

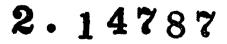
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## REPORT ON THE CREE LAKE GOLD PROPERTY of CREE LAKE RESOURCES CORP SWAYZE AND CUNNINGHAM TOWNSHIPS PORCUPINE MINING DIVISION, ONTARIO

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**MINING LANDS BRANCH** 



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Toronto, Ontario December 31, 1990

### SUMMARY

Cree Lake Resources Corp has completed an exploration program on its recently acquired, 100 claim gold property in the Cree Lake area of the Swayze greenstone belt of northeastern Ontario. The work consisted primarily of ground geophysical surveying (MaxMin II EM, magnetics) along with data compilation and limited prospecting.

Cree Lake Resources acquired the property due to the presence of gold values in a number of attractive lithologic and structural settings adjacent to a major regional structure (Cree Lake Fault) including gold in interflow chemical sediments, gold in carbonate-sericite shear zones and gold in the contact aureole of a felsic intusive body. These settings, although reminiscent of gold deposits elsewhere in the Superior Province, are generally atypical of the Swayze which is more noted for its narrow, high grade quartz vein-type gold occurrances. These latter types generally have very limited tonnage potential relative to the former which are associated with large gold deposits in many areas, eg Kerr Addison, Golden Knight, Val D'or area, etc.

Some twenty-two holes have been drilled on the property by previous workers, two by Inco in 1966 and twenty by Quinterra Resources Inc in 1985-87. This latter drilling was partially in response to the discovery of a surface gold value of 0.878 oz gold per ton over 10 ft in banded pyrite iron formation. Subsequent work determined that the gold is quite erratically distributed and is in a large boulder(s), the source for which has yet to be found.

Three gold-bearing areas of significance were discovered by the Quinterra drilling and present priority targets for on-going work as follows:

- (a) hole 85-10, 14 and 87-16, 17 area: wide sections of anomalous gold values, eg 608 ppb over 31.5 ft incl 2000 ppb over 3 ft in hole 14, were recorded here in chert-pyrite-graphite chemical sedimentary material. The geophysical responses associated with this unit(s) extend virtually the entire length (23,700 ft) of the grid
- (b) hole 87-18 area: this hole returned 0.052 oz gold per ton over 12.5 ft in a near surface, brecciated iron formation; geophysical surveying has now determined this to be the single hole in a feature which extends for some 3200 ft.
- (c) hole 85-12 area: this hole was stopped in gold-bearing hornfelsic material (600 ppb Au over 20 ft including 1200 ppb over 5 ft) adjoining a felsic intrusive. A magnetic anomaly located by our surveying and containing the above hole extends for some 4000 ft along the contact area.

There is concluded to be potential for the discovery of an economic gold deposit on the property.

A major exploration program budgeted at \$635,000 is recommended to further explore the claims with work to consist of geological mapping and prospecting, overburden stripping, trenching and sampling and diamond drilling.



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## **1.0 INTRODUCTION**

Located in the Swayze gold area of northern Ontario, the Cree Lake property contains chemically anomalous to ore-grade gold values proximal to a major regional structure, the Cree Lake Fault, in a number of lithologic settings including:

- (a) gold in a variety of interflow chemical sedimentary units including sulphide iron formation, chert-graphite units and brecciated cherty iron formation;
- (b) gold in strongly foliated carbonate-sericite-chlorite schists with associated green carbonate alteration; and
- (c) gold in pyritic, metasomatized volcanics containing fine quartz veinlets at a felsic intrusive contact.

None of the above represents the narrow erratic quartz vein style of mineralization so typical of the Swayze but for which the economic potential is generally quite limited. It has long been felt by a number of workers that the Swayze has potential for other than the narrow quartz vein type of deposit. The above mineralization styles are typical of some of the major gold mines of the Abitibi greenstone belt including those of the Porcupine, Agnico-Eagle and Bourlamaque Batholith areas. Previous work on the present Cree Lake property suggests that it has definite possibilities for a more substantial type of gold deposit such as the foregoing and it was on this basis that the property was acquired.

In the first step towards evaluating these possibilities, Cree Lake Resources Corp commissioned MPH Consulting Limited to carry out programs of data compilation along with field programs of prospecting, linecutting and ground geophysical surveying.

This work was completed in the period from early November, 1990 through late December, 1990. The results of this program are presented following, all in the context of the geology, previous work, gold mineralization on and exploration potential of the Cree Lake property and the Swayze greenstone belt. Recommendations are presented for on-going exploration of the claims.

## 2.0 LOCATION, ACCESS AND INFRASTRUCTURE

The property is located in southern Swayze township and the north part of adjacent Cunningham township, District of Sudbury, Ontario at latitude 47° 46'N, longitude 82° 40'W per Figure 1.

The claim group is approximately 84 miles (140 km) southwest of Timmins, 36 miles (60 km) east of Chapleau and 114 miles (190 km) north of Sudbury, Ontario.

A forest access road, the Dore Road, leaves highway 101 at a point 10 km east of Foleyet, Ontario and heads in a southerly direction. At a point 63 km south of highway 101, the old Sultan-Kenty Mine road turns off to the west and leads a further 3 km south to the Cree Lake property.

This road transects the central portion of the property in a north-south direction thereby providing convenient access to the claims. The previous operators have also established a series of drill roads off the Kenty road thus providing easy access to the central and eastern extremities of the property.

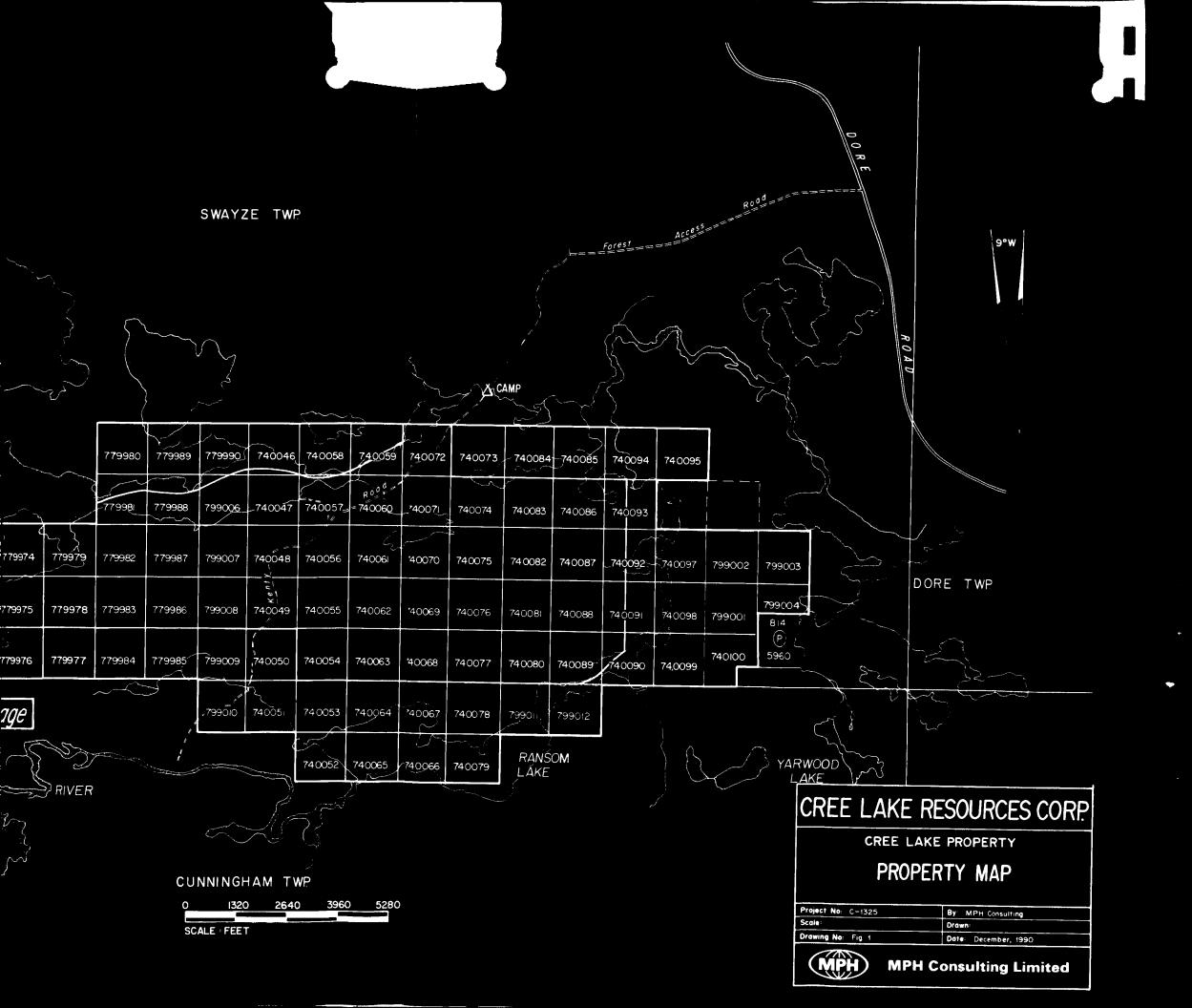
Float-equipped aircraft can land on Cree Lake which adjoins to the north and partially underlies the property.

The property is well located in terms of exploration and mining supplies, services, etc., being approximately equidistant from Marathon/Manitouwadge/Wawa, Timmins and Sudbury. There is a large and relatively stable work force in the region from which to draw miners for any new mining operation.

The CPR main line passes through the small railhead of Sultan, approximately 20 km southwest of the property. E.B. Eddy Forest Products maintains a large camp at Ramsay, approximately 65 km by road to the southeast, also on the CPR line.

Abundant fresh water is available on the property from Cree and Ransom Lakes or the Wakami River. The nearest hydro-electric power is at Sultan. There is also an old telegraph line and right-of-way which extends from Sultan to the forestry tower in the north portion of Cunningham Township.





## 3.0 TOPOGRAPHY, VEGETATION AND CLIMATE

The property is covered in general with a thin but extensive layer of till which in turn is covered by swamp in the low-lying areas. The main topographic features are Cree Lake to the north and Ransom Lake and the Wakami River to the south and east.

Second growth jackpine, spruce and poplar are present in the area with alders in the swampy areas. Swamps and ridges generally trend east-west reflective of underlying structural and lithologic trends.

A major wind storm in this area several years ago has produced a great deal of "blowdown" which hampered the grid re-furbishment and line cutting efforts.

The climate is typical for this latitude with an average temperature range from  $+30^{\circ}$ C in summer to  $-40^{\circ}$ C in the winter. Freeze-up is in November with break-up in April.

## 4.0 PROPERTY AND LEGAL

The Cree Lake property is within the Porcupine Mining Division of Ontario. It is a relatively large property consisting of 100 contiguous mining claims as follows:

<u>Claim No</u>	Township	Expiry Date
P 740046-050 incl P 740051-053 incl P 740054-063 incl P 740064-067 incl P 740068-077 incl P 740078-095 incl P 740097-100 incl P 779956-990 incl P 799001-004 incl P 799006-009 incl	Swayze Cunningham Swayze Cunningham Swayze Swayze Swayze Swayze Swayze Swayze	03/05/91 03/05/91 03/05/91 03/05/91 03/05/91 03/05/91 03/05/91 03/05/91
P 799000-009 Incl P 799010-012 incl	Swayze Cunningham	03/05/91 03/05/91

The entire property was recorded on April 04, 1984.

All of the claims have their required 200 days of assessment work. They are presently on their first extension to lease. Under the existing Mining Act, Cree Lake Resources can maintain the entire property in good standing until May 03, 1995 by making nominal extension to lease payments of \$500.00 (i.e. \$5 per claim per year). It desired, the company can at any time prior to the above date take some or all of the claims to lease by carrying out the required legal survey.

In Ontario, leases are presently granted on mining claims for an initial 21 year term. This is renewable in perpetuity.

Where both surface and mining rights are leased, a payment to the Crown of \$1.00 per acre the first year and \$0.25 per acre for each subsequent year is required. For mining rights only the required payments is \$1.00 per acre for the first year and \$0.10 per acre for each subsequent year.

It should be noted that a new Mining Act is being introduced in Ontario such that there will be changes to all of the above assessment and lease factors. Under the indicated provisions of the new Act, assuming that this becomes law, Cree Lake Resources Corp. will again be required to file assessment work if the claims are not taken to lease. The initial requirement would be \$40,000 and this would be due in 1993.

Cree Lake Resources Corp purchased the present property outright in 1990 for \$5000 subject only to the reservation of a 2% net smelter royalty to Quinterra Resources Inc

of Vancouver.

The claims are being held in trust by W.E. Brereton, P.Eng. on behalf of Cree Lake Resources Corp. pending Cree Lake's acquisition of a Mining Licence.

## 5.0 HISTORY AND PREVIOUS WORK

The Cree Lake property was the subject of considerable exploration for gold during the flow-through heyday of 1984-87. This work was carried out by Quinterra Resources Inc and associated company Golden Rim Resources Inc (Golden Rim entered into an agreement with Quinterra in 1985 whereby Golden Rim could earn a 50% interest in the property by spending \$1,000,000 in exploration over three years. Golden Rim did not spend the full \$1,000,000 and therefore did not earn any interest in the claims).

Based on old trenches on the Cree Lake property, it is apparent that this property was at one time prospected for gold, probably in the 1930's. Some claims were staked for gold at that time in northern Cunningham township but they had all lapsed by the mid-1940's.

The most intensive development for gold in the immediate area took place at the Kenty property in northeastern Swayze township in the 1930's. The Kenty deposit consists of a series of parallel fracture-filling type quartz-carbonate veins in altered mafic volcanics and feldspar porphyry (Gorden, 1979). The veins average 4 to 5 ft in width; the maximum width is 10 feet. Each consists of a main quartz leader with subsidiary parallel veinlets on either side. Coarse visible gold occurs in fractures in the vein quartz. Pyrite along with minor galena, chalcopyrite, sphalerite, specularite and graphite are also present. Channel sampling on surface by Kenty Gold Mines indicated that the oreshoot in the No 1 vein averaged 6.3 ft in width and 50 ft in length with an average of 0.39 oz gold per ton. The No 2 oreshoot, located east of the first, measured 3.7 ft in width by 72 ft in length and averaged 0.67 oz gold per ton. Two vertical shafts were sunk in 1931-34, that on the No 1 vein to 510 ft and that on the No 2 vein to 534 ft. A total of 6,750 ft of lateral development was carried out for the two shafts. Possible reserves of undetermined grade were reported by the Financial Post Survey of Mines (1948, p.14) as follows:

No 1	Shaft Area	69,000 tons
No 2	Shaft Area	<u>290.000 tons</u>
		359,000 tons

In 1948, Erndale Mines Limited, installed a 100 ton per day mill and hoisted 1250 tons of ore of unknown grade from the No 1 shaft.

There has never been any additional production from the deposit.

Gold is also present on the Buffalo Canadian Gold Mines Limited property at the northeast end of Cree Lake, directly north of the present property. There are two known historic gold occurrences on the property - that on the north side of the easterly point at waters edge on the small island on Cree Lake on present claims 1112778-79 (old claim 116850) and a second showing on the mainland some 3500 feet east of the above. This "mainland" showing is located along the west part of the common

boundary between present claims 1112773 and 74.

A grab sample indicated to be from the vein at the island showing collected by D.C. McKechnie, P.Eng. in 1961, and which probably represented a width of from three to six inches, returned a value of 4.61 oz gold per ton. (Assessment File T-2192, Dept. of Northern Development and Mines, Timmins, Ont.). The vein material consisted of quartz with pyrite and chalcopyrite with the vein itself indicated to be relatively short and narrow.

Grab samples from the mainland showing, also taken by D.C. McKechnie in 1961, showed the following gold assays:

Sample No.	Oz Gold Per Ton
1. Narrow vein in pit-quartz with rusty material	1.36 7.27
<ol> <li>Narrow vein in pit-quartz with pyrite</li> <li>Rock inclusion in narrow adjoining vein with</li> </ol>	1.21
galena and pyrite	4.08
4. Waste in middle of vein	0.025

Both showing areas were then subjected to considerable drilling by Flint Rock Mines Limited in 1962-63. There were 34 holes drilled on the property. Twenty-five of these, ranging form 28 to 379 feet in length, were drilled on the mainland showing on old claims 116847 and 848. Nine holes were drilled on the island showing on claim 116850, ranging from 85 to 160 feet in length.

The holes on the mainland showing were along a 400 feet vein structure which had been indicated by trenching by previous operators. Assays of 12-18 inch wide, high grade sections in the drill cores reportedly showed gold values ranging from 0.40-20.7 oz per ton and silver values ranging from 0.32-4.54 oz per ton (Donovon, 1968, p33).

The mainland showing is located on the north side of a low hill. The central portion of the westerly trench exposes a narrow quartz vein zone in a shear within mafic volcanics. The quartz is mineralized with pyrite and subordinate fine-grained galena and chalcopyrite. The most intense shearing and quartz-sulphide mineralization has a width of 12-14 inches with the best mineralization concentrated in a 3-4 inch band along the south edge of the vein zone. The mafic volcanics within the shear have been variably sericitized and carbonatized.

The vein zone strikes at 065°, dips steeply at surface and is exposed along a length of 75-100 ft.

A single, double-fist size sample of the best-looking vein material collected by W.E. Brereton, P.Eng. of MPH Consulting in August of 1990 assayed 3.54 oz gold per ton attesting to the high grade nature of the quartz-sulphide vein interval.

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Another occurrence of gold in quartz veins is reported immediately south of the subject property on Allen Lake in Cunningham township. A shaft was sunk on this property in 1934 to a depth of 150 feet and a limited amount of lateral work was done. The writer does not know definitely what was found in the underground work, but understands that little or no ore was found.

This is now known as the Swayze-Huycke prospect and is is a re-staking of an old property of Olive Gold Mines Limited and is described in Ontario Department of Mines Report, 1942, part 7, page 22, from which the following is taken: "In September 1934, the vertical, two compartment shaft had reached a depth of 150 feet, with a level at 125 feet. About 31 feet of drifting and 100 feet of cross-cutting had been carried out on this level." The writer has been unable to obtain any detailed reports on the results of this work but assumes that it was negative. Any showings that existed near the shaft have been covered, or otherwise hidden by flooding to the east of the shaft. The head-frame has now collapsed. A few shallow pits are present on the east side of an island about 1,700 feet south of the shaft that are now filled with water. At the north end of the above property, just to the west of Allen Creek, outcrops and a few shallow pits show the presence of a low grade iron formation. On the west side of the lake, the rocks are Timiskaming type sediments, greywackes and quartzites. On the east side the rocks are Keewatin type andesites. The Allen Lake fault bisects the lake in a north-south direction.

The present Cree Lake property was covered by various airborne surveys flown during the 1960's and 1970's in the search for base metals but there is no evidence of any concentrated exploration effort having taken place in the area of the property prior to the acquisition of the ground by Quinterra Resources Inc. in 1984. The only recorded work consists of two drillholes totalling 1133 ft completed by INCO in 1966. These holes, numbers 31925 and 31926A, were drilled in the northwest portion of present claim 779968 and northeast portion of claim 779973 respectively. Both holes were sited on electromagnetic targets. Iron formation and graphite schist were intersected in both cases. No assays were reported.

The area was geologically mapped by Furse (1932), Rickaby (1934), Meen (1942), and more recently by Donovan (1968) and Siragusa (1980) of the Ontario Department of Mines. The area was also covered by an airborne INPUT electromagnetic survey and a magnetometer survey carried out by the Ontario Ministry of Natural Resources in late 1980 and early 1981. Of particular interest, this airborne surveying disclosed a major EMconductive trend with local magnetic coincidences extending for some 7.5 km in an eastwest direction along the central and north portions of the subject property.

The work carried out by Quinterra Resources and Golden Rim Resources is summarized as follows:

1984: Preliminary geological mapping and prospecting was carried out in the fall of 1984 (Winter, 1985). A number of samples were collected for analysis in the course of the above.

In the central part of the property, a chip sample of sulphide facies iron formation yielded an assay of 0.878 oz gold per ton over 10.0 feet. This sulphide material is located on line 0+00 at 7+00S and is now known to represent two or more large pieces of glacial float firmly lodged in overburden. A second sample taken 75 m to the east assayed 0.503 oz gold per ton. Two samples taken from the pyritic, quartz sericite schist to the north assayed 0.137 and 0.027 oz gold per ton. A check assay on the 0.137 oz gold per ton An value yielded only 0.008 oz gold per ton. Other samples collected from this horizon assayed up to 195 ppb gold. Approximately 400 m to the north, a sample of a felsic metavolcanic gave 333 ppb gold.

Also, in October of 1984, the property was flown with a combined VLF-EM and magnetic survey by Terraquest Limited (Watson, 1985).

We find it interesting that the Terraquest airborne VLF survey shows the major conductive trend to end well before reaching the west property boundary while the government-sponsored INPUT surveys indicate the conductive zone to continue strongly off the west end of the property. Our ground surveying confirmed the INPUT picture. Note that Quinterra based its grid lay-out on the Terraquest results.

1985: A ground exploration program consisting of linecutting (40 miles), magnetic, VLF-EM and self potential surveying and detailed geological mapping was carried out in the fall of 1985 (Winter, 1986A). This work did not cover the entire property such that the west portion of the property saw no exploration at all. The airborne EM trends of interest continue off the Quinterra grid particularly to the west and also to the east.

In detail, the ground geophysical surveying did not cover the entire grid. The self potential (SP) work covered 20.5 miles between lines 72E to 108W. Ten miles of magnetic and VLF-EM surveying was carried out over the central portion of the grid from 16W to 40E.

The SP results on the Cree Lake property are indicated by Quinterra to be divided approximately into two types by the baseline. South of the baseline, the potential contours show large, broad, generally irregularly shaped areas of positive or negative potentials. North of the baseline are 20 strongly negative, linear to arcuate anomalies which generally parallel the volcanic stratigraphy.

The magnetometer survey over the central part of the grid showed an east-west trend with general background values of about 58800 nT. Superimposed on this overall pattern are linear east-west anomalies with values of 1500-2000 nT above the general background although peak values reach 5000-7000 nT above background. Magnetic depressions of a few hundred nT parallel the magnetic ridges. The southeastern corner of the surveyed area shows northeasterly trends.

The Radem dip angle survey indicated 8 generally east-west striking conductors parallel to the volcanic stratigraphy and coincident with the SP anomalies.

All of the foregoing (and some additional) geophysical work is compiled on Map 1 at rear. The detailed geological work by Quinterra is presented on Map 2. The twenty holes which have been drilled to date are presented on both maps.

## <u>1985/1986</u>:

Fourteen diamond drill holes totalling 7,010 feet were completed between November 22, 1985 to January 23, 1986 (Winter, 1986B) by Longyear Canada to test geophysical targets as follows:

Hole No.	Co-ordinates	Length(ft)	Angle	Azimuth	Claim
CL-85-01	LO:4+50S	405	45°	180°	740056
CL-85-02	L4E:2+80S	595	45°	180°	740056
CL-85-03	L8E:3+50S	555	45°	180°	740056
CL-85-04	L12E:3+30S	525	45°	180°	740061
CL-85-05	L16E:4+75N	535	45°	180°	740061
CL-85-06	L12E:1+90N	405	45°	0°	740061
CL-85-07	L6E:1+20N	575	45°	0°	740056
CL-85-08	L6E:3+50S	595	45°	0°	740056
CL-85-09	LO:5+15S	375	45°	0°	740056
CL-85-10	L8E:15+80N	825	45°	180°	740057
CL-85-11	L16E:19+50S	385	45°	180°	740063
CL-85-12	L8E:12+50S	455	45°	180°	740055
CL-85-13	L16E:3+80S	395	45°	180°	740061
CL-85-14	L12E:11+60N	385	45°	180°	740060

## PHASE 1-CREE LAKE DRILLING

These holes are discussed in more detail as follows:

### <u>CL-85-01:</u>

This hole was drilled under the surface trench where surface sampling had given 0.878 oz gold per ton across 10 ft in a quartz-chert-pyrite zone. No

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comparable rocks were intersected in this hole and from examination of the area on surface the above assay was considered by Quinterra to come from one or more large boulders. There were no significant intersections in the hole.

#### <u>CL-85-02:</u>

A grab sample from a trench at approximately L4E:5+50S assayed 0.13 oz gold per ton (0.008 oz gold per ton on repeat). This hole was drilled under this location and, in a zone correlative with the surface location, intersected quartz-carbonate-sericite schist. The best value from this zone was 3 ft from 332-335 assaying 115 ppb gold. Quartz-carbonate veining with minor disseminated pyrite in mafic to intermediate tuffs from 408.5 - 411.5 ft assayed 139 ppb gold.

#### CL-85-03:

From 223.5 - 233 ft (9.5 ft), a quartz-carbonate sericite schist averaged 256 ppb gold. This is considered to be the same zone as intersected in CL-85-02. A chert-pyrite-quartz zone from 340.5 - 350 ft (9.5 ft) averaged 204 ppb gold.

#### CL-85-04:

The same chert-pyrite quartz zone intersected in CL-85-03 was also cut in this hole. It assayed 195 ppb gold across 6.6 ft from 281.7-288.3 ft.

#### <u>CL-85-05:</u>

This hole was drilled to test coincident VLF, SP and magnetic anomalies. A chert-graphite-pyrite iron formation was intersected and the best assays from this horizon were:

71.5-75 (3.5 ft) at 132 ppb gold 85.5-94 (8.5 ft) at 363 ppb gold 210.6-211.6 (1 ft) at 117 ppb gold

#### CL-85-06:

This hole tested the same set of geophysical anomalies as CL-85-05 with the best values in the iron formation being:

155-157 (2 ft) at 130 ppb gold 173-17515 (2.5 ft) at ppb gold

<u>CL-85-07</u>: No significant values were obtained

<u>CL-85-08</u>: No significant values were obtained <u>CL-85-09</u>: No significant values were obtained

CL-85-10:

This hole was drilled to intersect the upper part of the central volcanic.

sequence and two SP-VLF zones. From 759-796 ft (37 ft), a graphitecarbonate-chert-pyrite zone was intersected which averaged 183 ppb in gold. The best individual sections were 5 ft @ 440 ppb, 3 ft @ 380 ppb and 5 ft @ 410 ppb.

#### <u>CL-85-11</u>: No significant intersections were obtained.

### <u>CL-85-12:</u>

This hole was drilled to test two parallel magnetic anomalies close to the granite plug in the southern part of the property. Twelve ft of altered (metasomatized) mafic-intermediate tuff followed by 8 ft of a very fine grained unit (hornfels) containing fine quartz stringers, chlorite and approximately 0.5% disseminated pyrite at the end of the hole averaged 600 ppb gold with the best value being 1200 ppb (0.035 oz gold per ton) over 5 ft.

#### <u>CL-85-13:</u>

This hole was drilled to test the eastern extension of the chert-pyrite-quartz horizon intersected in CL-85-03 and CL-85-04. Three zones were intersected in the hole. From 251-275 ft (24 ft) a quartz-sericite-carbonate schist was intersected assaying 146 ppb gold. From 291-297.5 (6.5 ft) the chert-pyrite-quartz horizon averaged 100 ppb. A brecciated chert unit from 303.5-306 ft averaged 180 ppb gold and from 355.5-360 ft (4.5 ft) an altered mafic-intermediate tuff containing quartz-carbonate stringers assayed 150 ppb gold.

#### CL-85-14:

This hole was drilled 400 ft east of CL-85-10 to test coincident VLF-SP anomalies. It intersected the same graphite-chert-pyrite zone as in CL-85-10 between 759-796 ft. In this hole the zone was cut from 223-254.5 ft (31.5 ft) and assayed 608 ppb gold. The best value was 2000 ppb (0.058 oz gold per ton) across 3 ft in a blue-grey to black chert containing approximately 5% disseminated pyrite.

In an attempt to determine the degree of enrichment of gold presented by the higher values, Quinterra calculated the mean and standard deviation for all of the samples from the first phase of drilling. The mean is 28.5 ppb and the standard deviation is 107 ppb. If the values greater than 2 standard deviations are considered to be anomalous then values greater than 214 ppb are anomalous in gold. Three zones were thus considered by Quinterra to be highly anomalous in gold as follows:

#### Hole CL-85-05 Area:

85.5-94 ft (8.5 ft) at 363 ppb gold in graphite-chert iron formation. This zone can be traced geophysically for approximately 15,000 ft.

#### Hole CL-85-10 & CL-85-14 Area:

The best section is 31.5 ft in CL-85-14 from 223-254.4 ft of a graphitechert-pyrite zone averaging 608 ppb gold (maximum value 2000 ppb gold) which is correlative with the zone in CL-85-10 from 759-796 ft in which two 5 ft sections assayed 440 and 410 ppb gold. These two holes are on the western end of a geophysical anomaly that can be traced for approximately 3500 ft east to L40E.

#### Hole CL-85-12 Area:

Twenty feet of altered and metasomatized metatuffs cut by fine quartz stringers and containing 0.5% pyrite averages 600 ppb gold at the end of the hole with the best value being 1200 ppb across 5 ft.

Twenty three miles of induced polarization/resistivity surveys were then carried out between lines 28W to 72W in the late fall of 1986, by Rideau Geophysics Limited. The surveying was carried out with a pole-dipole array using a 100 foot dipole size and reading n=1, 2. One of the primary target areas was the weakly pyritic, gold-bearing intrusive contact zone intersected by hole CL-85-12. A number of IP and resistivity anomalies were located by the surveying, these generally coincident with the known VLF/SP anomalies. No IP/resistivity anomalies were located in the area of hole CL-85-12.

<u> 1987</u> :	A 2,962	foot diam	ond drilling	progra	m was	then ca	rried	out	on the	e property
	between	March and	i April of	1987	(Dubeau	, 1987)	to	test	some	additional
	geophysic	cal targets lo	ocated by the	earlier	work as	follows	•			

#### PHASE 2 - CREE LAKE DRILLING

Hole No	Co-ordinates	Length (ft)	Angle	Azimuth	Claim
CL-87-15	L-12W:3+80S	475	45°	180°	799007
CL-87-16	L-20E:13+60N	487	45°	180°	740060
CL-87-17	L-24E:12+50N	495	45°	180°	740071
CL-87-18	L-64E:6+00S	535	45°	180°	740087
CL-87-19	L-68E:17+50S	485	45°	180°	740088
CL-87-20	L-60E:21+00S	485	45°	180°	740080

These holes are discussed in more detail as follows:

#### CL-87-15:

This hole was drilled on line 12W to test an electrical anomaly. Rocks in the hole were highly altered throughout and comprised mafic tuffs, mafic volcanics, shear zones, schists and a mineralized zone of chert-sulphidesquartz and carbonate. Minor arsenopyrite was noted in fine quartz stringers and as disseminated crystals associated with pyrite within the mineralized zone. Between 258-280 feet (22 feet), the mineralized zone and altered mafic tuffs averaged 0.0157 oz per ton, with the best value being 0.026 oz gold per ton over 2.5 feet.

#### CL-87-16:

The hole was drilled on line 20E to test an electrical anomaly. Rocks consisted of mafic volcanics, altered mafic to felsic tuffs with interbedded pyritic-graphitic horizons. The conductor appears to be due to the graphitic zones, particularly the second of three zones which averaged 0.0122 oz gold per ton over 33 feet between 314 and 347 feet. The highest value was 0.026 oz gold per ton from 342 to 347 feet.

#### CL-87-17:

The hole was drilled on line 24E to test an electrical anomaly. The hole intersected mafic volcanics and tuffs, feldspar porphyries, two graphitic schist units, one brecciated, the other interbedded with mudstones. The hole ended in a diorite. Between 223-229.5 feet, the mafic tuffs, interlayered with graphite-pyrite beds averaged 0.021 oz gold per ton over 6.5 feet, with a high value of 0.033 oz gold per ton over 2.5 feet. No significant Au values were noted in the graphitic horizons which appear to be the target conductors.

#### CL-87-18:

The hole was drilled on line 64E to test an electrical (SP/IP) anomaly. The hole intersected mafic volcanics and tuffs, a graphitic iron formation, which is intruded by a diorite sill and which in turn is intruded by feldspar porphyry dykes. Between 40-52.5 feet, brecciated cherty iron formation assayed 0.052 oz gold per ton over 12.5 feet.

#### CL-87-19:

The hole was drilled on line 68E to test an electrical anomaly. The hole intersected mafic volcanics which were hematized in places and contained minor pyrite and chalcopyrite locally. There was no apparent conductor intersected and no significant gold values were identified.

## CL-87-20:

The hole was drilled on line 60E to test an electrical anomaly. The hole intersected mafic volcanics and tuffs, feldspar porphyry, crystal tuffs and diorite. Up to 10% pyrite was noted in places. At 416 to 419.5, a zone of up to 15% quartz veins with minor pyrite assayed 0.031 oz gold per ton. The diorite is highly magnetic. No obvious conductor was noted.

Finally, in August of 1987, a small program was carried out by Quinterra Resources consisting of magnetic and VLF surveying on lines 44E to 64E, overburden stripping in the area of hole CL-87-18 and further prospecting (Laderoute, 1987). This program was

plagued by equipment failures such that only about 50% of the planned stripping was completed. The stripping was not successful in exposing the gold-bearing iron formation intersected in hole 18. None of the planned magnetic (and VLF-EM) surveying in the west portion of the grid was carried out. This program did not yield any results of interest in either a positive or negative sense.

## 6.0 THE SWAYZE GREENSTONE BELT - GEOLOGY AND MINERALIZATION

The Swayze area, including Swayze township, is one of Ontario's historic gold areas and has seen prospecting activities for a variety of metals. Although there are no precious or base metal producers in the area at the present time, the Swayze has a rich mineral endowment typical of the Abitibi Orogenic Belt. Deposits and/or occurrences of gold, silver, zinc, nickel, copper, lead, iron molybdenum, asbestos, talc, barite and marl are known in the area. Carbonatite-associated rare earths and industrial minerals are present west of the Swayze associated with the Kapuskasing High.

The Swayze can be thought of as an arcuate volcano-sedimentary ("greenstone") belt of Archean age, convex to the west, extending from Sewell township in the northeast, through Swayze township in the central region, to Groves township in the southeast per Figure 2.

The Swayze greenstone belt forms the westernmost extremity of the central Abitibi belt, partially disconnected from it by a series of north to northwest striking faults and granodiorite/monzonite batholiths.

The volcanics consist primarily of mafic rocks which floor some substantial intermediatefelsic eruptive centres. Two such centres are to be found in the Kenogaming-Penhorwood and Swayze township areas.

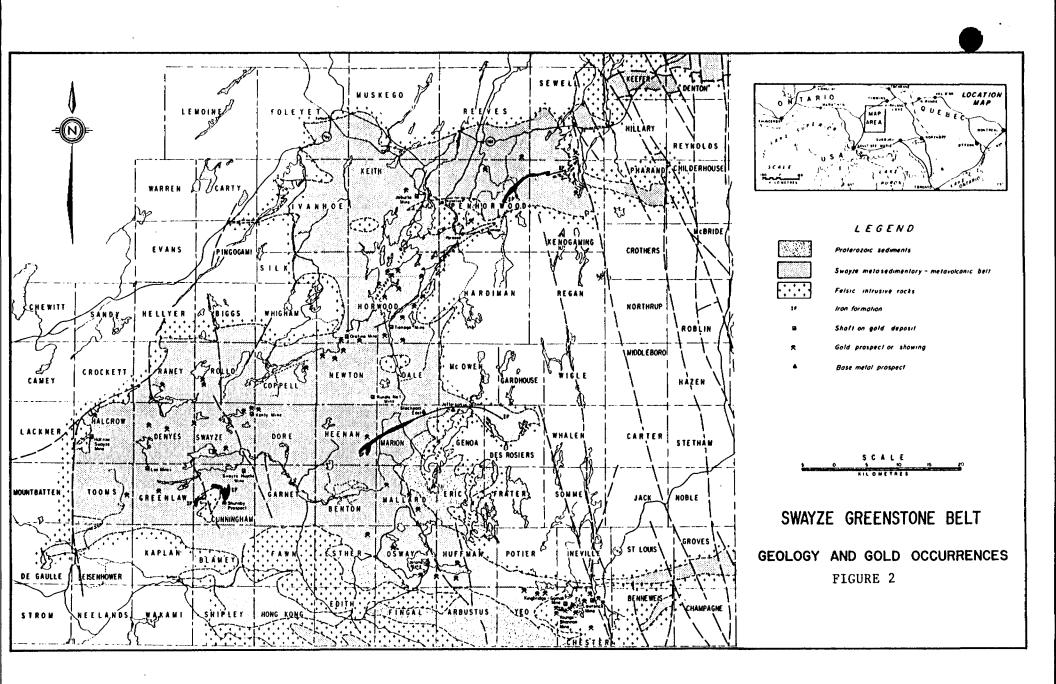
Clastic and chemical sedimentary rocks, including major banded iron formations, are intercalated with the volcanics. They also form regionally extensive sedimentary units as in the southeast portion of the Swayze.

A variety of synvolcanic to post-volcanic intrusions has invaded the supracrustal rocks. The Swayze belt is truncated to the west by the fault-bounded, north-northeast trending Kapuskasing Structural Zone, which contains high-grade metamorphic rocks and associated carbonatite intrusive complexes.

It has been recognized that the rocks in north Swayze represent the first major reappearance of greenstones west of the Timmins-Porcupine gold camp, the latter notable for its production of some 57 million ounces of gold to date.

Both the Porcupine-Destor Fault and the Cadillac-Larder Lake Break are inferred to extend as zones of high strain through the north and south portions, respectively, of the Swayze, the former through the Joburke Mine area and the latter through the Jerome Mine area. Also, the Ridout Group sediments in south Swayze may be correlative with the Timiskaming Group sediments in the Virginiatown-Kirkland Lake-Matachewan area. These sediments are intimately associated with zones of high strain and gold deposits in these camps.

The extensive carbonatization associated with features like the Cadillac-Larder Lake Break is also commonly observed along major fault and shear zones in the Swayze suggesting that the same fundamental processes have been operative.



Known gold mineralization in Swayze is typically of the quartz lode variety generally accompanied by shearing, fracturing and associated sulphides and carbonate. Sulphides typically include pyrite along with any or all pyrrhotite, chalcopyrite, galena and sphalerite. Gold is present in a large variety of lithological and structural settings. Some prominent examples are gold in quartz veins and replacements in diorite (Orofino deposit-Silk Township); in strongly sheared carbonated zones (Tooms-Greenlaw area); in siliceous zones associated with felsic porphyry (Rundle No. 1 deposit-Newton Township); in quartz vein zones in sheared sediments (Halcrow-Swayze deposit-Halcrow Township); near a porphyry contact in sheared sediments (Jerome Mine - Osway Township); in sheared, carbonatized mafic volcanics (Joburke Mine); and in quartz veins in granodiorite-granite (Chester-Yeo area).

Gold is also present in oxide iron formation (Marion Township), in pyritic iron formation associated with extensive shearing and carbonatization (Cree Lake) and in sheared pyritic zones in intermediate volcaniclastics (Kenogaming township).

The gold potential of the Swayze greenstone belt has been recognized since the early 1900's. An early discovery was made at Moore Lake, Yeo township, in 1912 by P. Moore who test-pitted an auriferous quartz-carbonate vein within pyritized, carbonatized metasediments. Gold and copper mineralization in quartz-carbonate veins within sheared granite was investigated in Chester township in 1910. This showing (Lawrence prospect) eventually produced some 16 tons of 7% Cu, 0.15 oz gold per ton in 1916.

Much of the initial exploration focus in the region was directed towards iron deposits. The Woman River iron deposit (Algoma Steel Corp., 1906-07, Heenan and Marion townships) contains reserves of some 5,100,000 long tons of 40% Fe. Additional iron deposits include that at Radio Hill in Keith and Penhorwood townships (158,200,000 long tons at 27% Fe; Kukatush Mining Corp., 1958-65). Iron exploration was also carried out in Cunningham township in the late 1920's.

Barite was discovered by R. Cryderman in Penhorwood township in 1917 with some production reported by Barite Syndicate Explorations in 1923. The deposit is currently held by Extender Minerals Ltd. who reportedly carried out bulk sampling in 1984 prior to a decision to ship material to their Matachewan barite processing facility.

The first major thrust in gold exploration and development occurred in the period 1930-1943, during which time most of the reported gold occurrences were discovered. Aside from the Joburke Mine, most of the gold production in the area was also from this time period.

Sporadic gold exploration occurred again in the mid 1950's and early 1960's with an explosion of activity during the 1980's following an increase in gold prices. Earlier prospecting discoveries culminated in the 1970's and early 1980's with gold production form the Joburke Mine, Keith township (Pamour Porcupine Mines Ltd.) and a major evaluation program at the Orofino deposit (Orofino-Northgate Joint Venture) along with extensive work on various prospects in the Chester township area.

Approximately 980,000 tons of gold-silver ore have been mined to date from seven deposits (Joburke, Jerome, Tionaga, Kingbridge-Gomak, Halcrow-Swayze, Young-Shannon, Lawrence). Two of these contained significant copper values (Lawrence, Young-Shannon). The lions share of production has been from the Joburke and Jerome Mines. The Joburke Mine yielded 632, 292 tons grading 0.10 oz gold per ton (1973-75, 1971-81), while the Jerome Mine produced some 56,893 ox Au and 15,114 oz Ag from 335,060 tons of ore (1938-1951).

Base metals exploration was a major focus in the Swayze from the mid 1950's to the late 1960's. Lead-zinc mineralization was first discovered in the area in iron formation in Cunningham township in 1904 by Ridout Mining Co. Later work by Shunsby Mines Ltd. (1957-63) in this same township found a Zn-Cu deposit in which the current owner, MW Resources Ltd., reports reserves of 2,400,000 tons at 2.7% Zn, 0.39% Cu with a higher grade section of 80,000 tons of 6.2% Zn, 3.9% Cu, 1.2 oz Ag per ton, 0.03 oz gold per ton (1981).

Work on a copper-nickel deposit in Groves township form 1953 to 1975 resulted in the delineation of some 500,000 tons of reserves grading 1.5-2% combined Cu-Ni (Ontario Nickel Mines Ltd., Nickel Gold Mines Ltd.).

A large portion of the northern part of the belt was evaluated by Canadian-Johns Manville for its asbestos potential from 1951 to 1967. The Reeves Mine in Reeves township reportedly had reserves of 20,000,000 tons of 3 to 3.5% asbestos fibre content (1967). Upon cessation of the asbestos mining activities, a thriving talc mining/milling complex has been established at the site by Steetley Talc Limited.

No New Brolost.

#### 7.0 CREE LAKE PROPERTY - GEOLOGY AND MINERALIZATION

Based on the geological mapping by Quinterra in 1985 per Map 2, it can be seen that the grid area is underlain mainly by intermediate to mafic volcanic units with some ultramafic members. Extensive volcanic fragmentals ("1b congl") outcrop in the north-central portion of the grid area.

Intercalated with the above volcanics are a number of extensive chemical and clastic sedimentary units with variable chert, magnetite, pyrite and graphite components (rock types 4, 5). These rocks typically have a prominent electrical  $\pm$  magnetic signature and give rise to the geophysical anomalies mapped on the claims by past and present workers. Felsic volcaniclastic units are variably interbedded with the sediments.

There appear to be three main sedimentary - felsic volcanic units in the area of line 0 to 20E where we have the most geological information. One is located immediately south of the baseline (holes 1, 3, 4, 8, 15 etc.). A second is located immediately north of the baseline (holes 05, 06, 07, etc.) with a third further to the north in the area of holes 10, 14, 16 and 17. Note that the central and north sedimentary units have prominent MaxMin II EM expressions while that to the south is defined by magnetic and IP anomalous responses. These sedimentary units would appear to extend across virtually the entire property in an east-west direction considering the geophysical results.

Associated with these chemical and clastic sedimentary and felsic volcanic units are extensive zones of shearing and alteration which have been mapped by Quinterra on the basis of the alteration assemblages present, eg chlorite schist, carbonate-sericite schist, etc (rock type 6). At least some of these rocks are felt to be sheared felsic tuffs. Considerable green carbonate alteration may be present in these schists. This entire sedimentary-felsic volcanic-alteration zone assemblage has a thickness of approximately 2000 ft in the area of line 0.

A stock or plug of granitic composition intrudes volcanics in the south-central portion of the grid. A second such stock is indicated by government geological mapping to be present on claim 799009, two claims to the west of the above and beyond the area covered by the present line grid. Magnetic results suggest that this body may be much larger than presently thought. Also, limited geological traversing by MPH geologists suggests that some of the rocks presently mapped as coarse flows are, in fact, diorite/gabbro sills, eg line 20W, 5N. Sill-like intrusives of gabbroic to dioritic composition also occur throughout the south part of the property and give rise to airborne and ground magnetic highs.

A major east-west fault, the Cree Lake Fault, is interpreted to follow Cree Lake and extend across the northern part of the property. The extensive shearing and alteration observed in the property are adjacent to this structure. In a broader regional sense, there is a possibility that this fault and associated alteration represent a segment of the westward continuation of the Cadillac-Larder Lake Break (per maps displayed at Ontario Geological Survey Open House, Toronto, December, 1990). The extensive areas of high strain and intense carbonate alteration observed on the present property are characteristic features of this major regional structure with which major gold deposits such as the Kerr Addison are, in turn, associated. Late north-northwest faulting at the east end and off the west end of the claim group appears to offset all rock units and existing structures.

Where these can be seen, tops in pillowed volcanic units consistently face north suggesting that the property is on the north limb of a regional anticlinal structure.

The dominant foliation trend in the various rock units on the property is east-west with vertical to subvertical dips.

Gold is present in a number of lithologic and structural settings on the property including:

- (a) gold in extensive chemical sedimentary units including graphite-chert-pyrite iron formation, chert-pyrite iron formation and black chert iron formation. The chert-pyrite iron formation consists of alternating quartz-rich and pyriterich layers with considerable carbonate. Small quartz-carbonate stringers are present which may represent re-mobilized chert or quartz, eg. surface "discovery" boulder at line 0, 7S and black chert iron formation in hole 18;
- (b) gold in zones of intense shearing and green carbonate alteration often intimately associated with a), eg pyritic quartz-sericite-carbonate schist (hole 03, 04, etc.); and
- (c) gold associated with quartz veining and minor pyrite in the alteration aureole of a felsic intrusive body (hole 12)

Mineralization types (a) and (b) occur within the extensive east-west zone of EM conductivity and magnetic activity which crosses the north central portion of the property. Judging from the Quinterra drilling, the northernmost EM trend is the most consistently anomalous in gold (eg holes 10, 14, 16, 17). The hole 18 area, which represents one of our primary exploration targets, appears to represent the merging of the central and south sedimentary-felsic volcanic zones to the east.

## 8.0 EXPLORATION PROGRAM - 1990

#### 8.1 <u>General</u>

Upon review of the existing work, it became apparent that there was about 1 mile of the airborne geophysical trend of interest in the west part of the property and a small section in the east that was unexplored. It was therefore decided to expand the existing grid to cover these areas.

The baseline was therefore extended 4900 feet due west to the west property boundary. Cross lines were then cut at 400 foot intervals. Two additional lines, 76E and 80E, were cut off the east end of the existing grid. A total of 9.3 miles of new line was cut, chained and picketed at 100 ft intervals.

Initial property inspections also disclosed a great deal of "blow-down" on the existing grid such that it was deemed necessary to re-furbish this grid as well. A total of 38.9 miles of existing grid was refurbished for a total grid coverage of 48.2 miles. The crew in charge of grid re-furbishment also carried out some limited prospecting in November while field conditions permitted.

It was further recognized that conventional ground EM (eg MaxMin II) had never been carried out on the property. It was therefore decided to carry out systematic Max Min II EM (and magnetic) surveying over the entire grid to produce a unified geophysical data base.

The field work was carried out by MPH Consulting Limited of Toronto in the period early November through late December, 1990. The MPH personnel established a tent camp on the Kenty road where this crosses Cree Lake, to the north of the present property, and then commuted daily to the property.

Imperial units have been used extensively so as to facilitate integration with the existing database.

## 8.2 <u>Geophysical Surveying</u>

#### 8.2.1 <u>Magnetometer Survey</u>

Approximately 48.2 miles (77.6 km) of total field magnetic surveys were carried out along all crosslines and the baseline. Readings were taken at 100 ft station intervals with intermediate readings at 50 ft in areas of high magnetic gradients.

An OMNI PLUS magnetometer was used to measure total field values. A OMNI-IV base station was employed to record and correct for diurnal variations.

The corrected total field magnetic data are presented in contour form on Map 3 relative to significant topographic features and the property outline.

Several contouring intervals have been used to accommodate the range in anomaly amplitudes. No attempt was made to bias the contours.

## 8.2.2 Horizontal Loop Electromagnetic (HLEM) Survey

A total of 46.2 miles (74.54 km) of surveying was completed on all crosslines with an Apex Parametrics MaxMin II HELM unit. A 400 ft coil separation and transmitting frequencies of 444 Hz and 1777 Hz were used. Readings were taken at 100 ft station intervals. Topographic corrections were performed at every station to ensure optimum alignment of the transmitter and receiver coils in the often rough terrain.

The horizontal loop electromagnetic data are presented as in-phase and quadrature profiles at a vertical scale of 1 inch to 25%. The plotting convention used for the profiles is positive facing west. The data for the two transmitting frequencies,, 444 Hz and 1777 Hz, are presented on Maps 4 and 5 respectively at a scale of 1:4800.

The MaxMin conductors, categorized as definite, probable or possible bedrock features, are shown in the interpretation superimposed on the horizontal loop profiles. The 1777 Hz data interpretation is also summarized on the magnetometer map as the interpretation of the stronger conductors does not change in general between transmitting frequencies but the weaker conductors are more confidently interpreted at the higher transmitting frequency.

Individual interpreted conductor parameters such as dip, depth to the conductor and conductivity - thickness product are marked on Maps 4 and 5.

## 9.0 EXPLORATION RESULTS

## 9.1 Propsecting

The prospecting efforts were quite limited in scope due to the time of year and nothing of any consequence was discovered. Assay results with sample locations are presented in Appendix 1 at rear and any anomalous values are indicated on Map 2.

A grab sample of the initial Quinterra "discovery" boulder(s) yielded 281/295 ppb gold (sample CL-90-03). These boulders have been extensively blasted by the previous workers however, and it is unclear as to exactly what (and how) they sampled. It is a possibility that the initial sampling included a gold-bearing vein(s) within the gold-anomalous iron formation material.

The other assays represent altered and/or sulphide-bearing samples collected during traversing. While none of the values are of ore grade, it is interesting to note that most are chemically anomalous in gold. This is in keeping with the generally gold-anomalous setting on the property. One value of particular interest is that in sample CL-90-04 (360 ppb gold). This was a rather poor surface sample of weathered, black, cherty iron formation with 2-3% pyrite which looks virtually identical to the gold-bearing iron formation material in hole 87-18 some 8400 ft to the east. Geophysical evidence suggests that both occurrences may be related. The area around sample CL-90-04 should be properly stripped, blasted and sampled during the next round of exploration.

#### 9.2 Geophysical Results and Interpretation

#### 9.2.1 General Comments

The magnetic data are interpreted and discussed first. Reference to HLEM conductors has been made in the interpretation when the continuity of individual magnetic features is uncertain and where clarification results from integration of the HLEM data.

The various HLEM conductors are subsequently discussed and priority targets identified. No correlation or comparison with previous geophysical results is made.

Relatively detailed geological information on the property is available from previous exploration programmes. Drilling results are available from the 1966, 1985 and 1987 field seasons and those drill holes which have tested specific conductive horizons are identified.

#### 9.2.2 Total Field Magnetics

The contoured corrected total field data present a relatively uniform response pattern with a dominant east-west trend to individual magnetic features. The gradational contouring intervals used have served to highlight the more subtle features without distorting the more identifiable responses. Total field amplitudes generally range from backgrounds of approximately 58,400 to 58,500 nT up to 70,000 nT over discrete, highly magnetic features. The majority of magnetic amplitudes recorded range from 58,400 to 60,000 nT.

The first step in any interpretation is to outline the causal sources of individual magnetic responses. On the Cree Lake property the response pattern is relatively linear so that individual features can be traced with comparative ease. Available geological information is fairly detailed over the main area of the grid and indicates complex and often thin interbedding of individual lithologic units. Therefore, the current interpretation is general in its overall objectives for lithologic and structural features but specific where the magnetic results clearly support or are supported by a given HLEM interpretation. Where an interpretation has been made, the causative bodies have been classified into three major categories:

- 1. Broad, high, susceptibility features
- 2. Broad, medium to low susceptibility features, and
- 3. Narrow, linear high to low susceptibility features.

Depths to the higher amplitude magnetic features are generally shallow and dips are near vertical. Outcrop has been noted throughout the property.

No fault directions have been interpreted as continuity of most individual magnetic features from line-to-line is apparent.

The property is separated into four magnetic domains, labelled M1 to M4, primarily on the basis of general magnetic response character rather than lithologic considerations.

**Domain M1** is located in the north-central and northeastern sectors of the grid. The magnetic response pattern is generally featureless with background amplitudes of 58,400 to 58,450 nT and is inferred to reflect sediments and/or felsic volcanics. Several isolated magnetic features of up to 400 nT above background probably reflect either more mafic volcanic units or magnetic iron formation.

Domain M1 adjoins domain M2 to the south across an unfaulted contact.

Domain M2 describes the majority of the grid area, covering the central, western and southwestern sectors. The background amplitudes of 58,500 nT are slightly higher than those encountered in domain M1 to the northeast, suggesting a more mafic volcanic content to the sedimentary/volcanic lithologic package underlying domain M2. The highest amplitudes recorded on the property are contained within domain M2 which is characterized by numerous subparallel, narrow, linear magnetic features of varying strike extent but are overall regional in nature with an east-west orientation. In the central portion of the grid, about and immediately south of the baseline, these features are interpreted to primarily reflect iron formation units with associated magnetite and /or pyrrhotite mineralization. This interpretation is supported by the HLEM dataset where conductors Hl-1 to HL-6 are wholly or partially coincident with these magnetic responses.

The magnetic response pattern may also partly reflect more mafic volcanic units within the lithologic package. In fact, mafic and ultramafic volcanic units are inferred to be increasingly prevalent towards the southeast sector of the grid where no conductive features or horizons were delineated by the HLEM survey.

The magnetic response pattern is relatively complex in the vicinity of lines 112W to 140W and the presence of narrow diabase dykes with average north-south orientations is inferred. Identified as domain M3, these dykes are only tentatively interpreted as the survey lines are oblique to the dykes and geological information in this area is not available. Regional airborne magnetic and geologic mapping results do support the interpretation of diabase dykes with these orientations near this location.

A much more tentative interpretation of a diabase dyke with a NNW orientation is made in the vicinity of Lines OE and 8E. The former location corresponds with high ground on the edge of Cree Lake and the latter is within the area of detailed evaluation and diamond drilling completed by Quinterra. No indication of diabase dykes is recorded on the geologic plan maps available.

Magnetic domain M4 reflects the granitic intrusive stock or plug mapped at the south end of lines OE to 20E. Recorded total field magnetic amplitudes range from 58,550 to 58,700 nT but display a markedly different response character to domain M2 immediately north and east. The smoothly varying response pattern within domain M4 is typical of a felsic intrusive unit with perhaps more than one phase of intrusion.

## 9.3 HLEM Survey

The MaxMin II survey delineated twelve (12) conductive horizons, labelled HL-1 to HL-12, the majority of which are delineated at both transmitting frequencies. Five of the conductors have been further subdivided: Conductors HL-4, HL-5, HL-6, HL-7 and HL-8.

The dominant conductor trend is grid east-west. The individual horizons have strike extents ranging from 100 to in excess of 20,000 ft.

The anomalous zones have been interpreted as either strong, moderate or weak bedrock conductors relative to each other. In places reference was made to the magnetic data when conductor continuity and/or trend was in question. Any uncertainty in conductor continuity is indicated by question marks.

As the conductors are generally closely-spaced their dips cannot be estimated due to mutual interference between responses. All parameters have therefore been derived from Strangways's nomogram for thin sheets dipping at  $90^{\circ}$  (Mining Geophysics, Vol. 1).

Depths to the conductors are generally shallow, 40 ft or less. Where the depth estimate is <40 ft, the conductor could be at surface or any depth up to that figure.

Conductor quality varies from very weak to weak with estimated conductances ranging from <3.5 to 11.5 mhos in the 444 Hz dataset and <1 to 10 mhos in the 1777 Hz dataset. The calculated conductances are generally much lower than those indicated by government airborne survey results. One possible explanation of this is that individual conductors are relatively thin with respect to the cable lengths used.

Conductor HL-1, situated about at 11+00S on lines 72E to 80E, is defined primarily as a quadrature response at 1777 Hz only. This very weak conductive feature correlates with an area of apparent structural complexity within magnetic domain M2. No geometrical parameters can be calculated. The conductor is partially coincident with narrow weakly magnetic features and is interpreted to reflect either very low sulphide and/or graphite mineralization or a zone of shearing and alteration.

Conductor HL-2 is located on lines 60E to 68E grid west of conductor HL-1 and has a similar response character. There is no direct correlation with individual magnetic features and no geometrical parameters can be calculated. The interpretation is similar to that for conductor HL-1.

Conductor HL-3 extends from 4+00S on line 48E to 7+00E on line 80E and is open to the east. Observed primarily as a quadrature response at the 444 Hz frequency, the response character is more clearly defined at 1777 Hz where the signature contains both in-phase and quadrature responses. Parameters calculated from the 1777 Hz dataset on line 64E indicate a narrow conductor at a depth of 80 ft below surface with a conductance of 3 mhos. The 444 Hz data, which are of less distinct response character, indicate a conductance of <3.5 mhos at a depth of <40 ft.

Parameters were also calculated on line 72E for the 1777 Hz data only where a narrow conductor is estimated to have a conductance of 3 mhos at depths of <40 ft. The zone is semi-coincident with two linear magnetic features within domain M2, being on the north flank of a broad highly magnetic feature on lines 60E to 80E. This corresponds to the more conductive section of HL-3 and has been tested by drillhole CL-87-18 on line 64E which intersected mafic volcanics and tuffs, a graphitic iron formation and a brecciated cherty iron formation which assayed 0.052 oz gold per ton over 12.5 ft.

Conductor HL-3 is interpreted to reflect sulphide mineralization and/or graphite associated with iron formation.

Conductor HL-4 is a regional conductive horizon extending across the property, being identified on almost all survey lines. The horizon has been subdivided into four conductors for the interpretation and ease of reference.

Conductor HL-4a, located about the baseline on lines 72E to 80E, is described by quadrature profiles only in the 1777 Hz dataset and is tentatively interpreted on line 80E only in the 444 Hz dataset. The conductor correlates with the magnetic contact

inferred between domains M1 and M2 and is semi-coincident with weakly magnetic features.

No geometrical parameters have been calculated and conductor H2-4a is interpreted to reflect either very weak sulphide mineralization and/or graphite possibly associated with lean iron formation or a zone of shearing and alteration.

Conductor HL-4b extends from 3+00N on line 36E to 0+50N on line 52E and is best defined on lines 44E and 48E. Readily interpreted at both transmitting frequencies, conductor HL-4b is a narrow zone that correlates closely with the northernmost highly magnetic linear magnetic feature identified within domain M2.

Geometrical parameters were calculated on a single line 44E from the 1777 Hz data only and indicate a conductance of 1 mho and depth to source of <40 ft.

Conductor HI-4b is inferred to reflect moderate-to-strong sulphide mineralization and/or graphite associated with iron formation and is considered a priority target.

Conductor HL-4c is only tentatively interpreted at about 5+00N on lines 16E to 28E, being traced primarily as a quadrature response at both transmitting frequencies. No geometrical parameters could therefore be calculated. However, conductor HL-4c does correlate with the westward continuation of the magnetic feature associated with HL-4b. Conductor HL-4c may therefore reflect much lower sulphide and/or graphite concentrations in a similar geological setting to conductor HL-4b.

Conductor HL-4d is the main element of horizon HL-4, extending from the baseline at line 44E to 9+50S on line 157W where it is open to the west. The conductor varies in both width and quality along its length. Estimated conductances range from <1 to 4.5 mhos with the stronger sections of the conductor being on lines 157W to 144W, 124W to 120W, 100W to 76W and 4E to 20E. Depths to the conductor vary from near surface to 40 ft on line 157W.

Conductor HL-4d is situated wholly within magnetic domain M2, being partially coincident along its length with the strongly magnetic linear feature associated with HL-4b and HL-4c. There is no apparent disruption of the conductor along its length, in keeping with the general interpretation of regional east-west shears related to the Cree Lake Fault being the dominant structures in the area. The disruption to the correlating magnetic feature between lines 128W to 112W is interpreted as being due to cross-cutting diabase dykes.

The interpretation of conductor HL-4d is of variable magnetic and non-magnetic sulphide mineralization and/or graphite associated with iron formation and possibly shearing and alteration.

Drill holes CL-85-05 (16E), CL-85-06 (12E) and CL-85-07 (6E) tested conductor HL-4d and intersected a chert-graphite-pyrite iron formation. Anomalous gold

assays were returned from holes CL-85-05 and CL-85-06.

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Conductor HL-5a is a narrow weakly conductive feature extending from 7+00N on line 56E to 4+50N on line 76E. The conductor is wholly within the sediments and/or felsic volcanics inferred to underlie magnetic domain M1 and has no associated magnetic features.

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Parameter calculations indicate conductance/depth estimates of 2 mhos/80 ft and <3.5 mhos/<40 ft for the 1777 and 444 Hz datasets, respectively.

Conductor HL-5a is inferred to reflect a low volume content of non-magnetic sulphides and/or graphite possibly associated with shearing and alteration.

Conductor HL-5b, subparallel to and 200 ft south of HL-5a, extends from lines 52E to 64E. The magnetic setting and interpretation of conductor HL-5b is similar to that for conductor HL-5a. However, the the higher conductances of 3.5 to 4.5 mhos calculated on lines 52E and 56E indicate a higher volume of non-magnetic sulphide mineralization and/or graphite associated with conductor HL-5b. Depths to the conductive horizon are estimated at <40 to 48 ft.

Conductor HL-5c is situated between 6+00sN and 12+00N on lines 40W to 48E. Conductances between 2 and 11.5 mhos have been calculated and indicate a moderately conductive horizon along the majority of it length. Calculated depths are generally shallow, being <40 to 44 feet. An apparent increase in depth to the conductor is indicated, however, by the 1777 Hz data on lines 24W and 36W where 80 and 68 ft are calculated, respectively.

Conductor HL-5c is located almost entirely within the sediments and/or felsic volcanics inferred to underlie domain M1. Conductor HL-5c generally has no correlating magnetic features but in two areas, lines 28W and 24W and lines OE to 16E, HL-5c lies close to and within magnetic domain M2 and is partially coincident with narrow, weak-to-moderately magnetic features. There is no direct correlation noted between calculated conductances and any associated magnetic features.

Conductor HL-5c is therefore interpreted to reflect primarily non-magnetic sulphides and/or graphite which may be associated with shearing and alteration. Given the limited strike extent and low amplitude of the associated magnetic features, the preferred interpretation of their causal sources is mafic volcanics and/or local magnetic sulphide concentrations rather than lean iron formation.

Conductor HL-5c has been tested by two phases of drilling over a short section of its strike extent: CL-85-10 (8E), CL-85-14 (12E), CL-87-16 (20E) and CL-87-17 (24E). The latter two holes tested the conductor where estimated widths are in the order of 100 ft or more as opposed to the narrow widths elsewhere. All four holes intersected mafic volcanics, altered mafic to felsic tuffs with interbedded pyritic-graphitic, graphitic schist, graphitic-carbonate-chert-pyrite or graphitic-chert-pyrite horizons. All holes encountered anomalous gold mineralization.



Conductors HL-5d and HL-5e, located between 100 and 200 ft north and south, respectively, of HL-5c, are very weakly conductive features detected as quadrature profiles in the 1777 Hz dataset only. Conductor HL-5d is interpreted on lines 24E to 32E while HL-5e is identified on lines 24E and 28E. Neither conductor has any correlating magnetic feature and both are located at the eastern end and beyond of the broadest section of conductor HL-5e.

Conductors HL-5d and HL-5e are interpreted to reflect very lean non-magnetic sulphides and/or graphite in sediments and/or felsic volcanics. Hole CL-87-17 (23E) may or may not have intersected conductor HL-5d at the top of the hole. Conductor HL-5e would have been tested by hole CL-87-17.

Conductor HL-5f is the westward continuation of conductor HL-5c. A distinct pinching out of conductive material is inferred between elements HL-5c and HL-5f.

Conductor HL-5f extends from 4+50N on line 44W to 3+00S on line 157W where it is open to the west. The strongest and broadest (up to 50 ft wide?) section of HL-5f is interpreted on lines 144W to 157W where conductances range from 3.5 to 10 mhos. Depth estimates are 40 ft or less although the 444 Hz data indicate an increase in depth to 60 ft on line 157W.

The remainder of conductor HL-5f to the east is often only described by quadrature responses although conductances of 1.5 to <3.5 mhos have been calculated in some areas. Inco (1966) holes 31926A (82W) and 31925 (102W), if of sufficient length will have tested this section of conductor HL-5f.

HL-5f is located almost entirely in magnetic domain M2 and has correlating narrow, weakly magnetic features in several places along its length. Diabase dykes are inferred from the magnetics to crosscut HL-5f between lines 132W and 108W. The strongest section of HL-5f is immediately west of this area and is 200 ft or so south of a broad highly magnetic linear feature of similar orientation.

The interpretation of conductor HL-5f is similar of a scenario to that encountered by drill testing of conductor HL-5c.

**Conductor** HL-6a is some 100 to 300 ft north of conductors HL-5c and HL-5f on lines 64W to 36W. Defined primarily by quadrature profile responses only, a conductance of 3 mhos and depth of 48 ft to the source were calculated from the 1777 Hz data on line 64W.

Conductor HL-6a is within the sediments and/or felsic volcanics underlying magnetic domain M1 and has no correlating magnetic features. Non-magnetic sulphide mineralization and/or graphite possibly associated with shearing and alteration are inferred as the causal source.

Conductor HL-6b is the westward continuation of HL-6a to line 157W at the baseline where it is open to the west. The conductor pinches and swells and is of

variable conductivity along its length. Estimated conductances range from 2.5 to 7 mhos. Estimated depths are invariably in the order of 40 ft or less. Some correlation with magnetic features is noted on lines 116W, 120W and 140W to 157W.

Conductor HL-6b is interpreted to reflect mainly non-magnetic sulphides and/or graphite in sediments and/or felsic to mafic volcanics and is possibly associated with shearing and alteration. The strongly magnetic linear feature 100 ft south of HL-6b on lines 140W to 157W may reflect iron formation.

Hole 31925 drilled by Inco in 1966 tested conductor HL-6b near line 102W. Conductor HL-7a extends from 17+00N on line 4W to 13+00N on line 32W. The quadrature profiles are consistently of higher amplitude than the in-phase profiles indicating poor conductivity as shown by the 1 mho conductances calculated from the 1777 Hz data. No correlating magnetic features are noted and conductor HL-7a is inferred to primarily reflect a zone of shearing and alteration that may be weakly mineralized.

Conductors HL-7b and HL-7c are the westward continuation of conductor HL-7a to line 64W. Actual continuity of this horizon cannot be interpreted due to the limited extent of the survey lines and the lack of information. The responses recorded indicate a lower conductance than for conductor HL-7a but the interpretation is similar.

Conductors HL-8a to HL-8e? are interpreted several hundred feet north of conductive horizon HL-7 and are only partially surveyed due to the proximity of Cree Lake and the limited extent of the grid lines. The interpretation of conductors HL-8a to HL-8e? is similar to that of horizon HL-7. No further interpretation can be made.

Conductor HL-9 is identified by a very low amplitude quadrature response at 1777 Hz about 6+50S on lines 56W to 72W. HL-9 is about 200 ft north of a regional iron formation unit (?) interpreted from the magnetic dataset. Conductor HL-9 may reflect unmineralized shearing and alteration.

**Conductor HL-10**, a narrow, weakly conductive feature located near 8+00N on lines 120W to 136W, is outlined primarily as quadrature profile responses. The conductor correlates with a weakly magnetic response on line 132W that may or may not be associated with crosscutting diabase dykes.

No geometrical parameters can be calculated from the results. Conductor HL-10 is interpreted to reflect shearing and alteration with the sediments and/or felsic to mafic volcanics which may underlie this sector of the grid.

These responses associated with Conductor HL-11 are only partially defined due to the northern limits of the survey lines. Interpreted with varying confidence on lines 132W to 152W, an estimate on the width of the conductor can only be made on

line 144W where an overall width of 150 to 250 ft is estimated. The response on line 144W is described by both in-phase and quadrature profiles at the transmitting frequency of 1777 Hz only indicating a low conductance for the causal source. Due to the poor response character no geometrical parameters have been calculated.

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Conductor HL-11 has no correlating magnetic features and is interpreted to reflect weak non-magnetic sulphide mineralization and/or graphite that may be associated with shearing and alteration.

Conductor HL-12 is a weakly conductive feature indicated by the responses recorded at both transmitting frequencies to be beyond the northern extent of lines 120W and 124W. No further interpretation can be made.

#### **10.0 CONCLUSIONS AND RECOMMENDATIONS**

Results of previous and present exploration on the Cree Lake property permit a number of conclusions regarding the ground as follows:

- 1. There would appear to be definite potential for the discovery of an economic gold deposit on the claims. A number of exploration scenarios can be invoked including:
  - (a) Kerr Addison type deposits (gold with or without pyrite associated with extensive carbonate alteration proximal to a major shear structure)
  - (b) Val D'or or Silidor type deposits (quartz lode deposits at the edge of or within granite intrusive bodies.
  - (c) Pickle Lake type deposits (gold in sulphidized iron formation).
- 2. The claims have only been superficially explored to date. Virtually all of the previous drilling has been concentrated in a small area in the east portion of the property. Field examination of the rest of the property reveals very little evidence of prospecting activities in the form of stripped outcrops, etc.
- 3. We concur with Quinterra Resources Inc that the original value of 0.878 oz gold per ton was derived from one or more large boulders firmly lodged in overburden. The original Quinterra value was checked and duplicated by the assay laboratory (Bell-White) and is concluded to be real. Our inability to reproduce this number on the basis of a single sample is not particularly worrisome and is concluded to reflect an erratic distribution of gold in the iron formation material. It is further concluded that much more emphasis will have to be placed on the local glacial regime in an attempt to locate the source of the boulders.
- 4. The geophysical surveying was successful in defining a number of priority exploration targets on the claims. Key among these is conductor HL-3. This feature is indicated to be some 3200 ft long and the single hole which investigated it in the past, no. 87-18, returned 0.052 oz gold per ton over 12.5 ft in a brecciated iron formation unit. Other key targets from a geophysical perspective include conductors HL-5b, HL-4b, HL-5c, HL-8a/b/c, HL-9 and HL-10. The magnetic anomaly along the granite contact intersected by previous hole 85-12 (600 ppb Au over 20 ft including 1200 ppb over 5 ft) is now known to be over 4000 ft in length and presents another key target.

It is recommended that a major exploration program be instigated to further evaluate the gold potential of this property. This work should take the form of a large surface program to be followed by diamond drilling. The surface work should include:

- (a) geological mapping of the new grid area and air photo-controlled mapping of the balance of the property not covered by the grid
- (b) comprehensive prospecting of the entire property, particularly along geophysical trends known to be gold-bearing and in and about the granite bodies
- (c) overburden stripping of geophysical targets (where conditions permit) and of any prospecting discoveries followed by washing, blasting and sampling. One of the key targets for this work will be the conductor HL-3/hole 87-18 area. The iron formation host to the known gold mineralization here is known to subcrop under very shallow overburden based on previous, limited Quinterra stripping. The central "discovery boulder " area drilled by Quinterra should also be more thoroughly exposed so that geological relationships can be more clearly understood

Exact location of some diamond drill holes will be contingent on the results of the above although there is considerable drilling that can be carried out based on the results of previous work relative to the present geophysical picture. In particular, the following geophysical features should be tested:

Conductor HI-3	(3 holes)
Conductor HL-4a	(1 hole)
Conductor HL-4b	(1 hole)
Conductor HL-5a/b/c/d	(5 holes)
Conductor HL-7b	(3 holes)
Conductor HL-10/11	(2 holes)
85-12 magnetic anomaly	(3 holes)

This work is budgeted as follows:

PHASE 1A - SURFACE WORK Mob/Demob	\$10,000
*Mapping, prospecting: 4 men x \$800 day x 30 days	96,000
**Surface stripping, blasting, sampling: 2 1/2 months x \$40,000/mo	100,000
Assay, analytical	15,000
Equipment, supplies, vehicles, boat and motor	15,000
Reporting, drafting, supervision, consulting	<u>15.000</u>
	\$251,000

Contingency at 15%	37.650
TOTAL PHASE 1A	\$290,000
* inclusive of camp, food etc. ** costs based on similar work on nearby project in 1990 and incl excavator, backhoe, wajax dumps plus operators and support	lude 2 bulldozers,
PHASE 1B - DIAMOND DRILLING	
Initial: 18 holes x 500 ft x \$25/ft (BQ core)	\$225,000
Allowance for 6 additional holes to be spotted on results in Phase 1a: 6 holes x 500 ft x $25/ft$	75.000
	\$300,000
Contingency at 15%	45.000
TOTAL PHASE 1B	\$345,000
GRAND TOTAL PHASE 1	\$635,000

Respectively submitted, Ű

# W.E. Brereton, P.Eng.

Further work would be contingent on the results of the above.

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# APPENDIX 1

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Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

# Geochemical Analysis Certificate

#### 0T-0641-RG1

Company:	MPH CONSULTING LT	D.	Date: OCT-11-90
Project: Attn:	BILL BRERETON		Copy 1. 2406-120 ADELAIDE ST.W.TORONTO M5H 1T1 2. FAX TO 416-365-1830
	y <i>certify</i> the following Geoc OCT-09-90 by BILL BRE		ROCK samples
Sample Number	Au ppb	Au check ppb	
• ·			
		i	Location
CL-90-01		164	5+505, 4+00E 5+755, 2+25E
CL-90-02 CL-90-03	281	295	7+005, 0+00
CL-90-04	360	,	4100N, 20100W

Certified by

G. Lebel / Manager

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705) 642-3244 FAX (705) 642-3300



# Swastika Laboratories

A Division of Assayers Corporation Ltd.

# Assaying - Consulting - Representation

# Geochemical Analysis Certificate

#### 0T-0735-RG1

Company:	MPH CONSULTING LTD,
Project:	C-1325
Attn: ·	B. BRERETON

Date: NOV-15-90 Copy 1. 2406-120 ADELAIDE ST.W.TORONTO M5H 1T1 2. FAX TO 416-365-1830

We hereby certify the following Geochemical Analysis of 7 ROCK samples submitted NOV-13-90 by .

Sample Number	Au ppb	Location
CL-90-05 CL-90-06 CL-90-07 CL-90-08 CL-90-08B	154 14 Ni 1 137/137 89	6+505 8+50E 3+755 12+00W 2+25N 4+00E 6+755 6+00W 11 11
CL-90-09 CL-90-10	Ni 1 295/281	BL, SSTORN

Certified by Donna Handner

P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705) 642-3244, FAX (705) 642-3300

<b>F</b>	Ministry of Northern Development and Mines
Intario	

# **Report of Work Conducted** After Recording Claim

**Mining Act** 

ersonal information collected on this form is obtained under the authority of the k this collection should be directed to the Provincial Manager, Mining Lands, Mir Sudbury, Ontario, P3E 6A5, telephone (705) 670-7264.



900

- Instructions: Please type or print and submit in duplicate,
  - Refer to the Mining Act and Regulations for requirements of filing assessment work or consult the Mining Recorder.
    - A separate copy of this form must be completed for each Work Group.
    - Technical reports and maps must accompany this form in duplicate.
    - A sketch, showing the claims the work is assigned to, must accompany this form. 1 ,

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Work Performed (Check One Work Group Only) .

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	Rehabilitation	RECEIVED		
	Other Authorized Work	NOV 1 3 1992	OCT - 6 1992	
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	Assignment from Reserve	MINING LANDO DA		
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Total Assessment Work Claimed on the Attached Statement of Costs

The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded Note: holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

#### Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report)

Name	Address
WE. Brere In S. Gua	1800-150 Hork St
19PH Consulting	Toronto MSH355
Liwited.	

#### (attach a schedule if necessary)

### Certification of Beneficial Interest \* See Note No. 1 on reverse side

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i certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder.		(Signature)	5

### **Certification of Work Report**

I certify that I have a personal knowledge of the facts set forth in this Work report, having performed the visits completion and annexed report is true.	work or witnessed same during and/or after
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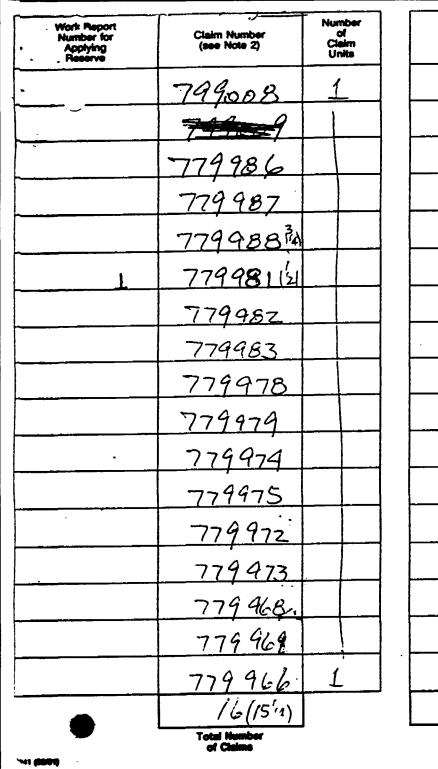
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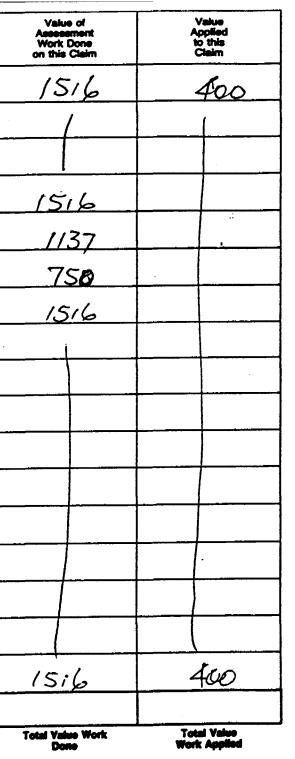
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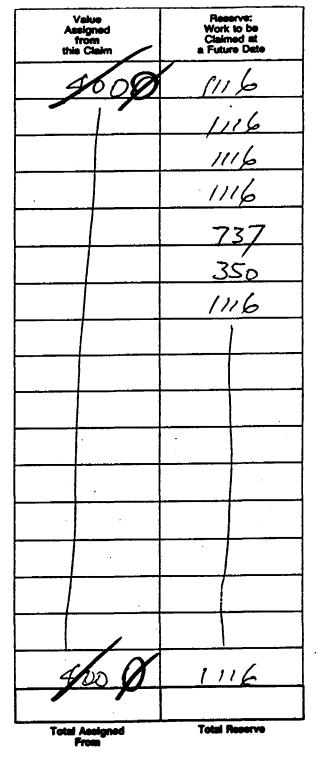
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Credits you are claiming in this report may be cut back. In order to minimize the adverse effects of such deletions, please indicate from which claims you wish to priorize the defetion of credits. Please mark ( $\prime$ ) one of the following:	Бо
1.  Credits are to be cut back starting with the claim listed last, working backwards.	
2.  Credits are to be cut back equally over all claims contained in this report of work.	

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Credits are to be cut back as priorized on the attached appendix. ei

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In the event that you have not specified your choice of priority, option one will be implemented.

- Examples of beneficial interest are unrecorded transfers, option agreements, memorandum of agreements, etc., with respect to the mining claims. Note 1:
  - If work has been performed on patented or leased land, please complete the following: Note 2:

Signature I certify that the recorded holder had a beneficial interest in the patented or leased land at the time the work was performed.

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	1 1 2 x 4	Number	Value of	Value	Value	Reserve:	7 r	E	ect	
Work Report Number for Applying Reserve	Claim Number (see Note 2)	of Cielm Units	Assessment Work Done on this Claim	Value Applied to this Claim	Aseigned from this Claim	Reserve: Work to be Claimed at a Future Date		aiming in this report may be cut back. In order to minimize the adverse effects of such deletions, please indicate from wish to priorize the deletion of credits. Please mark ( $\checkmark$ ) one of the following: e to be cut back starting with the claim listed last, working backwards. e to be cut back agually over all claims contained in this report of work. e to be cut back as priorized on the attached appendix. you have not specified your choice of priority, option one will be implemented.	Examples of beneficial interest are unrecorded transfers, option agreements, memorandum of agreements, etc., with resp to the mining claims.	
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L	.56 (33)		Sc 382.00 Total Value Work Done	22,400	22,400	57982_ Total Reserve	<u>_</u> ~		Note 1: 1	Note 2: 1 I certify to or leased
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2. Credits are to be cut back equally over all claims contained in this report of work.

3. Credits are to be cut back as priorized on the attached appendix.

In the event that you have not specified your choice of priority, option one will be implemented.

Note 1: Examples of beneficial interest are unrecorded transfers, option agreements, memorandum of agreements, etc., with res. to the mining claims.

Signature

Note 2: If work has been performed on patented or leased land, please complete the following:

I certify that the recorded holder had a beneficial interest in the patented or leased land at the time the work was performed.

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Date

\*\* TOTAL PAGE.002 \*\*

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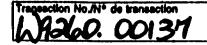
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éloppement du Nord

# Statement of Costs for Assessment Credit



#### État des coûts aux fins du crédit d'évaluation

#### Mining Act/Loi sur les mines

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used to maintain a record and ongoing status of the mining claim(s). Questions about this collection should be directed to the Provincial Manager, Minings Lands, Ministry of Northern Development and Mines, 4th Floor, 159 Cedar Street, Sudbury, Ontario P3E 6A5, telephone (705) 670-7264. Les renseignements personnels contenus dans la présente formule sont recuellis en vertu de la Loi aur les mines et serviront à tenir à jour un registre des concessions minières. Adresser toute quesiton sur la collece de ces renseignements au chef provincial des terrains miniers, ministère du Développement du Nord et des Mines, 159, rue Cedar, 4<sup>®</sup> étage, Sudbury (Ontario) P3E 6A5, téléphone (705) 670-7264.

#### 1. Direct Costs/Coûts directs

Туре	Description	Amount Montant	Totals Total global
Wages Salaires	Labour Main-d'oeuvre		
	Field Supervision Supervision sur le terrain	5000	5000
Contractor's and Consultant's	inecuting	17736	
Fees Droits de l'entrepreneur	precuting Appectung Geolusy	5325 8847	
et de l'expert- conseil	Deophysics	30,077	61985
Supplies Used Fournitures utilisées	Туре		
	BECEIV	ED	
Equipment Rental	Type		
Location de matériel	NOV 1 3 1		
	MINING LANDS	BRANCH	
	Total Di Total des co	rect Costs ûts directs	66985

Note: The recorded holder will be required to verify expenditures claimed in this statement of costs within 30 days of a request for verification. If verification is not made, the Minister may reject for assessment work all or part of the assessment work submitted.

**Filing Discounts** 

- 1. Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.
- 2. Work filed three, four or five years after completion is claimed at 50% of the above Total Value of Assessment Credit. See calculations below:

Total Value of Assessment Credit

× 0.50 =

**Total Assessment Claimed** 

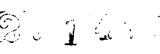
#### **Certification Verifying Statement of Costs**

I hereby certify:

that the amounts shown are as accurate as possible and these costs were incurred while conducting assessment work on the lands shown on the accompanying Report of Work form.

(Recorded Holder, Ageni, Position in Company) \_ I am authorized that as

to make this certification



#### 2. Indirect Costs/Coûts Indirects

#### \*\* Note: When claiming Rehabilitation work indirect costs are not allowable as assessment work. Pour le remboursement des travaux de réhabilitation, les coûts indirects ne sont pas admissibles en tant que travaux

U EVALUA				
Туре	Descripti	on	Amount Montant	Totals Total global
Transportation Transport	fruck fe	ni-	4000	
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	0	CT - 6	1992	
	Receip	t		
Food and Lodging Nourriture et hébergement	lineux 45	layy solde		11,250.
Mobilization and Demobilization Mobilisation et démobilisation				4000
	Sub Tot Total partiel		rect Costs s Indirects	4000 19250
Amount Allowable Montant admissible			· · · · · · · · · · · · · · · · · · ·	1-1-0-
Total Value of Ass (Total of Direct and Indirect costs)	80382			

Note : Le likulaire enregistré sera tenu de vérifier les dépenses demandées dans le présent état des coûts dans les 30 jours suivant une demande à cet effet. Si la vérification n'est pas effectuée, le ministre peut rejeter tout ou une partie des travaux d'évaluation présentés.

#### Remises pour dépôt

- 1. Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.
- 2. Les travaux déposés trois, quatre ou cinq ans après leur achèvement sont remboursés à 50 % de la valeur totale du crédit d'évaluation susmentionné. Voir les calculs ci-dessous.

Evaluation totale demandee Valeur totale du crédit d'évaluation × 0,50 =

#### Attestation de l'état des coûts

J'atteste par la présente :

que les montants indiqués sont le plus exact possible et que ces dépenses ont été engagées pour effectuer les travaux d'évaluation sur les terrains indiqués dans la formule de rapport de travail ci-joint.

Et qu'à titre de\_\_\_\_\_je suis autorisé (titulaire enregistré, représentant, poste occupé dans la compagnie)

à faire cette attestation.

Nota : Dans cette formule, lorsqu'il désigne des personnes, le mascutin est utilisé au sens neutre.

#### ASSESSMENT WORK CREDIT FORM

FILE NUMBER: 2.14787 DATE: FEBRUARY 25, 1993 RECORDER'S REPORT NUMBER: W9260.00137

Ν

**RECORDED HOLDER:**William E. Brereton **CLIENT NUMBER:**111858 TOWNSHIP OR AREA: Swayze

CLAIN NUMBER	VALUE OF ASSESSMENT WORK DONE ON THIS CLAIM	VALUE APPLIED To This Claim	VALUE ASSIGNED FROM THIS CLAIM	RESERVE
740070	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
740069	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
740068	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
740063	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
740062	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
740061	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
740060	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
740057	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
740056	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
740055	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
740054	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
740049	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
740048	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
740047	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
799006	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
799007	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
740093	\$ 446.00	\$ 400.00	\$ 0.00	\$ 46.00
740092	\$ 446.00	\$ 400.00	\$ 0.00	\$ 46.00
740091	\$ 446.00	\$ 400.00	\$ 0.00	\$ 46.00
740090	\$ 141.00	\$ 141.00	\$ 0.00	\$ 0.00
740089	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
740088	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
740087	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
740086	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
740083	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
740082	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
740081	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
740080	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
740077	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
740076	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
740075	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
740074	\$1212.00	\$ 400.00		\$ 812.00
740071	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
799008	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
779986	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00
779987	\$1212.00	\$ 400.00	\$ 0.00	\$ 812.00

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56 claims	\$63,376.00	\$ 22,141.00	\$ 0.00	\$ 41,235.00
779956	\$1213.00	\$ 400.00	\$ 0.00	\$ 813.00
779957	\$1213.00	\$ 400.00	\$ 0.00	\$ 813.00
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779960	\$1213.00	\$ 400.00	\$ 0.00	\$ 813.00
779963	\$1213.00	\$ 400.00	\$ 0.00	\$ 813.00
779962	\$1213.00	\$ 400.00	\$ 0.00	\$ 813.00
779967	\$1213.00	\$ 400.00	\$ 0.00	\$ 813.00
779966	\$1213.00	\$ 400.00	\$ 0.00	\$ 813.00
779969	\$1213.00	\$ 400.00	\$ 0.00	\$ 813.00
779968	\$1213.00	\$ 400.00	\$ 0.00	\$ 813.00
779973	\$1213.00	\$ 400.00	\$ 0.00	\$ 813.00
779972	\$1213.00	\$ 400.00	\$ 0.00	\$ 813.00
779975	\$1213.00	\$ 400.00	\$ 0.00	\$ 813.00
779974	\$1213.00	\$ 400.00	\$ 0.00	\$ 813.00
779979	\$1213.00	\$ 400.00	\$ 0.00	\$ 813.00
779978	\$1213.00	\$ 400.00	\$ 0.00	\$ 813.00
779983	\$1213.00	\$ 400.00	\$ 0.00	\$ 813.00
779982	\$1213.00	\$ 400.00	\$ 0.00	\$ 813.00
779981	\$ 446.00	\$ 400.00	\$ 0.00	\$ 46.00
779988	\$ 833.00	\$ 400.00	\$ 0.00	\$ 433.00

#### **CREE LAKE EXPENDITURE SUMMARY \***

### **Direct Costs**

Supervision	5,000.00
Linecutting, grid refurbishment: 77.12 km @ \$230/km	17,736.00
Prospecting	5,325.00
Geophysics: Magnetics and 2-frequency Max-Min II HLEM 77.12 km @ 390/km	30,077.00
Geology	<u>8.847.00</u>
	66,985.00
Indirect Costs	
Transportation	4,000.00
Food and lodging: 45 days x 5 men x \$50/day	11,250.00
Mob-demob	4,000.00
	19,250.00

\* As derived from MPH Consulting Limited invoices submitted to (and paid in full by) Cree Lake Resources Corp.

_ RECORDED					
OCT - 6 1992					
Receipt					

# 2.14787

60 Wilson Avenue Timmins, Ontario P4N 287



Ministry of Northern Development and Mines Ministère du Développement du Nord et des Mines (705) 360-8330 Fax: 264-8723

2.14787

October 15, 1992

Mr. William E. Brereton Vice President MPH Consulting Limited 150 York Street, Suite 1800 Toronto, Ontario M5H 3S5

Dear Mr. Brereton:

Subject: Assessment Work in Swayze and Cunningham Townships

You have indicated the Townships of Swayze and Cunningham on the front page of your report of work received in this office on October 6, 1992. All of the claims listed on the subsequent pages are situate in the Township of Swayze. I am unsure whether your intent was to assign assessment work credit to claims in Cunningham Township.

On October 13, 1992 I received an amended copy of the work report, on which you added \$45 of assessment work done to Mining Claim P-740090. Is your intent to place this \$45 in reserve?

The next item that has to be addressed is the column entitled "Value Assigned from this Claim". This should only be used if you are assigning work to other contiguous unpatented claims. As you have applied \$400 to each claim involved, the Assigned column should be left blank in this case.

I have enclosed a copy of the list of claims indicating the required changes and a list of mining claims recorded in your name, for your information.

Based on the number of amendments to the form, I would recommend that you submit a new report of work form, in duplicate.

Yours sincerely,

Gary ťte

Mining Recorder Porcupine Mining Division

/tb



Ministry of<br/>Northern Development<br/>and MinesMinistère du<br/>Développement du Nord<br/>et des MinesMining Lands Branch<br/>Geoscience Approvals Section<br/>933 Ramsey Lake Road<br/>6th Floor<br/>Sudbury, Ontario<br/>P3E 6B5Telephone:(705)670-5853<br/>Fax:

February 25, 1993

Our File: 2.14787 Transaction **#**W9260.00137

Mining Recorder Ministry of Northern Development and Mines 60 Wilson Ave. Timmins, Ontario P4N 2S7

Dear Sir/Madam:

#### Subject: APPROVAL OF ASSESSMENT CREDITS ON MINING CLAIMS 740070 ET AL SWAYZE AND CUNNINGHAM TWP

The Deficiencies in the Geophysical Survey submitted on the above Report of Work have not been rectified.

The assessment work credits for the Geophysical survey filed under section 14 of the Mining Act Regulations have been approved as of February 15, 1993. Please see the attached assessment credit form.

Please indicate this approval on your records.

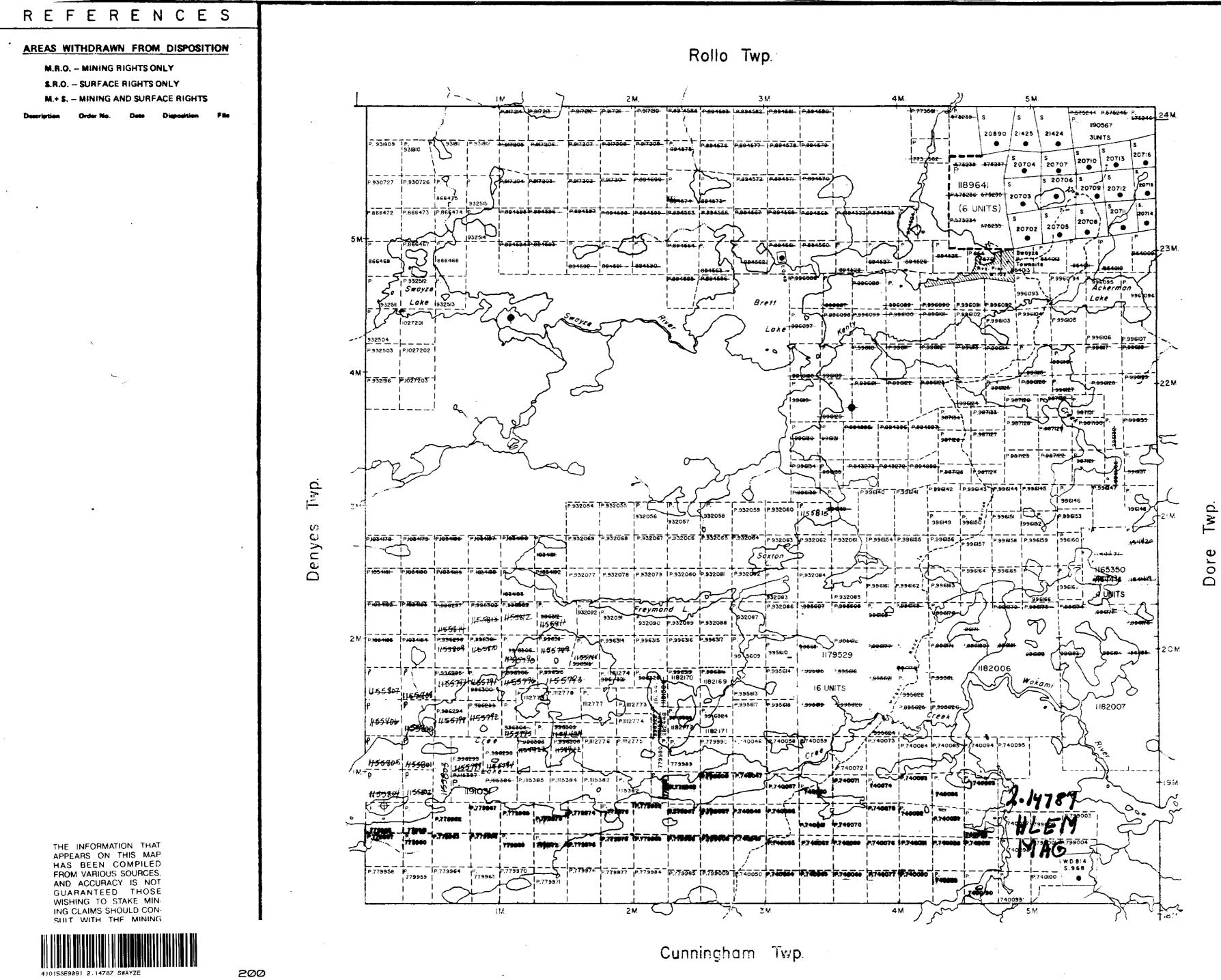
If you have any questions regarding this correspondence contact Ted Anderson of the Mining Lands Branch at (705) 670-5856.

Yours sincerely,

Mark Hall (Acting) Senior Manager, Mining Lands Mines and Minerals Division TAK TAA/jl

cc: Resident Geologist Timmins, Ontario ONTARIO GEOLOGICAL SURVEY GIS - ASSESSMENT FILES MAR 0 4 1993 RECENTED

VAssessment Files Library Toronto, Ontario

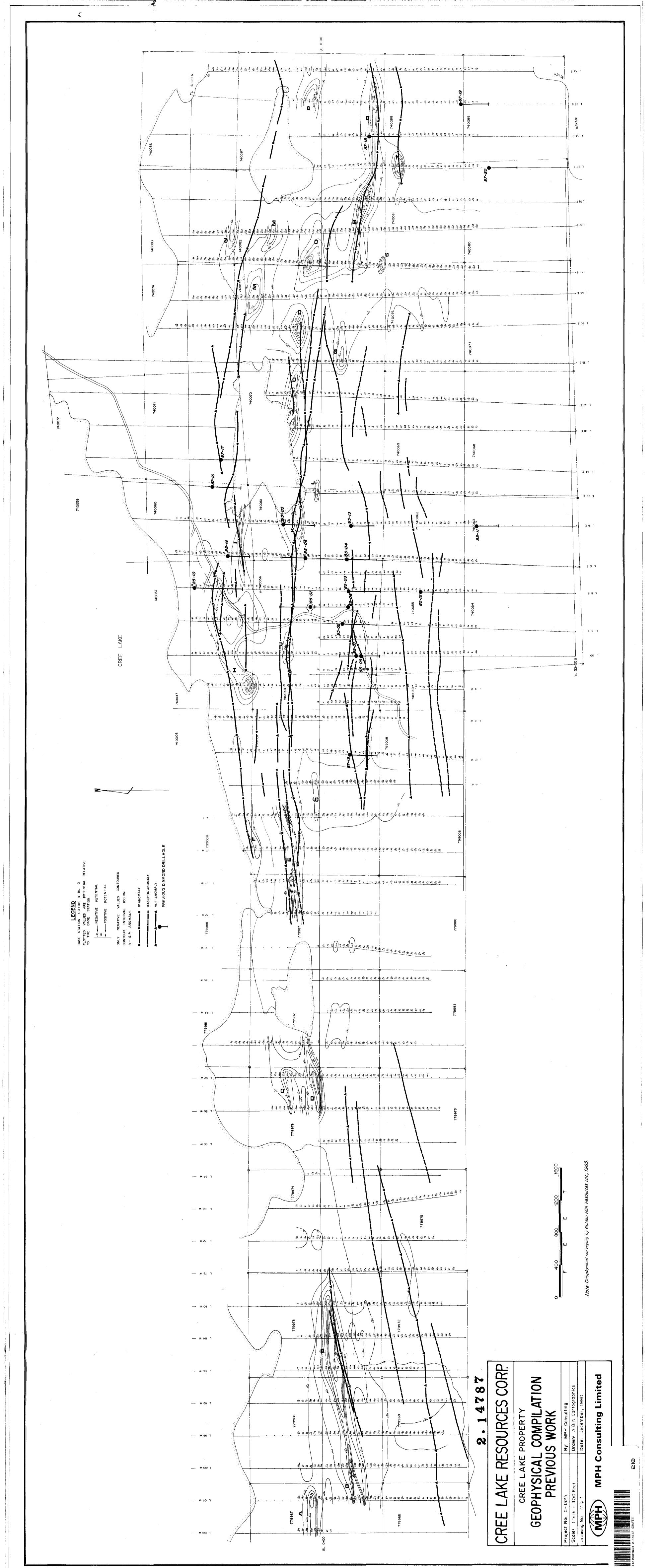


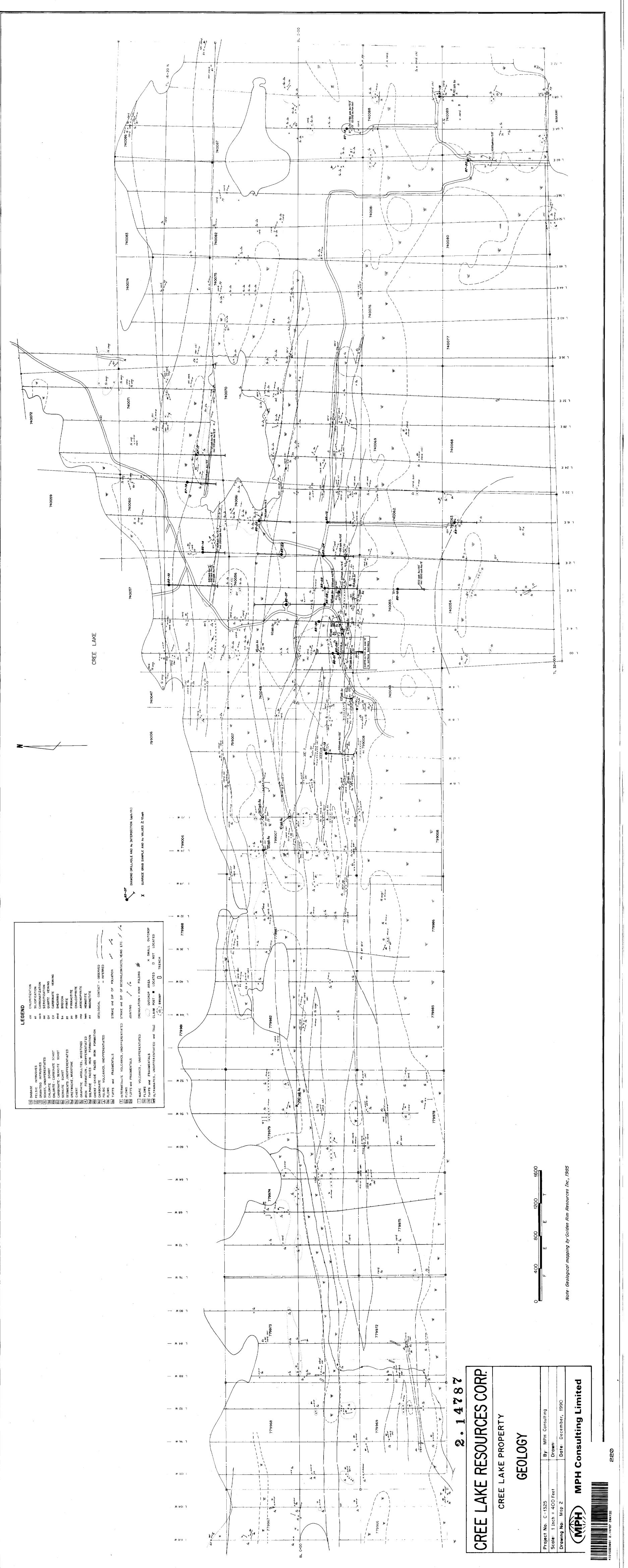
LEGEND HIGHWAY AND ROUTE No. OTHER ROADS TRAILS SURVEYED LINES: TOWNSHIPS, BASE LINES, ETC. LOTS, MINING CLAIMS, PARCELS, ETC UNSURVEYED LINES: LOT LINES PARCEL BOUNDARY MINING CLAIMS ETC. **RAILWAY AND RIGHT OF WA** UTILITY LINES NON-PERENNIAL STREAM FLOODING OR FLOODING RIGHTS SUBDIVISION OR COMPOSITE PLAN RESERVATIONS **ORIGINAL SHORELINE** MARSH OR MUSKEG MINES TRAVERSE MONUMENT **DISPOSITION OF CROWN LANDS** TYPE OF DOCUMENT SYMBOL PATENT, SURFACE & MINING RIGHTS , SURFACE RIGHTS ONLY , MINING RIGHTS ONLY \_\_\_\_ LEASE, SURFACE & MINING RIGHTS. SURFACE RIGHTS ONLY MINING BIGHTS ONLY LICENCE OF OCCUPATION ORDER-IN-COUNCIL RESERVATION CANCELLED SAND & GRAVEL REMOTE TOURIST CAMPS NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY & 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT. R.S.O. 1970, CHAP. 380, SEC 63, SUBSEC 1 SCALE: 1 INCH = 40 CHAINS FEE 1000 2000 0 200 METRES (1 KM) (2 KM) 2.14787 TOWNSHIP M.N.R. ADMINISTRATIVE DISTRICT CHAPLEAU MINING DIVISION PORCUPINE LAND TITLES / REGISTRY DIVISION SUDBURY Ministry of Land R Natural Management Resources Branch Ontario Number Date MARCH, 1985

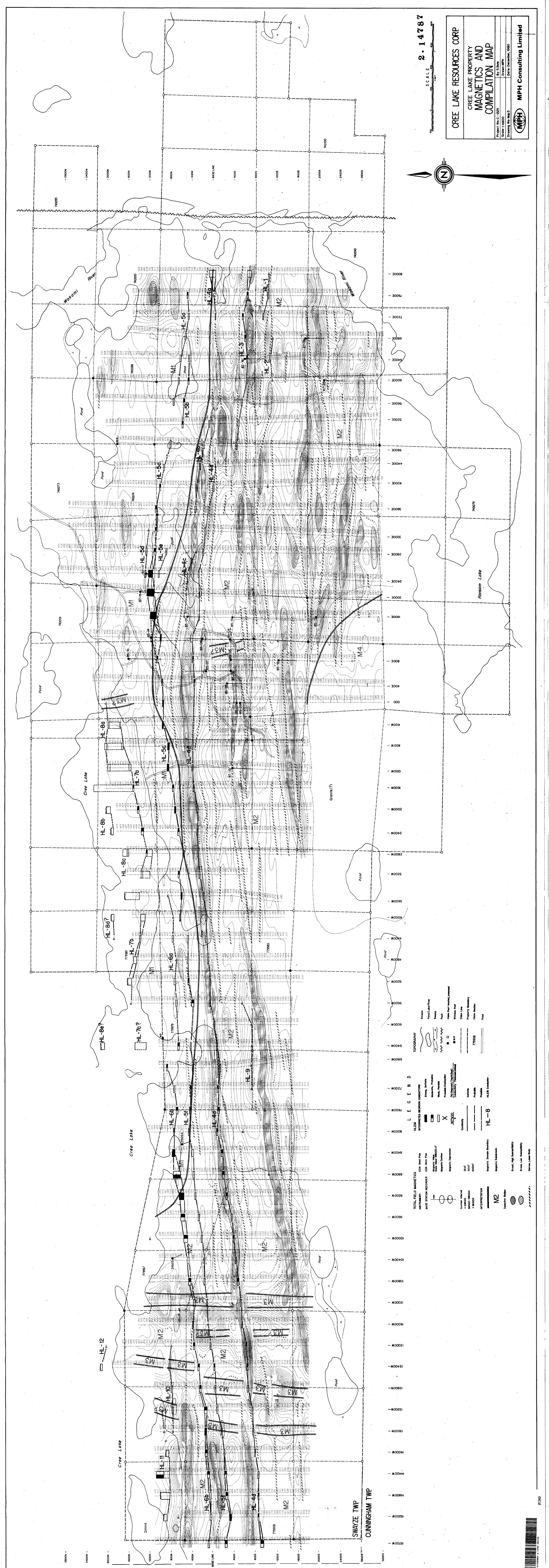
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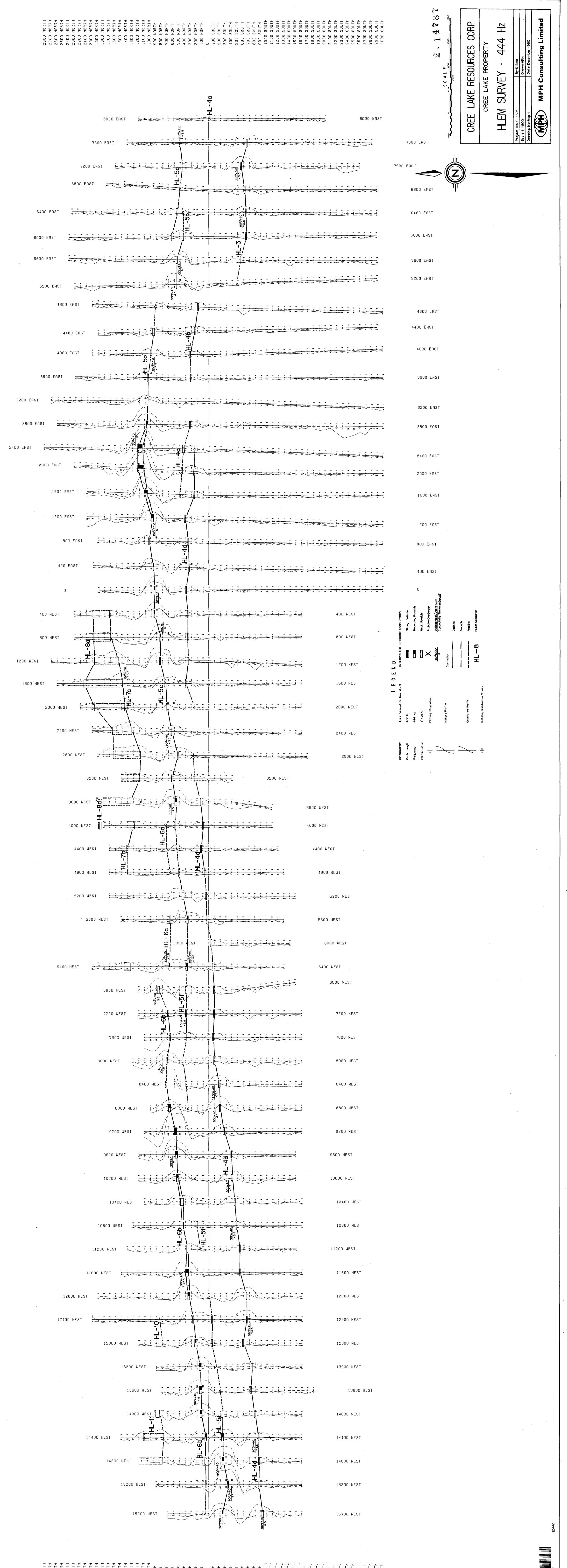
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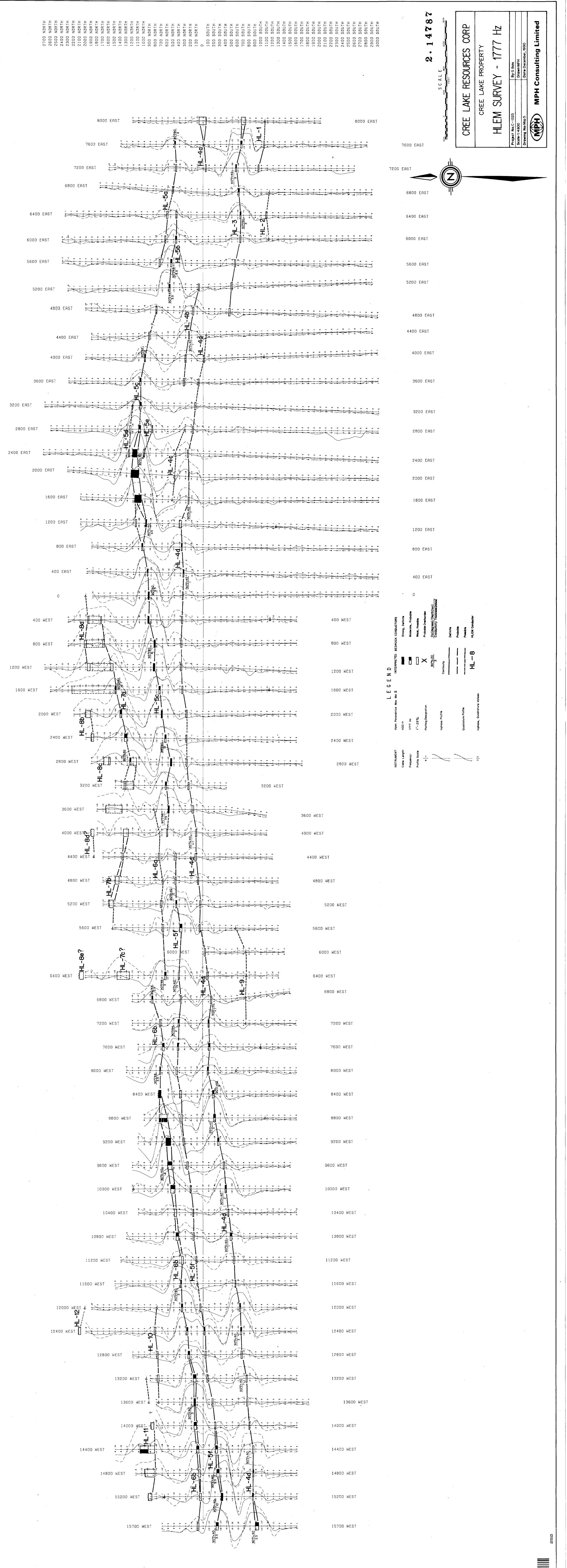
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