH				

Horden Lake Deposit
Drill Hole Assay Data
January 29, 1993

From	To	Length	Cu %	Ni %
25309				
789.6	794.6	5.0	0.04	0.03
794.6	798.5	3.9	0.29	0.13
798.5	803.4	4.9	0.70	0.29
803.4	808.4	5.0	0.24	0.13
808.4	813.7	5.3	0.09	0.04
813.7	818.0	4.3	0.65	0.37
818.0	822.5	4.5	0.53	0.35
822.5	827.0	4.5	0.17	0.10
827.0	830.0	3.0	0.50	0.12
830.0	836.0	6.0	0.31	0.13
836.0	840.0	4.0	0.54	0.23
840.0	841.8	1.8	0.42	0.09
841.8	846.0	4.2	0.09	0.04
846.0	851.0	5.0	0.16	0.44
851.0	855.7	4.7	0.03	0.25
855.7	857.0	1.3	0.52	0.35
857.0	862.7	5.7	0.30	0.12
862.7	867.8	5.1	0.34	0.13
867.8	872.8	5.0	0.28	0.16
872.8	877.0	4.2	0.27	0.13
877.0	878.0	1.0	0.80	0.22
878.0	882.5	4.5	0.24	0.16
882.5	887.0	4.5	1.29	0.36
887.0	890.7	3.7	1.33	0.71
890.7	893.0	2.3	1.33	0.30
893.0	895.0	2.0	0.28	0.07
895.0	902.0	7.0	0.20	0.13
902.0	903.2	1.2	2.99	0.52
EOH				
26872				
78.3	81.3	3.0	1.25	0.33
81.3	83.6	2.3	0.15	0.06
83.6	85.1	1.5	1.26	0.36
85.1	85.3	0.2	1.38	0.65
85.3	87.1	1.8	1.50	0.94
87.1	92.1	5.0	0.31	0.07
92.1	96.3	4.2	0.38	0.15
96.3	97.6	1.3	0.41	0.34
97.6	97.7	0.1	0.44	0.28
97.7	99.0	1.3	0.46	0.22
99.0	106.9	7.9	0.18	0.07
106.9	109.5	2.6	0.48	0.54
109.5	115.3	5.8	0.79	0.17
115.3	121.2	5.9	0.20	0.05
121.2	123.0	1.8	0.17	0.08
123.0	124.9	1.9	0.84	0.10
124.9	128.0	3.1	0.59	0.40
128.0	135.0	7.0	0.16	0.07
135.0	136.1	1.1	0.15	0.55
136.1	140.7	4.6	0.19	0.11
140.7	144.5	3.8	0.30	0.13

Horden Lake Deposit
Drill Hole Assay Data
January 29, 1993

From	To	Length	Cu %	Ni %
144.5	146.0	1.5	0.71	0.27
146.0	148.0	2.0	2.59	0.40
148.0	150.1	2.1	1.11	0.22
150.1	151.1	1.0	0.56	0.08
151.1	152.9	1.8	3.48	0.59
152.9	154.1	1.2	0.53	0.63
154.1	155.5	1.4	1.88	0.88
155.5	156.9	1.4	0.08	0.03
156.9	159.8	2.9	4.46	0.52
159.8	161.0	1.2	4.10	0.53
161.0	162.7	1.7	6.34	0.48
162.7	163.6	0.9	0.70	0.09
163.6	165.6	2.0	2.38	0.38
165.6	166.8	1.2	2.90	0.76
EOH				
26828				
133.6	144.3	10.7	0.32	0.24
144.3	150.4	6.1	0.19	0.10
150.4	156.3	5.9	0.85	0.22
156.3	165.4	9.1	0.34	0.12
165.4	166.2	0.8	0.31	0.13
166.2	170.6	4.4	0.28	0.14
170.6	172.4	1.8	2.11	0.14
172.4	182.4	10.0	0.49	0.15
182.4	190.7	8.3	0.38	0.10
190.7	198.9	8.2	0.25	0.11
198.9	204.6	5.7	0.44	0.69
204.6	214.6	10.0	0.25	0.14
214.6	224.6	10.0	0.12	0.05
224.6	227.9	3.3	1.22	0.63
227.9	230.3	2.4	1.28	0.19
230.3	234.0	3.7	0.54	0.55
234.0	238.2	4.2	0.84	0.75
238.2	239.6	1.4	8.21	0.23
239.6	241.5	1.9	1.11	0.09
241.5	243.4	1.9	2.27	0.22
243.4	247.4	4.0	2.56	0.74
247.4	252.1	4.7	0.90	0.12
EOH				
25319				
176.4	181.0	4.6	0.80	0.20
181.0	184.4	3.4	1.01	0.44
184.4	188.8	4.4	1.08	0.43
188.8	193.8	5.0	0.29	0.10
193.8	196.7	2.9	0.24	0.17
196.7	201.4	4.7	0.77	0.25
201.4	205.4	4.0	1.22	0.63
205.4	210.4	5.0	0.37	0.12
210.4	214.0	3.6	0.13	0.09
214.0	215.4	1.4	0.21	0.12
215.4	219.3	3.9	0.37	0.18
219.3	222.8	3.5	0.22	0.04

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From	To	Length	Cu %	Ni %
222.8	227.8	5.0	0.05	0.05
227.8	232.8	5.0	0.03	0.02
232.8	237.0	4.2	0.03	Nil
237.0	242.0	5.0	0.88	0.29
242.0	247.3	5.3	1.53	0.54
247.3	249.0	1.7	0.27	0.07
EOH				
25321				
538.0	543.0	5.0	1.09	0.02
543.0	548.0	5.0	0.25	0.08
548.0	553.0	5.0	0.09	0.15
553.0	554.0	1.0	0.37	0.22
554.0	557.4	3.4	0.06	0.02
557.4	560.0	2.6	0.27	0.06
560.0	563.9	3.9	0.86	0.48
563.9	568.9	5.0	0.45	0.39
568.9	570.6	1.7	0.34	0.20
570.6	575.6	5.0	1.15	1.12
575.6	579.2	3.6	1.33	0.79
579.2	582.0	2.8	0.82	0.48
EOH				
28817				
871.4	880.0	8.6	0.71	0.23
880.0	885.0	5.0	0.28	0.33
885.0	889.0	4.0	1.01	0.28
EOH				
26863				
1247.7	1253.7	6.0	0.45	0.09
1253.7	1259.2	5.5	0.45	0.20
1259.2	1263.6	4.4	0.34	0.12
1263.6	1273.4	9.8	0.19	0.07
1273.4	1275.0	1.6	0.40	0.15
1275.0	1275.8	0.8	0.41	0.16
1275.8	1276.9	1.1	0.42	0.17
1276.9	1278.5	1.6	0.84	0.26
1278.5	1280.6	2.1	3.32	0.13
1280.6	1282.0	1.4	0.56	0.08
1282.0	1283.0	1.0	1.12	0.59
1283.0	1284.3	1.3	0.41	0.15
1284.3	1287.0	2.7	0.58	0.30
1287.0	1288.6	1.6	0.05	0.04
1288.6	1291.9	3.3	2.36	0.27
1291.9	1296.9	5.0	0.43	0.08
1296.9	1298.3	1.4	0.56	0.61
1298.3	1300.5	2.2	1.03	0.54
1300.5	1303.9	3.4	0.88	0.14
1303.9	1304.9	1.0	2.60	0.12
1304.9	1306.5	1.6	1.74	0.32
1306.5	1307.8	1.3	1.34	0.21
1307.8	1309.0	1.2	0.88	0.28
1309.0	1312.1	3.1	0.03	0.02
1312.1	1313.4	1.3	1.11	0.17

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From	To	Length	Cu %	Ni %
1313.4	1316.6	3.2	0.50	0.20
EOH				
33227				
1667.3	1672.0	4.7	0.05	0.02
1672.0	1674.4	2.4	2.02	0.08
1674.4	1676.6	2.2	1.33	0.16
1676.6	1677.8	1.2	0.83	0.19
1677.8	1679.3	1.5	0.43	0.33
1679.3	1681.8	2.5	0.35	0.37
1681.8	1684.0	2.2	0.56	0.20
1684.0	1686.8	2.8	0.24	0.52
1686.8	1689.9	3.1	0.67	0.34
1689.9	1690.8	0.9	4.82	0.30
1690.8	1692.8	2.0	1.03	0.19
1692.8	1697.8	5.0	0.51	0.13
1697.8	1702.4	4.6	0.34	0.16
1702.4	1707.1	4.7	0.34	0.19
EOH				
25305				
414.2	417.4	3.2	2.07	0.34
417.4	420.2	2.8	0.25	0.09
420.2	420.6	0.4	0.31	0.13
420.6	426.7	6.1	0.36	0.17
426.7	427.1	0.4	0.26	0.13
427.1	431.3	4.2	0.16	0.08
431.3	431.8	0.5	0.11	0.06
431.8	442.2	10.4	0.05	0.03
442.2	452.3	10.1	1.69	0.91
452.3	452.7	0.4	2.16	0.91
452.7	454.2	1.5	2.62	0.91
EOH				
25307				
938.8	940.7	1.9	0.70	0.19
940.7	943.3	2.6	0.08	0.06
943.3	944.4	1.1	1.45	0.19
944.4	946.9	2.5	0.16	0.15
946.9	947.8	0.9	0.57	1.19
947.8	948.3	0.5	0.57	1.19
948.3	952.5	4.2	4.19	0.51
952.5	954.5	2.0	0.69	0.06
954.5	956.7	2.2	2.07	0.52
EOH				
25323				
255.0	257.7	2.7	0.82	0.19
257.7	262.7	5.0	0.50	0.17
262.7	267.7	5.0	0.90	0.39
267.7	269.7	2.0	0.33	0.27
269.7	274.7	5.0	0.14	0.11
274.7	279.0	4.3	0.92	0.05
EOH				
25325				
668.9	673.9	5.0	0.32	0.20

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From	To	Length	Cu %	Ni %
673.9	676.0	2.1	0.37	0.26
676.0	678.5	2.5	0.59	0.35
678.5	683.5	5.0	0.29	0.15
683.5	688.5	5.0	0.28	0.16
688.5	693.5	5.0	0.33	0.14
693.5	698.5	5.0	0.49	0.13
698.5	703.5	5.0	0.42	0.15
703.5	708.5	5.0	0.44	0.07
708.5	713.4	4.9	0.20	0.15
713.4	714.5	1.1	0.33	0.17
714.5	714.8	0.3	0.26	0.14
714.8	719.5	4.7	0.26	0.14
719.5	721.5	2.0	0.14	0.13
721.5	723.7	2.2	0.94	1.00
EOH				
28818				
1279.0	1285.0	6.0	0.25	0.15
1285.0	1293.0	8.0	0.40	0.22
1293.0	1300.0	7.0	0.33	0.20
1300.0	1310.0	10.0	0.25	0.08
1310.0	1313.0	3.0	0.29	0.40
1313.0	1319.0	6.0	0.15	0.07
1319.0	1325.0	6.0	0.35	0.12
1325.0	1330.0	5.0	0.61	0.20
1330.0	1335.0	5.0	0.30	0.23
1335.0	1338.0	3.0	0.50	0.04
EOH				
33234				
1758.4	1760.9	2.5	1.02	0.17
1760.9	1764.0	3.1	0.34	0.22
1764.0	1766.4	2.4	0.12	0.10
1766.4	1768.5	2.1	0.40	0.24
1768.5	1770.2	1.7	0.36	0.15
1770.2	1771.7	1.5	0.38	0.21
1771.7	1774.7	3.0	0.20	0.17
1774.7	1776.3	1.6	0.70	0.21
1776.3	1777.7	1.4	0.45	0.17
1777.7	1779.8	2.1	0.45	0.17
1779.8	1781.3	1.5	1.18	0.36
1781.3	1783.4	2.1	0.22	0.10
1783.4	1786.4	3.0	1.10	0.20
1786.4	1788.2	1.8	0.34	0.15
1788.2	1791.8	3.6	0.28	0.16
1791.8	1793.5	1.7	0.49	0.28
1793.5	1795.5	2.0	0.13	0.13
1795.5	1797.6	2.1	0.90	0.34
EOH				
26871				
205.1	205.8	0.7	0.19	0.13
205.8	206.8	1.0	0.18	0.06
206.8	208.8	2.0	1.22	0.43
208.8	211.1	2.3	1.21	0.25

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From	To	Length	Cu %	Ni %
211.1	213.3	2.2	0.52	0.75
EOH				
26853				
334.1	335.8	1.7	1.15	0.36
335.8	342.6	6.8	0.15	0.23
342.6	344.3	1.7	0.08	0.06
344.3	348.1	3.8	0.22	0.23
348.1	353.7	5.6	0.46	0.29
353.7	357.4	3.7	0.63	0.15
EOH				
26855				
480.4	484.4	4.0	0.56	0.17
484.4	489.0	4.6	0.33	0.13
489.0	492.3	3.3	1.17	0.13
492.3	502.3	10.0	0.25	0.11
502.3	507.2	4.9	0.25	0.12
507.2	513.5	6.3	0.15	0.13
513.5	519.6	6.1	0.18	0.13
519.6	522.6	3.0	0.73	0.18
522.6	526.3	3.7	0.33	0.16
526.3	528.1	1.8	0.91	0.31
528.1	531.4	3.3	0.32	0.96
531.4	533.6	2.2	0.61	0.29
533.6	538.1	4.5	0.66	0.43
538.1	539.4	1.3	1.81	0.49
539.4	541.9	2.5	0.42	1.00
541.9	545.7	3.8	1.00	0.62
545.7	546.8	1.1	4.21	0.49
546.8	548.1	1.3	1.69	0.07
EOH				
24089				
127.3	131.2	3.9	0.78	0.03
131.2	131.6	0.4	0.73	0.02
131.6	138.8	7.2	0.68	0.02
138.8	143.0	4.2	0.20	0.02
143.0	144.5	1.5	0.20	0.02
144.5	151.1	6.6	0.20	0.02
151.1	151.6	0.5	0.20	0.02
151.6	166.7	15.1	0.20	0.02
166.7	167.2	0.5	0.20	0.02
167.2	177.2	10.0	0.20	0.02
177.2	177.6	0.4	0.20	0.02
177.6	179.5	1.9	0.20	0.02
179.5	180.0	0.5	0.20	0.02
180.0	181.8	1.8	0.20	0.02
181.8	182.2	0.4	0.20	0.02
182.2	192.7	10.5	0.20	0.02
192.7	193.3	0.6	0.20	0.02
193.3	200.5	7.2	0.29	0.09
200.5	201.2	0.7	0.16	0.07
201.2	208.0	6.8	0.04	0.06
208.0	208.8	0.8	0.26	0.13

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From	To	Length	Cu %	Ni %
208.8	209.5	0.7	0.48	0.21
209.5	211.0	1.5	0.48	0.21
211.0	216.7	5.7	0.11	0.08
216.7	217.0	0.3	1.41	0.31
217.0	218.5	1.5	2.72	0.54
218.5	218.8	0.3	2.48	0.61
218.8	221.2	2.4	2.24	0.68
221.2	222.9	1.7	1.74	0.82
222.9	223.2	0.3	2.42	0.65
223.2	224.6	1.4	3.10	0.49
224.6	225.0	0.4	3.67	0.54
225.0	226.8	1.8	4.24	0.60
226.8	230.2	3.4	1.98	0.81
230.2	230.7	0.5	1.01	0.41
EOH				
25303				
297.8	299.2	1.4	1.04	0.57
299.2	300.7	1.5	0.72	1.27
300.7	308.2	7.5	0.34	0.32
308.2	310.0	1.8	0.78	0.92
310.0	319.0	9.0	0.68	0.15
319.0	320.8	1.8	0.23	0.10
320.8	325.0	4.2	0.66	0.56
325.0	325.3	0.3	0.38	0.50
325.3	326.9	1.6	0.10	0.43
326.9	335.0	8.1	0.05	0.04
335.0	335.5	0.5	0.08	0.04
335.5	343.4	7.9	0.11	0.04
343.4	344.1	0.7	0.62	0.22
344.1	345.2	1.1	1.12	0.38
345.2	346.3	1.1	2.78	0.84
346.3	349.0	2.7	1.25	0.20
349.0	349.6	0.6	0.40	1.49
349.6	354.4	4.8	0.76	0.59
354.4	360.0	5.6	0.40	0.10
360.0	385.7	25.7	0.20	0.02
385.7	385.9	0.2	0.20	0.02
385.9	396.1	10.2	0.20	0.02
396.1	396.5	0.4	0.20	0.02
396.5	398.4	1.9	0.20	0.02
398.4	398.8	0.4	0.20	0.02
398.8	405.0	6.2	0.20	0.02
405.0	405.6	0.6	0.20	0.02
405.6	410.0	4.4	0.20	0.02
410.0	420.5	10.5	0.17	0.09
420.5	430.8	10.3	0.56	0.28
430.8	431.7	0.9	2.20	0.45
431.7	436.4	4.7	3.84	0.61
436.4	437.9	1.5	0.39	0.07
437.9	442.9	5.0	2.86	0.77
442.9	446.5	3.6	1.81	0.27
446.5	450.0	3.5	2.02	0.66

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From	To	Length	Cu %	Ni %
EOH				
25306				
583.9	585.3	1.4	1.36	0.61
585.3	586.2	0.9	2.74	0.39
586.2	587.6	1.4	4.22	0.17
587.6	589.9	2.3	0.68	1.02
589.9	593.8	3.9	2.74	0.59
593.8	596.0	2.2	0.25	0.15
596.0	597.5	1.5	2.51	0.68
597.5	598.6	1.1	1.37	0.36
598.6	602.5	3.9	0.23	0.05
602.5	603.3	0.8	1.53	0.32
EOH				
25329				
955.9	957.2	1.3	0.09	0.03
957.2	959.0	1.8	1.46	0.99
959.0	961.5	2.5	1.84	0.54
961.5	963.0	1.5	1.78	0.64
963.0	964.4	1.4	1.08	0.46
EOH				
26867				
126.2	127.3	1.1	0.92	0.34
127.3	127.5	0.2	1.80	0.31
127.5	129.1	1.6	2.68	0.27
129.1	136.9	7.8	0.09	0.02
136.9	137.9	1.0	0.33	0.09
137.9	139.0	1.1	1.67	0.28
139.0	140.3	1.3	2.00	0.46
140.3	141.1	0.8	0.25	0.47
141.1	143.5	2.4	1.06	0.87
143.5	146.0	2.5	0.29	0.19
146.0	146.9	0.9	9.84	0.55
146.9	147.6	0.7	0.63	0.34
EOH				
26810				
289.8	290.4	0.6	0.76	0.08
290.4	290.7	0.3	0.76	0.08
290.7	292.6	1.9	0.01	0.02
292.6	294.6	2.0	0.40	1.45
294.6	299.6	5.0	0.56	Nil
EOH				
26869				
423.1	426.5	3.4	0.77	0.44
426.5	433.9	7.4	0.53	0.21
433.9	438.9	5.0	0.13	0.05
438.9	453.9	15.0	0.20	0.02
453.9	458.9	5.0	0.05	Nil
458.9	459.4	0.5	0.02	1.08
459.4	459.8	0.4	0.02	1.08
459.8	467.7	7.9	0.01	0.05
467.7	468.8	1.1	2.16	1.11
EOH				

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From	To	Length	Cu %	Ni %
26816				
195.5	198.2	2.7	1.16	0.64
198.2	201.7	3.5	2.72	0.53
201.7	202.7	1.0	0.70	0.59
202.7	207.0	4.3	2.17	0.28
207.0	208.9	1.9	0.33	0.16
208.9	213.2	4.3	0.80	0.73
213.2	218.2	5.0	0.07	0.01
218.2	219.5	1.3	0.20	0.02
219.5	223.0	3.5	0.20	0.02
223.0	233.8	10.8	0.20	0.02
233.8	236.0	2.2	0.05	0.04
236.0	238.8	2.8	0.05	0.04
238.8	244.9	6.1	3.52	0.89
EOH				
25379				
358.9	363.9	5.0	0.47	0.15
363.9	367.7	3.8	0.50	0.19
367.7	370.3	2.6	0.86	0.39
370.3	373.1	2.8	2.41	0.27
373.1	376.5	3.4	0.18	0.54
376.5	381.5	5.0	0.05	0.03
381.5	385.1	3.6	0.05	0.02
385.1	393.1	8.0	0.05	0.02
393.1	398.1	5.0	0.05	0.01
398.1	400.1	2.0	8.62	0.45
400.1	401.1	1.0	0.08	0.03
401.1	406.0	4.9	5.40	0.81
406.0	409.1	3.1	3.84	0.78
409.1	411.8	2.7	0.15	0.21
411.8	414.1	2.3	2.85	0.21
414.1	416.8	2.7	0.10	0.01
416.8	418.7	1.9	4.38	0.57
EOH				
26819				
441.3	446.3	5.0	0.85	0.12
446.3	451.3	5.0	0.48	0.06
451.3	456.3	5.0	0.41	0.16
456.3	460.5	4.2	0.56	0.15
460.5	463.0	2.5	0.04	0.02
463.0	471.8	8.8	0.03	0.02
471.8	474.1	2.3	0.01	0.03
474.1	476.8	2.7	1.36	0.59
476.8	481.8	5.0	0.06	0.02
481.8	483.5	1.7	0.05	0.03
483.5	487.4	3.9	2.69	0.83
487.4	488.8	1.4	0.02	0.04
488.8	489.7	0.9	11.38	0.28
489.7	491.0	1.3	0.73	0.06
491.0	492.5	1.5	5.33	0.40
492.5	497.5	5.0	0.28	0.03
497.5	502.0	4.5	0.02	0.01

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From	To	Length	Cu %	Ni %
502.0	503.0	1.0	0.02	0.01
503.0	512.5	9.5	0.02	0.01
512.5	517.5	5.0	0.01	0.02
517.5	522.0	4.5	0.29	0.04
522.0	523.7	1.7	2.33	0.64
EOH				
28811				
591.0	596.0	5.0	0.40	0.05
596.0	600.0	4.0	0.32	0.34
600.0	605.0	5.0	0.54	0.18
605.0	610.0	5.0	0.16	0.16
610.0	615.0	5.0	1.82	0.69
615.0	620.0	5.0	1.12	0.89
620.0	624.5	4.5	0.21	0.08
624.5	630.0	5.5	3.06	0.79
630.0	635.0	5.0	2.56	0.95
635.0	640.0	5.0	1.88	0.94
640.0	646.5	6.5	2.08	0.88
646.5	648.5	2.0	3.24	0.18
648.5	657.0	8.5	1.28	0.53
657.0	665.2	8.2	1.88	0.96
EOH				
28813				
1002.0	1002.5	0.5	3.96	0.84
1002.5	1009.2	6.7	0.16	0.02
1009.2	1009.5	0.3	0.16	0.02
1009.5	1010.5	1.0	4.38	0.81
1010.5	1014.0	3.5	0.92	0.90
1014.0	1018.0	4.0	2.80	0.85
1018.0	1022.5	4.5	Tr	0.03
1022.5	1024.5	2.0	1.04	1.03
EOH				
26868				
152.7	154.0	1.3	15.30	0.44
154.0	154.9	0.9	9.55	0.30
154.9	157.2	2.3	4.10	0.57
157.2	159.3	2.1	0.19	0.11
159.3	161.6	2.3	0.48	0.91
161.6	162.9	1.3	2.84	0.19
162.9	165.1	2.2	0.18	0.04
165.1	166.3	1.2	3.18	0.66
166.3	167.5	1.2	0.23	0.04
167.5	169.5	2.0	2.69	0.13
169.5	170.0	0.5	1.45	0.09
170.0	172.8	2.8	0.20	0.04
172.8	173.7	0.9	3.68	0.26
173.7	176.9	3.2	0.62	0.12
176.9	177.8	0.9	1.16	0.66
177.8	178.9	1.1	4.79	0.41
178.9	184.9	6.0	0.17	0.04
184.9	186.7	1.8	0.82	0.73
186.7	188.8	2.1	0.56	0.12

Horden Lake Deposit
Drill Hole Assay Data
January 29, 1993

From	To	Length	Cu %	Ni %
188.8	190.1	1.3	1.66	0.29
190.1	191.9	1.8	4.30	0.33
191.9	193.1	1.2	1.14	0.75
193.1	194.6	1.5	1.78	0.62
194.6	195.8	1.2	2.66	1.13
195.8	197.0	1.2	8.40	0.71
197.0	199.3	2.3	1.73	0.22
199.3	202.0	2.7	1.28	0.71
EOH				
25378				
326.1	327.4	1.3	3.86	0.69
327.4	331.3	3.9	0.89	0.32
331.3	334.5	3.2	0.13	0.04
334.5	336.8	2.3	1.28	0.39
336.8	340.4	3.6	2.02	0.54
340.4	350.4	10.0	0.14	0.05
350.4	357.5	7.1	0.23	0.05
357.5	359.3	1.8	1.72	0.64
359.3	363.4	4.1	0.27	0.04
363.4	365.3	1.9	2.74	0.89
365.3	368.2	2.9	1.30	0.06
EOH				
26870				
437.8	439.9	2.1	1.52	0.50
439.9	446.8	6.9	0.33	0.03
446.8	447.9	1.1	3.06	0.25
447.9	451.8	3.9	0.11	0.02
451.8	453.0	1.2	1.55	0.22
453.0	454.4	1.4	1.79	0.29
EOH				
24047				
209.3	211.9	2.6	1.84	0.86
211.9	212.5	0.6	5.30	0.72
212.5	213.8	1.3	2.22	0.94
213.8	216.9	3.1	5.51	0.26
216.9	217.3	0.4	4.51	0.41
217.3	219.7	2.4	3.52	0.56
219.7	220.0	0.3	3.66	0.44
220.0	222.1	2.1	3.80	0.32
222.1	222.5	0.4	2.95	0.28
222.5	223.9	1.4	2.11	0.24
223.9	224.3	0.4	3.27	0.23
224.3	227.7	3.4	4.43	0.23
227.7	231.1	3.4	4.24	0.66
EOH				
25302				
393.1	396.8	3.7	3.26	0.75
396.8	397.2	0.4	2.77	0.56
397.2	399.4	2.2	2.27	0.37
399.4	401.1	1.7	0.63	0.13
401.1	403.4	2.3	0.63	0.13
EOH				

Horden Lake Deposit
Drill Hole Assay Data
January 29, 1993

From	To	Length	Cu %	Ni %
26856				
515.2	516.6	1.4	0.07	0.04
516.6	518.1	1.5	0.49	0.07
518.1	520.9	2.8	1.25	0.09
520.9	522.3	1.4	1.06	0.52
522.3	523.7	1.4	3.04	0.46
EOH				
25308				
652.6	655.2	2.6	0.50	0.08
655.2	657.3	2.1	1.71	0.39
657.3	658.6	1.3	0.30	0.86
658.6	661.0	2.4	1.21	0.35
EOH				
26827				
953.9	958.8	4.9	0.02	0.02
958.8	961.3	2.5	1.32	0.81
961.3	962.6	1.3	1.72	0.04
EOH				
26865				
197.4	198.3	0.9	0.52	0.90
198.3	201.1	2.8	2.68	0.33
201.1	209.8	8.7	0.04	0.01
209.8	211.5	1.7	2.82	0.49
211.5	212.9	1.4	0.02	0.01
212.9	214.6	1.7	2.70	0.69
214.6	215.5	0.9	4.14	0.84
215.5	216.9	1.4	1.02	0.85
216.9	218.9	2.0	1.47	0.88
218.9	220.1	1.2	1.92	0.91
220.1	224.6	4.5	4.61	0.66
224.6	227.8	3.2	0.02	0.01
227.8	229.9	2.1	2.00	1.02
EOH				
26859				
337.4	339.2	1.8	2.60	0.57
339.2	340.9	1.7	1.38	0.19
340.9	343.5	2.6	2.28	0.88
343.5	344.1	0.6	3.60	0.82
344.1	347.1	3.0	4.92	0.76
347.1	348.9	1.8	2.50	0.98
348.9	351.9	3.0	5.28	0.31
351.9	353.2	1.3	4.78	0.58
353.2	354.4	1.2	1.58	0.97
354.4	355.1	0.7	0.52	1.09
355.1	359.0	3.9	2.26	0.95
EOH				
26875				
434.1	437.9	3.8	0.42	0.16
437.9	440.4	2.5	1.30	0.19
440.4	441.7	1.3	1.58	0.74
441.7	442.8	1.1	2.88	0.61
442.8	444.4	1.6	1.00	0.77

Horden Lake Deposit
Drill Hole Assay Data
January 29, 1993

From	To	Length	Cu %	Ni %
444.4	445.5	1.1	0.58	0.12
445.5	448.2	2.7	1.20	0.94
448.2	449.7	1.5	1.74	0.74
EOH				
26821				
257.3	260.4	3.1	0.01	0.02
260.4	265.4	5.0	0.01	0.02
265.4	266.6	1.2	0.15	0.10
EOH				
26826				
433.5	436.0	2.5	2.76	0.72
436.0	437.5	1.5	0.22	0.03
437.5	442.4	4.9	0.02	0.01
442.4	442.5	0.1	0.02	0.01
442.5	445.7	3.2	0.05	0.02
445.7	450.7	5.0	0.84	0.17
450.7	457.6	6.9	0.04	0.01
EOH				
24048				
435.4	436.7	1.3	0.07	0.04
436.7	437.4	0.7	3.65	0.28
437.4	438.5	1.1	7.22	0.51
438.5	438.8	0.3	5.50	0.52
438.8	443.4	4.6	3.78	0.53
EOH				
25310				
560.6	562.5	1.9	0.20	0.02
562.5	564.0	1.5	0.20	0.02
564.0	566.4	2.4	0.20	0.02
566.4	567.0	0.6	0.20	0.02
567.0	570.0	3.0	0.20	0.02
570.0	571.4	1.4	0.02	0.03
571.4	574.6	3.2	3.08	0.74
EOH				
28819				
1007.5	1009.5	2.0	2.85	0.53
1009.5	1013.0	3.5	0.22	0.04
1013.0	1016.0	3.0	0.07	0.02
1016.0	1018.5	2.5	0.07	0.02
1018.5	1019.6	1.1	3.38	0.14
EOH				
26823				
510.3	513.3	3.0	0.17	0.15
513.3	517.0	3.7	0.22	0.10
517.0	522.5	5.5	0.15	0.12
EOH				
25301				
215.1	219.9	4.8	0.18	0.08
219.9	221.2	1.3	0.10	1.22
221.2	222.4	1.2	0.12	0.12
222.4	223.2	0.8	0.20	1.50
EOH				

Horden Lake Deposit
Drill Hole Assay Data
January 29, 1993

From	To	Length	Cu %	Ni %
33240				
317.7	320.2	2.5	0.19	0.25
320.2	321.1	0.9	0.37	0.39
321.1	323.0	1.9	0.42	0.22
323.0	323.7	0.7	1.42	0.18
323.7	326.0	2.3	0.39	0.58
EOH				
24049				
223.7	226.3	2.6	0.56	0.86
226.3	231.9	5.6	1.02	1.72
231.9	241.5	9.6	0.96	0.41
241.5	242.1	0.6	0.24	1.70
242.1	243.7	1.6	0.10	0.67
243.7	244.1	0.4	0.36	0.72
244.1	250.8	6.7	0.61	0.77
250.8	253.8	3.0	0.12	0.10
253.8	255.5	1.7	1.25	0.87
255.5	260.0	4.5	0.12	0.02
260.0	267.1	7.1	0.12	0.02
267.1	268.3	1.2	0.12	0.02
268.3	270.5	2.2	0.38	0.24
270.5	272.2	1.7	1.44	0.52
EOH				
33242				
646.5	652.7	6.2	0.31	0.76
652.7	657.7	5.0	0.12	0.17
657.7	661.9	4.2	0.33	0.39
661.9	665.4	3.5	0.10	0.14
EOH				
33246				
291.0	297.0	6.0	0.68	0.86
297.0	299.5	2.5	1.31	0.42
299.5	303.1	3.6	0.47	0.43
303.1	305.0	1.9	0.55	0.11
305.0	315.5	10.5	0.02	0.02
315.5	316.1	0.6	1.03	0.47
EOH				
33261				
137.5	141.5	4.0	0.20	0.02
141.5	142.2	0.7	0.20	0.02
142.2	143.0	0.8	0.53	Nil
143.0	145.2	2.2	0.09	Nil
145.2	145.7	0.5	1.29	Nil
EOH				
26866				
172.7	174.7	2.0	0.12	0.13
174.7	177.1	2.4	0.15	0.84
177.1	179.0	1.9	0.04	0.13
179.0	181.8	2.8	0.54	0.69
EOH				

APPENDIX III

HORDEN LAKE DEPOSIT
MINERAL RESERVE COMPOSITES

Horden Lake Deposit
Mineral Reserve Composites
January 29, 1993

		High Grade					Low Grade				
Section	Hole #	From	To	Length	Cu %	Ni %	From	To	Length	Cu %	Ni %
8000N	26820	126.2	136.7	10.5	0.51	0.16	101.0	158.7	57.7	0.40	0.19
8400N	24067	216.0	226.0	10.0	0.57	0.19	198.9	226.0	27.1	0.36	0.12
8400N	33235	616.9	627.3	10.4	0.71	0.16	559.0	627.3	68.3	0.39	0.17
9200N	33241	364.3	372.8	8.5	0.35	0.04	364.3	372.8	8.5	0.35	0.04
9200N	33248	891.0	900.0	9.0	0.73	0.19	887.7	900.0	12.3	0.66	0.17
9400N	33236	290.6	311.9	21.3	1.54	0.26	276.2	311.9	35.7	1.05	0.28
9400N	33244	778.9	795.7	16.8	2.22	0.45	778.9	795.7	16.8	2.22	0.45
9600N	24066	163.3	173.2	9.9	1.15	0.62	163.3	206.3	43.0	0.77	0.23
9600N	33237	755.3	764.8	9.5	1.07	0.31	733.0	764.8	31.8	0.60	0.20
9800N	33239	500.6	516.4	15.8	1.36	0.40	500.6	516.4	15.8	1.36	0.40
10000N	24029	Hole abandoned - no intersection.									
10000N	24071	62.5	71.0	8.5	1.27	0.39	39.0	71.0	32.0	0.60	0.14
10000N	24064	197.0	206.4	9.4	1.25	0.52	184.7	206.4	21.7	0.82	0.33
10000N	26818	413.9	423.7	9.8	0.89	0.24	402.6	437.9	35.3	0.58	0.10
10400N	24065	164.9	175.0	10.1	0.84	0.08	154.3	208.7	54.4	0.47	0.11
10600N	26858	208.7	223.9	15.2	1.41	0.14	192.3	227.7	35.4	0.82	0.07
10800N	26815	194.0	208.5	14.5	1.59	0.97	132.9	210.2	77.3	0.56	0.29
10800N	26825	708.2	717.4	9.2	1.10	0.63	690.1	717.4	27.3	0.73	0.37
11000N	26857	345.2	354.6	9.4	0.43	0.04	345.2	354.6	9.4	0.43	0.04
11200N	24068	164.5	177.5	13.0	2.33	0.22	159.3	212.2	52.9	1.04	0.27
11200N	25313	426.5	439.0	12.5	0.43	0.44	426.5	439.0	12.5	0.43	0.44
11200N	25315	750.5	758.8	8.3	0.94	0.24	734.0	775.4	41.4	0.55	0.21
11400N	26860	280.6	292.7	12.1	0.31	0.10	280.6	292.7	12.1	0.31	0.10
11600N	24088	204.0	215.5	11.5	0.40	0.07	204.0	215.5	11.5	0.40	0.07
11600N	25311	357.6	366.0	8.4	0.61	0.47	351.2	366.0	14.8	0.49	0.38
11600N	26812	615.9	625.1	9.2	0.29	0.34	615.9	625.1	9.2	0.29	0.34
11800N	26874	194.0	203.6	9.6	0.74	0.27	194.0	226.8	32.8	0.54	0.24
11800N	28814	1022.0	1054.0	32.0	0.98	0.29	1022.0	1054.0	32.0	0.98	0.29
11800N	33228	1718.7	1738.5	19.8	0.92	0.31	1718.7	1738.5	19.8	0.92	0.31
11900N	26861	226.2	260.9	34.7	1.56	0.34	215.1	260.9	45.8	1.36	0.32
12000N	24069	Hole abandoned - no intersection.									
12000N	24070	168.5	203.8	35.3	1.20	0.37	156.1	203.8	47.7	1.05	0.33
12000N	24087	348.1	369.1	21.0	1.03	0.41	348.1	372.5	24.4	0.95	0.37
12000N	26854	597.7	624.2	26.5	0.53	0.30	537.2	624.2	87.0	0.39	0.20
12000N	25317	836.0	903.3	67.3	0.58	0.20	836.0	903.3	67.3	0.58	0.20
12100N	26852	268.2	277.3	9.1	1.35	0.40	176.0	277.3	101.3	0.69	0.20
12200N	25324	222.0	257.6	35.6	1.49	0.21	222.0	271.8	49.8	1.16	0.16
12200N	26850	435.4	446.9	11.5	1.96	0.20	338.0	469.5	131.5	0.66	0.18
12200N	25327	577.5	596.9	19.4	1.86	0.26	511.8	605.6	93.8	0.84	0.19
12200N	28812	813.5	905.0	91.5	1.60	0.23	813.5	905.0	91.5	1.60	0.23
12200N	28816	1301.5	1360.3	58.8	0.99	0.19	1301.5	1365.0	63.5	0.96	0.18
12200N	33232	1889.7	1898.6	8.9	0.10	0.11	1889.7	1898.6	8.9	0.10	0.11
12300N	26873	189.0	204.6	15.6	1.24	0.31	141.7	204.6	62.9	0.70	0.21
12300N	26849	250.4	285.7	35.3	1.74	0.37	206.5	285.7	79.2	0.98	0.27
12400N	24085	199.1	232.3	33.2	2.61	0.44	185.6	232.3	46.7	2.01	0.38
12400N	25304	448.7	465.4	16.7	3.06	0.35	374.4	465.4	91.0	0.95	0.17
12400N	26851	656.3	666.4	10.1	1.73	0.29	560.6	666.4	105.8	0.58	0.19
12400N	25309	882.5	893.0	10.5	1.31	0.47	813.7	903.2	89.5	0.46	0.22
12500N	26872	146.0	166.8	20.8	2.65	0.44	78.3	166.8	88.5	0.96	0.25
12500N	26828	224.6	252.1	27.5	1.64	0.44	150.4	252.1	101.7	0.73	0.24

Zones with Cu >= 1.5% shaded.

Horden Lake Deposit
Mineral Reserve Composites
January 29, 1993

		High Grade					Low Grade				
Section	Hole #	From	To	Length	Cu %	Ni %	From	To	Length	Cu %	Ni %
12600N	25319	237.0	247.3	10.3	1.21	0.42	176.4	247.3	70.9	0.57	0.22
12600N	25321	570.6	582.0	11.4	1.13	0.86	538.0	582.0	44.0	0.62	0.36
12600N	28817	871.4	889.0	17.6	0.66	0.27	871.4	889.0	17.6	0.66	0.27
12600N	26863	1276.9	1309.0	32.1	1.14	0.23	1273.4	1316.6	43.2	0.95	0.21
12600N	33227	1672.0	1692.8	20.8	0.99	0.28	1672.0	1697.8	25.8	0.90	0.25
12800N	25305	442.2	454.2	12.0	1.82	0.91	414.2	454.2	40.0	0.82	0.35
12800N	25307	947.8	956.7	8.9	2.68	0.45	938.8	956.7	17.9	1.56	0.34
13000N	25323	255.0	279.0	24.0	0.61	0.19	255.0	279.0	24.0	0.61	0.19
13000N	25325	714.8	723.7	8.9	0.40	0.35	676.0	723.7	47.7	0.37	0.19
13000N	28818	1325.0	1338.0	13.0	0.47	0.17	1285.0	1338.0	53.0	0.34	0.16
13000N	33234	1777.7	1786.4	8.7	0.74	0.20	1758.4	1797.6	39.2	0.49	0.19
13100N	26871	205.1	213.3	8.2	0.81	0.39	205.1	213.3	8.2	0.81	0.39
13100N	26853	348.1	357.4	9.3	0.53	0.23	334.1	357.4	23.3	0.38	0.23
13100N	26855	526.3	548.1	21.8	0.96	0.57	480.4	548.1	67.7	0.56	0.27
13200N	24089	216.7	230.7	14.0	2.50	0.66	209.5	230.7	21.2	1.71	0.47
13200N	25303	430.8	450.0	19.2	2.53	0.55	420.5	450.0	29.5	1.84	0.45
13200N	25306	583.9	597.5	13.6	1.97	0.55	583.9	603.3	19.4	1.57	0.43
13200N	25329	955.9	964.4	8.5	1.36	0.56	955.9	964.4	8.5	1.36	0.56
13300N	26867	137.9	146.9	9.0	1.86	0.48	126.2	147.6	21.4	1.12	0.27
13300N	26810	289.8	299.6	9.8	0.44	0.31	289.8	299.6	9.8	0.44	0.31
13300N	26869	459.4	468.8	9.4	0.26	0.22	459.4	468.8	9.4	0.26	0.22
13400N	26816	236.0	244.9	8.9	2.43	0.62	195.5	244.9	49.4	1.05	0.30
13400N	25379	398.1	418.7	20.6	3.46	0.46	358.9	418.7	59.8	1.44	0.25
13400N	26819	474.1	492.5	18.4	1.83	0.32	441.3	492.5	51.2	0.88	0.17
13400N	28811	610.0	665.2	55.2	1.83	0.73	591.0	665.2	74.2	1.45	0.59
13400N	28813	1009.2	1018.0	8.8	2.14	0.84	1002.0	1024.5	22.5	1.07	0.45
13500N	26868	152.7	202.0	49.3	2.11	0.34	152.7	202.0	49.3	2.11	0.34
13500N	25378	326.1	340.4	14.3	1.34	0.36	326.1	368.2	42.1	0.84	0.22
13500N	26870	437.8	454.4	16.6	0.82	0.14	437.8	454.4	16.6	0.82	0.14
13600N	24047	209.3	231.1	21.8	3.77	0.49	209.3	231.1	21.8	3.77	0.49
13600N	25302	393.1	401.1	8.0	2.40	0.50	393.1	403.4	10.3	2.01	0.42
13600N	26856	515.2	523.7	8.5	1.19	0.21	515.2	523.7	8.5	1.19	0.21
13600N	25308	652.6	661.0	8.4	0.97	0.36	652.6	661.0	8.4	0.97	0.36
13600N	26827	953.9	962.6	8.7	0.65	0.25	953.9	962.6	8.7	0.65	0.25
13700N	26865	209.8	229.9	20.1	2.23	0.60	197.4	229.9	32.5	1.64	0.42
13700N	26859	337.4	359.0	21.6	3.13	0.72	337.4	359.0	21.6	3.13	0.72
13700N	26875	437.9	449.7	11.8	1.40	0.60	434.1	449.7	15.6	1.16	0.50
13800N	26821	257.3	266.6	9.3	0.03	0.03	257.3	266.6	9.3	0.03	0.03
13800N	26826	442.4	450.7	8.3	0.53	0.11	433.5	450.7	17.2	0.68	0.16
14000N	24048	435.4	443.4	8.0	3.70	0.43	435.4	443.4	8.0	3.70	0.43
14000N	25310	566.4	574.6	8.2	1.29	0.30	566.4	574.6	8.2	1.29	0.30
14000N	28819	1007.5	1019.6	12.1	0.87	0.12	1007.5	1019.6	12.1	0.87	0.12
14200N	26823	510.3	522.5	12.2	0.18	0.12	510.3	522.5	12.2	0.18	0.12
14800N	25301	215.1	223.2	8.1	0.16	0.41	215.1	223.2	8.1	0.16	0.41
15000N	33240	317.7	326.0	8.3	0.42	0.34	317.7	326.0	8.3	0.42	0.34
15200N	24049	226.3	241.5	15.2	0.98	0.89	223.7	272.2	48.5	0.58	0.55
15200N	33242	646.5	665.4	18.9	0.23	0.41	646.5	665.4	18.9	0.23	0.41
15400N	33246	291.0	299.5	8.5	0.87	0.73	291.0	305.0	14.0	0.72	0.57
15600N	33261	137.5	145.7	8.2	0.27	Nil	137.5	145.7	8.2	0.27	Nil
16000N	26866	172.7	181.8	9.1	0.24	0.49	172.7	181.8	9.1	0.24	0.49

Zones with Cu >= 1.5% shaded.

APPENDIX IV

HORDEN LAKE DEPOSIT
LONGITUDINAL RESERVE ESTIMATE

Horden Lake Deposit
Longitudinal Reserve Estimate

Section	Hole #	From	To	Length	Cu %	Ni %	TW (ft)	Tons	Category
8000N	26820	126.2	136.7	10.5	0.51	0.16	South of Reserve.		Not In Reserve
8400N	24067	216.0	226.0	10.0	0.57	0.19	South of Reserve.		Not In Reserve
8400N	33235	616.9	627.3	10.4	0.71	0.16	South of Reserve.		Not In Reserve
9200N	33241	364.3	372.8	8.5	0.35	0.04	8.0	80,877	Below Cutoff
9200N	**33248**	**891.0**	**900.0**	**9.0**	**0.73**	**0.19**	**8.0**	**80,372**	**Possible**
9400N	**33236**	**290.6**	**311.9**	**21.3**	**1.54**	**0.26**	**20.7**	**176,156**	**Possible**
9400N	**33244**	**778.9**	**795.7**	**16.8**	**2.22**	**0.45**	**15.0**	**114,786**	**Possible**
9600N	**24066**	**163.3**	**173.2**	**9.9**	**1.15**	**0.62**	**9.8**	**82,916**	**Possible**
9600N	**33237**	**755.3**	**764.8**	**9.5**	**1.07**	**0.31**	**9.0**	**90,391**	**Possible**
9800N	**33239**	**500.6**	**516.4**	**15.8**	**1.36**	**0.40**	**15.6**	**152,111**	**Possible**
10000N	24029	Hole abandoned - no intersection.							Not In Reserve
10000N	**24071**	**62.5**	**71.0**	**8.5**	**1.27**	**0.39**	**8.0**	**20,870**	**Possible**
10000N	**24064**	**197.0**	**206.4**	**9.4**	**1.25**	**0.52**	**9.3**	**66,977**	**Possible**
10000N	**26818**	**413.9**	**423.7**	**9.8**	**0.89**	**0.24**	**8.0**	**76,332**	**Possible**
10400N	**24065**	**164.9**	**175.0**	**10.1**	**0.84**	**0.08**	**10.0**	**76,823**	**Possible**
10600N	**26858**	**208.7**	**223.9**	**15.2**	**1.41**	**0.14**	**12.5**	**100,818**	**Possible**
10800N	**26815**	**194.0**	**208.5**	**14.5**	**1.59**	**0.97**	**11.9**	**98,062**	**Possible**
10800N	**26825**	**708.2**	**717.4**	**9.2**	**1.10**	**0.63**	**8.0**	**101,034**	**Possible**
11000N	26857	345.2	354.6	9.4	0.43	0.04	8.0	61,925	Below Cutoff
11200N	**24068**	**164.5**	**177.5**	**13.0**	**2.33**	**0.22**	**12.9**	**89,795**	**Possible**
11200N	25313	426.5	439.0	12.5	0.43	0.44	12.1	72,057	Below Cutoff
11200N	**25315**	**750.5**	**758.8**	**8.3**	**0.94**	**0.24**	**8.0**	**74,326**	**Possible**
11400N	26860	280.6	292.7	12.1	0.31	0.10	11.4	81,793	Below Cutoff
11600N	24088	204.0	215.5	11.5	0.40	0.07	11.3	65,650	Below Cutoff
11600N	**25311**	**357.6**	**366.0**	**8.4**	**0.61**	**0.47**	**8.0**	**59,532**	**Possible**
11600N	26812	615.9	625.1	9.2	0.29	0.34	8.0	98,239	Below Cutoff
11800N	**26874**	**194.0**	**203.6**	**9.6**	**0.74**	**0.27**	**8.0**	**34,763**	**Possible**
11800N	**28814**	**1022.0**	**1054.0**	**32.0**	**0.98**	**0.29**	**30.4**	**270,841**	**Possible**
11800N	33228	1718.7	1738.5	19.8	0.92	0.31	Below 1,000 feet.		Not In Reserve
11900N	**26861**	**226.2**	**260.9**	**34.7**	**1.56**	**0.34**	**31.0**	**83,971**	**Probable**
12000N	24069	Hole abandoned - no intersection.							Not In Reserve
12000N	**24070**	**168.5**	**203.8**	**35.3**	**1.20**	**0.37**	**33.6**	**118,649**	**Probable**
12000N	**24087**	**348.1**	**369.1**	**21.0**	**1.03**	**0.41**	**20.6**	**74,498**	**Probable**
12000N	**26854**	**597.7**	**624.2**	**26.5**	**0.53**	**0.30**	**22.6**	**140,534**	**Possible**
12000N	**25317**	**836.0**	**903.3**	**67.3**	**0.58**	**0.20**	**65.8**	**465,404**	**Possible**
12100N	**26852**	**268.2**	**277.3**	**9.1**	**1.35**	**0.40**	**8.0**	**13,683**	**Probable**
12200N	**25324**	**222.0**	**257.6**	**35.6**	**1.49**	**0.21**	**32.7**	**75,027**	**Probable**
12200N	**26850**	**435.4**	**446.9**	**11.5**	**1.96**	**0.20**	**10.2**	**38,948**	**Probable**
12200N	**25327**	**577.5**	**596.9**	**19.4**	**1.86**	**0.26**	**17.4**	**79,856**	**Possible**
12200N	**28812**	**813.5**	**905.0**	**91.5**	**1.60**	**0.23**	**82.1**	**703,290**	**Possible**
12200N	28816	1301.5	1360.3	58.8	0.99	0.19	Below 1,000 feet.		Not In Reserve
12200N	33232	1889.7	1898.6	8.9	0.10	0.11	Below 1,000 feet.		Not In Reserve
12300N	**26873**	**189.0**	**204.6**	**15.6**	**1.24**	**0.31**	**14.1**	**34,795**	**Probable**
12300N	**26849**	**250.4**	**285.7**	**35.3**	**1.74**	**0.37**	**29.8**	**65,257**	**Probable**
12400N	**24085**	**199.1**	**232.3**	**33.2**	**2.61**	**0.44**	**32.6**	**66,599**	**Probable**
12400N	**25304**	**448.7**	**465.4**	**16.7**	**3.06**	**0.35**	**15.3**	**70,078**	**Probable**
12400N	**26851**	**656.3**	**666.4**	**10.1**	**1.73**	**0.29**	**9.3**	**45,190**	**Possible**
12400N	**25309**	**882.5**	**893.0**	**10.5**	**1.31**	**0.47**	**9.9**	**53,161**	**Possible**
12500N	**26872**	**146.0**	**166.8**	**20.8**	**2.65**	**0.44**	**18.8**	**57,263**	**Probable**
12500N	**26828**	**224.6**	**252.1**	**27.5**	**1.64**	**0.44**	**22.5**	**47,993**	**Probable**

February 1, 1993   Blocks included in reserve bolded.   Probable blocks shaded.   SG: 10.0 ft3/ton

Horden Lake Deposit
Longitudinal Reserve Estimate

Section	Hole #	From	To	Length	Cu %	Ni %	TW (ft)	Tons	Category
12600N	25319	237.0	247.3	10.3	1.21	0.42	9.4	57,034	Possible
12600N	25321	570.6	582.0	11.4	1.13	0.86	10.8	74,768	Possible
12600N	28817	871.4	889.0	17.6	0.66	0.27	15.8	116,248	Possible
12600N	26863	1276.9	1309.0	32.1	1.14	0.23	Below 1,000 feet.		Not In Reserve
12600N	33227	1672.0	1692.8	20.8	0.99	0.28	Below 1,000 feet.		Not In Reserve
12800N	25305	442.2	454.2	12.0	1.82	0.91	11.4	79,097	Possible
12800N	25307	947.8	956.7	8.9	2.68	0.45	8.0	61,000	Possible
13000N	25323	255.0	279.0	24.0	0.61	0.19	22.2	128,880	Possible
13000N	25325	714.8	723.7	8.9	0.40	0.35	8.0	46,211	Below Cutoff
13000N	28818	1325.0	1338.0	13.0	0.47	0.17	Below 1,000 feet.		Not In Reserve
13000N	33234	1777.7	1786.4	8.7	0.74	0.20	Below 1,000 feet.		Not In Reserve
13100N	26871	205.1	213.3	8.2	0.81	0.39	8.1	16,781	Probable
13100N	26853	348.1	357.4	9.3	0.53	0.23	9.1	16,631	Probable
13100N	26855	526.3	548.1	21.8	0.96	0.57	19.9	51,969	Probable
13200N	24089	216.7	230.7	14.0	2.50	0.66	13.8	22,621	Probable
13200N	25303	430.8	450.0	19.2	2.53	0.55	19.1	36,917	Probable
13200N	25306	583.9	597.5	13.6	1.97	0.55	12.5	52,393	Possible
13200N	25329	955.9	964.4	8.5	1.36	0.56	8.0	72,451	Possible
13300N	26867	137.9	146.9	9.0	1.86	0.48	8.1	21,320	Probable
13300N	26810	289.8	299.6	9.8	0.44	0.31	8.6	10,847	Below Cutoff
13300N	26869	459.4	468.8	9.4	0.26	0.22	8.0	15,587	Below Cutoff
13400N	26816	236.0	244.9	8.9	2.43	0.62	8.0	11,726	Probable
13400N	25379	398.1	418.7	20.6	3.46	0.46	19.9	28,433	Probable
13400N	26819	474.1	492.5	18.4	1.83	0.32	15.8	32,940	Probable
13400N	28811	610.0	665.2	55.2	1.83	0.73	45.2	274,348	Possible
13400N	28813	1009.2	1018.0	8.8	2.14	0.84	8.0	63,629	Possible
13500N	26868	152.7	202.0	49.3	2.11	0.34	48.3	142,466	Probable
13500N	25378	326.1	340.4	14.3	1.34	0.36	14.0	20,591	Probable
13500N	26870	437.8	454.4	16.6	0.82	0.14	15.3	25,809	Probable
13600N	24047	209.3	231.1	21.8	3.77	0.49	21.8	43,763	Probable
13600N	25302	393.1	401.1	8.0	2.40	0.50	8.0	12,155	Probable
13600N	26856	515.2	523.7	8.5	1.19	0.21	8.0	17,017	Probable
13600N	25308	652.6	661.0	8.4	0.97	0.36	8.0	53,732	Possible
13600N	26827	953.9	962.6	8.7	0.65	0.25	8.1	78,739	Possible
13700N	26865	209.8	229.9	20.1	2.23	0.60	19.7	66,917	Probable
13700N	26859	337.4	359.0	21.6	3.13	0.72	21.1	26,346	Probable
13700N	26875	437.9	449.7	11.8	1.40	0.60	11.0	23,843	Probable
13800N	26821	257.3	266.6	9.3	0.03	0.03	8.0	26,541	Below Cutoff
13800N	26826	442.4	450.7	8.3	0.53	0.11	8.0	28,858	Possible
14000N	24048	435.4	443.4	8.0	3.70	0.43	8.0	45,921	Possible
14000N	25310	566.4	574.6	8.2	1.29	0.30	8.0	50,684	Possible
14000N	28819	1007.5	1019.6	12.1	0.87	0.12	11.5	110,686	Possible
14200N	26823	510.3	522.5	12.2	0.18	0.12	10.7	107,769	Below Cutoff
14800N	25301	215.1	223.2	8.1	0.16	0.41	8.0	81,854	Below Cutoff
15000N	33240	317.7	326.0	8.3	0.42	0.34	8.0	67,947	Below Cutoff
15200N	24049	226.3	241.5	15.2	0.98	0.89	15.1	126,232	Possible
15200N	33242	646.5	665.4	18.9	0.23	0.41	18.9	223,558	Below Cutoff
15400N	33246	291.0	299.5	8.5	0.87	0.73	8.2	82,944	Possible
15600N	33261	Drill Hole East of Reserve Area.							Not In Reserve
16000N	26866	172.7	181.8	9.1	0.24	0.49	8.0	100,782	Below Cutoff

February 1, 1993 | Blocks included in reserve bolded. | Probable blocks shaded. | SG: 10.0 ft3/ton

APPENDIX V

HORDEN LAKE DEPOSIT
MINEABLE RESERVES

Horden Lake Property
Undiluted Pit Reserve Estimate
January 29, 1993

Ovb SG:	15.0	ft3/ton
Waste SG	11.0	ft3/ton
Ore SG:	10.0	ft3/ton

Section	Width (feet)	Overburden Tons	Waste Tons	Ore Tons	Cu %	Ni %	Strip Ratio Waste/Ore	Strip Ratio W+Ovb/Or
12200N	100	3,395	0	0	0.00	0.00	0.0	0.0
12300N	100	16,042	0	0	0.00	0.00	0.0	0.0
12400N	100	25,508	0	0	0.00	0.00	0.0	0.0
12500N	100	40,842	0	0	0.00	0.00	0.0	0.0
12600N	150	121,895	0	0	0.00	0.00	0.0	0.0
12800N	200	349,099	0	0	0.00	0.00	0.0	0.0
13000N	150	395,081	0	0	0.00	0.00	0.0	0.0
13100N	100	307,048	34,952	0	0.00	0.00	0.0	0.0
13200N	100	329,705	105,897	29,293	2.50	0.66	3.6	14.9
13300N	100	317,414	101,814	22,466	1.12	0.27	4.5	18.7
13400N	100	220,183	110,819	64,503	1.05	0.30	1.7	5.1
13500N	100	134,581	133,794	68,158	2.11	0.34	2.0	3.9
13600N	100	185,818	117,424	31,616	3.77	0.49	3.7	9.6
13700N	100	177,366	128,047	49,912	1.64	0.42	2.6	6.1
13800N	100	113,507	41,331	0	0.00	0.00	0.0	0.0
13900N	100	59,988	0	0	0.00	0.00	0.0	0.0
14000N	150	80,913	0	0	0.00	0.00	0.0	0.0
14200N	150	50,955	0	0	0.00	0.00	0.0	0.0
TOTAL	2100	2,929,339	774,078	265,947	1.92	0.39	2.9	13.9

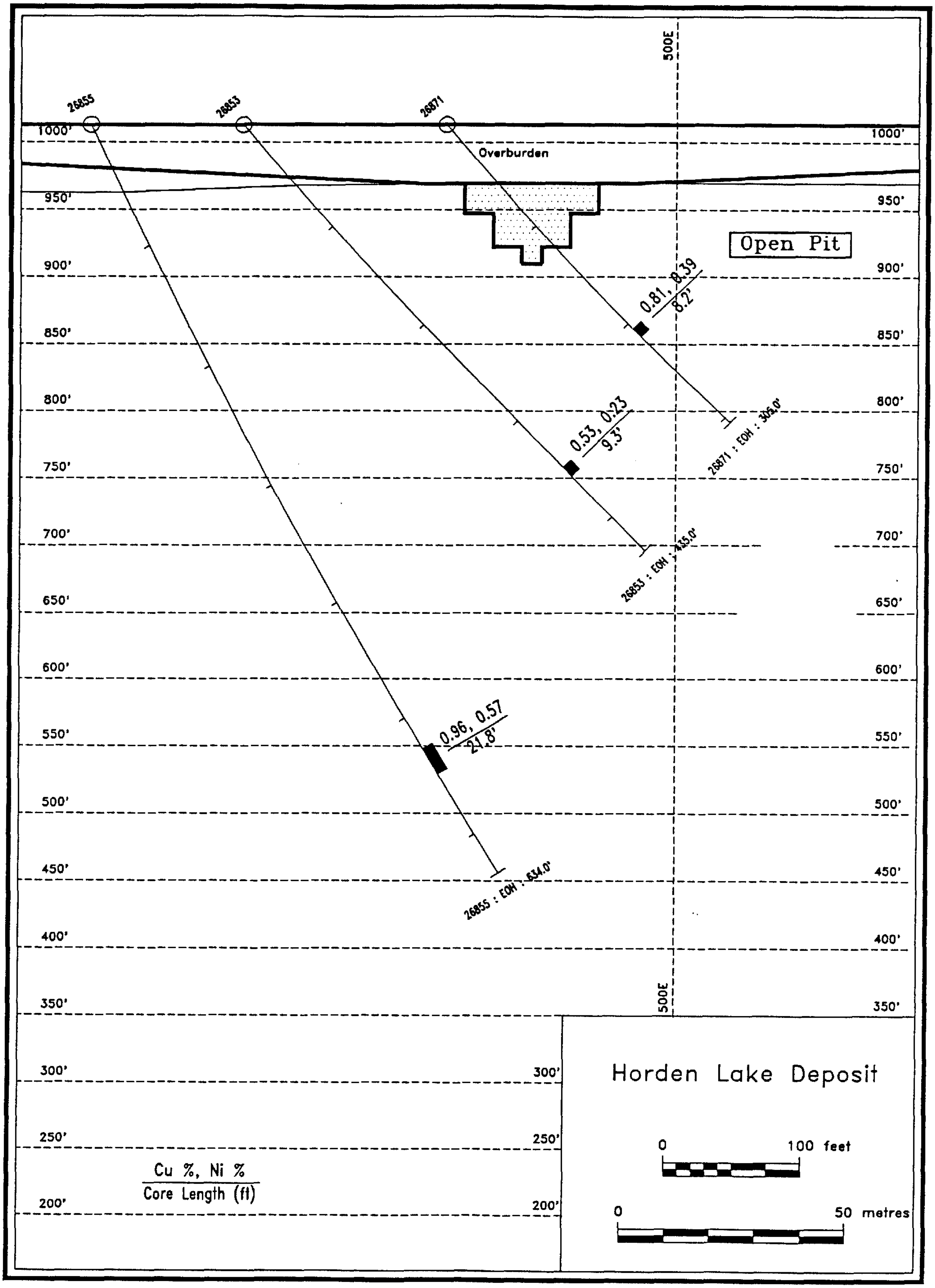
Horden Lake Property
Undiluted Underground Reserve Estimate
January 29, 1993

All Blocks

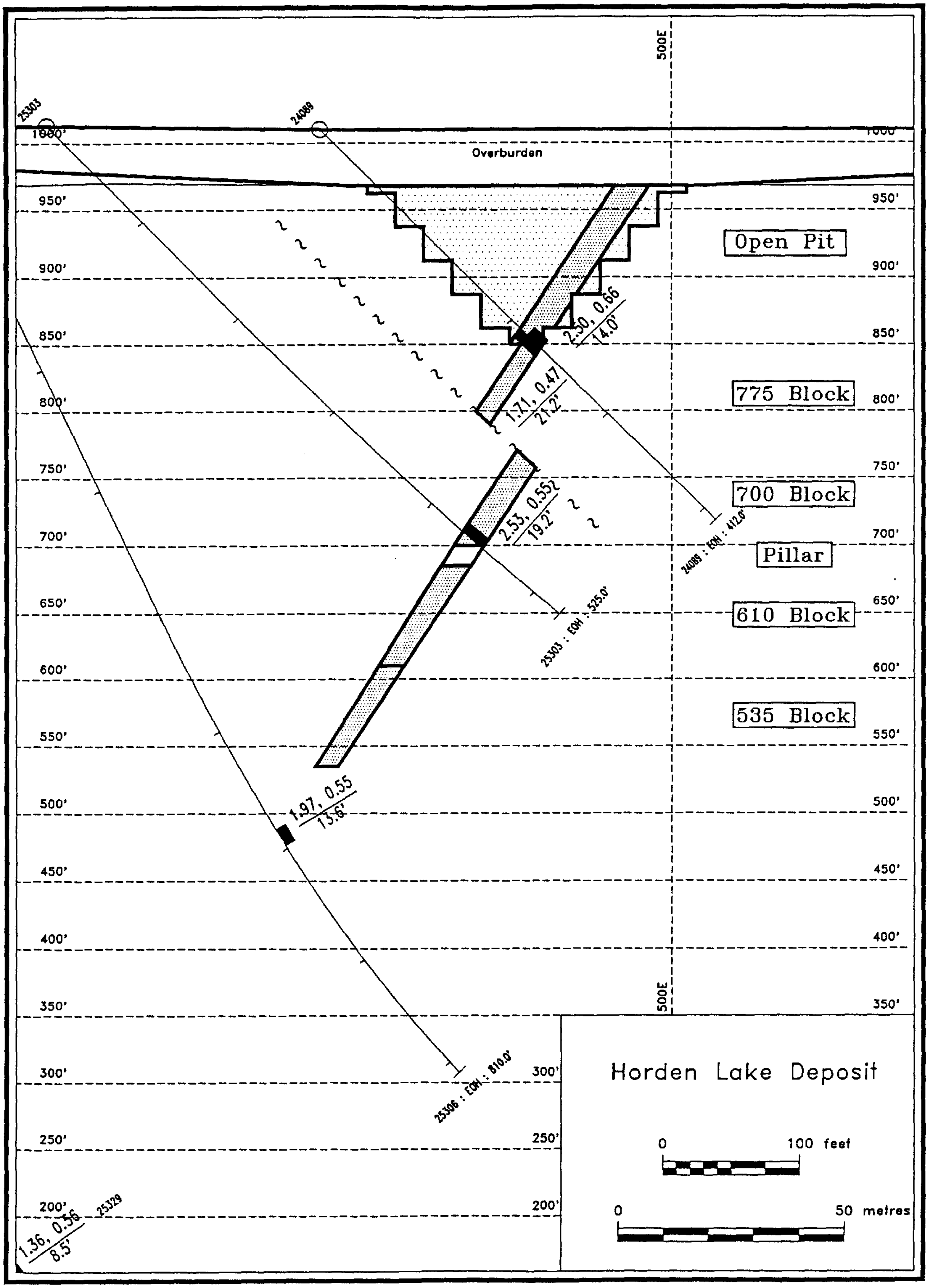
Section	Width (feet)	775 Block			700 Block			610 Block			535 Block			TOTAL		
		Tons	Cu %	Ni %	Tons	Cu %	Ni %	Tons	Cu %	Ni %	Tons	Cu %	Ni %	Tons	Cu %	Ni %
13200N	100	9,044	1.71	0.47	14,541	2.53	0.55	15,366	2.53	0.55	13,348	1.97	0.55	52,299	2.25	0.54
13300N	100	1,230	0.44	0.31	6,743	0.44	0.31	6,113	0.26	0.22	5,589	0.26	0.22	19,675	0.33	0.26
13400N	100	7,312	2.43	0.62	3,578	2.43	0.62	20,542	3.46	0.46	18,479	1.83	0.32	49,910	2.63	0.44
13500N	100	25,630	1.73	0.35	11,470	1.34	0.36	10,790	0.82	0.14	10,852	0.82	0.14	58,742	1.32	0.27
13600N	100	13,864	3.77	0.49	9,131	2.40	0.50	8,003	1.60	0.32	7,110	1.19	0.21	38,106	2.50	0.40
13700N	100	18,332	2.23	0.60	17,390	3.13	0.72	11,376	1.40	0.60	9,952	1.40	0.60	57,050	2.19	0.64
TOTAL	600	75,411	2.27	0.48	62,852	2.23	0.53	72,190	2.07	0.42	65,329	1.42	0.36	**275,782**	**2.01**	**0.45**

Cutoff >1.5% Cu

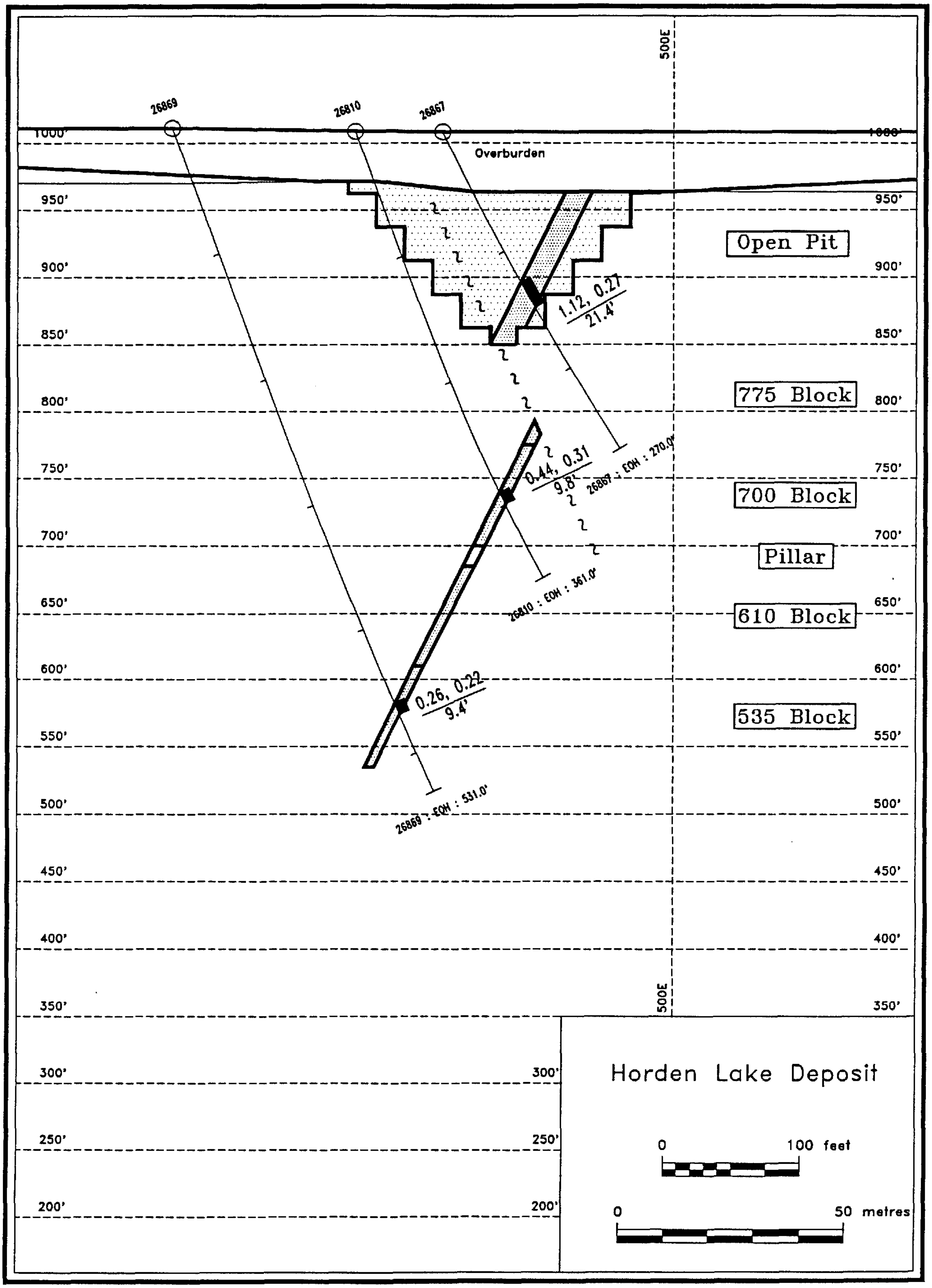
Section	Width (feet)	775 Block			700 Block			610 Block			535 Block			TOTAL		
		Tons	Cu %	Ni %	Tons	Cu %	Ni %	Tons	Cu %	Ni %	Tons	Cu %	Ni %	Tons	Cu %	Ni %
13200N	100	9,044	1.71	0.47	14,541	2.53	0.55	15,366	2.53	0.55	13,348	1.97	0.55	52,299	2.25	0.54
13300N	100													0	0.00	0.00
13400N	100	7,312	2.43	0.62	3,578	2.43	0.62	20,542	3.46	0.46	18,479	1.83	0.32	49,910	2.63	0.44
13500N	100	25,630	1.73	0.35										25,630	1.73	0.35
13600N	100	13,864	3.77	0.49	9,131	2.40	0.50	8,003	1.60	0.32				30,997	2.81	0.45
13700N	100	18,332	2.23	0.60	17,390	3.13	0.72							35,721	2.67	0.66
TOTAL	600	74,181	2.30	0.48	44,639	2.73	0.61	43,911	2.80	0.47	31,827	1.89	0.42	**194,558**	**2.44**	**0.50**



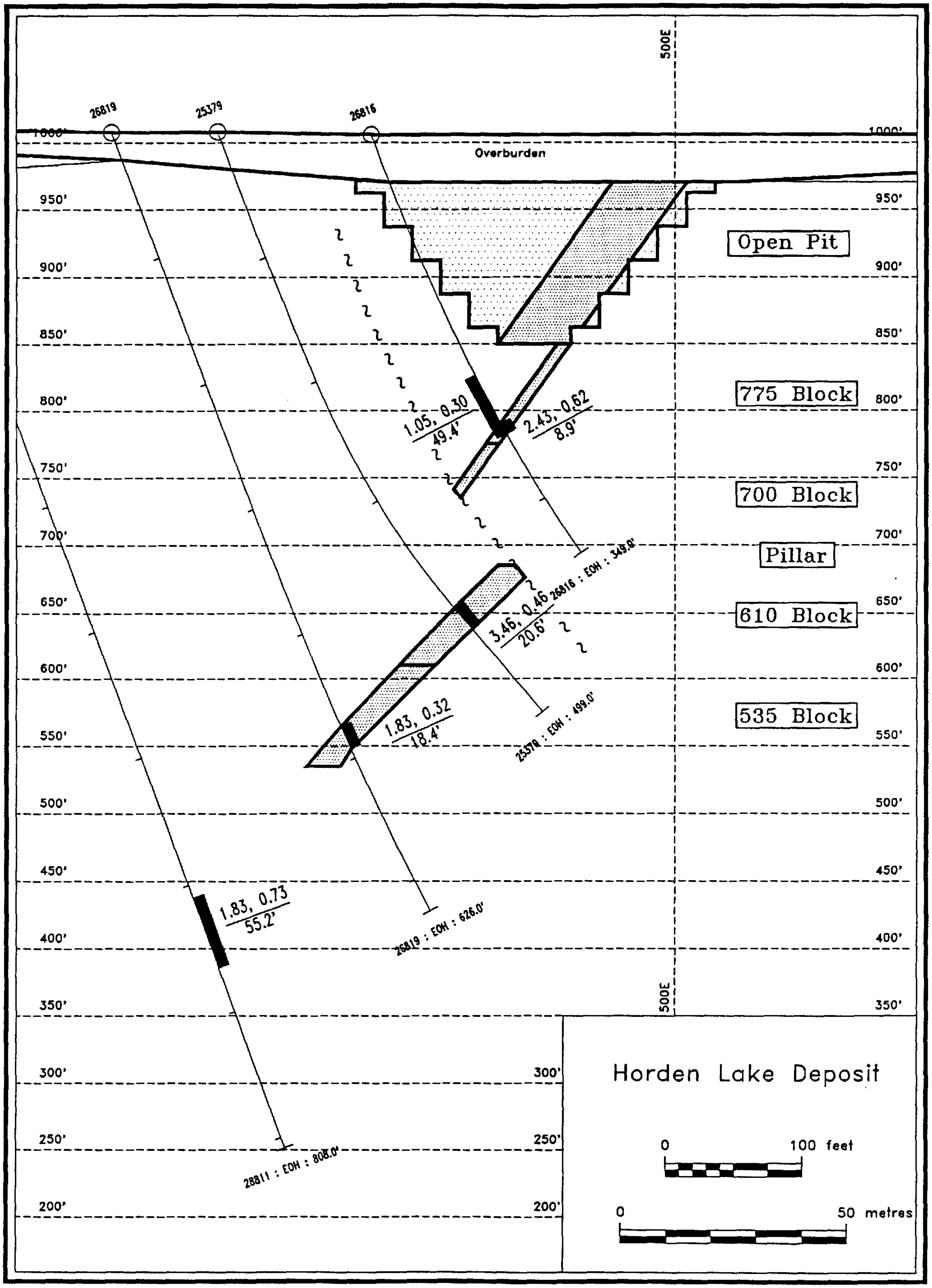
Mine Section 13100N



Mine Section 13200N



Mine Section 13300N



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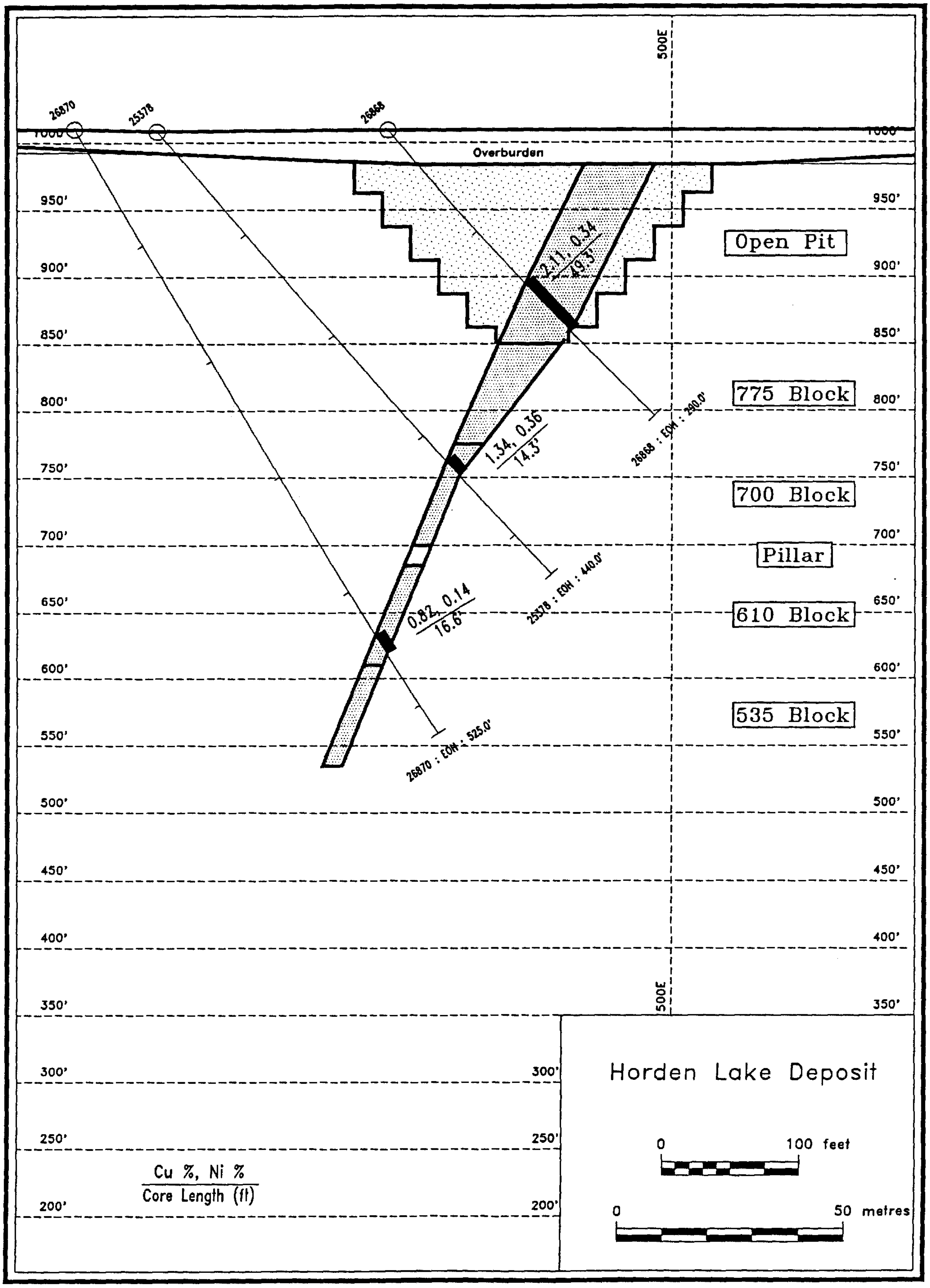

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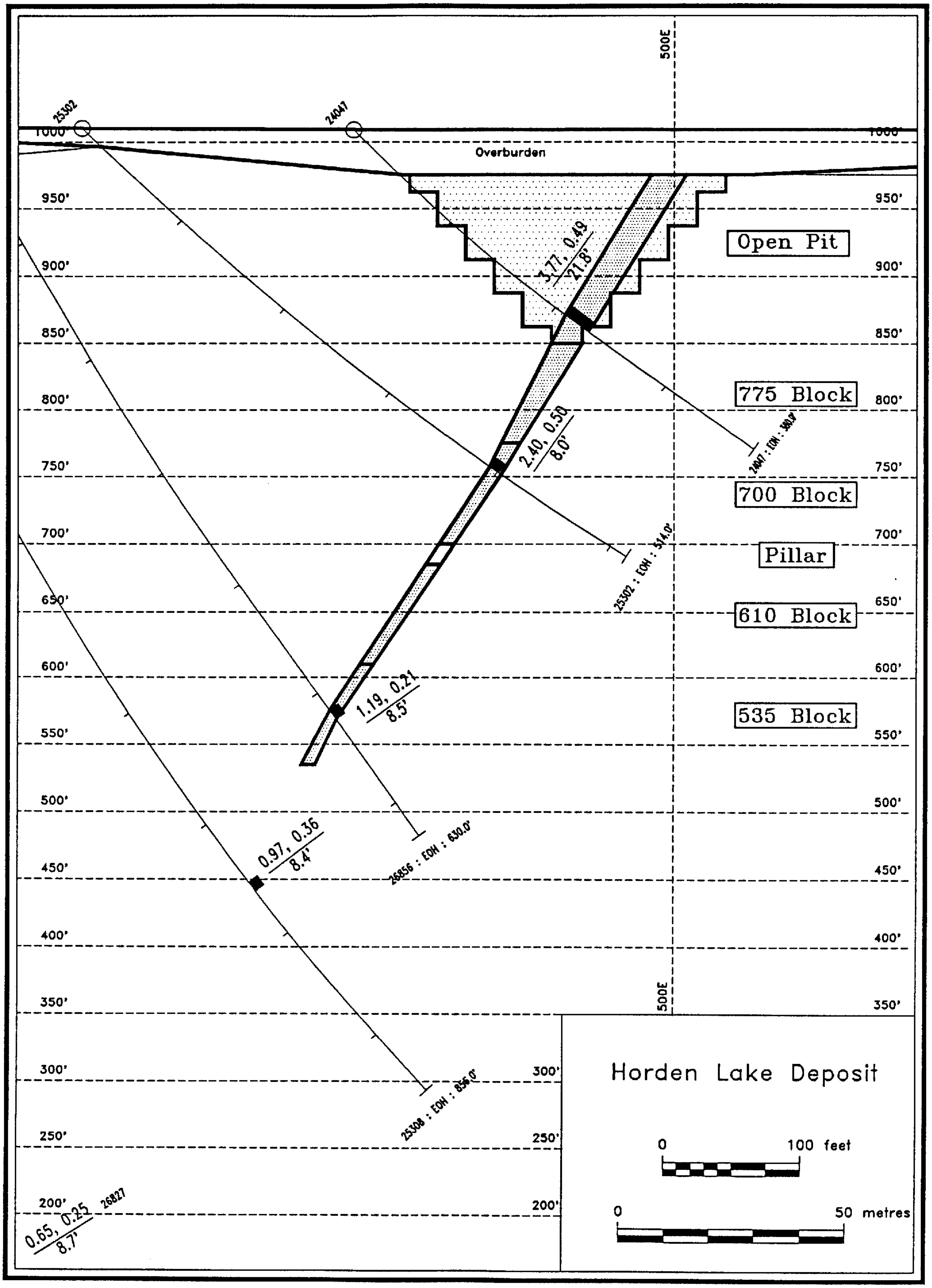

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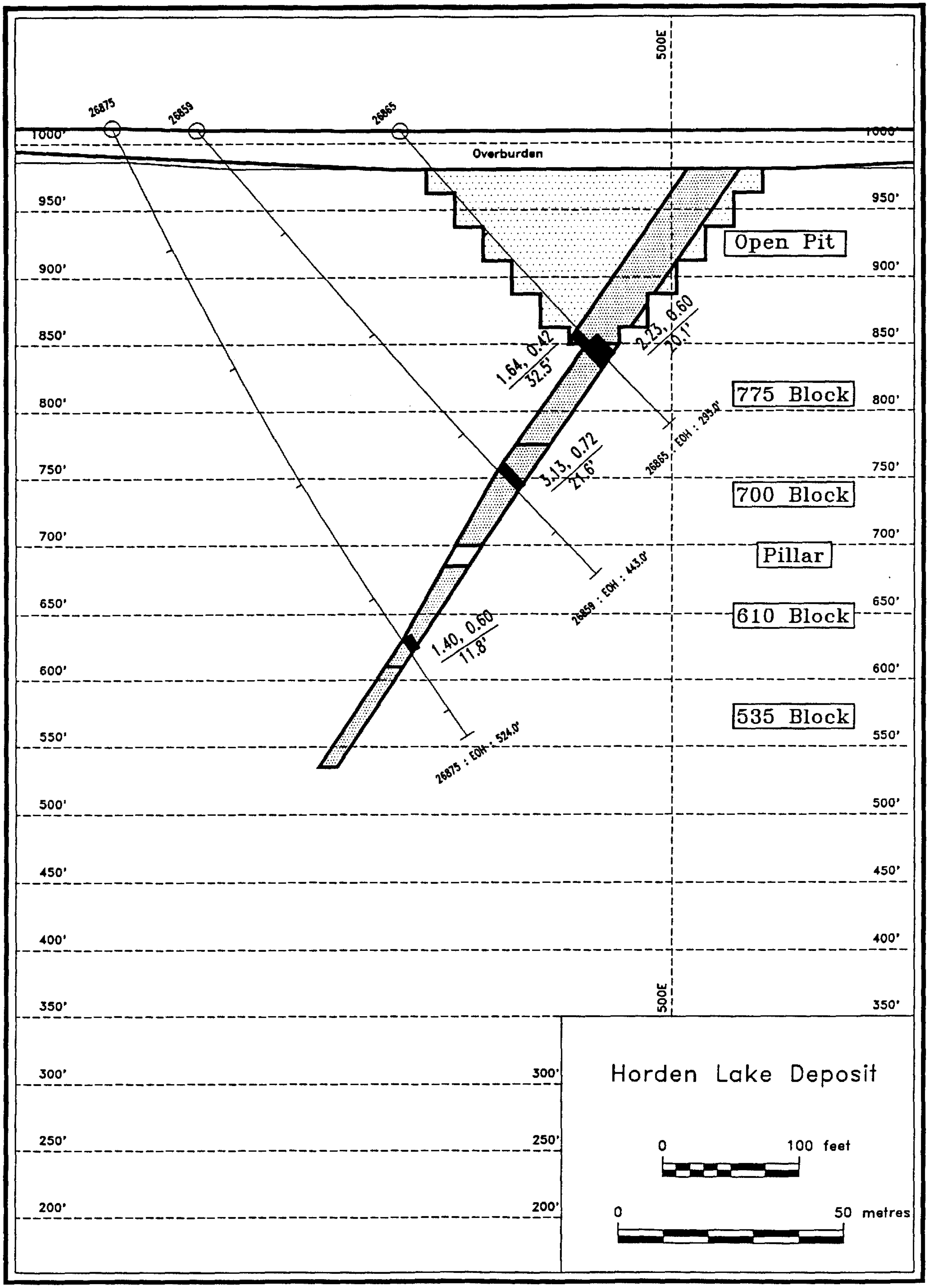
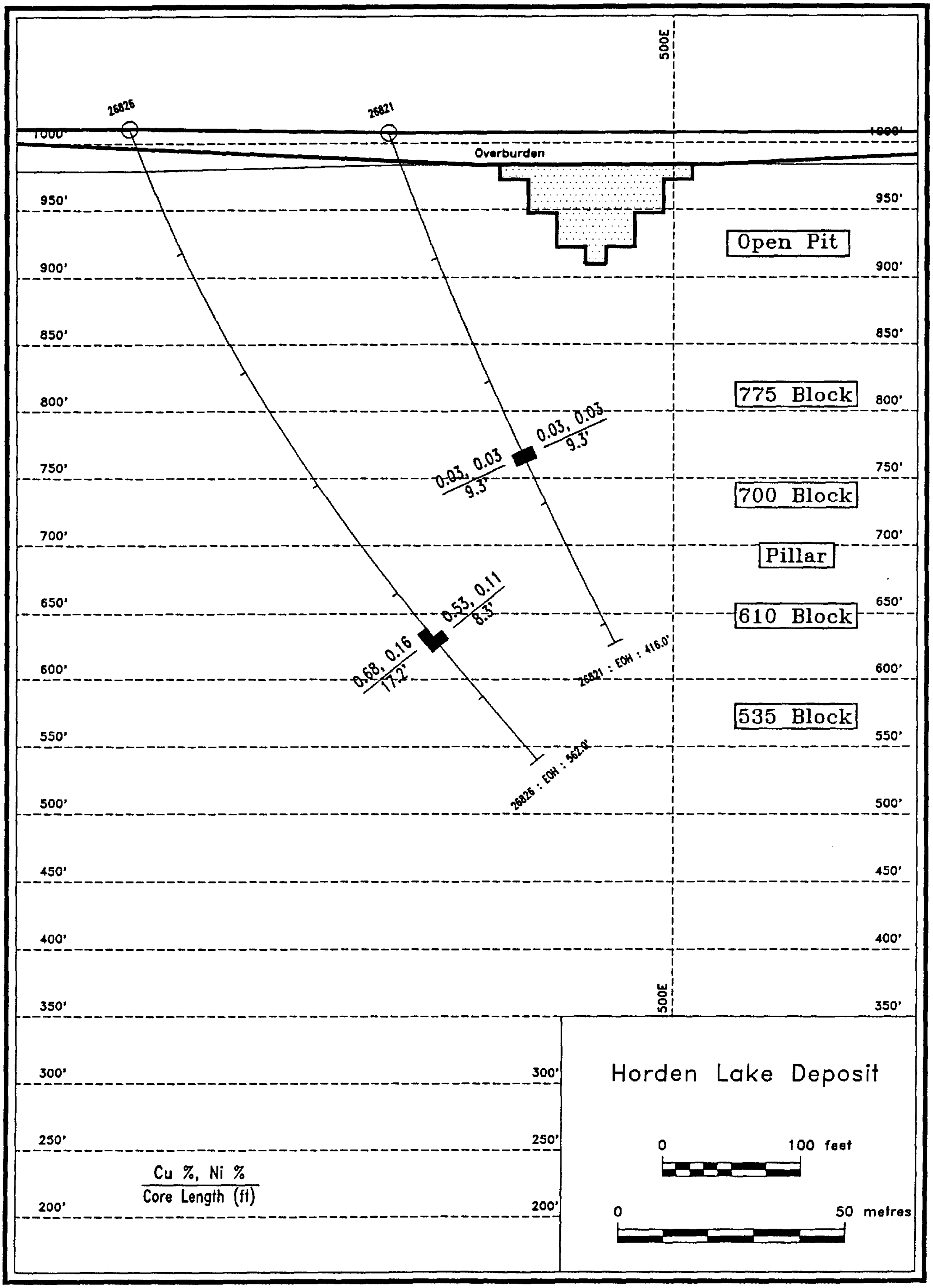


Mine Section 13700N



Mine Section 13800N

APPENDIX VI

HORDEN LAKE DEPOSIT
COST ESTIMATES

Estimate of Open Pit Operating Costs

Labour Costs

Hourly $20/hr base rate plus 35% of base rate for burden

Staff $35/hr base rate plus 35% of base rate for burden

	28 × $27 × 8 hr	6048.00
	2 × $45.25 × 8 hr	756.00

Equipment Costs

(a) Owning Costs - assume write off over 10,000 hrs

Loaders	2 × $455,000 ÷ 10,000 ×16	1456.00
trucks	5 × $400,000 ÷ 10,000 ×16	3200.00
Airtrac	1 × $200,000 ÷ 10,000 ×8	160.00

(b) Fuel + Lubes

Fuel - loader	60 litres/hr	or 1920 litres/day	
truck	35 "	or 4000 "	
Drill	22 "	or 222 "	
		6142 " @ $0.50/litre	3071.00

Lubes @ 25% of fuel costs 768.00

(c) Repair Parts

	(total Repair Cost)	(material Costs)			(exchange Rate)	
Trucks	6.60	× .55	× 16	× 5	× 1.2	= 348.48
Loaders	9.40	× .6	× 16	× 2	× 1.2	= 216.57
Drill						255.20
						$820.25

use 820.00

Bits, Steel + Explosives

Estimated cost per ton $1.50

Total Ton Rock per day 3010

Total Cost per day 4515 — 4515.00

Contractor's Overhead + Profit @ 15% of above — 3120.00

TOTAL 23914.00

Cost per Ton Ore $34.16

Cost per Ton Mat. $2.61

APPENDIX VII

HORDEN LAKE DEPOSIT
CASH FLOWS

Horden Lake Project
(Canadian $000's)

Base Case

		Qtr 1	Qtr 2	Qtr 3	Qtr 4	Year 1	Qtr 5	Qtr 6	Qtr 7	Qtr 8	Year 2
Production											
Ore Milled	(tonnes)	-	-	39,690	39,690	79,379	39,690	39,690	39,690	39,690	158,759
Copper Grade	(%)	-	-	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67
Copper Recovery	(%)	-	-	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
Copper Concentrate	(tonnes)	-	-	2,386	2,386	4,772	2,386	2,386	2,386	2,386	9,545
Copper Concentrate Grade	(%)	-	-	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Net Smelter Return		-	-	1,085	1,085	2,170	1,085	1,085	1,085	1,085	4,340
Operating Costs											
Open pit - Labour		-	-	425	425	851	425	425	425	425	1,701
- Equipment		-	-	592	592	1,185	592	592	592	592	2,370
- Drilling/Blasting		-	-	282	282	564	282	282	282	282	1,129
- Misc.		-	-	36	36	73	36	36	36	36	145
- Contractor Overhead		-	-	195	195	390	195	195	195	195	781
- Owner's Costs		-	-	219	219	438	219	219	219	219	875
Underground - Ongoing Developme		-	-	-	-	-	-	-	-	-	-
- Stoping		-	-	-	-	-	-	-	-	-	-
- Haulage		-	-	-	-	-	-	-	-	-	-
- Mine General		-	-	-	-	-	-	-	-	-	-
- Contractor's Over		-	-	-	-	-	-	-	-	-	-
- Owner's Costs		-	-	-	-	-	-	-	-	-	-
Other - Camp & Surface Support		-	-	219	219	438	219	219	219	219	875
- Reclamation		-	-	44	44	88	44	44	44	44	175
- Milling		-	-	893	893	1,787	893	893	893	893	3,574
- Truck Ore to Mill		-	-	595	595	1,190	595	595	595	595	2,380
		-	-	3,501	3,501	7,002	3,501	3,501	3,501	3,501	14,004
Cash Operating Profit		-	-	(2,416)	(2,416)	(4,832)	(2,416)	(2,416)	(2,416)	(2,416)	(9,664)
Net Cash Flow											
Cash Operating Profit		-	-	(2,416)	(2,416)	(4,832)	(2,416)	(2,416)	(2,416)	(2,416)	(9,664)
Less: Capital Investment		2,795	3,050	-	-	5,845	-	1,215	1,633	1,633	4,480
Federal Corporation Taxes		-	-	-	-	-	-	-	-	-	-
Quebec Corporation Taxes		-	-	-	-	-	-	-	-	-	-
Quebec Mining Duties		(296)	(296)	(296)	(296)	(1,185)	(574)	(574)	(574)	(574)	(2,297)
Net Cash Flow		(2,499)	(2,754)	(2,120)	(2,120)	(9,491)	(1,842)	(3,057)	(3,474)	(3,474)	(11,847)
Accumulated NCF		(2,499)	(5,252)	(7,372)	(9,491)	(9,491)	(11,333)	(14,390)	(17,864)	(21,338)	(21,338)

Base Case

Horden Lake Project
(Canadian $000's)

		Qtr 9	Qtr 10	Qtr 11	Qtr 12	Year 3	Qtr 13	Qtr 14	Qtr 15	Qtr 16	Year 4	Qtr 17	Year 5	TOTAL
Production														
Ore Milled	(tonnes)	39,690	39,690	39,690	39,690	158,759	39,690	39,690	39,690	39,690	158,759	9,515	9,515	565,171
Copper Grade	(%)	1.67	1.75	1.75	1.75	1.73	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.71
Copper Recovery	(%)	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
Copper Concentrate	(tonnes)	2,386	2,500	2,500	2,500	9,888	2,500	2,500	2,500	2,500	10,002	599	599	34,806
Copper Concentrate Grade	(%)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Net Smelter Return		1,085	1,137	1,137	1,137	4,496	1,137	1,137	1,137	1,137	4,548	273	273	15,826
Operating Costs														
Open pit - Labour		421	-	-	-	421	-	-	-	-	-	-	-	2,973
- Equipment		587	-	-	-	587	-	-	-	-	-	-	-	4,141
- Drilling/Blasting		280	-	-	-	280	-	-	-	-	-	-	-	1,973
- Misc.		36	-	-	-	36	-	-	-	-	-	-	-	254
- Contractor Overhead		193	-	-	-	193	-	-	-	-	-	-	-	1,364
- Owner's Costs		217	-	-	-	217	-	-	-	-	-	-	-	1,529
Underground - Ongoing Developme		2	256	256	256	770	256	256	256	256	1,024	61	61	1,855
- Stoping		6	656	656	656	1,975	656	656	656	656	2,625	157	157	4,757
- Haulage		3	306	306	306	922	306	306	306	306	1,225	73	73	2,220
- Mine General		4	449	449	449	1,352	449	449	449	449	1,797	108	108	3,257
- Contractor's Over		2	250	250	250	753	250	250	250	250	1,001	60	60	1,814
- Owner's Costs		2	219	219	219	658	219	219	219	219	875	52	52	1,586
Other - Camp & Surface Support		219	219	219	219	875	219	219	219	219	875	52	52	3,115
- Reclamation		44	44	44	44	175	44	44	44	44	175	10	10	623
- Milling		893	893	893	893	3,574	893	893	893	893	3,574	214	214	12,721
- Truck Ore to Mill		595	595	595	595	2,380	595	595	595	595	2,380	143	143	8,473
		3,505	3,888	3,888	3,888	15,167	3,888	3,888	3,888	3,888	15,551	932	932	52,655
Cash Operating Profit		(2,420)	(2,751)	(2,751)	(2,751)	(10,672)	(2,751)	(2,751)	(2,751)	(2,751)	(11,003)	(659)	(659)	(36,829)
Net Cash Flow														
Cash Operating Profit		(2,420)	(2,751)	(2,751)	(2,751)	(10,672)	(2,751)	(2,751)	(2,751)	(2,751)	(11,003)	(659)	(659)	(36,829)
Less: Capital Investment		-	-	-	-	-	-	-	-	-	-	-	-	10,325
Federal Corporation Taxes		-	-	-	-	-	-	-	-	-	-	-	-	-
Quebec Corporation Taxes		-	-	-	-	-	-	-	-	-	-	-	-	-
Quebec Mining Duties		(620)	(620)	(620)	(620)	(2,478)	(582)	(582)	(582)	(582)	(2,328)	(199)	(199)	(8,488)
Net Cash Flow		(1,800)	(2,131)	(2,131)	(2,131)	(8,193)	(2,169)	(2,169)	(2,169)	(2,169)	(8,675)	(460)	(460)	(38,666)
Accumulated NCF		(23,138)	(25,269)	(27,400)	(29,531)	(29,531)	(31,700)	(33,869)	(36,037)	(38,206)	(38,206)	(38,666)	(38,666)	(38,666)

Horden Lake Project
(Canadian $000's)

Base Case
Smelter Calculations

	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Year 1	Qtr 5	Qtr 6	Qtr 7	Qtr 8	Year 2
Copper Concentrate (tonnes)	-	-	2,386	2,386	4,772	2,386	2,386	2,386	2,386	9,545
Copper Concentrate Grade (%)	-	-	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Copper Price (US$/t)	-	-	2,205	2,205	2,205	2,205	2,205	2,205	2,205	2,205
Exchange Rate (US:Canada)	-	-	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Payable Copper	-	-	1,562	1,562	3,123	1,562	1,562	1,562	1,562	6,247
Less: Shipping	-	-	66	66	132	66	66	66	66	263
Treatment Charges	-	-	263	263	526	263	263	263	263	1,052
Refining Charges	-	-	148	148	296	148	148	148	148	592
	-	-	477	477	953	477	477	477	477	1,907
Net Smelter Return	-	-	1,085	1,085	2,170	1,085	1,085	1,085	1,085	4,340

	Qtr 9	Qtr 10	Qtr 11	Qtr 12	Year 3	Qtr 13	Qtr 14	Qtr 15	Qtr 16	Year 4	Qtr 17	Year 5	TOTAL
Copper Concentrate (tonnes)	2,386	2,500	2,500	2,500	9,888	2,500	2,500	2,500	2,500	10,002	599	599	34,806
Copper Concentrate Grade (%)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Copper Price (US$/t)	2,205	2,205	2,205	2,205	2,205	2,205	2,205	2,205	2,205	2,205	2,205	2,205	2,205
Exchange Rate (US:Canada)	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Payable Copper	1,562	1,637	1,637	1,637	6,471	1,637	1,637	1,637	1,637	6,546	392	392	22,780
Less: Shipping	66	69	69	69	272	69	69	69	69	276	17	17	959
Treatment Charges	263	276	276	276	1,090	276	276	276	276	1,103	66	66	3,837
Refining Charges	148	155	155	155	613	155	155	155	155	620	37	37	2,158
	477	500	500	500	1,975	500	500	500	500	1,998	120	120	6,954
Net Smelter Return	1,085	1,137	1,137	1,137	4,496	1,137	1,137	1,137	1,137	4,548	273	273	15,826

Horden Lake Project
(Canadian $000's)

Base Case
Capital Cost Schedule

	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Year 1	Qtr 5	Qtr 6	Qtr 7	Qtr 8	Year 2
Feasibility Study	150	-	-	-	150	-	50	-	-	50
Site Preparation	150	50	-	-	200	-	50	-	-	50
Camp	200	200	-	-	400	-	10	20	20	50
Site Services	20	100	-	-	120	-	50	50	50	150
Office Warehouse	100	200	-	-	300	-	10	20	20	50
Project Management	75	75	-	-	150	-	50	50	50	150
Preproduction Development	500	1,000	-	-	1,500	-	865	1,298	1,298	3,461
Contractors Overhead	100	125	-	-	225	-	130	195	195	519
Road	1,500	1,300	-	-	2,800	-	-	-	-	-
	2,795	3,050	-	-	5,845	-	1,215	1,633	1,633	4,480

	Qtr 9	Qtr 10	Qtr 11	Qtr 12	Year 3	Qtr 13	Qtr 14	Qtr 15	Qtr 16	Year 4	Qtr 17	Year 5	TOTAL
Feasibility Study	-	-	-	-	-	-	-	-	-	-	-	-	200
Site Preparation	-	-	-	-	-	-	-	-	-	-	-	-	250
Camp	-	-	-	-	-	-	-	-	-	-	-	-	450
Site Services	-	-	-	-	-	-	-	-	-	-	-	-	270
Office Warehouse	-	-	-	-	-	-	-	-	-	-	-	-	350
Project Management	-	-	-	-	-	-	-	-	-	-	-	-	300
Preproduction Development	-	-	-	-	-	-	-	-	-	-	-	-	4,961
Contractors Overhead	-	-	-	-	-	-	-	-	-	-	-	-	744
Road	-	-	-	-	-	-	-	-	-	-	-	-	2,800
	-	-	-	-	-	-	-	-	-	-	-	-	10,325

Horden Lake Project
(Canadian $000's)

Break Even Case

		Qtr 1	Qtr 2	Qtr 3	Qtr 4	Year 1	Qtr 5	Qtr 6	Qtr 7	Qtr 8	Year 2
Production											
Ore Milled	(tonnes)	-	-	39,690	39,690	79,379	39,690	39,690	39,690	39,690	158,759
Copper Grade	(%)	-	-	6.79	6.79	6.79	6.79	6.79	6.79	6.79	6.79
Copper Recovery	(%)	-	-	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
Copper Concentrate	(tonnes)	-	-	9,701	9,701	19,401	9,701	9,701	9,701	9,701	38,803
Copper Concentrate Grade	(%)	-	-	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Net Smelter Return		-	-	4,411	4,411	8,822	4,411	4,411	4,411	4,411	17,644
Operating Costs											
Open pit - Labour		-	-	425	425	851	425	425	425	425	1,701
- Equipment		-	-	592	592	1,185	592	592	592	592	2,370
- Drilling/Blasting		-	-	282	282	564	282	282	282	282	1,129
- Misc.		-	-	36	36	73	36	36	36	36	145
- Contractor Overhead		-	-	195	195	390	195	195	195	195	781
- Owner's Costs		-	-	219	219	438	219	219	219	219	875
Underground - Ongoing Developme		-	-	-	-	-	-	-	-	-	-
- Stoping		-	-	-	-	-	-	-	-	-	-
- Haulage		-	-	-	-	-	-	-	-	-	-
- Mine General		-	-	-	-	-	-	-	-	-	-
- Contractor's Over		-	-	-	-	-	-	-	-	-	-
- Owner's Costs		-	-	-	-	-	-	-	-	-	-
Other - Camp & Surface Support		-	-	219	219	438	219	219	219	219	875
- Reclamation		-	-	44	44	88	44	44	44	44	175
- Milling		-	-	893	893	1,787	893	893	893	893	3,574
- Truck Ore to Mill		-	-	595	595	1,190	595	595	595	595	2,380
		-	-	3,501	3,501	7,002	3,501	3,501	3,501	3,501	14,004
Cash Operating Profit		-	-	910	910	1,820	910	910	910	910	3,640
Net Cash Flow											
Cash Operating Profit		-	-	910	910	1,820	910	910	910	910	3,640
Less: Capital Investment		2,795	3,050	-	-	5,845	-	1,215	1,633	1,633	4,480
Federal Corporation Taxes		-	-	-	-	-	-	-	-	-	-
Quebec Corporation Taxes		-	-	-	-	-	-	-	-	-	-
Quebec Mining Duties		-	-	-	-	-	-	-	-	-	-
Net Cash Flow		(2,795)	(3,050)	910	910	(4,025)	910	(305)	(722)	(722)	(840)
Accumulated NCF		(2,795)	(5,845)	(4,935)	(4,025)	(4,025)	(3,115)	(3,420)	(4,142)	(4,865)	(4,865)

Horden Lake Project
(Canadian $000's)

Break Even Case

		Qtr 9	Qtr 10	Qtr 11	Qtr 12	Year 3	Qtr 13	Qtr 14	Qtr 15	Qtr 16	Year 4	Qtr 17	Year 5	TOTAL
Production														
Ore Milled	(tonnes)	39,690	39,690	39,690	39,690	158,759	39,690	39,690	39,690	39,690	158,759	9,515	9,515	565,171
Copper Grade	(%)	6.79	6.79	6.79	6.79	6.79	6.79	6.79	6.79	6.79	6.79	6.79	6.79	6.79
Copper Recovery	(%)	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
Copper Concentrate	(tonnes)	9,701	9,701	9,701	9,701	38,803	9,701	9,701	9,701	9,701	38,803	2,326	2,326	138,136
Copper Concentrate Grade	(%)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Net Smelter Return		4,411	4,411	4,411	4,411	17,644	4,411	4,411	4,411	4,411	17,644	1,057	1,057	62,810
Operating Costs														
Open pit - Labour		421	-	-	-	421	-	-	-	-	-	-	-	2,973
- Equipment		587	-	-	-	587	-	-	-	-	-	-	-	4,141
- Drilling/Blasting		280	-	-	-	280	-	-	-	-	-	-	-	1,973
- Misc.		36	-	-	-	36	-	-	-	-	-	-	-	254
- Contractor Overhead		193	-	-	-	193	-	-	-	-	-	-	-	1,364
- Owner's Costs		217	-	-	-	217	-	-	-	-	-	-	-	1,529
Underground - Ongoing Developme		2	256	256	256	770	256	256	256	256	1,024	61	61	1,855
- Stoping		6	656	656	656	1,975	656	656	656	656	2,625	157	157	4,757
- Haulage		3	306	306	306	922	306	306	306	306	1,225	73	73	2,220
- Mine General		4	449	449	449	1,352	449	449	449	449	1,797	108	108	3,257
- Contractor's Over		2	250	250	250	753	250	250	250	250	1,001	60	60	1,814
- Owner's Costs		2	219	219	219	658	219	219	219	219	875	52	52	1,586
Other - Camp & Surface Support		219	219	219	219	875	219	219	219	219	875	52	52	3,115
- Reclamation		44	44	44	44	175	44	44	44	44	175	10	10	623
- Milling		893	893	893	893	3,574	893	893	893	893	3,574	214	214	12,721
- Truck Ore to Mill		595	595	595	595	2,380	595	595	595	595	2,380	143	143	8,473
		3,505	3,888	3,888	3,888	15,167	3,888	3,888	3,888	3,888	15,551	932	932	52,655
Cash Operating Profit		906	523	523	523	2,476	523	523	523	523	2,093	125	125	10,155
Net Cash Flow														
Cash Operating Profit		906	523	523	523	2,476	523	523	523	523	2,093	125	125	10,155
Less: Capital Investment		-	-	-	-	-	-	-	-	-	-	-	-	10,325
Federal Corporation Taxes		-	-	-	-	-	-	-	-	-	-	-	-	-
Quebec Corporation Taxes		-	-	-	-	-	-	-	-	-	-	-	-	-
Quebec Mining Duties		(28)	(28)	(28)	(28)	(112)	-	-	-	-	-	(58)	(58)	(170)
Net Cash Flow		934	551	551	551	2,588	523	523	523	523	2,093	184	184	-
Accumulated NCF		(3,930)	(3,379)	(2,828)	(2,277)	(2,277)	(1,753)	(1,230)	(707)	(184)	(184)	-	-	-

Horden Lake Project
(Canadian $000's)

Break Even Case
Smelter Calculations

	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Year 1	Qtr 5	Qtr 6	Qtr 7	Qtr 8	Year 2
Copper Concentrate (tonnes)	-	-	9,701	9,701	19,401	9,701	9,701	9,701	9,701	38,803
Copper Concentrate Grade (%)	-	-	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Copper Price (US$/t)	-	-	2,205	2,205	2,205	2,205	2,205	2,205	2,205	2,205
Exchange Rate (US:Canada)	-	-	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Payable Copper	-	-	6,349	6,349	12,698	6,349	6,349	6,349	6,349	25,396
Less: Shipping	-	-	267	267	535	267	267	267	267	1,069
Treatment Charges	-	-	1,069	1,069	2,139	1,069	1,069	1,069	1,069	4,277
Refining Charges	-	-	601	601	1,203	601	601	601	601	2,406
	-	-	1,938	1,938	3,876	1,938	1,938	1,938	1,938	7,753
Net Smelter Return	-	-	4,411	4,411	8,822	4,411	4,411	4,411	4,411	17,644

	Qtr 9	Qtr 10	Qtr 11	Qtr 12	Year 3	Qtr 13	Qtr 14	Qtr 15	Qtr 16	Year 4	Qtr 17	Year 5	TOTAL
Copper Concentrate (tonnes)	9,701	9,701	9,701	9,701	38,803	9,701	9,701	9,701	9,701	38,803	2,326	2,326	138,136
Copper Concentrate Grade (%)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Copper Price (US$/t)	2,205	2,205	2,205	2,205	2,205	2,205	2,205	2,205	2,205	2,205	2,205	2,205	2,205
Exchange Rate (US:Canada)	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Payable Copper	6,349	6,349	6,349	6,349	25,396	6,349	6,349	6,349	6,349	25,396	1,522	1,522	90,409
Less: Shipping	267	267	267	267	1,069	267	267	267	267	1,069	64	64	3,807
Treatment Charges	1,069	1,069	1,069	1,069	4,277	1,069	1,069	1,069	1,069	4,277	256	256	15,227
Refining Charges	601	601	601	601	2,406	601	601	601	601	2,406	144	144	8,565
	1,938	1,938	1,938	1,938	7,753	1,938	1,938	1,938	1,938	7,753	465	465	27,598
Net Smelter Return	4,411	4,411	4,411	4,411	17,644	4,411	4,411	4,411	4,411	17,644	1,057	1,057	62,810

Horden Lake Project
(Canadian $000's)

Break Even Case
Capital Cost Schedule

	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Year 1	Qtr 5	Qtr 6	Qtr 7	Qtr 8	Year 2
Feasibility Study	150	-	-	-	150	-	50	-	-	50
Site Preparation	150	50	-	-	200	-	50	-	-	50
Camp	200	200	-	-	400	-	10	20	20	50
Site Services	20	100	-	-	120	-	50	50	50	150
Office Warehouse	100	200	-	-	300	-	10	20	20	50
Project Management	75	75	-	-	150	-	50	50	50	150
Preproduction Development	500	1,000	-	-	1,500	-	865	1,298	1,298	3,461
Contractors Overhead	100	125	-	-	225	-	130	195	195	519
Road	1,500	1,300	-	-	2,800	-	-	-	-	-
	2,795	3,050	-	-	5,845	-	1,215	1,633	1,633	4,480

	Qtr 9	Qtr 10	Qtr 11	Qtr 12	Year 3	Qtr 13	Qtr 14	Qtr 15	Qtr 16	Year 4	Qtr 17	Year 5	TOTAL
Feasibility Study	-	-	-	-	-	-	-	-	-	-	-	-	200
Site Preparation	-	-	-	-	-	-	-	-	-	-	-	-	250
Camp	-	-	-	-	-	-	-	-	-	-	-	-	450
Site Services	-	-	-	-	-	-	-	-	-	-	-	-	270
Office Warehouse	-	-	-	-	-	-	-	-	-	-	-	-	350
Project Management	-	-	-	-	-	-	-	-	-	-	-	-	300
Preproduction Development	-	-	-	-	-	-	-	-	-	-	-	-	4,961
Contractors Overhead	-	-	-	-	-	-	-	-	-	-	-	-	744
Road	-	-	-	-	-	-	-	-	-	-	-	-	2,800
	-	-	-	-	-	-	-	-	-	-	-	-	10,325

APPENDIX VIII

CERTIFICATES OF QUALIFICATIONS

CERTIFICATE OF QUALIFICATION

I, David G. Wahl, residing at 3 McKay Crescent, Unionville, Ontario, do hereby certify that:

1. I am a consulting engineer and Vice-President of Watts, Griffis and McOuat Limited.

2. I am a graduate of the Colorado School of Mines, with a degree of Engineer of Mines (1968) and have been practising my profession since graduation.

3. I am a registered Professional Engineer in the Province of Ontario and have been designated Consulting Engineer with specialization granted in exploration and development.

4. I have not received, nor do I expect to receive, any interest, directly or indirectly, in the properties or securities of Kingswood Resources Inc.

5. This report, and the conclusions and recommendations made, are based on my review of all the available information on the property and surrounding area. I have not visited the property.

6. I hereby consent to the use of this report in a Statement of Material Facts of the Company and for preparation of a prospectus for submission to any Provincial regulatory authority.

REGISTERED PROFESSIONAL ENGINEER
D. G. WAHL
PROVINCE OF ONTARIO

Toronto, Ontario
February , 1993

David G. Wahl, P.Eng.
Consulting Engineer

CERTIFICATE OF QUALIFICATION

I, David N. Henderson, of 345 Prince of Wales Drive, Whitby, Ontario, do hereby certify that:

1. I am an associate mining engineer retained by Watts, Griffis and McOuat Limited.

2. I am a graduate of Queen's University at Kingston, Ontario with a B.Sc.(Eng) degree (1972) in mining engineering and I have been practiced my profession since graduation.

3. I am a registered Professional Engineer in the Province of Ontario.

4. I have not received, nor do I expect to receive, any interest, directly or indirectly, in the properties or securities of Kingswood Resources Inc.

5. The statements contained in this report, and the recommendations made, are based upon my review of all available data. I have not visited the site.

6. I hereby consent to the use of this report in a Statement of Material Facts of the Company and for preparation of a prospectus for submission to any Provincial regulatory authority.

David N. Henderson, P.Eng.

Toronto, Ontario
February 1, 1993

CERTIFICATE OF QUALIFICATION

I, Ian D. Trinder, of 4185 Taffey Crescent, Mississauga, Ontario, do hereby certify that:

1. I am an independent geologist retained by Watts, Griffis and McOuat Limited as a Geological Associate.

2. I am a graduate of the University of Manitoba with a B.Sc. degree - Honours Geology (1983), and of the University of Western Ontario with a M.Sc. degree - Geology (Mineral Deposits) (1989).

3. I practiced my profession part-time as a graduate student from 1983 to 1986. I have been practicing full-time since 1986.

4. I have not received, nor do I expect to receive, any interest, directly or indirectly, in the properties or securities of Kingswood Resources Inc.

5. The statements contained in this report, and the conclusions and recommendations made, are based upon my review of all available data. I have not visited the property.

6. I hereby consent to the use of this report in a Statement of Material Facts of the Company and for preparation of a prospectus for submission to any Provincial regulatory authority.

Toronto, Ontario
February / , 1993

Ian D. Trinder, M.Sc.

CERTIFICATE OF QUALIFICATION

I, William N. Pearson, of 55 Bradbeer Crescent, Thornhill, Ontario, do hereby certify that:-

1. I am a consulting geologist and president of Pearson, Hofman and Associates Ltd. of Toronto and have been retained by Watts, Griffis and McOuat Limited.

2. I am a graduate of the University of British Columbia in Honours Geology with the degree of B.Sc. in 1974, and of Queen's University, Kingston, Ontario with the degree of M.Sc. in 1977 and Ph.D. in 1980.

3. I am a Professional Geoscientist registered with the Association of Professional Engineers and Geoscientists of the Province of British Columbia.

4. I have been practising my profession since graduation.

5. I have not received, nor do I expect to receive, any interest, directly or indirectly, in the properties or securities of Kingswood Resources Inc.

6. This report, and the conclusions and recommendations made, are based on examination of all available data. I have not visited the property.

7. I hereby consent to the use of this report in a Statement of Material Facts of the Company and for preparation of a prospectus for submission to any Provincial regulatory authority.

W.N. Pearson, Ph.D., P.Geo.

Toronto, Ontario
February, 1993