



52108NE0004 2.7916 FALCON LAKE

010

REPORT ON THE
GEOCHEMICAL SURVEY AND EXPENDITURES
ON THE
TORONTO LAKE CLAIM GROUP
TORONTO LAKE AREA
THUNDER BAY MINING DIVISION
ONTARIO

FOR

QUEBEC COBALT AND EXPLORATION LIMITED

RECEIVED

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CAROLYN HORNER B.Sc.

H. E. NEAL & ASSOCIATES LTD.

TORONTO - CANADA

May 1985



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MAPS: Key Map, Property Map, Location Map.

Geology and Gold Assays - 3 sheets D, E & F - 1" to 400'

Geology and Geochemistry - sample locations - 3 sheets - 1" to 400'.

1.0 SUMMARY:

A geochemical survey was conducted by H.E. Neal & Associates Ltd. during the summer of 1984. A total of 165 rock samples, 118 soil samples and 10 humus samples were collected from the Toronto Lake claim group. The rock sampling outlined two areas with anomalous gold. The highest gold assay was 2900 ppb (0.08 oz./ton) from a quartz vein located on Turtle Island.

Arsenic is a useful gold pathfinder element in the Toronto Lake area.

2.0 INTRODUCTION:

During the summer of 1984 a five member crew collected rock, soil and humus samples from the Toronto Lake claim group held by Quebec Cobalt and Exploration Limited.

Claim lines were traversed and pace and compass lines were established at 400 foot intervals. Flagging was placed at 100 foot intervals on all traverse lines.

The purpose of the geochemical survey was to detect any anomalous gold zones in the area. During the same field season similar work was done on the Ketchikan Lake claim group to the north.

3.0 THE PROPERTY:

The Toronto Lake claim group consists of 94 contiguous claims in the Toronto Lake Area, Thunder Bay Mining Division, Ontario. These claims are held by Quebec Cobalt and Exploration Limited.

4.0 LOCATION AND ACCESS:

The claims are located northeast of Lake Nipigon, approximately 15 miles north of Auden, Ontario.

Access was by float plane to Toronto and Joy Lakes from Kyro's Airways base in Jellicoe, Ontario. An Otter was used for camp moves and a Cessna 185 was used for weekly service flights. The distance from the float plane base to the property is approximately 50 miles.

ONTARIO

QUE.

TORONTO LAKE PROJECT
CLAIMS

THUNDER BAY

SAULT
STE MARIE

TORONTO
HAMILTON

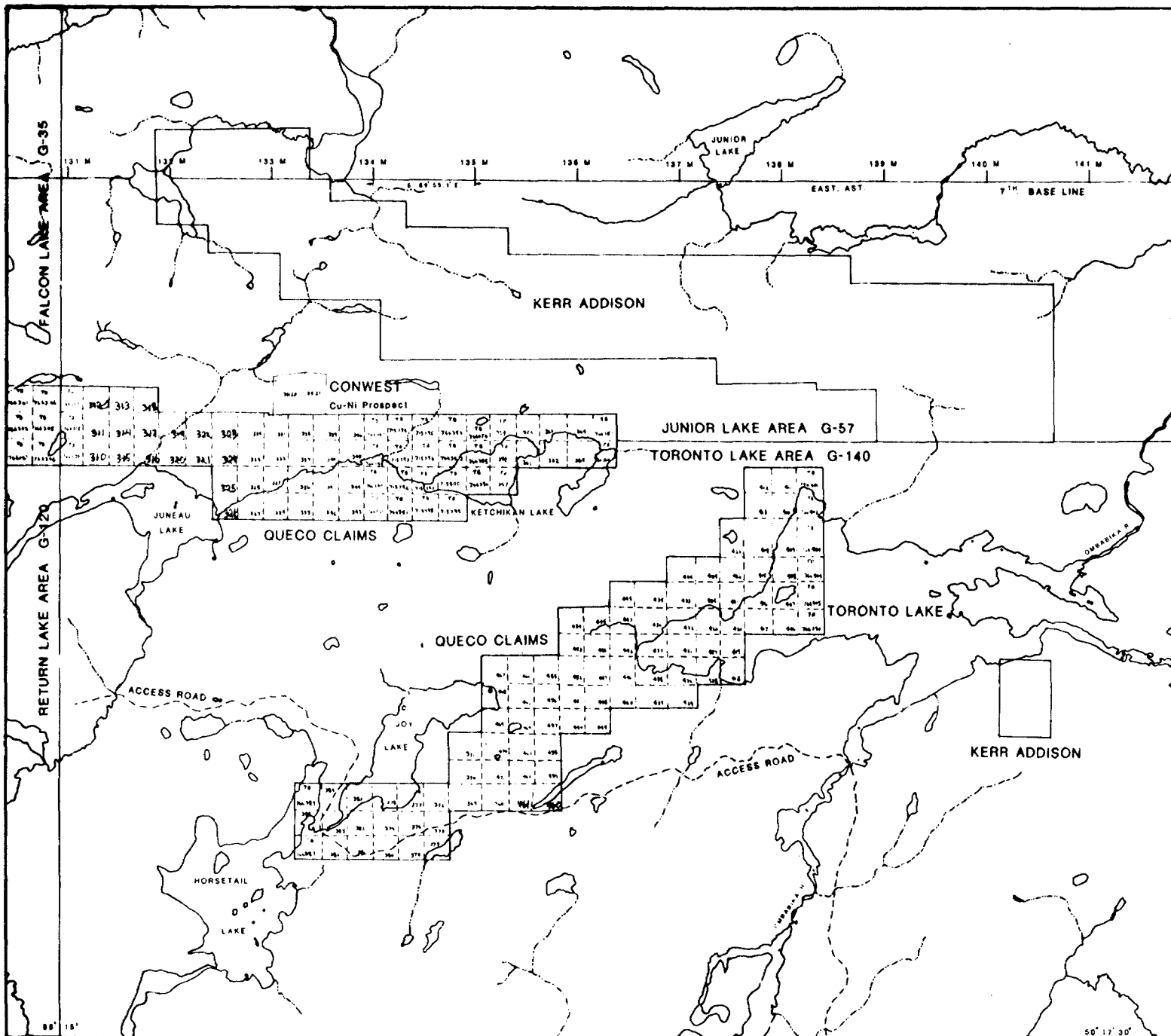
KEY MAP

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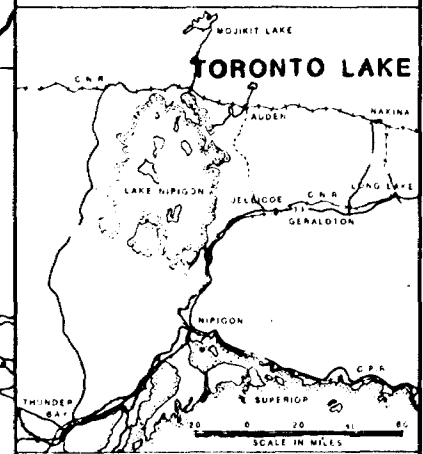
MILES

H.E. NEAL & ASSOCIATES LTD.





KEY MAP



NTS 42/5, 52/8

**QUEBEC COBALT
AND EXPLORATION LIMITED**

**TORONTO LAKE PROJECT
PROPERTY MAP**

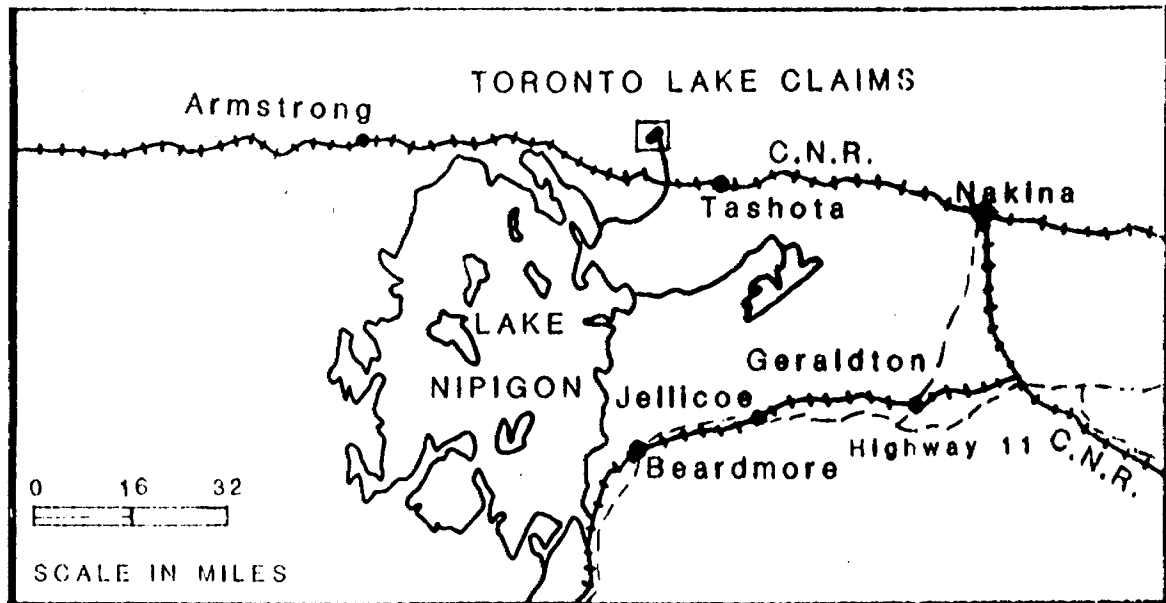
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SCALE IN FEET

H. E. NEAL AND ASSOCIATES LTD.
TORONTO CANADA

DRAWN BY: C.R.S. DRAWING No. DATE: MAY 25, 1964
APPROVED BY: H.E.N.

50° 17' 30"

LOCATION MAP



5.0 PREVIOUS WORK:

- 1953 - Kennco Exploration (Canada) Limited did ground magnetometer and electromagnetic surveys.
- ? - Zmudzinski and Despard geological survey.
- 1955 - N.A. Timmins Explorations (Ontario) Limited did a ground magnetometer survey and drilled 4 holes totalling 2958 feet.
- 1959 - Panther International Mining Company Limited did an airborne magnetometer survey and 1438 feet of drilling.
- 1967 - Canadian Dyno Mines Ltd. performed ground magnetometer and electromagnetic surveys.
- 1969 - International Mogul Mines Limited and North Coldstream Mines Limited drilled 6 holes for a total of 1644 feet.
- 1977 - Rickaby Mines Limited (McAdam Mining Corporation Limited) performed a ground magnetometer survey.

6.0 GENERAL GEOLOGY:

Bedrock exposed in the area is Precambrian in age. The oldest rocks are Archean volcanic and sedimentary rocks including some iron formation. These rocks trend in an easterly and northeasterly direction. They have been isoclinally folded, intensely metamorphosed and intruded by large masses of granitic rocks and by dikes of porphyry and pegmatite. Basic eruptives, which are both pre-granite and post-granite in age, cross-cut

the volcanic and sedimentary rocks. The pre-granitic basic rocks have undergone regional metamorphism. Possibly they represent a late intrusive phase of the Archean volcanism. The post-granitic basic rocks are relatively unaltered Keweenaw diabases. They occur as steeply dipping dikes and as flat or gently dipping sheets.

Pleistocene geology in the area consists mainly of glacial till with boulders, gravel, sand, silt and clay also present. A northwest trending esker is present at the west end of Ketchikan Lake.

TABLE OF FORMATIONS

CENOZOIC:

RECENT AND PLEISTOCENE: Glacial drift, gravel, sand, silt, clay
Unconformity

PRECAMBRIAN

PROTEROZOIC:

KEWEENAWAN: Diabase, porphyritic diabase.
Intrusive Contact

ARCHEAN:

ACID (GRANITIC) ROCKS: Granite (gneiss), porphyritic granite
(gneiss), migmatite, pegmatite,
quartz porphyry, feldspar porphyry,
quartz-feldspar porphyry.
Intrusive Contact

BASIC AND ULTRABASIC ROCKS:

Metagabbro, Metapyroxenite,
anorthosite, anorthositic
metagabbro, serpentinite, basic
dike rocks.

Intrusive Contact

MARSHALL LAKE GROUP:

Metasediments: biotite gneiss,
biotite-quartz-feldspar gneiss,
quartzite, conglomerate, iron
formation.
Metavolcanics: massive amphibolite,
schistose amphibolite, pillow lava,
metadiabase, tuff, agglomerate.

(Pye, 1968)

7.0 GEOCHEMICAL SURVEY:

A five member crew collected 165 rock samples, 118 soil samples and 10 humus samples from the Toronto Lake claim group. The survey was carried out from June 5th. to July 4th., 1984 and from August 16th. to August 31st., 1984. All samples were initially sent to X-Ray Assay Laboratories in Don Mills, Ontario and analyzed for gold. The geochemical analyses performed to date on the Toronto Lake samples are listed below:

<u>Sample Medium</u>	<u>No. of Samples</u>	<u>Elements Determined</u>	<u>Assay Laboratory</u>
Rock	165	Au, Cu, Pb, Zn, As, Sb	X-Ray Assay, Bondar-Clegg
Rock	153	Whole rock analysis	Bondar-Clegg
Soil	118	Au, Ba, Mo, Hg	X-Ray Assay
Soil	89	Cu, Pb, Zn, As, Sb	Bondar-Clegg
Humus	10	Au, Mo, Ba	X-Ray Assay

The analytical methods used for each element are listed in Table 1.

All assay results are included in Appendix A. The ranges of assay values are shown in Table 2.

Additional analyses were done in order to determine the presence of any gold pathfinder elements in the Toronto Lake area. Whole rock analysis was done in order to recognize alteration haloes and to determine the stratigraphy of the property.

TABLE 1

TORONTO LAKE

CHEMICAL LABORATORY ANALYSES

Sample Type	Element	Analytical Method	Extraction Method	Lower Detection Limit
Rock	Au	FADCP	HNO ₃ , Aqua Regia	2 ppb
	Cu	AA	HNO ₃ -HCl Hot	1 ppm
	Pb	AA	"	2 ppm
	Zn	AA	"	1 ppm
	As	Colourimetric	Nitric Perchlor Dig.	2 ppm
	Sb	AA	1:1 HCl-MIBK	0.2 ppm
	Whole rock	DC Plasma	Borate Fusion	0.01%
	- LOI	Gravimetric	" "	0.01%
Soil	Au	FADCP	HNO ₃ , Aqua Regia	2 ppb
	Mo	DCP	HNO ₃ :HCl	1 ppm
	Ba	XRF-G	--	20 ppm
	Hg	WET	H ₂ SO ₄ , HNO ₃	10 ppb
	Cu	AA	HNO ₃ -HCl Hot	1 ppm
	Pb	AA	"	2 ppm
	Zn	AA	"	1 ppm
	As	Colourimetric	Nitric Perchlor Dig.	2 ppm
	Sb	AA	1:1 HCl-MIBK	0.2 ppm
Humus	Au	NA	-	1 ppb
	Mo	NA	-	1 ppm
	Ba	NA	-	100 ppm

Whole Rock Analysis includes:

SiO₂, Al₂O₃, Total Fe (as Fe₂O₃), CaO, MgO, K₂O, Na₂O, TiO₂, P₂O₅,
MnO and L.O.I.

TABLE 2

TORONTO LAKE CLAIM GROUP

RANGE OF ASSAY VALUES

	ppb				ppm			ppb	
	Au	Cu	Pb	Zn	As	Sb	Mo	Ba	Hg
Rock	<2	2	<2	2	<2	<0.2			
	2900	4135	185	17,100	2,000	88.0			
Soil	<2	1	2	2	<2	<0.2	<1	200	<10
	11	84	22	108	14	1.4	3	580	80
Humus	<1						<1	100	
	2						1	300	

7.1 Rock Sampling

The 165 rock samples were grab samples collected from outcrops on the Toronto Lake claim group. Most of the samples were of metasediments but rusty outcrops and quartz veins were also sampled.

The highest gold assay was 2900 ppb (0.08 oz/ton) in a mineralized quartz vein on the north shore of Turtle Island. This rusty quartz vein has exposed dimensions of 6 feet by 3 feet and contains abundant pyrite, chalcopyrite and sphalerite.

7.1.1 Trace Element Analyses

The results of the geochemical analyses are included in Appendix A. The rock samples which contain any elements in anomalous amounts are shown in Table 3. There are nine samples with anomalous gold content. The data shows that five rock samples containing anomalous gold also contain arsenic in anomalous amounts. Four samples are anomalous in gold and zinc, three are anomalous in gold and antimony, two are anomalous in gold and copper and one sample is anomalous in gold and lead.

The three main gold showings have different trace element associations. The Camp Showing is associated with high arsenic values. One sample also contained weakly anomalous antimony. The grab sample from the Turtle Island mineralized quartz vein contains highly anomalous amounts of gold

(0.08 oz/ton), copper (0.4%), lead, zinc (1.7%), arsenic (0.2%) and antimony. The Turtle Island sediment showing (72 ppb Au) is associated with anomalous zinc, antimony and arsenic. The anomalous elements common to all three showings are gold, arsenic and to a lesser extent antimony.

There are two samples which are anomalous in arsenic but were not found to be anomalous in gold. However, both of these samples are in the vicinity of samples which do contain anomalous gold. There are five samples containing anomalous gold and arsenic (Table 3). These results show that the arsenic content increases as the gold content increases but the relationship is not linear (Graph 1).

TABLE 3

TORONTO LAKE CLAIM GROUP

ROCK SAMPLES

ANOMALOUS VALUES

Sample #	ppb		ppm			
	≥ 10 Au	≥ 300 Cu	≥ 11 Pb	≥ 100 Zn	≥ 33 As	> 0.2 Sb
JYTL-1	-	-	12	-	-	-
JYLS-2	12	-	-	-	-	-
LTI-1	72	-	-	165	46	5.9
T1-2	-	-	12	-	193	-
LS-59	2900	4135	185	17100	> 2000	88.0
LS-50	-	-	-	-	-	1.0
LS-22	-	646	-	-	-	-
LS-14	29	2310	-	109	-	-
L1E- 4	320	-	-	-	1250	0.6
L1E- 6	99	-	-	-	550	-
L1E- 7	75	-	-	-	388	-
L1E- 9	24	-	-	-	-	-
L1E-10	-	-	-	-	40	-
L3E- 5	-	321	-	-	-	-
L6W- 2	-	-	12	-	-	-
L6W- 8	-	-	14	-	-	-
L8W- 5	-	-	48	-	-	-
L8W- 3	-	-	15	-	-	-
L3E-4S	11	-	-	102	-	-
L15E- 1	-	-	12	-	-	-
L15E- 6	-	-	-	103	-	-
L6-35	-	350	-	-	-	-
JL12W-3	-	300	-	-	-	-
BSP- 2	-	-	-	-	-	0.6

(continued on page 12)

TABLE 3 (continued)

Sample #	ppb		≥ 11 Pb	ppm		
	≥ 10 Au	≥ 300 Cu		≥ 100 Zn	≥ 33 As	> 0.2 Sb
L18W- 2	-	-	28	-	-	-
L30W- 8	-	-	15	-	-	-
LS -13	-	-	14	-	-	-
TL- 4	-	-	16	-	-	-
TI- 1	-	-	-	-	-	0.3
L12W- 2	-	-	-	-	-	0.4
RD - 3	-	-	-	-	-	0.3

Au ppb vs. As ppm Graph 1

K&E 10 X 10 TO THE INCH 46 0703
MADE IN U.S.A.
KEUFFEL & ESSER CO.

3000

2500

2000

1500

1000

500

0

500

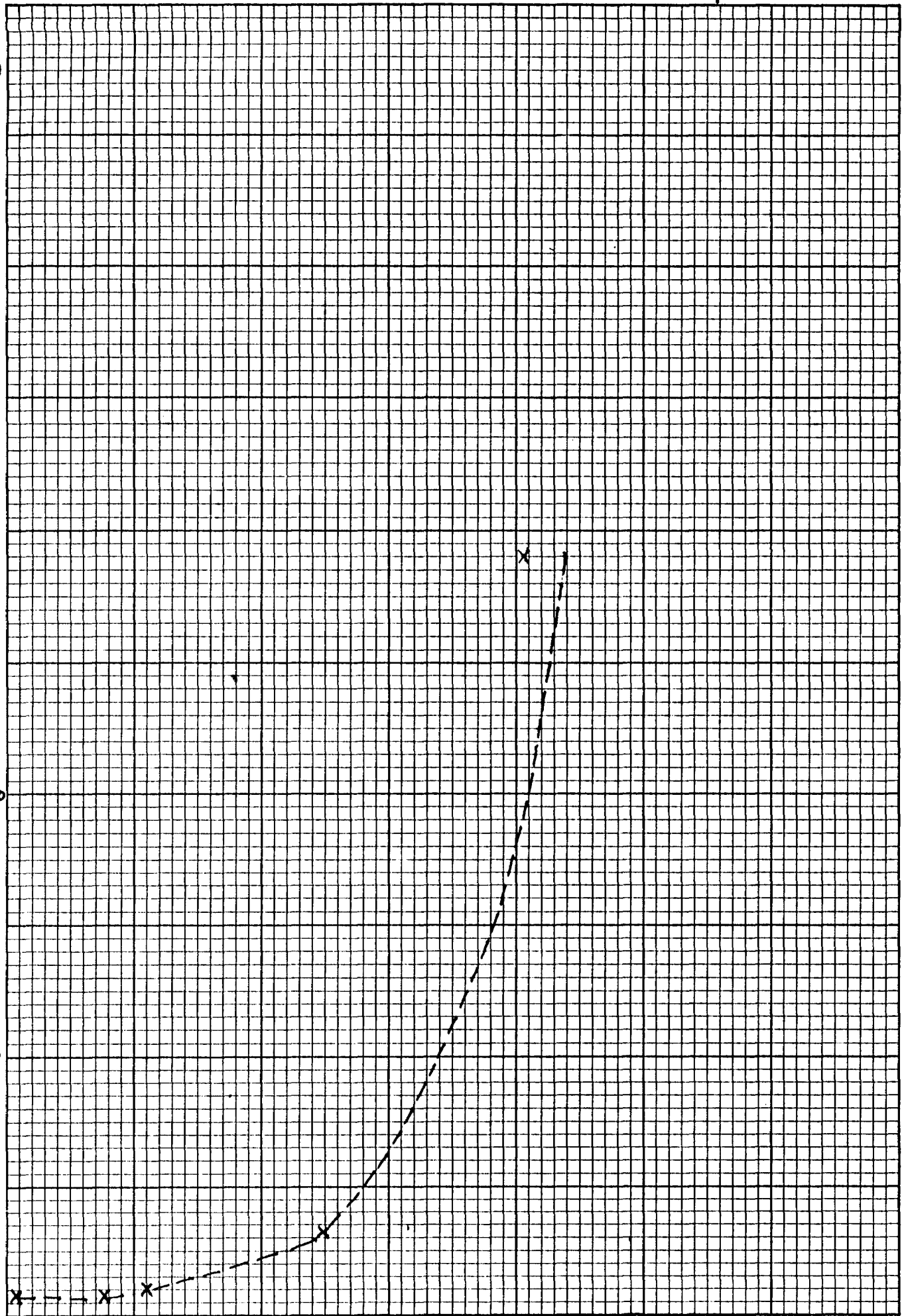
1000

1500

2000

As ppm

Au ppb



0

500

1000

1500

2000

7.1.2 Whole Rock Analysis

Whole rock analysis was done on 153 rock samples by Bondar Clegg.

Whole rock analysis included determinations for SiO_2 , Al_2O_3 , Total Fe (as Fe_2O_3), CaO, MgO, K_2O , Na_2O , TiO_2 , P_2O_5 , MnO and L.O.I. The results are in Appendix A.

All of the rock samples were plotted on a Jensen Cation Plot (Figures 1 and 2). Most of the volcanics are Tholeiites but several are Calc-Alkaline and two samples are Komatiites. Most of the calc-alkalic volcanics are present on the inside and the outside of the sediment band fold nose to the south-east of Joy Lake. Two calc-alkalic samples are located on L3E on the south shore of Toronto Lake. One calc-alkalic sample is located on L13W. Sample L15W-1 is a basaltic komatiite and sample L1W-3 is an ultramafic komatiite.

The majority of the Toronto Lake "sediments" are calc-alkalic. There are several tholeiitic samples but they are scattered across the claim groups and therefore do not appear to occur in any particular stratigraphic horizon.

The peraluminosity index (PAI) was calculated using the whole rock data as follows:

$$\frac{\text{mole \% Al}_2\text{O}_3}{\text{mole \% K}_2\text{O} + \text{Na}_2\text{O} + \text{CaO}}$$

FIGURE 1
 Jensen Cation Plot
 Toronto Lake Group
 "Sediments"

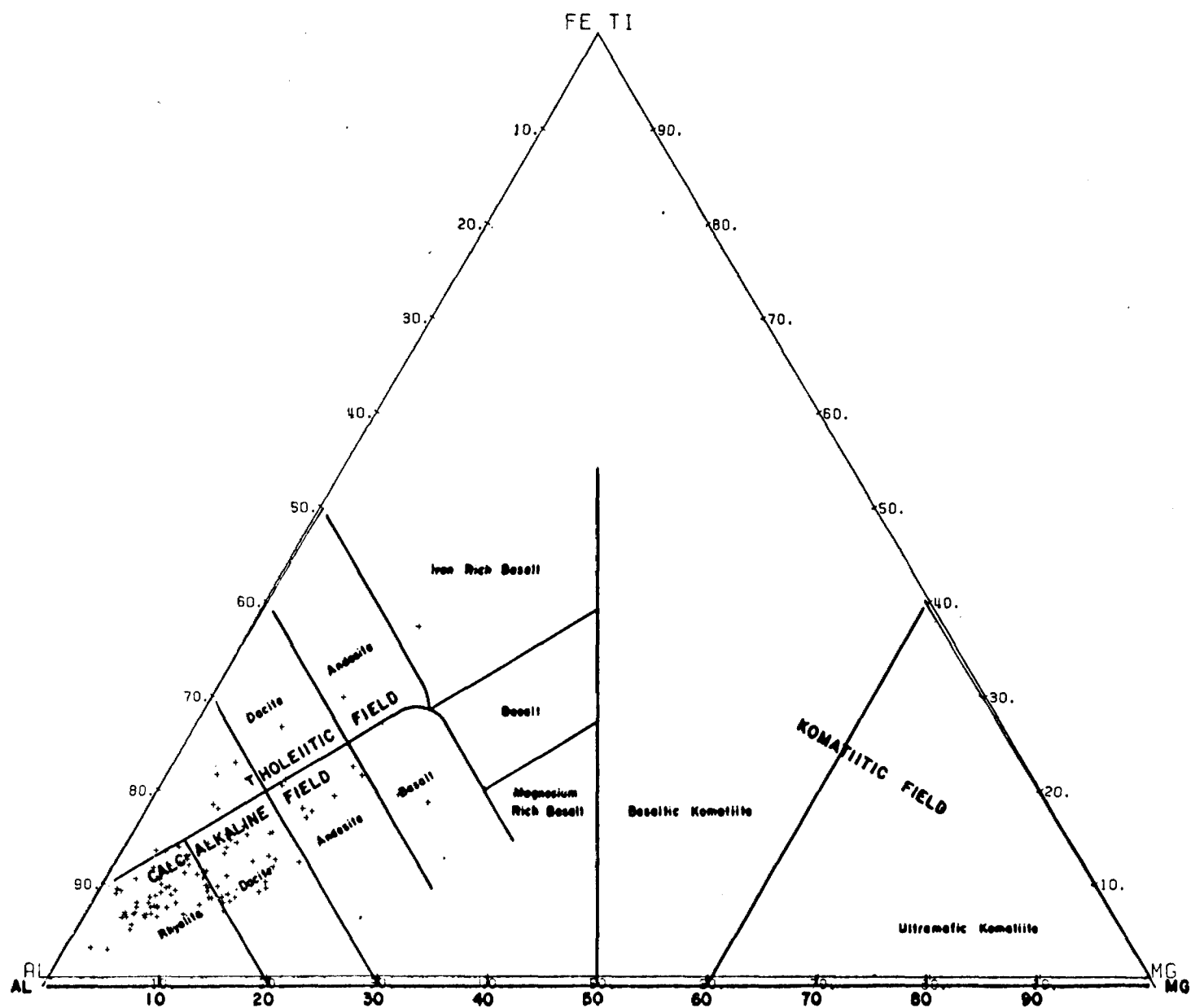
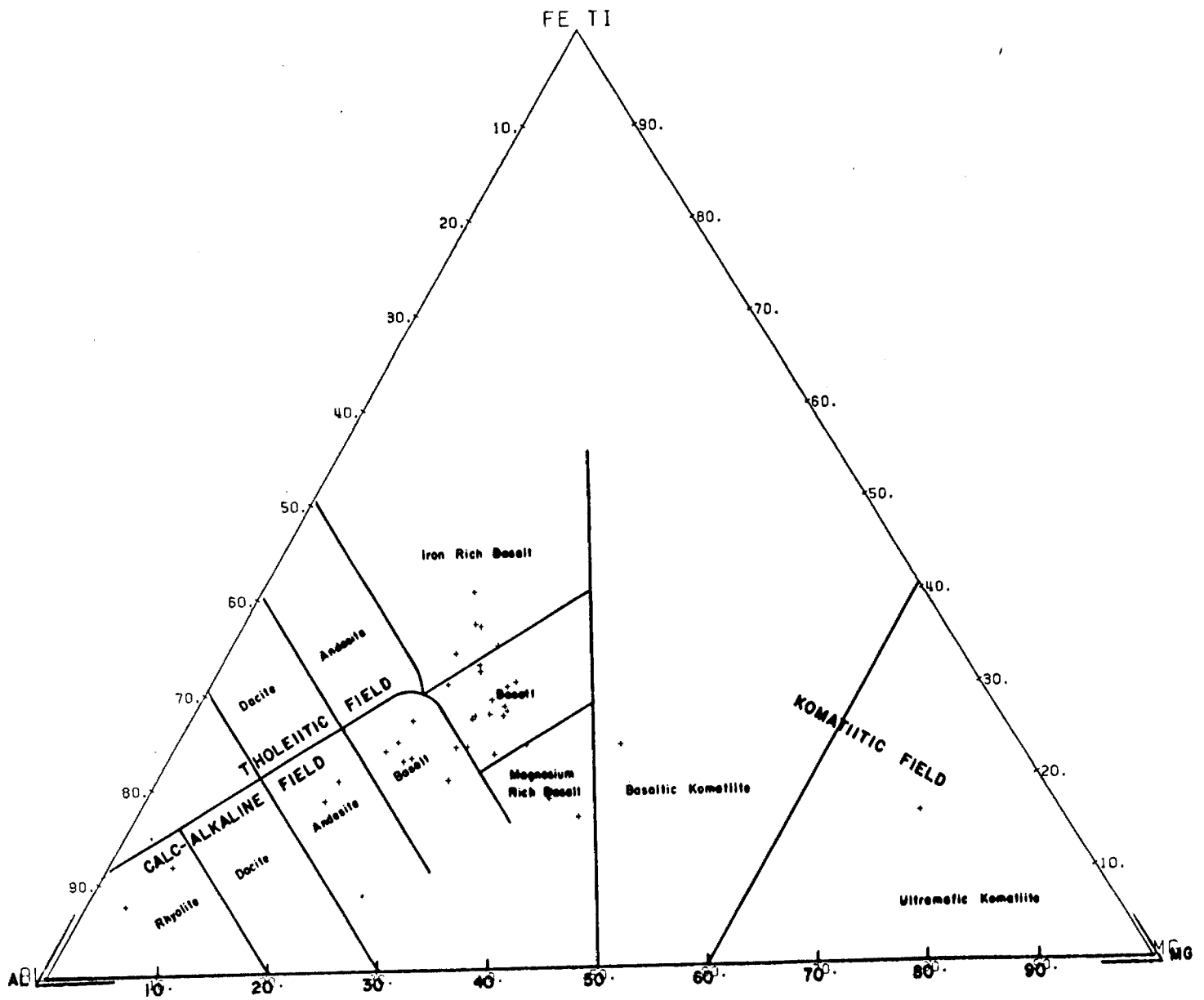


FIGURE 2
 Jensen Cation Plot
 Toronto Lake Group
Volcanics



The peraluminosity index is one way of measuring the intensity of feldspar-destructive alteration. The frequency distributions of PAI are plotted on Figure 3. The histograms show that 95% of the volcanics have a $PAI < 1$. Mafic volcanics affected by feldspar-destructive alteration have a $PAI > 1$ and mostly greater than 3. Only two volcanic samples, L3E-4S and L36W-5 have a $PAI > 1$. Sample L3E-4S which has a $PAI = 2$ also contains weakly anomalous gold and zinc. Eighty-one percent of the sediments have a $PAI > 1$, 19% have a $PAI < 1$. Only 1% of the sediments have a PAI greater than 2.

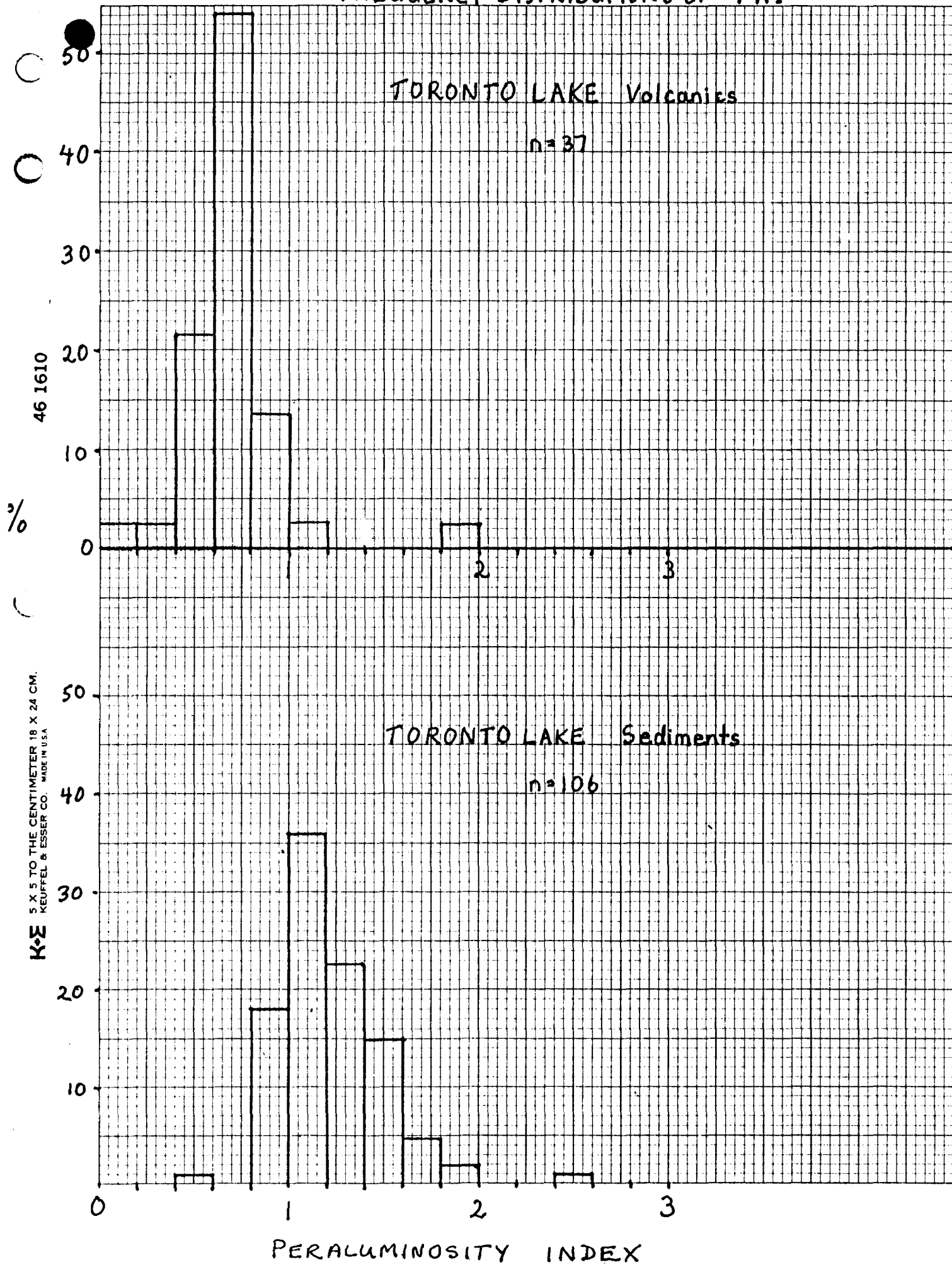
7.2 Soil Sampling Results

During the summer of 1984, 118 soil samples were collected from the Toronto Lake group. The soil sample lines were located over sediments in most cases. A pit was dug every 50 feet or 25 feet to expose the soil profile. The red-brown layer was sampled when it was available. This layer was found at 2 inches to 16 inches below surface. Sample material was collected from as deep as 24 inches below surface. The soil type most commonly collected was a silty, sandy, pebbly till. The pebbles were removed during the sampling procedure. These samples were originally analyzed for Au, Mo, Ba and Hg.

Gold in soils did not indicate any correlation with molybdenum, barium or mercury. In an attempt to find a useful pathfinder element for gold

FIGURE 3

FREQUENCY DISTRIBUTIONS OF PAI



K·E
5 X 5 TO THE CENTIMETER 18 X 24 CM.
KEUFFEL & ESSER CO. MADE IN U.S.A.

in soils, 89 of the soil samples were sent to Bondar-Clegg laboratory in Ottawa and analyzed for Cu, Pb, Zn, As and Sb. These results are included in Appendix A.

The frequency of assay values was tabulated for each element and the 95th percentile was chosen as the threshold value. The threshold values are as follows:

<u>Element</u>	<u>Threshold Value</u>
Cu	57 ppm
Pb	14 ppm
Zn	47 ppm
As	9 ppm
Sb	0.2 ppm

Any soil samples containing these elements in amounts equal to or greater than the threshold value are shown in Table 4.

There are 6 soil samples containing anomalous gold although none of these values are high. One sample also contains anomalous zinc, another contains anomalous antimony and a third sample contains anomalous copper. The other three samples do not contain any of the elements tested in anomalous amounts. A few other soil samples contain anomalous copper, zinc or antimony but no gold.

The soil samples collected across the Camp Showing (L1E-24 + 50 to 26 + 50s) were not found to be anomalous in any of the elements analyzed. This is interesting since the rock sampling in this area indicated high levels of arsenic and gold and some anomalous antimony.

TABLE 4

TORONTO LAKE GROUP

ANOMALOUS SOIL SAMPLES

Soil Samples	≥ 6	≥ 3	≥ 561	≥ 41	≥ 57	≥ 14	≥ 47	≥ 9	≥ 0.2
	ppb Au	ppm Mo	ppm Ba	ppb Hg	ppm Cu	ppm Pb	ppm Zn	ppm As	ppm Sb
L 5E - 22+70S	-	3	-	-	-	-	NS	-	-
23+25S	-	3	-	50	-	-	NS	-	-
23+50S	-	-	-	80	-	-	NS	-	-
L11 W - 19+90S	-	-	-	-	-	-	108	-	-
21+00S	-	-	580	-	-	-	-	-	-
L 6E(S)-5+00N	-	-	-	-	-	15	-	-	-
3+50N	-	-	-	50	-	14	-	10	-
2+90N	-	-	-	50	-	-	-	-	-
1+40N	-	-	-	60	-	-	-	-	-
L12E - 9+00N	-	-	-	-	-	14	-	-	-
8+25N	-	3	-	-	-	15	-	-	-
7+00N	-	3	-	-	-	22	-	-	-
4+00N	-	3	-	-	-	-	-	-	-
2+50N	-	-	-	60	-	-	-	-	-
L15W - 0+50S	7	-	-	-	-	-	74	-	-
1+50S	9	-	-	-	-	-	-	-	-
2+15S	6	-	-	-	-	-	-	-	-
L37W - 6+50N	-	3	-	-	-	-	NS	-	-
6+00N	-	-	-	60	-	-	NS	-	-
L19W - 9+00S	6	-	-	-	-	-	-	-	0.4
9+50S	11	-	-	-	84	-	-	-	-
10+10S	-	-	580	-	-	-	-	-	-
10+50S	-	-	-	-	-	-	-	-	0.5

(continued on page 18)

TABLE 4 (continued)

Soil Samples	6 ppb Au	3 ppm Mo	561 ppm Ba	41 ppb Hg	57 ppm Cu	14 ppm Pb	47 ppm Zn	9 ppm As	0.2 ppm Sb
L15W - 16+00N	8	-	-	-	-	-	-	-	-
16+50N	-	-	-	-	-	-	-	9	-
L13W - 2+25N	-	-	-	-	62	-	-	14	-
4+80N	-	-	-	-	68	-	-	-	-
L 6W - 29+55S	-	-	-	-	-	-	-	9	-
31+40S	-	-	-	-	-	-	-	9	-
L17W - 27+50N	-	-	-	-	-	-	-	-	1.4
L30W - 19+00S	-	-	-	-	74	-	-	-	-
L31W - 1+00N	-	-	-	-	-	-	48	-	-

7.3 Humus Sampling Results

A line of 10 humus samples were collected from L5E. Pits were dug at 25 foot intervals and the Ao horizon at the base of the organic layer was sampled. Soil samples were also collected from these pits. These samples were analysed for Au, Mo and Ba by neutron activation. The results are in Appendix A and the range of values are shown in Table 2. The ranges are much less than those from the soil sample results.

8.0 CONCLUSIONS:

1. In rock samples arsenic appears to be the most consistent pathfinder element for gold mineralization in the Toronto Lake group.
2. Soil samples were analysed for Au, Mo, Ba, Hg, Cu, Pb, Zn, As and Sb. Only 6 samples contained anomalous gold but the values were low. None of the other elements in soil could be considered useful pathfinders for gold mineralization in the area. The soil sampling did not pick up a gold and arsenic anomaly in bedrock. No further soil sampling is recommended for this property.
3. The minor humus sampling did not include anomalous gold.
4. The volcanic rocks on the property are predominantly tholeiitic basalts. There are some calc-alkaline volcanics at the south-east corner of the property. Two samples of komatiites were found. The "sediments" on the property are mainly calc-alkaline rhyolites and dacites but there are also some tholeiites.
5. The geochemical survey, specifically the rock sampling, outlined two areas containing anomalous gold values. A metasediment outcrop to the north of the campsite contained four samples with anomalous

gold values ranging from 24 ppb to 320 ppb (0.01 oz/ton).
Turtle Island has two gold anomalies about 400 feet apart,
72 ppb and 2900 ppb.

These areas warrant further work. Outcrop stripping and
sampling with detailed prospecting in the vicinity of the
two target areas is recommended.

Carolyn Horner B.Sc.

APPENDIX A

Assay Results



REPORT: 015-0219

PROJECT:

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Pb PPM	Zn PPM	As PPM	Sr PPM	NOTES
QV-L30W-1-ROCK		4	<2	2	<2	0.2	
QV-L31W-2-ROCK		8	<2	6	<2	0.2	
QV-L3E-1		4	<2	5	3	0.2	
QV-L3E-6-ROCK		6	<2	6	<2	0.2	
QV-L3E-12S-ROCK		4	<2	8	<2	0.2	
QV-L4E-3-ROCK		28	<2	8	<2	0.2	
QV-L4E-9-ROCK		50	<2	30	1	0.2	
QV-L6E-6S-ROCK		8	<2	5	<2	0.2	
QV-L15E-3		8	4	34	2	0.2	
QV-BPN-1		6	<2	8	<2	0.2	
QV-RSP-2		25	<2	7	<2	0.6	
QV-LS-59		4135	185	17100	2000	88.0	

BONDAR-CLEGG

Geochem
Lab Rep

115-0220

PROJECT:

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Pb PPM	Zn PPM	As PPM	Sb PPM	NOTE	SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Pb PPM	Zn PPM	As PPM	Sb PPM	NOTE
01-JYTL-1-ROCK		7	12	16	<2	<0.2		01-L13E-1-ROCK		5	3	12	4	<0.2	
01-LS-35		350	3	18	<2	<0.2		01-L13E-3-ROCK		6	4	20	2	<0.2	
01-LS-38		11	2	18	<2	<0.2		01-L13E-7-ROCK		8	5	38	<2	<0.2	
01-RD-1-ROCK		15	4	48	<2	<0.2		01-L15E-2		7	8	48	<2	<0.2	
01-RD-2-ROCK		6	5	14	<2	<0.2		02-JL12W-3-ROCK		300	3	20	<2	<0.2	
01-RD-4-ROCK		16	6	18	<2	<0.2		02-JYLS-1-ROCK		152	2	11	<2	0.2	
01-RD-5-ROCK		80	4	30	<2	<0.2		02-RD-6-ROCK		56	<2	10	<2	<0.2	
01-TI-1		44	10	34	9	0.3		02-L1W-3-ROCK		3	<2	6	<2	<0.2	
01-L6W-5		6	8	15	4	0.2		02-L13W-4-ROCK		116	<2	16	<2	<0.2	
01-L12W-1-ROCK		28	<2	20	3	0.2		02-L13W-7-ROCK		104	4	34	2	<0.2	
01-L12W-2-ROCK		14	3	40	<2	0.4		02-L15W-1-ROCK		140	2	21	<2	<0.2	
01-L13W-1-ROCK		4	<2	20	<2	<0.2		02-L15W-2-ROCK		38	<2	34	<2	0.2	
01-L13W-5-ROCK		9	4	30	<2	<0.2		02-L15W-9-ROCK		112	<2	12	<2	0.2	
01-L14W-1-ROCK		27	5	34	2	<0.2		02-L17W-1-ROCK		108	2	78	<2	0.2	
01-L15W-4-ROCK		2	9	16	<2	<0.2		02-L17W-6-ROCK		26	4	40	<2	0.2	
01-L15W-5-ROCK		4	6	14	<2	<0.2		02-L28W-2-ROCK		22	<2	8	3	0.2	
01-L16W-3-ROCK		33	3	60	3	<0.2		02-L30W-2-ROCK		120	<2	12	<2	0.2	
01-L17W-5-ROCK		5	6	20	<2	0.2		02-L30W-3-ROCK		26	4	30	<2	<0.2	
01-L18W-2-ROCK		116	28	98	<2	<0.2		02-L30W-6-ROCK		98	<2	20	2	<0.2	
01-L19W-1-ROCK		10	5	16	<2	<0.2		02-L30W-9-ROCK		47	4	50	<2	<0.2	
01-L30W-4-ROCK		44	2	20	<2	<0.2		02-L31W-1-ROCK		10	2	69	<2	<0.2	
01-L30W-8-ROCK		2	15	30	<2	<0.2		02-L31W-5-ROCK		52	3	9	<2	<0.2	
01-L31W-3-ROCK		18	8	64	<2	<0.2		02-L31W-6-ROCK		50	<2	10	<2	<0.2	
01-L32W-2-ROCK		25	6	21	<2	<0.2		02-L32W-1-ROCK		38	<2	11	<2	<0.2	
01-L32W-3-ROCK		23	4	38	<2	<0.2		02-L32W-4-ROCK		106	<2	16	<2	<0.2	
01-L36W-2-ROCK		80	6	16	<2	<0.2		02-L33W-1-ROCK		84	<2	18	3	<0.2	
01-L36W-3-ROCK		32	2	73	<2	<0.2		02-L33W-2-ROCK		38	<2	16	2	<0.2	
01-L37W-3-ROCK		2	3	9	<2	<0.2		02-L33W-5-ROCK		5	<2	30	<2	<0.2	
01-L1E-3		8	6	29	3	<0.2		02-L36W-5-ROCK		220	<2	12	<2	<0.2	
01-L1E-4		8	10	16	1250	0.6		02-L37W-1-ROCK		132	6	20	<2	0.2	
01-L1E-9		2	5	25	2	<0.2		02-L37W-2-ROCK		74	2	28	3	0.2	
01-L1E-11		2	6	20	6	<0.2		02-L4-10-ROCK		18	<2	69	<2	<0.2	
01-L3E-2		20	5	8	3	0.2		02-L4E-11-ROCK		33	<2	30	2	<0.2	
01-L3E-5S-ROCK		6	6	22	<2	<0.2		03-435-1		5	10	27	<2	<0.2	
01-L3E-6S-ROCK		16	8	30	<2	<0.2		03-JYLS-2-ROCK		38	4	36	<2	<0.2	
01-L3E-7S-ROCK		14	4	28	<2	<0.2		03-LS-13-ROCK		12	14	24	<2	<0.2	
01-L3E-11S02		24	10	48	<2	0.2		03-TL-4-ROCK		7	16	20	<2	<0.2	
01-L5E-4		8	4	17	<2	0.2		03-L2W-3-ROCK		25	7	16	<2	<0.2	
01-L6E-5S-ROCK		2	3	30	<2	0.2		03-L2W-5-ROCK		3	10	16	<2	<0.2	
01-L12E-1-ROCK		36	3	8	<2	<0.2		03L108W-12-ROCK		4	6	16	<2	<0.2	



115-0220

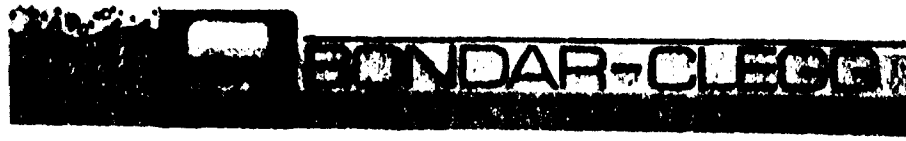
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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Pb PPM	Zn PPM	As PPM	Sr PPM	NOTES
03-L28U-1-ROCK		17	8	40	<2	<0.2	
03-L30N-7-ROCK		14	4	26	<2	<0.2	
04-R0-3-ROCK		96	2	45	<2	0.3	



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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Pb PPM	Zn PPM	As PPM	SB PPM	NOTE	SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Pb PPM	Zn PPM	As PPM	SB PPM	NO
L31W 3+00N		30	6	20	3	<0.2		L15W 2+60S		24	5	23	3	<0.2	
L31W 2+50W		18	6	18	3	<0.2		L15W 3+05S		15	7	20	4	<0.2	
L31W 2+00N		12	8	20	4	<0.2		L15W 3+50S		30	7	38	7	<0.2	
L31W 1+50W		13	6	16	2	<0.2		L13W 4+80N		68	6	24	3	<0.2	
L31W 1+00N		50	11	48	3	<0.2		L13W 4+45N		28	6	20	3	<0.2	
L30W 18+50S		28	5	15	6	<0.2		L13W 4+00N		32	8	29	4	<0.2	
L30W 19+00S		74	5	33	4	<0.2		L13W 3+00N		22	6	16	2	<0.2	
L30W 19+50S		45	6	23	2	<0.2		L13W 2+25W		62	6	22	14	<0.2	
L30W 20+00S		10	11	30	3	<0.2		L11W 19+90S		26	4	108	7	<0.2	
L19W 0+00S		8	7	23	3	<0.2		L11W 20+50S		8	4	20	2	<0.2	
L19W 8+50S		5	7	19	3	<0.2		L11W 21+00S		48	7	20	2	<0.2	
L19W 9+00S		6	8	12	3	0.4		L11W 21+50S		15	4	20	3	<0.2	
L19W 9+50S		84	5	31	7	<0.2		L11W 22+00S		4	4	10	<2	<0.2	
L19W 10+10S		1	4	2	<2	<0.2		L11W 22+80S		40	4	26	6	<0.2	
L19W 10+50S		14	8	20	4	0.5		L11W 23+25S		45	2	15	5	<0.2	
L19W 11+00S		7	7	18	3	<0.2		L11W 23+95S		8	5	26	3	<0.2	
L19W 11+60S		56	8	35	6	<0.2		L11W 24+50S		16	4	16	3	<0.2	
L18W 10+30S		17	9	23	5	<0.2		L11W 25+00S		8	3	13	<2	<0.2	
L18W 10+70S		8	9	20	4	<0.2		L6W 27+00S		10	8	20	3	<0.2	
L18W 11+20S		10	12	16	4	<0.2		L6W 27+50S		16	7	25	3	<0.2	
L17W 30+50N		6	6	6	<2	<0.2		L6W 28+00S		13	8	19	2	<0.2	
L17W 30+00N		10	10	40	2	<0.2		L6W 28+50S		9	6	18	3	<0.2	
L17W 29+50N		6	8	12	2	<0.2		L6W 29+10S		9	5	20	2	<0.2	
L17W 29+00N		6	8	14	2	<0.2		L6W 29+55S		35	8	19	9	<0.2	
L17W 28+50N		7	8	18	2	<0.2		L6W 31+40S		21	6	36	9	<0.2	
L17W 28+00N		6	6	23	3	<0.2		L1E 24+50S		12	5	20	4	<0.2	
L17W 27+50N		6	8	25	4	1.4		L1E 25+00S		20	7	23	4	<0.2	
L15W 16+50N		24	12	24	9	<0.2		L1E 25+50S		13	6	20	5	<0.2	
L15W 16+00N		5	7	16	2	<0.2		L1E 26+00S		12	11	25	4	<0.2	
L15W 15+50N		4	4	15	3	<0.2		L1E 26+50S		15	9	24	8	<0.2	
L15W 15+00N		7	6	16	2	<0.2		L6E(S) 6+00N		12	8	15	4	<0.2	
L15W 14+50N		6	5	16	2	<0.2		L6E(S) 5+50N		14	9	16	<2	<0.2	
L15W 14+00N		4	5	14	<2	<0.2		L6E(S) 5+00N		34	15	44	8	<0.2	
L15W 13+50N		14	5	20	3	<0.2		L6E(S) 4+00N		3	4	4	<2	<0.2	
L15W 12+90N		12	5	13	2	<0.2		L6E(S) 3+50N		22	14	20	10	<0.2	
L15W 0+00S		32	7	19	2	<0.2		L6E(S) 2+90N		8	12	16	3	<0.2	
L15W 0+50S		30	7	74	<2	<0.2		L6E(S) 2+50N		10	5	8	3	<0.2	
L15W 1+00S		12	5	14	2	<0.2		L6E(S) 1+40N		25	12	18	6	<0.2	
L15W 1+50S		10	7	15	3	<0.2		L6E(S) 0+00N		8	9	16	2	<0.2	
L15W 2+15S		10	7	14	2	<0.2		L12E 9+00N		6	14	14	3	<0.2	



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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Pb PPM	Zn PPM	As PPM	SP PPM	NOTES
L12E 8+25N		6	15	14	<2	<0.2	
L12E 7+00N		25	22	44	3	<0.2	
L12E 6+50N		23	7	20	2	<0.2	
L12E 5+50N		28	10	38	2	<0.2	
L12E 5+00N		7	6	14	<2	<0.2	
L12E 4+50N		7	9	12	3	<0.2	
L12E 4+00N		20	13	35	5	<0.2	
L12E 3+50N		8	6	16	<2	<0.2	
L12E 2+50N		8	13	13	4	<0.2	

SAMPLE	AU PPS
435-1	< ?
L1L-3	< ?
L1L-4	320
L3E-1	< ?
L3E-2	< ?
II-1	< ?

SAMPLE	AU PPB
✓L3E-3-ROCK	4
✓L3E-4-ROCK	<2
✓L3E-5-ROCK	6
✓L3E-6-ROCK	<2
✓L4E-3-ROCK	<2
✓L4E-9-ROCK	<2
✓L4E-10-ROCK	<2
✓L4E-11-ROCK	3
✓L1W-3-ROCK	<2
✓L2W-3-ROCK	<2
✓L2W-4-ROCK	<2
✓L2W-5-ROCK	<2
✓L6W-1-ROCK	<2
✓L6W-2-ROCK	<2
✓L6W-8-ROCK	8
✓L11W-1-ROCK	<2
✓L12W-1-ROCK	<2
✓L12W-2-ROCK	<2
✓L12W-3-ROCK	<2
✓L12W-9A-ROCK	<2
✓L12W-9B-ROCK	<2
✓L10BW-1-ROCK	<2
✓L10BW-12-ROCK	<2
✓T1-1-ROCK	<2
✓T1-2-ROCK	<2
✓T1-4-ROCK	<2
✓T1-7-ROCK	<2
✓T1-7-ROCK	<2
✓T1-2-ROCK	<2
✓T1-3-ROCK	<2
✓T1-4-ROCK	<2
✓T1-5-ROCK	<2

SAMPLE	AU PPH
✓BPN-1	<2
✓BSP-1	<2
✓BSP-2	<2
✓L5E-4	<2
✓L9E-1	<2
✓L15E-1	<2
✓L15E-2	<2
✓L15E-3	<2
✓L15E-6	<2
✓L4W-1	<2
✓L6W-5	<2
✓L7W-3	<2
✓L8W-3	<2
✓L8W-4	<2
✓L8W-5	<2
✓L9W-5	<2
✓L9W-7	<2
✓L2-1	<2

SAMPLE	AU PPB
JL12W-3-ROCK	6
JYLS-1-ROCK	<2
JYLS-2-ROCK	12
JYTL-1-ROCK	<2
L13W-1-ROCK	<2
L13W-4-ROCK	<2
L13W-5-ROCK	2
L13W-7-ROCK	2
L14W-1-ROCK	<2
L15W-1-ROCK	9
L15W-2-ROCK	2
L15W-4-ROCK	<2
L15W-5-ROCK	<2
L15W-9-ROCK	2
L16W-3-ROCK	3
L17W-1-ROCK	7
L17W-5-ROCK	<2
L17W-6-ROCK	4
L18W-2-ROCK	3
L19W-1-ROCK	<2
L28W-1-ROCK	<2
L28W-2-ROCK	<2
L30W-1-ROCK	<2
L30W-2-ROCK	7
L30W-3-ROCK	<2
L30W-4-ROCK	<2
L30W-6-ROCK	7
L30W-7-ROCK	<2
L30W-8-ROCK	2
L30W-9-ROCK	2
L31W-1-ROCK	<2
L31W-2-ROCK	<2
L31W-3-ROCK	3
L31W-5-ROCK	<2
L31W-6-ROCK	<2
L32W-1-ROCK	<2
L32W-2-ROCK	2
L32W-3-ROCK	4
L32W-4-ROCK	<2
L33W-1-ROCK	<2
L33W-2-ROCK	<2
L33W-5-ROCK	<2
L36W-2-ROCK	<2
L36W-3-ROCK	<2
L36W-5-ROCK	<2
L37W-1-ROCK	2
L37W-2-ROCK	<2
L37W-3-ROCK	<2
RD-1-ROCK	<2
RD-2-ROCK	<2

SAMPLE	AU PPB
RD-3-ROCK	<2
RD-4-ROCK	<2
RD-5-ROCK	3
RD-6-ROCK	5
9 L3E-1142	<2
LS-22A	<2
LS-22B	<2
LS-24	<2
LS-30	<2
LS-36	<2
LS-38	<2
LS-40	<2
LS-41	<2
LS-50	<2
LS-52	<2
LS-55	<2
LS-56	<2
LS-59	2000
L11-1	72
L1E-5	<2
L1E-6	99
L1E-7	75
L1E-8	3
L1E-9	24
L1E-10	<2
L1E-11	3
L1E-12	3
L1E-13	3

SAMPLE ANALYSIS

L0-2-ROCK	<?
L0-2B-ROCK	<?
L0-3-ROCK	<?
L0-4-ROCK	<?
L0-5-ROCK	<?
L1E-2S-ROCK	<?
L3E-2S-ROCK	<?
L3E-4S-ROCK	11
L3E-5S-ROCK	<?
L3E-6S-ROCK	<?
L3E-7S-ROCK	<?
L3E-8S-ROCK	<?
L3E-11S-ROCK	2
L3E-12S-ROCK	8
L4E-1S-ROCK	<?
L6E-1S-ROCK	<?
L6E-5S-ROCK	<?
L6E-6S-ROCK	<?
L12F-1-ROCK	<?
L13E-1-ROCK	<?
L13E-2-ROCK	<?
L13E-6-ROCK	<?
L13E-7-ROCK	<?
LS-13-ROCK	<?
LS-14-ROCK	29
LS-15-ROCK	<?
LS-18-ROCK	<?
LS-19-ROCK	<?
LS-20-ROCK	<?
LS-22-ROCK	<?
LS-23-ROCK	<?

SAMPLE	AU PPB	MO PPM	BA PPM	HG PPB
L15W-12+90N	<2	<1	500	<10
L15W-0+00S	<2	<1	480	10
L15W-0+50S	7	<1	360	30
L15W-1+00S	<2	<1	300	20
L15W-1+50S	9	<1	480	30
L15W-2+15S	6	1	460	10
L15W-2+60S	2	<1	500	20
L15W-3+05S	<2	<1	500	20
L15W-3+50S	2	<1	400	10
L13W-4+80N	<2	<1	400	10
L13W-4+45N	<2	<1	500	10
L13W-4+00N	<2	<1	480	10
L13W-3+00N	<2	<1	480	10
L13W-2+25N	<2	<1	360	10

SAMPLE	AU PPB	MO PPM	BA PPM	HG PPB
L11W-19+90S-SOIL	<2	<1	200	<10
L11W-20+50S-SOIL	<2	<1	440	10
L11W-21+00S-SOIL	<2	<1	590	30
L11W-21+50S-SOIL	<2	<1	460	10
L11W-22+00S-SOIL	<2	<1	520	<10
L11W-22+30S-SOIL	4	<1	340	<10
L11W-23+25S-SOIL	<2	<1	380	<10
L11W-23+95S-SOIL	<2	<1	340	20
L11W-24+00S-SOIL	<2	<1	460	10
L11W-24+00S-SOIL	<2	<1	500	10
L6W-27+00S-SOIL	<2	<1	420	40
L6W-27+50S-SOIL	<2	<1	420	30
L6W-28+00S-SOIL	<2	<1	440	40
L6W-28+50S-SOIL	<2	<1	480	20
L6W-29+10S-SOIL	<2	<1	360	20
L6W-29+55S-SOIL	<2	<1	340	20
L6W-30+00S-SOIL	SMP MISS	SMP MISS	SMP MISS	SMP MISS
L6W-31+40S-SOIL	<2	<1	440	20
L6E(S)-6+00N-SOIL	<2	<1	420	30
L6E(S)-5+50N-SOIL	<2	<1	340	20
L6E(S)-5+00N-SOIL	<2	<1	340	40
L6E(S)-4+00N-SOIL	<2	<1	340	10
L6E(S)-3+50N-SOIL	<2	2	420	50
L6E(S)-2+70N-SOIL	<2	1	380	50
L6E(S)-2+50N-SOIL	<2	<1	380	20
L6E(S)-1+40N-SOIL	<2	<1	380	60
L6E(S)-0+00N-SOIL	<2	<1	460	10
L12E-9+00N-SOIL	<2	2	480	20
L12E-8+25N-SOIL	<2	2	500	10
L12E-7+00N-SOIL	<2	2	440	20
L12E-6+50N-SOIL	<2	1	440	20
L12E-5+50N-SOIL	<2	1	360	10
L12E-5+00N-SOIL	<2	1	460	10
L12E-4+50N-SOIL	<2	2	420	40
L12E-4+00N-SOIL	<2	3	460	30
L12E-3+50N-SOIL	<2	<1	480	10
L12E-3+00N-SOIL	<2	1	440	40
L12E-2+50N-SOIL	<2	1	460	60
L12E-2+00N-SOIL	<2	<1	460	20
L1E-24+50S-SOIL	3	<1	400	20
L1E-25+00S-SOIL	3	<1	460	20
L1E-25+50S-SOIL	5	<1	460	20
L1E-26+00S-SOIL	2	<1	540	10
L1E-26+50S-SOIL	<2	<1	520	40

SMP MISS. - SAMPLE WAS NOT RECEIVED AT XRAL

SAMPLE	AU PPB	MO PPM	BA PPM	HG PPB
L37W-7+50N	3	1	480	20
L37W-6+50N	<2	3	480	40
L37W-6+00N	3	2	380	60
L37W-5+50N	3	<1	440	40
L37W-5+00N	<2	<1	540	10
L37W-4+50N	2	<1	500	40
L37W-4+00N	<2	<1	540	10
L37W-3+50N	<2	<1	520	40
L36W-5+50N	<2	<1	500	20
L36W-5+00N	4	<1	560	20
L36W-4+50N	<2	<1	520	40
L36W-4+00N	3	1	500	30
L36W-3+50N	<2	<1	480	10
L36W-3+00N	3	<1	480	40
L36W-2+50N	<2	<1	500	10
L31W-3+50N	<2	1	520	20
L31W-3+00N	2	<1	520	20
L31W-2+50N	<2	<1	520	20
L31W-2+00N	<2	<1	520	30
L31W-1+50N	<2	<1	520	10
L31W-1+00N	2	2	460	20
L30W-18+50S	3 ¹	<1	520	<10
L30W-19+00S	<2	1	380	10
L30W-19+50S	3	<1	500	10
L30W-20+00S	3	<1	520	10
L19W-8+00S	<2	<1	520	20
L19W-8+50S	<2	<1	540	20
L19W-9+00S	6	<1	540	20
L19W-9+50S	11	<1	280	10
L19W-10+10S	<2	<1	580	<10
L19W-10+50S	<2	<1	520	20
L19W-11+00S	<2	<1	520	10
L19W-11+00S	3	<1	420	<10
L18W-10+30S	3	<1	400	30
L18W-10+70S	<2	<1	420	20
L18W-11+20S	<2	<1	480	40
L17W-30+50N	3	<1	480	<10
L17W-30+00N	3	1	340	20
L17W-29+50N	<2	<1	520	30
L17W-29+00N	<2	<1	540	<10
L17W-28+50N	<2	<1	540	30
L17W-28+00N	<2	<1	540	10
L17W-27+50N	<2	<1	540	20
L15W-16+50N	3	<1	400	10
L15W-16+00N	8	<1	560	10
L15W-15+50N	<2	<1	540	<10
L15W-15+00N	<2	<1	520	<10
L15W-14+50N	4	<1	560	<10
L15W-14+00N	<2	<1	540	<10
L15W-13+50N	4	<1	540	<10

SAMPLE	AU PPB	MO PPM	BA PPM	HG PPB
L5E-22+70S-SOIL	<2	3	460	40
L5E-23+00S-SOIL	<2	1	460	30
L5E-23+25S-SOIL	<2	3	540	50
L5E-23+50S-SOIL	<2	1	480	50
L5E-24+00S-SOIL	5	<1	420	40
L5E-24+30S-SOIL	<2	<1	380	20
L5E-24+60S-SOIL	<2	<1	380	<10
L5E-25+00S-SOIL	<2	1	360	40
L5E-25+75S-SOIL	<2	<1	440	10
L5E-26+00-SOIL	<2	2	400	20
NP-1-SOIL	<2	<1	240	10

SAMPLE	AD PPM	MG PPM	BA PPM
L5E-22+70S-HUMUS	1	1	300
L5E-23+00S-HUMUS	<1	<1	200
L5E-23+25S-HUMUS	<1	<1	200
L5E-23+50S-HUMUS	<1	<1	200
L5E-24+00S-HUMUS	<1	<1	300
L5E-24+30S-HUMUS	2	<1	200
L5E-24+60S-HUMUS	1	1	100
L5E-25+00S-HUMUS	<1	1	300
L5E-25+75S-HUMUS	<1	1	300
L5E-26+00-HUMUS	2	<1	300

APPENDIX B

Expenditure Receipts

Toronto Lake Group
Expenditure Receipts

<u>Cheque no.</u>	<u>Description</u>	<u>Amount</u>
5620	X-Ray Assay	174.35 only
5671	X-Ray Assay	179.75
5838	Lakehead Freight	214.48
	Bondar-Clegg	150.00
6016	Bondar-Clegg	1,130.30
6016	Bondar-Clegg	152.40
6016	Bondar-Clegg	1,054.10
6026	Bondar-Clegg	2,075.00
5947	X-Ray Assay	11.00
6027	Petty Cash	10.05
5990	Petty Cash	8.55
5729	X-Ray Assay	63.50
		<u>5,223.48</u>

PAID



X-RAY ASSAYS LABORATORIES LIMITED

1885 LESLIE STREET • DON MILLS ONTARIO M3B 3J4 • (416) 445-5755
COPY TO:

ATTACHED TO:
 NAME: **SAME**

INVOICE NO.	INVOICE DATE	WORK ORDER NO.	DATE SUBMITTED

IN ACCOUNT WITH YOUR ACCOUNT OVER 90 DAYS

DESCRIPTION	AMOUNT	TAX	TOTAL
<i>Handwritten: 100.00</i>	100.00		100.00
<i>Handwritten: 260.75</i>	260.75		260.75
<i>Handwritten: 431</i>			431.00
<i>Handwritten: 360.75</i>			360.75

SC. FEES		5.00
----------	--	------

DATE COPY

TOTAL IN CANADIAN FUNDS

365.75

left 174.35

XRAY

XRAY LABORATORIES LIMITED
1885 LESLIE STREET • DON MILLS ONTARIO M3B 3J4 • (416) 445-5755
COPY TO:

TO: **Qual And Associates**
5000 Bayview Street East, Suite 606
Toronto, Ontario
M3J 1R6

SHIPPED TO:

INVOICE NO.	INVOICE DATE	WORK ORDER NO.	DATE SHIPPED
15 1318	June 14, 1984		
TERMS: NET 30 DAYS			

Net 30 days, 1.5% per month interest on account over 30 days

CLIENT PROJECT NO.	TYPE OF SAMPLES SUBMITTED	WAY BILL NO.	SHIPPED FROM

QUANTITY	DESCRIPTION METHOD	XRAY CODE	UNIT COST	AMOUNT
2000	100 supplies	1004	0.07	140.00
25	25 random		1.25	31.25
	25 random (1000 307 007)			6.50
		431		
				#5671

SHIPPING CHARGES	CUSTOM BROKERAGE	TELEX	MINIMUM CHARGES
MISC. CHARGES			BURCHARGE - HIGH SERVICE

TOTAL IN CANADIAN FUNDS **177.75**

CALL COPY

177.75

Headlighters Limited

STATEMENT

PLEASE REMIT TO
HEAD OFFICE

NO. 05187
DATE 09/09/76
ACCOUNT

P.O. BOX 2058, 724 FIELD ST.
THUNDER BAY, ONTARIO P7B 5E7

THUNDER BAY

PICKUP..... 345-6501
ACCOUNTING..... 345-7349
SERVICE GARAGE... 345 7340
CLAIMS DEPT..... 345-7348
RATES & ROUTING.. 345 6505

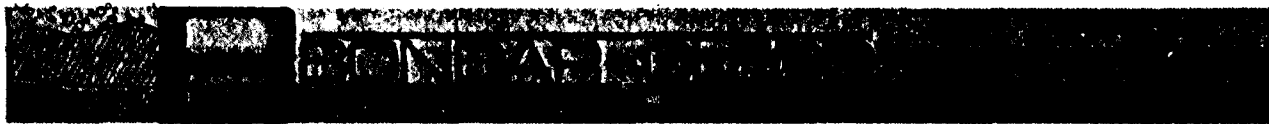
DATE	NO. T.S.	REFERENCE	AMOUNT	
	106505		214.48	
			214.48	
CURRENT	OVER	DAYS	PLEASE PAY THIS AMOUNT	
			OVER	DAYS

- TERMINALS
- WINNIPEG
 - TORONTO
 - FORT FRANCES
 - EMO
 - RAINY RIVER
 - SIoux NARIROWS
 - NESTOR FALLS
 - KENORA
 - FALCON LAKE
 - ATIKOKAN
 - BEARDMORE
 - GERALDTON
 - MANITOUWADGE
 - MARATHON
 - NIPIGON
 - SCHREIBER
 - WHITE RIVER
 - WAWA
 - SAULT STE. MARIE
- BORDER POINTS
- INTERNATIONAL FALLS, MINN.
 - PIGEON RIVER, MINN.
 - SAULT STE. MARIE, MICH.

TERMS DUE WITHIN 7 DAYS. 1% PER MONTH IN-
TEREST CHARGED ON OVERDUE ACCOUNTS.

PLEASE RETURN REMITTANCE COPY OF THIS STATEMENT
WITH YOUR PAYMENT.

Bondar-Clegg & Company Ltd.
5420 Canotek Rd.,
Ottawa, Ontario,
Canada K1J 8N5
Phone: (613) 749-2220
Telex: 05



H.E. Neal & Associates Ltd.
Suite 606, 55 Queen St. East
Toronto, Ontario
MSC 1R6

INVOICE: 1169

DATE: February 20, 1985

Preparation of Data and Jensen Cation Plots for Report #: 014-3517	\$50.00
Preparation of Data and Jensen Cation Plots for Reports: 014-3517 & 015-0220	100.00
	<hr/>
TOTAL	\$150.00
	<hr/>

THIS IS A PROFESSIONAL SERVICE
ACCOUNTS DUE WHEN RENDERED

Bondar-Clegg & Company Ltd.

5420 Canrick Rd.,
Ottawa, Ontario,
Canada K1J 8X5
Phone: (613) 749-2220
Telex: 05



H.E. NEAL & ASSOCIATES LIMITED
606-55 QUEEN ST. E.
TORONTO, ONTARIO
M5C 1R6

Invoice: 110383

Date: February 07, 1985

Report No: 015-0218

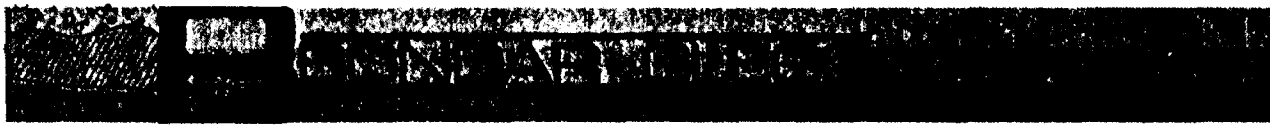
89 Analyses of Copper	at	1.95	173.55	
89 Analyses of Lead	at	1.00	89.00	
89 Analyses of Zinc	at	1.00	89.00	
Subtotal			351.55	351.55
89 Analyses of Arsenic	at	3.50	311.50	
89 Analyses of ANTIMONY	at	5.25	467.25	
Subtotal			778.75	778.75
Invoice Total				\$1130.30

" 6016

THIS IS A PROFESSIONAL SERVICE
ACCOUNTS DUE WHEN RENDERED

Bondar-Clegg & Company Ltd.

3420 Canolek Rd.,
Ottawa, Ontario,
Canada K1J 8X5
Phone: (613) 749-2220
Telex: 05



H.E. NEAL & ASSOCIATES LIMITED
606-55 QUEEN ST. E.
TORONTO, ONTARIO
M5C 1R6

Invoice: 110405

Date: February 08, 1985

Report No: 015-0219

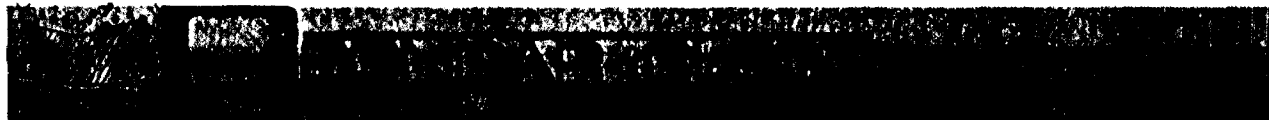
12 Analyses of Copper	at	1.95	23.40	
12 Analyses of Lead	at	1.00	12.00	
12 Analyses of Zinc	at	1.00	12.00	
Subtotal			47.40	47.40
12 Analyses of Arsenic	at	3.50	42.00	
12 Analyses of ANTIMONY	at	5.25	63.00	
Subtotal			105.00	105.00
Invoice Total				\$152.40

#6016

THIS IS A PROFESSIONAL SERVICE
ACCOUNTS DUE WHEN RENDERED

Bondar-Clegg & Company Ltd.

5420 Canotek Rd.,
Ottawa, Ontario,
Canada K1J 8X5
Phone: (613) 749-2220
Telex: 05



H.E. NEAL & ASSOCIATES LIMITED
606-55 QUEEN ST. E.
TORONTO, ONTARIO
M5C 1R6

Invoice: 110400

Date: February 08, 1985

Report No: 115-0220

83 Analyses of Copper	at	1.95	161.85	
83 Analyses of Lead	at	1.00	83.00	
83 Analyses of Zinc	at	1.00	83.00	
Subtotal			327.85	327.85
83 Analyses of Arsenic	at	3.50	290.50	
83 Analyses of ANTIMONY	at	5.25	435.75	
Subtotal			726.25	726.25
Invoice Total				<u>1054.10</u>

* 6016

THIS IS A PROFESSIONAL SERVICE
ACCOUNTS DUE WHEN RENDERED

Bondar-Clegg & Company Ltd.

5420 Canotek Rd.,
Ottawa, Ontario,
Canada K1J 8X5
Phone: (613) 749-2220
Telex: 03



H.E. NEAL & ASSOCIATES LIMITED
606-55 QUEEN ST. E.
TORONTO, ONTARIO
M5C 1R6

Invoice: 110495
Date: February 18, 1985
Report No: 015-0220

83 Analyses of Whole Rock Analysis at 25.00	2075.00	
Subtotal	2075.00	2075.00
Invoice Total		<u>\$2075.00</u>

* 6026

THIS IS A PROFESSIONAL SERVICE
ACCOUNTS DUE WHEN RENDERED

COPY TO:

974

SAME

Cus 301

1992	Nov 5, 1990	
------	-------------	--

Net 30 days, 1.5% per month on account over 30 days

PAID Oct 2, 1994

paid on your behalf

11.00

431-1

5747

11/90

Start \$143.20

ACCOUNT - H.E. Neal & Associates Ltd.

ITEM	CLIENT	AMOUNT
Photos	Quisco Tot.L.	23.77
Photos	Hoffman	11.70
Photo albums		5.98
Taxi to bus depot - no receipt	Tot.L.	2.50
(Shipping of samples	Tot.L.	10.05
Meal (out 65) see item * p.d. by H.E. Neal.		
Hemlo conference registration		10.00
" " " "		10.00
TAXI	NEBO MARRI	2.40
Maps musical work	Angle River	10.27
Reductions & prints	Archie	8.83
Postage		4.48
Printing	Archie	4.94
Reductions & prints	Archie	3.18
H. F. Neal with Reproduction - Hemlo conference		10.00
Taxi re trip		4.50
Reis expenditure - lunch		12.50
G.S.F. pens		5.10
	Total	140.20
	copy to H.E. Neal	2.80
381-10 Toronto Lake		36.32
333-10 Hoffman		11.70
362-10 Archie		16.75
477-10 Angle River		10.27
408-10 H.E. Neal		64.96
		<u>140.20</u>

#6027

ACCOUNT - H.E. Neal & Associates Ltd.

start 11

	ITEM	CLIENT	AMOUNT
	Postage for plates	Office	50.00
2	Pen Nib	Archie	9.58
1			
8	Publications - Ontario Gov.	Hoffman	1.77
8	Bus charge - Toronto Lake Simcoe & Border Cross	QUECO	5.00
11	Special delivery	QUECO	8.50
11			3.34
			3.66
17	Printing	QUECO	4.14
17	TLC		1.90
21	Postage - registered & sp. delivery	QUECO	3.34
A4	Andrews - Hamilton	Andrews	10.00
	"	"	
			5.00
			<u>106.28</u>

Office - 77.80 - 408 - 10
 Archie - 9.58 - 462 - 10
 Hoffman - 1.77 - 433 - 10
 QUECO - 17.13 - 431 - 10

5990

ANAL

ANALYTICAL LABORATORIES LIMITED
1885 LESLIE STREET • DON MILLS ONTARIO M3B 3J4 • (416) 445-5755

COPY TO

TO
H.E. NEAL & ASSOCIATES LIMITED
ATTN: BUZZ NEAL
55 QUEEN STREET EAST, SUITE 606
TORONTO, ONTARIO
M5C 1K6

CUSTOMER NO. 301

INVOICE NO.	INVOICE DATE	WORK ORDER NO.	DATE SHIPPED
21453	04-JUL-84	17097	18-JUN-84

TERMS NET 30 DAYS
1.5% PER MONTH INTEREST ON ACCOUNT OVER 30 DAYS

H.E. NEAL & ASSOCIATES LIMITED
ATTN: BUZZ NEAL
55 QUEEN STREET EAST, SUITE 606
TORONTO, ONTARIO
M5C 1K6

CLIENT PROJECT NO.	TYPE OF SAMPLES SUBMITTED
	ROCK

SHIPPED VIA	WAY BILL NO.
SMALL FRY	11172

Description/Method	ANAL CODE	UNIT COST	AMOUNT
AGGREGATES	2, 10, 7, 0, 0, 0	7.00	42.00
FINISH GRINDING & MILLING (TORONTO STEEL MILL)	99, 1, 0, 0, 0, 0	2.75	16.50
SUB-TOTAL			\$ 58.50

431

572

SHIPPING CHARGE	TELEPHONE BROKERAGE	TELEFAX	MINIMUM CHARGE
5.00			
SUB-TOTAL			\$ 5.00

TOTAL IN CANADIAN FUNDS 63.50

Toronto Lake Group

ASSESSMENT WORK BREAKDOWN

1. FIELD WORK

<u>Type of Work</u>	<u>Name & Address</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
Rock, soil & humus sampling	E. Froebel	June 5-July 4/84, Aug. 16-30/84	33.75
	K. David	" "	33.75
	D. Stachiw	" "	33.75
	G. Wallenius	June 22-July 4/84, Aug 16-31/84	21.75
	C. Horner	June 5-July 4/84, "	34.50

2. CONSULTANTS

<u>Name & Address</u>	<u>Dates Worked (specify in field or office)</u>	<u>Number of 8 hour days</u>
H.E. Neal	June 20-22/84 Field Sept '84-Jan '85 office	7
C. Horner	Sept. '84 to Apr. '85 Office	43.26
P. Atherton	Sept, Nov, Dec '84, Jan '85 Office	1.6
R. Risto	Oct. '84, Dec. '84	0.73

3. DRAUGHTSMAN, TYPING, OTHERS (specify)

<u>Name & Address</u>	<u>Type of Work</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
D. Longman	Typing		1
K. Kinnear	Drafting	May '84, June '84	7.5
E. Froebel	Drafting	May-June 4/84	3
C. Horner	Research & Drafting	May-June 4/84	5.5
TOTAL 8 HOUR TECHNICAL DAYS			227.1

4. LINE-CUTTING

<u>Name</u>	<u>Address</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>

TOTAL 8 HOUR LINE-CUTTING DAYS _____

ASSESSMENT WORK BREAKDOWN

1. Type of Survey Geochemical
 2. Township or Area Toronto Lake Area
 3. Numbers of Mining Claims Traversed by Survey see attached list.

4. Number of Miles of Line Cut _____ Flown _____

*5. Number of Stations Established _____

*6. Make and type of Instrument Used _____

*7. Scale Constant or Sensitivity _____

*8. Frequency Used and Power Output _____

9. Summary of Assessment Credits (details on reverse side)

Total 8 hour Technical Days (Include Consultants, Draughting etc.) 227.1

Total 8 hour Line-Cutting Days Nil

Calculation

$$\frac{227.1}{\text{Technical}} \times 7 = \frac{1589.7}{\text{Line-cutting}} + \frac{\text{Nil}}{\text{Line-cutting}} = \frac{1589.7}{78} = \frac{20.4}{\text{Assessment credits per claim}}$$

The dates listed on this form represent working time spent entirely within the limits of the above listed claims Check

If otherwise, please explain Dates include interpretation of geochemical analyses and report compilation.

Dated: May 21/85

Signed: Barbara Horner

- Note: (A) * Complete only if applicable.
 (B) Complete list of names, addresses and dates on reverse side.
 (C) Submit separate breakdown for each type of survey.
 (D) Submit in duplicate.

PERSONNEL:

P. Atherton	5425 Croydon Road, Burlington, Ont. L7L 3J2
K. David	299 Roehampton Ave. Apt. 828, Toronto, Ont. M4P 1S2
E. Froebel	54 Cumber Ave. West Hill, Ont. M1E 1T3
C. Horner	70 Spadina Road, Apt. 303, Toronto, Ont. M5R 2T6
F. Houghton	Beardmore, Ont.
K. Kinnear	310 Bloor Street West, Rm. 946, Toronto, Ont. M5S 1W4
D. Longman	17 Redwing Place, Don Mills, Ont.
R. MacAdam	Beardmore, Ont.
H.E. Neal	124 Roxborough Drive, Toronto, Ont. M4W 1X4
Line Cutter (name unknown)	Beardmore, Ont.
R. Risto	22 Northridge Ave. Toronto, Ont.
D. Stachiw	30 Charles Street West, Apt. 1214, Toronto, Ont. M4V 1R5
G. Wallenius	81 Blake Street, Sault Ste. Marie, Ont.

Toronto Lake Group

Work Performed on Claims

TB 766 375
766 376
766 377
766 378
766 379
766 380
766 381
766 384
766 385
766 386
766 402
766 405
766 407
766 409
766 410
766 411
766 413
766 416
766 418
766 420
766 422
766 425
766 426
766 428
766 429
766 430
766 432
766 433
766 434
766 436
766 437

TB 766 439
766 440
766 441
766 443
766 445
766 446
766 447
766 448
766 450
766 451
766 452
766 453
766 456
766 457
766 458
766 459
766 463
766 464
766 465
766 469
766 470



Ministry of Natural Resources

File _____

GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) GEOCHEMICAL
Township or Area TORONTO LAKE AREA
Claim Holder(s) QUEBEC COBALT AND EXPLORATION LIMITED
Survey Company H.E. NEAL & ASSOCIATES LTD.
Author of Report CAROLYN HORNER
Address of Author c/o H.E. NEAL & ASSOC., 606-55 QUEEN ST.E. TORONTO, ONT. M5C 1R6
Covering Dates of Survey June 5/84-May 21/85
Total Miles of Line Cut _____

MINING CLAIMS TRAVERSED
List numerically
SEE ATTACHED LIST
(prefix) (number)
TOTAL CLAIMS _____

SPECIAL PROVISIONS CREDITS REQUESTED
DAYS per claim.
Geophysical
-Electromagnetic
-Magnetometer
-Radiometric
-Other
Geological
Geochemical

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)
Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: May 29/85 SIGNATURE: Carolyn Horner
Author of Report or Agent

Res. Geol. _____ Qualifications 25691

Previous Surveys
Table with columns: File No., Type, Date, Claim Holder

If space insufficient, attach list

GEOCHEMICAL SURVEY - PROCEDURE RECORD

Numbers of claims from which samples taken SEE ATTACHED LIST

Total Number of Samples 293

Type of Sample ROCK, SOIL & HUMUS
(Nature of Material)

Average Sample Weight R-5 lbs., S-1 lb., H-1/4 lb.

Method of Collection grab sampling, dug soil & humus pits with shovel.

Soil Horizon Sampled B

Horizon Development moderate

Sample Depth up to 2 feet.

Terrain Hilly

Drainage Development good to poor

Estimated Range of Overburden Thickness unknown

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis _____

General _____

ANALYTICAL METHODS

Values expressed in: per cent
p. p. m.
p. p. b.

Cu, Pb, Zn, Ni, Co, Ag, Mo, As (circle)

Others Au, Ba, Hg, Sb, whole rock analysis

Field Analysis (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Field Laboratory Analysis

No. (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Commercial Laboratory (667, 2953 tests)

Name of Laboratory X-Ray Assay, Bondar-Clegg

Extraction Method see report page 7, Table 1

Analytical Method "

Reagents Used _____

General _____

Toronto Lake Group

Mining Claims Traversed

TB 766 368
766 369
766 370
766 371
766 372
766 373
766 374
766 375
766 376
766 377
766 378
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766 401
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766 420

TB 766 421
766 422
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TB 766 456
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766 463
766 464
766 465
766 466
766 467
766 468
766 469
766 470
766 471

Total 78 Claims

Toronto Lake Group

Work Performed on Claims

TB 766 375
766 376
766 377
766 378
766 379
766 380
766 381
766 384
766 385
766 386
766 402
766 405
766 407
766 409
766 410
766 411
766 413
766 415
766 418
766 420
766 422
766 425
766 426
766 428
766 429
766 430
766 432
766 433
766 434
766 436
766 437

TB 766 439
766 440
766 441
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766 463
766 464
766 465
766 469
766 470



52108NE0004 2.7916 FALCON LAKE

020
α. 7916

Mining Lands Section
Control Sheet

File No. ~~28163~~

- TYPE OF SURVEY
- GEOPHYSICAL
 - GEOLOGICAL
 - GEOCHEMICAL
 - EXPENDITURE

MINING LANDS COMMENTS:

Cancelled

Signature of Assessor

Date

REPORT ON THE
GEOCHEMICAL SURVEY AND EXPENDITURES
ON THE
KETCHIKAN LAKE CLAIM GROUP
TORONTO, JUNIOR, FALCON & RETURN LAKE AREAS
THUNDER BAY MINING DIVISION
ONTARIO

FOR

QUEBEC COBALT AND EXPLORATION LIMITED

BY

CAROLYN HORNER B.Sc.
H. E. NEAL & ASSOCIATES LTD.
TORONTO - CANADA

RECEIVED

MAY 30 1985

MINING LANDS SECTION

May 1985



S2108NE0004 2.7916 FALCON LAKE

020C

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Geology and Geochemistry Maps - sample locations

1.0 SUMMARY:

A geochemical survey was carried out by H.E. Neal & Associates Ltd. in the summer of 1984. A total of 217 rock samples, 221 soil samples and 9 humus samples were collected from the Ketchikan Lake claim group held by Quebec Cobalt and Exploration Limited. All of these samples were assayed for gold.

Additional analyses included molybdenum, barium and mercury in soil and molybdenum and barium in humus.

Thirteen of the rock samples had gold assays greater than 10 ppb which was considered to be anomalous. The best assay in bedrock was 60 ppb Au. Twelve soil samples were considered to contain anomalous gold content. The best soil result was 16 ppb Au. The humus sampling did not indicate anomalous gold mineralization.

2.0 INTRODUCTION:

During the summer of 1984 a five member crew collected rock, soil and humus samples from the Ketchikan Lake claim group held by Quebec Cobalt and Exploration Limited. The purpose of the geochemical survey was to detect any anomalous gold zones in the area. During the same field season similar work was done on the Toronto Lake claim group to the southeast.

Claim lines were traversed and pace and compass flag lines were established at 400 foot intervals. Flagging was placed at 100 foot intervals on all traverse lines.

3.0 THE PROPERTY:

The Ketchikan Lake claim group consists of 76 contiguous claims in the Toronto, Junior, Falcon and Return Lake Areas, Thunder Bay Mining Division, Ontario.

The claims were staked by Quebec Cobalt and Exploration Limited in May, 1983.

Ketchikan Lake Group

Toronto Lake Area	-	44
Junior Lake Area	-	26
Falcon Lake Area	-	4
Return Lake Area	-	<u>2</u>
		76 claims

4.0 LOCATION AND ACCESS:

The claims are located northeast of Lake Nipigon, approximately 15 miles north of Auden, Ontario.

Access was by float plane to Juneau and Ketchikan Lakes from Kyro's Airways base in Jellicoe, Ontario. An Otter was used for camp moves and a Cessna 185 was used for weekly service flights. The distance from the float plane base to the property is approximately 50 miles.



ONTARIO

QUE.

TORONTO LAKE PROJECT
CLAIMS

THUNDER BAY

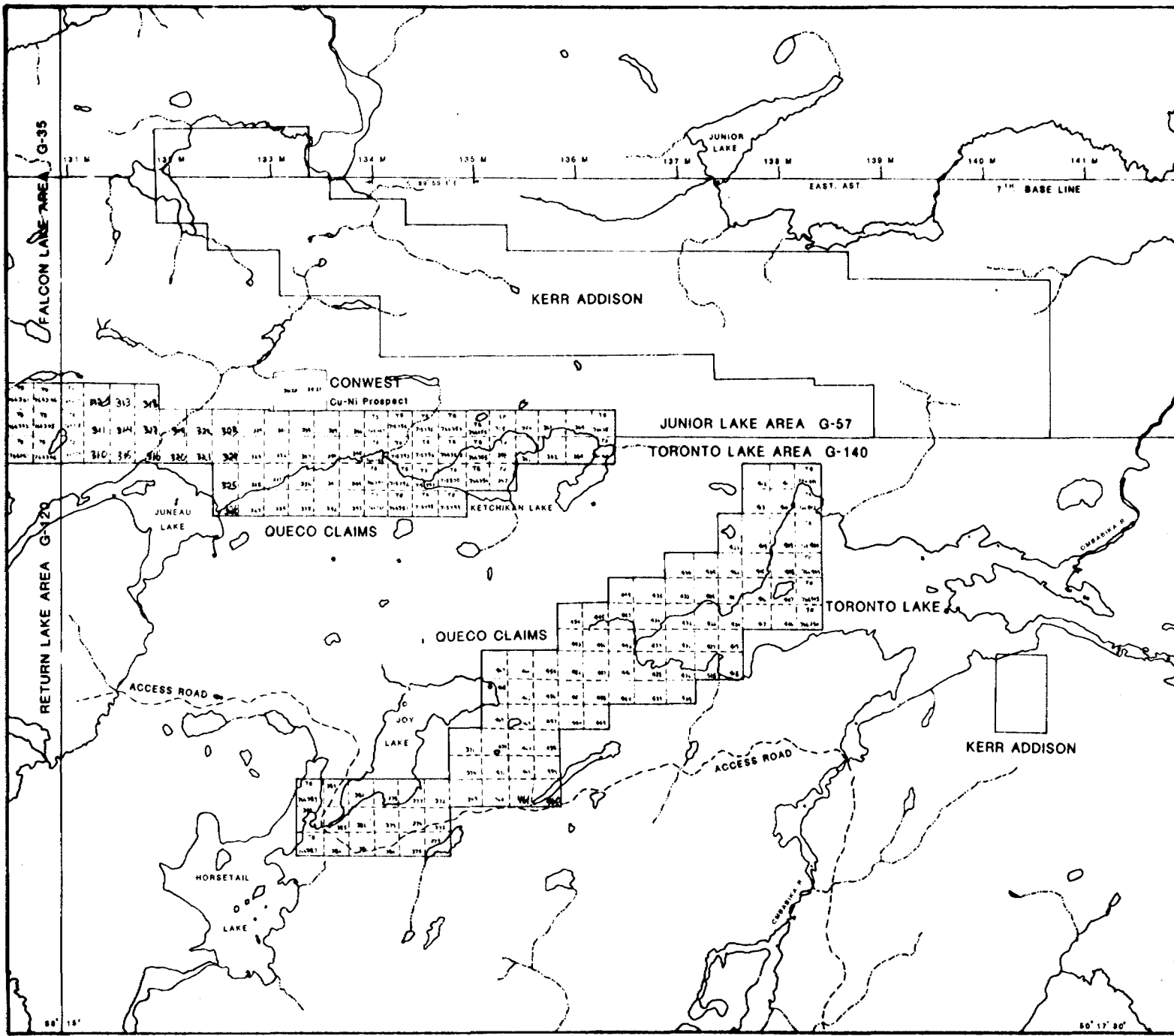
SAULT
STE MARIE

TORONTO
HAMILTON

KEY MAP



H.E. NEAL & ASSOCIATES LTD.



KEY MAP



NTS 42L/S, 62I/B

**QUEBEC COBALT
AND EXPLORATION LIMITED**

TORONTO LAKE PROJECT

PROPERTY MAP

0 1000 4000 8000
SCALE IN FEET

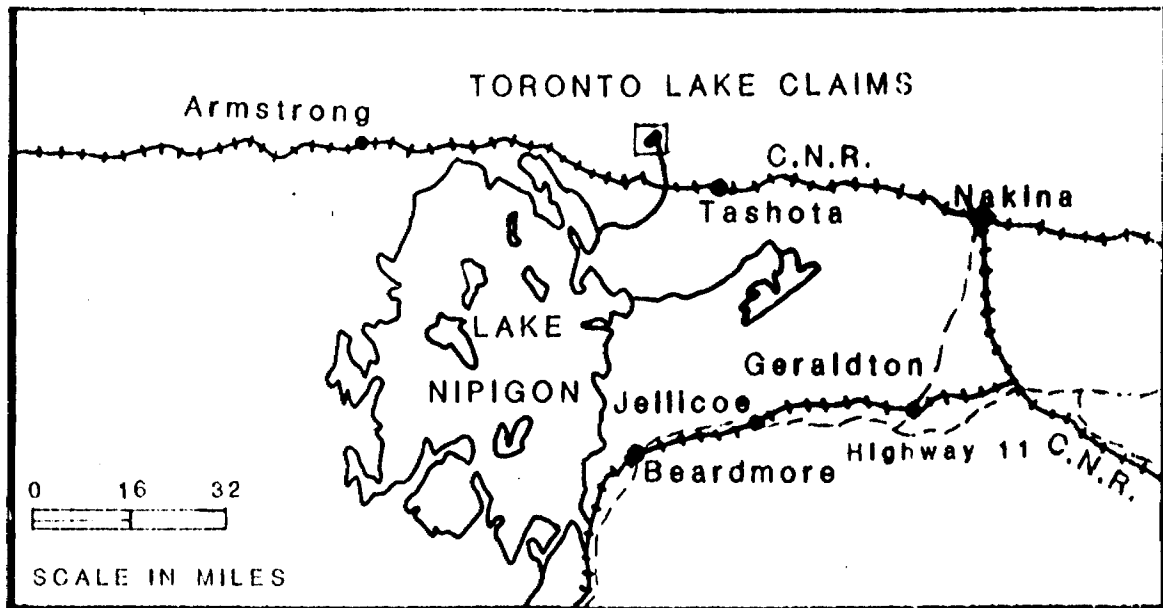
H.E. NEAL AND ASSOCIATES LTD.
TORONTO CANADA

DRAWN BY: E.R.F.	DRAWING No.	DATE: MAY 25, 1964
APPROVED BY: H.E.N.		

80° 15'

80° 17' 30"

LOCATION MAP



5.0 LINECUTTING:

Linecutting was done by a contractor in the Ketchikan Lake Claim group. A total of 8 miles of line was cut. These cut lines were used for control on the location of the pace and compass traverses. Pickets were placed at 100 foot intervals. A baseline and a tieline to the south were cut.

6.0 PREVIOUS WORK:

- 1953 - Kennco Exploration (Canada) Limited did ground magnetometer and electromagnetic surveys.
- ? - Zmudzinski and Despard geological survey.
- 1955 - N.A. Timmins Explorations (Ontario) Limited did a ground magnetometer survey and drilled 4 holes totalling 2958 feet.
- 1959 - Panther International Mining Company Limited did an airborne magnetometer survey and 1438 feet of drilling.
- 1967 - Canadian Dyno Mines Ltd. performed ground magnetometer and electromagnetic surveys.
- 1969 - International Mogul Mines Limited and North Coldstream Mines Limited drilled 6 holes for a total of 1644 feet.
- 1977 - Rickaby Mines Limited (McAdam Mining Corporation Limited) performed a ground magnetometer survey.

7.0 GENERAL GEOLOGY:

Bedrock exposed in the area is Precambrian in age. The oldest rocks are Archean volcanic and sedimentary rocks including some iron formation. These rocks trend in an easterly and northeasterly direction. They have been isoclinally folded, intensely metamorphosed and intruded by large masses of granitic rocks and by dikes of porphyry and pegmatite. Basic eruptives, which are both pre-granite and post-granite in age, cross-cut the volcanic and sedimentary rocks. The pre-granitic basic rocks have undergone regional metamorphism. Possibly they represent a late intrusive phase of the Archean volcanism. The post-granitic basic rocks are relatively unaltered Keweenawan diabases. They occur as steeply dipping dikes and as flat or gently dipping sheets.

Pleistocene geology in the area consists mainly of glacial till with boulders, gravel, sand, silt and clay also present. A northwest trending esker is present at the west end of Ketchikan Lake.

TABLE OF FORMATIONS

CENOZOIC:

RECENT AND PLEISTOCENE: Glacial drift, gravel, sand, silt, clay
Unconformity

PRECAMBRIAN

PROTEROZOIC:

KEWEENAWAN: Diabase, porphyritic diabase
Intrusive Contact

ARCHEAN:

ACID (GRANITIC) ROCKS: Granite (gneiss), porphyritic granite
 (gneiss), migmatite, pegmatite,
 quartz porphyry, feldspar porphyry,
 quartz-feldspar porphyry.
Intrusive Contact

BASIC AND ULTRABASIC ROCKS:

Metagabbro, metapyroxenite,
anorthosite, anorthositic
metagabbro, serpentinite, basic
dike rocks.

Intrusive Contact

MARSHALL LAKE GROUP:

Metasediments: biotite gneiss,
biotite-quartz-feldspar gneiss,
quartzite, conglomerate, iron
formation.
Metavolcanics: massive amphibolite,
schistose amphibolite, pillow lava,
metadiabase, tuff, agglomerate.

8.0 GEOCHEMICAL SURVEY:

A five member crew collected 217 rock samples, 221 soil samples and 9 humus samples from the Ketchikan Lake claim group. The survey was carried out from July 5th. to August 15th, 1984. All samples were sent to X-Ray Assay Laboratories in Don Mills, Ontario and analyzed for gold. In addition, soil was analyzed for molybdenum, barium and mercury and humus was analyzed for molybdenum and barium.

The analytical methods used for each element are listed in Table 1.

TABLE 1

KETCHIKAN LAKE
CHEMICAL LABORATORY ANALYSES

Sample Type	Element	Analytical Method	Extraction Method	Lower Detection Limit
Rock	Au	FADCP	HNO ₃ , Aqua Regia	2 ppb
Soil	Au	FADCP	" "	2 ppb
	Mo	DCP	HNO ₃ :HCl	1 ppm
	Ba	XRF-G	--	20 ppm
	Hg	WET	H ₂ SO ₄ , HNO ₃	10 ppb
Humus	Au	NA	-	1 ppb
	Mo	NA	-	0.5 ppm
	Ba	NA	-	100 ppm

KETCHIKAN LAKE CLAIM GROUP

RANGE OF ASSAY VALUES IN DIFFERENT SAMPLE MEDIA

Sample Medium	ppb Au	ppm Mo	ppm Ba	ppb Hg
Rock	< 2			
n = 217	60			
Soil	< 2	< 1	120	< 10
n = 221	16	5	560	280
Humus	2	< 0.5	< 100	
n = 9	3	0.5	200	

8.1 Rock Sampling

A total of 217 rock samples were collected from the Ketchikan Lake claim group. All of these samples were sent to X-Ray Assay Laboratories and analyzed for gold by fire assay D.C.P. Twenty-two of the samples were diamond drill core, thirty-one were trench samples and one hundred and sixty-four were grab samples from outcrops. Most of the samples were collected from sediment outcrops but some were from other rock types containing sulphides and quartz veins.

8.1.1 Diamond Drill Core Sampling

Twenty-two samples of diamond drill core from the 1969 drilling program by International Mogul Mines Limited and North Coldstream Mines Limited were assayed for gold. A total of 325 feet of drill core (A type) from four holes was sampled. The four drill holes S1, S2, S3 and 69-8 are believed to be located in claims TB766339, TB766346 and TB766347 as shown on map sheet B.

The intervals sampled contained metagreywacke interbedded with biotitic quartzite or a siliceous tuff. Some samples contained up to 50% massive sulphides, mainly pyrite, pyrrhotite and chalcopyrite.

The assay results ranged from less than 2 ppb gold to 40 ppb Au.

Drill Core Samples With Assays > 10 ppb Au.

S1/128-143	22 ppb
S1/143-153	16 ppb
S2/115-130	40 ppb
69-8/282-290	12 ppb

The 1969 drilling program by Mogul and North Coldstream was done to investigate a copper-nickel showing. The drilling outlined a Ni-Cu deposit with reported reserves of 2.3 million tons averaging 0.87% Ni, and 0.59% Cu. The drill core sampling done in 1984 did not indicate any significant gold mineralization associated with the sulphides in metasediments.

8.1.2 Trench Sampling

Thirty-one rock samples were collected from five trenches previously blasted in 1969. The trenches, labelled K1 through K5, are shown on Sheets B-C. The trenches vary from 13 feet to 32 feet long and sampling was done at 2 foot and 5 foot spacing across strike. Most of the samples were a quartz-sericite or chlorite schist containing fine-grained disseminated to massive sulphides. One trench (K4) is in iron formation consisting of cherty, grey quartz bands alternating with magnetite bands and containing fine-grained sulphides. Two of the trench samples had gold assays above 10 ppb. These are K1-2, 28 ppb Au and JL50E-11 (from trench K3) with 23 ppb Au.

8.1.3 Grab Sampling

The remaining 164 rock samples were grab samples collected from outcrops. Most of the samples are of metasediments but other rock types were sampled. Any rusty outcrops or quartz veins were also sampled. Seven grab samples had assays above 10 ppb gold. The highest gold assay was 60 ppb in a quartz vein. The grab sample from the metadiabase outcrop hosting the quartz vein contained about 5% disseminated sulphides and assayed 38 ppb gold.

The well-exposed outcrop area to the north of the esker at Ketchikan Lake was sampled in detail but only one sample (from trench K3) was anomalous in gold.

Assays better than 10 ppb gold

<u>Sample #</u>	<u>Rock type</u>	<u>Au ppb</u>	<u>Claim #</u>
JL50E-10	basic volcanic	12	TB715795
KLS-4	sediment	11	TB766352
JL BD-1	basic volcanic	22	TB766363
JL 31E-2	quartz vein	60	TB766332
JL 31E-3	basic volcanic	38	TB766332
JL 20E-2	sediment	39	TB766319
JL 5E-1	quartz vein	40	TB766306

The anomalous gold values are scattered across the claim group and do not appear to delineate one particular zone of gold mineralization. This may be due to the sparse outcrop exposure in this area.

8.2 Humus Sampling

Nine humus samples were collected on L39E between claims TB766341 and TB766344. Nine pits at 50 foot intervals were excavated to expose the soil profile. The decomposed organics just above the grey leached soil layer were collected. These samples were dried in cloth bags and then sent to X-Ray Assay Laboratories. All samples were analyzed for gold, barium and molybdenum by neutron activation. The values obtained for the three elements are very low.

Ranges of Assay Values in Humus

<u>Element</u>	<u>Range</u>
Gold	2 to 3 ppb
Molybdenum	< 0.5 to 0.5 ppm
Barium	< 100 to 200 ppm

These samples were taken across an unexposed basic volcanic-sedimentary contact.

8.3 Soil Sampling

A total of 221 soil samples were collected from 23 sample lines, 3 pits in the esker and 5 locations in trenches. The soil sample locations are indicated on the accompanying maps (scale 1" to 400').

The soil sample lines are located over sediments in most cases. A pit was dug every 50 feet and the red-brown oxidized layer was sampled when it was available. This layer was found at 2½" to 13" below surface. Sample material was collected from as deep as 23" below surface. If only organics were encountered in the pit no sample was collected. The soil type most commonly collected was a silty, sandy, pebbly till. The pebbles were removed during the sampling procedure. All samples were sent to X-Ray Assay Laboratories in Toronto and analyzed for Au, Mo, Ba and Hg.

8.3.1 Soil Analysis Results

All assay results are included in Appendix A. The range of assay values for each element tested is shown below:

<u>Element</u>	<u>Range</u>
Au ppb	< 2 to 16
Mo ppm	< 1 to 5
Ba ppm	120 to 560
Hg ppb	< 10 to 280

The frequency of assay values was tabulated for each element and the 95th percentile was chosen as the threshold point. The threshold values are as follows:

<u>Element</u>	<u>Threshold Value</u>
Au	8 ppb
Mo	3 ppm
Ba	521 ppm
Hg	51 ppb

Assay values less than the threshold value are considered to be background levels for soil in the Ketchikan Lake area. Assay results which are equal to or greater than the threshold value are considered to be anomalous. Soil samples which contain any elements in anomalous amounts are shown in Table 2. The number of anomalous samples per element are as follows:

<u>Element</u>	<u>Number of Anomalous samples</u>
Au ppb	12
Mo ppm	8
Ba ppm	10
Hg ppb	9

In all cases except one, these are one element anomalies. Also in the majority of cases they are one point anomalies in the soil sample line. Exceptions to this are soil line JL32E which has two anomalous gold samples 200 feet apart and JL51E which has two anomalous gold samples 600 feet apart.

Soil line JL1E contains two anomalous molybdenum samples which are 400 feet apart. Soil lines JL5E, JL15E and JL51E each have two anomalous barium samples which are 50 feet, 50 feet and 750 feet apart respectively. Soil line JL69E has four anomalous mercury samples over a distance of 250 feet.

The best gold assay obtained from a soil sample was 16 ppb which is located at JL15E - 19+55S which is on the claim line between claim numbers TB766314 and TB766317.

TABLE 2

KETCHIKAN LAKE
ANOMALOUS SOIL SAMPLES

Soil Samples	≥ 8 ppb Au	≥ 3 ppm Mo	≥ 521 ppm Ba	≥ 51 ppb Hg
EP - 301	9	-	-	-
JL 1E - 15+50N	-	5	-	-
- 11+50N	-	3	-	-
JL 5E - 12+50S	-	-	540	-
- 13+00S	-	-	540	-
- 14+00S	-	5	-	-
JL 15E - 18+00S	-	-	540	-
- 18+50S	-	-	540	-
- 19+00S	-	-	-	90
- 19+55S	16	-	-	-
JL 26E - 27+00S	-	-	540	-
JL 29AE - 15+50S	-	-	-	60
- 17+50S	9	-	-	-
- 18+00S	-	-	540	-
JL 32E - 18+50S	9	-	-	-
- 20+50S	12	-	-	-
JL 42 - 0+50N	8	-	-	-
JL 44 - 10+00S	-	-	540	-
JL 45 - 0+00N	-	4	-	-

(Continued on page 17)

TABLE 2 (CONTINUED)

Soil Samples	≥ 8 ppb Au	≥ 3 ppm Mo	≥ 521 ppm Ba	≥ 51 ppb Hg
JL 49 (S) - 4+00N	-	-	540	-
JL 49 (N)- 27+00S	-	4	-	-
JL 50 (S)- 0+60N	9	-	-	-
JL 50 (N)- 5+00N	-	3	-	-
JL 51 - 13+00N	-	-	540	-
- 11+00N	9	-	-	-
- 5+50N	-	-	560	-
- 5+00N	9	-	-	-
JL 66 - 21+50S	11	3	-	-
- 23+00S	-	-	-	100
JL 69 - 10+50N	-	-	-	60
- 10+00N	8	-	-	-
- 9+50N	-	-	-	70
- 8+50N	-	-	-	280
- 8+00N	-	-	-	100
JL 71AE - 0+50S	-	-	-	70
JL2810W - 0+50S	8	-	-	-
- 1+70S	-	-	-	80
K3-2	-	3	-	-

9.0 CONCLUSIONS:

1. Four samples of diamond drill core contained anomalous gold. The highest value was 40 ppb Au.
2. Two samples from trenches contained anomalous gold. The values obtained were 28 ppb and 23 ppb in trenches K1 and K3 respectively.
3. Seven grab samples from outcrop contained anomalous gold. The highest value was 60 ppb Au.
4. The line of nine humus samples did not indicate the presence of gold mineralization.
5. Twelve gold values obtained in the soil survey are considered anomalous. The highest value of 16 ppb gold occurs as a one point anomaly in a sample line. The results of the survey suggest that molybdenum, barium and mercury are not indicative of gold mineralization in the area. The soil survey did not outline any anomalous gold zones.

It should be stressed that the geochemical sampling program was of a reconnaissance nature. The results of analyses from rock, soil and humus samples on the Ketchikan Lake claim group and the Toronto Lake group to the south suggest that rock is the most useful sample medium for determining the presence of gold mineralization in the area. Since outcrop is generally sparse the assessment of the gold potential

via geochemical sampling is difficult.

The original targets of interest were the metasedimentary rocks on the property. The 1984 program did not find significant gold mineralization in the metasediments on the Ketchikan Lake claim group. Thorough sampling of the other rock types on the property may be helpful in the assessment of the economic gold potential of the claim group.

Carolyn Horner B.Sc.

APPENDIX A

Assay Results

SAMPLE	AU PPB
JL46-100	3
JL46-101	3
JL46-102	3
JL46-103	<2
JL46-104	<2
JL49-100	5
JL49-101	4
JL49-102	2
JL49-103	<2
JL49-104	<2
JL49-105	<2
JL49-106	2
JL49-107	<2
JL49-108	7
JL49-109	<2
JL49-110	<2
JL49-111	<2
JL49-112	<2
JL49-113	<2
JL49-114	<2
JL51E-153	<2
JL58-4	<2
JL64E-1	<2
JL64E-2	<2
JL64E-3	<2
JL64E-4	<2
JL64E-5	<2
JL66E-1	<2
JL66E-2	<2
JL66E-3	<2
JL66E-4	<2
JL66E-5	<2
JL66E-7	<2
JL71AF-15	6
JL71AF-1+705	<2
JL80-1	22
JL80-2	4
K2-5	<2
K5-1	<2
K5-2	1
K5-3	3

SAMPLE	AU PPS
JL44-5	<?
JL45-5	<?
JL46-2	4
JL46-5	<?
JL46-10	<?
JL46-14	<?
JL46-148	<?
JL46-15	<?
JL46-16	<?
JL46-18	<?
JL48-3	<?
JL48-7	<?
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JL49-4	<?
JL49-5	<?
JL49-6	<?
JL49-7	<?
JL50-1	<?
JL50-2	<?
JL50-3	<?
JL50-6	<?
JL50-7	<?
JL50-8	<?
JL50-11	23
JL50-12	<?
JL51-1	<?
JL51-4	<?
JL51-5	<?
JL51-6	<?
JL51-7	<?
JL51-8	<?
JL51-9	<?
JL52-1	<?
JL71-1	<?
JL71-2	<?
JL71-5	<?

SAMPLE	AN DPA
J9-21	<?
JRLW-3	<?
JRLW-4	<?
JRLW-5	<?
JRLW-6	<?
JRLW-7	<?
JRLW-8	<?
JRLW-9	<?
J10-2	<?
JL1-1	<?
J13-1	<?
J13-3	<?
J19-2	<?
J19-4	<?
J115-	<?
JL11-1	4
JL14-2	3
JL20-2	39
JL47-1	<?
JL57-1	40
JL58-2	<?
JL258-2	<?
JL278-1	<?
JL278-3	<?
JL278-4	<?
JL278-5	7
JL288-1	<?
JL308-1	<?
JL308-2	<?
JL318-1	8
JL318-2	60
JL318-3	38
JL328-1	<?
S1/143-153	16
S1/153-174	3
S1/178-193	3
S1/193-203	<?
S1/208-223	<?
S2/42-62	<?
S2/62-77	<?
S2/77-90	<?
S2/90-105	<?
S2/105-120	<?
S2/115-130	40
S2/130-145	3
S1/117-123	3
S1/128-143	22

SAMPLE	AU PPB
JL15E-2	<2
JL25E-1	<2
JL39E-2	9
JL42E-1	SMP MISS
JL42-1	<2
S2/145-160	3
S3/196-220	<2
S3/270-285	<2
S3/285-293	9
69-8/131-156	2
69-8/247-263	<2
69-8/282-290	12

SMP. MISS. - SAMPLE WAS NOT RECEIVED AT XRAL

SAMPLE	AU PPB
K2-4	<2
K3-1	<2
K3-2	6
K3-3	5
K3-4	4
K3-5	6
K3-6	4
K3-7	<2
K3-8	<2
K4-1	<2
K4-2	<2
K4-3	<2
K4-4	<2
K4-5	3
K4-6	2
K4-7	<2
K4-8	2
K4-9	<2
KLS-2	<2
KLS-4	11
KLS-5	9
KLS-6	<2
KLS-7	<2
KLS-8	<2
KLS-9	<2
KLS-10	<2
KLS-11	<2
KLS-14	<2
KLS-18	3
KLS-19	<2
KLS-20	<2

SAMPLE	AU PPB
JL50-100	<2
JL50-101	<2
JL50-102	<2
JL50-103	7
JL50-104	<2
JL50-105	2
JL50-106	<2
JL50-107	<2
JL50-108	<2
JL50-109	<2
JL50-110	<2
JL50-111	<2
JL50-112	<2
JL50-113	<2
JL50-114	7
JL51-100	<2
JL51-101	<2
JL51-102	<2
JL51-103	<2
JL51-104	<2
JL51-105	<2
JL51-106	<2
JL51-107	<2
JL51-108	6
JL51-109	<2
JL51-110	7
JL51-111	<2
JL51-112	<2
JL51-113	<2
JL51-114	<2
JL51-115	<2
JL51-116	<2
JL51-117	<2
JL51-118	<2
JL51-119	<2
JL52-6	<2
JL52-7	<2
JL50-110	12
JL60-1	<2
JL60-2	<2
JL60-6	<2
K1-1	<2
K1-2	28
K1-3	<2
K1-4	6
K1-5	<2
K1-6	<2
K2-1	<2
K2-2	<2
K2-3	7

SAMPLE	AU PPB	MO PPM	BA PPM
JL39-24+00N-HUMUS	3	<0.5	100
JL39-23+50N-HUMUS	3	<0.5	100
JL39-23+00N-HUMUS	2	<0.5	100
JL39-22+50N-HUMUS	3	<0.5	200
JL39-22+00N-HUMUS	3	0.5	100
JL39-21+50N-HUMUS	2	<0.5	100
JL39-21+00N-HUMUS	2	0.5	100
JL39-20+50N-HUMUS	2	<0.5	<100
JL39-20+00N-HUMUS	3	<0.5	<100

SAMPLE	AU PPB	MO PPM	BA PPM	HG PPB
EP-100-SOIL	3	<1	460	30
EP-101-SOIL	5	<1	340	20
EP-200-SOIL	<2	<1	400	10
EP-201-SOIL	3	<1	500	20
EP-300-SOIL	<2	<1	360	20
EP-301-SOIL	9	<1	320	20
EP-302-SOIL	2	<1	280	20
JL1E-15+50N-SOIL	2	5	340	40 ✓
JL1E-15+00N-SOIL	<2	1	520	20 ✓
JL1E-14+50N-SOIL	3	1	420	30 ✓
JL1E-14+00N-SOIL	3	2	520	30 ✓
JL1E-11+90N-SOIL	2	1	380	30 ✓
JL1E-11+50N-SOIL	<2	3	460	40 ✓
JL1E-11+00N-SOIL	<2	1	520	40 ✓
JL5E-11+50S-SOIL	4	<1	380	30 ✓
JL5E-12+00S-SOIL	<2	<1	520	30 ✓
JL5E-12+50S-SOIL	3	<1	540	40 ✓
JL5E-13+00S-SOIL	<2	<1	540	20 ✓
JL5E-13+50S-SOIL	4	1	520	30 ✓
JL5E-14+00S-SOIL	<2	5	520	40 ✓
JL9E-29+00N-SOIL	2	<1	440	40 ✓
JL9E-28+50N-SOIL	4	1	480	30 ✓
JL9E-28+00N-SOIL	2	1	480	50 ✓
JL9E-27+50N-SOIL	4	<1	500	20 ✓
JL15E-17+00S-SOIL	5	<1	460	30 ✓
JL15E-17+50S-SOIL	4	<1	500	20 ✓
JL15E-18+00S-SOIL	<2	<1	540	20 ✓
JL15E-18+50S-SOIL	5	<1	540	40 ✓
JL15E-19+00S-SOIL	4	<1	520	90 ✓
JL15E-19+55S-SOIL	16	1	480	50 ✓
JL26E-26+00S-SOIL	<2	<1	440	30 ✓
JL26E-26+50S-SOIL	<2	<1	520	40 ✓
JL26E-27+00S-SOIL	<2	<1	540	40 ✓
JL26E-27+50S-SOIL	<2	<1	460	50 ✓
JL26E-28+00S-SOIL	3	<1	500	30 ✓
JL26E-28+50S-SOIL	<2	<1	480	30 ✓
JL26E-29+00S-SOIL	<2	<1	440	50 ✓
JL26E-29+50S-SOIL	3	<1	320	50 ✓
JL26E-30+00S-SOIL	<2	<1	500	30 ✓
JL27E-11+70N-SOIL	<2	<1	500	30 ✓
JL27E-11+50N-SOIL	<2	<1	500	30 ✓
JL27E-11+00S-SOIL	3	<1	260	20 ✓
JL27E-10+50N-SOIL	<2	1	460	40 ✓
JL27E-10+00S-SOIL	<2	<1	460	50 ✓
JL27E-9+50N-SOIL	<2	<1	520	20 ✓
JL27E-9+00N-SOIL	<2	<1	420	20 ✓
JL29AE-13+00S-SOIL	2	<1	520	30 ✓
JL29AE-13+50S-SOIL	2	<1	520	20 ✓
JL29AE-14+00S-SOIL	7	<1	480	30 ✓
JL29AE-14+50S-SOIL	2	<1	480	20 ✓

SAMPLE	AU PPB	MO PPM	BA PPM	HG PPB
JL29AE-15+00S-SOIL	<2	<1	480	20 ✓
JL29AE-15+50S-SOIL	3	2	420	60 ✓
JL29AE-16+00S-SOIL	3	<1	500	40 ✓
JL29AE-16+50S-SOIL	4	<1	460	40 ✓
JL29AE-17+00S-SOIL	2	<1	440	30 ✓
JL29AE-17+50S-SOIL	9	<1	380	30 ✓
JL29AE-18+00S-SOIL	4	<1	540	30 ✓
JL32E-16+50S-SOIL	2	<1	480	20 ✓
JL32E-17+00S-SOIL	<2	<1	420	20 ✓
JL32E-17+50S-SOIL	5	<1	420	10 ✓
JL32E-18+00S-SOIL	5	<1	480	20 ✓
JL32E-18+50S-SOIL	9	1	300	40 ✓
JL32E-19+00S-SOIL	4	<1	480	20 ✓
JL32E-19+50S-SOIL	<2	<1	380	20 ✓
JL32E-20+50S-SOIL	12	2	340	50 ✓
JL39-24+00N-SOIL	6	<1	380	10
JL39-23+50N-SOIL	<2	<1	400	10
JL39-23+00N-SOIL	2	<1	460	10
JL39-22+50N-SOIL	2	<1	380	20
JL39-22+00N-SOIL	<2	<1	360	10
JL39-21+50N-SOIL	3	<1	440	10
JL39-21+00N-SOIL	5	<1	400	10
JL42-4+00N-SOIL	3	<1	520	10
JL42-3+50N-SOIL	3	<1	340	20
JL42-3+00N-SOIL	3	<1	420	30
JL42-2+50N-SOIL	4	<1	460	10
JL42-2+00N-SOIL	3	<1	500	20
JL42-1+50N-SOIL	6	<1	400	20
JL42-1+00N-SOIL	<2	<1	300	20
JL42-0+50N-SOIL	8	<1	460	20
JL42-0+00N-SOIL	4	<1	460	20
JL44-5+00S-SOIL	6	<1	440	30
JL44-5+50S-SOIL	3	<1	380	40
JL44-6+00S-SOIL	3	<1	420	30
JL44-6+50S-SOIL	4	<1	460	20
JL44-7+00S-SOIL	4	<1	420	30
JL44-7+50S-SOIL	5	<1	440	20
JL44-8+00S-SOIL	6	<1	480	20
JL44-8+50S-SOIL	2	<1	460	20
JL44-9+00S-SOIL	3	<1	400	20
JL44-9+50S-SOIL	<2	<1	480	20
JL44-10+00S-SOIL	<2	<1	540	10
JL45-4+10N-SOIL	<2	<1	320	20
JL45-3+50N-SOIL	<2	<1	360	10
JL45-3+00N-SOIL	<2	<1	500	20
JL45-2+50N-SOIL	<2	1	380	20
JL45-2+00N-SOIL	<2	<1	420	10
JL45-1+50N-SOIL	<2	<1	480	10
JL45-1+00N-SOIL	2	<1	480	10
JL45-0+00N-SOIL	<2	4	440	10

SAMPLE	AU PPB	MO PPM	BA PPM	HG PPB
JL48-5+00N-SOIL	6	<1	480	10
JL48-4+50N-SOIL	<2	<1	460	10
JL48-4+00N-SOIL	3	1	460	20
JL48-3+50N-SOIL	2	2	300	20
JL48-3+00N-SOIL	5	<1	480	20
JL48-2+50N-SOIL	<2	<1	500	30
JL48-2+00N-SOIL	2	<1	480	20
JL48-1+50N-SOIL	3	<1	480	20
JL48-1+00N-SOIL	5	1	520	50
JL48-0+50N-SOIL	3	<1	480	10
JL48-0+00N-SOIL	<2	<1	480	10
JL49-7+00N-SOIL	3	<1	440	10 ✓
JL49-6+00N-SOIL	3	<1	460	<10 ✓✓
JL49-5+50N-SOIL	4	<1	360	10 ✓✓
JL49-4+90N-SOIL	2	<1	460	30 ✓✓
JL49-4+00N-SOIL	3	<1	540	10 ✓✓
JL49-3+50N-SOIL	<2	<1	380	30 ✓✓
JL49-3+00N-SOIL	4	<1	320	20 ✓✓
JL49-2+60N-SOIL	4	<1	500	10 ✓✓
JL49-2+00N-SOIL	<2	<1	480	50 ✓✓
JL49-23+00S-SOIL	3	1	420	30 ✓✓
JL49-23+50S-SOIL	3	<1	460	40 ✓✓
JL49-24+00S-SOIL	3	<1	420	10 ✓
JL49-24+50S-SOIL	3	<1	420	30 ✓
JL49-25+00S-SOIL	4	<1	420	20 ✓
JL49-25+50S-SOIL	3	<1	380	10 ✓✓
JL49-26+00S-SOIL	3	<1	440	10 ✓
JL49-26+50S-SOIL	4	2	480	20 ✓
JL49-27+00S-SOIL	4	4	420	20 ✓
JL49-28+00S-SOIL	3	<1	400	20 ✓
JL49-28+50S-SOIL	<2	<1	320	20 ✓
JL49-29+00S-SOIL	4	<1	340	30 ✓✓
JL49-29+50S-SOIL	6	<1	400	10 ✓✓
JL49-30+00S-SOIL	3	1	440	20 ✓✓
JL50-7+50N-SOIL	5	2	480	30 ✓✓
JL50-7+00N-SOIL	4	<1	520	30 ✓✓
JL50-6+00N-SOIL	4	2	260	30 ✓✓
JL50-5+50N-SOIL	3	<1	500	30 ✓✓
JL50-5+00N-SOIL	3	<1	500	10 ✓✓
JL50-4+50N-SOIL	<2	1	480	20 ✓✓
JL50-4+00N-SOIL	6	<1	400	10 ✓✓
JL50-3+50N-SOIL	3	1	460	10 ✓✓
JL50-3+00N-SOIL	3	<1	500	20 ✓✓
JL50-2+50N-SOIL	3	1	500	10 ✓✓
JL50-2+00N-SOIL	4	<1	500	20 ✓✓
JL50-1+55N-SOIL	2	<1	500	30 ✓✓
JL50-1+00N-SOIL	3	<1	460	50 ✓✓
JL50-0+60N-SOIL	9	<1	440	50 ✓✓
JL50-0+00N-SOIL	4	<1	440	40 ✓✓
JL50-10+00N-SOIL	4	<1	460	20 ✓

SAMPLE	AU PPB	MO PPM	BA PPM	HG PPB
JL50-9+50N-SOIL	2	<1	460	30 ✓
JL50-9+00N-SOIL	<2	<1	460	40 ✓
JL50-8+50N-SOIL	2	<1	480	20 ✓
JL50-8+00N-SOIL	2	<1	460	10 ✓
JL50-7+50N-SOIL	<2	<1	440	20 ✓
JL50-7+00N-SOIL	3	<1	440	30 ✓
JL50-6+00N-SOIL	<2	2	440	30 ✓
JL50-5+00N-SOIL	3	3	400	30 ✓
JL50-4+50N-SOIL	<2	1	440	50 ✓
JL50-4+00N-SOIL	<2	<1	460	20 ✓
JL50-3+60N-SOIL	<2	<1	440	50 ✓
JL50-2+90N-SOIL	<2	<1	320	10 ✓
JL50-2+50N-SOIL	3	<1	520	20 ✓
JL50-2+00N-SOIL	<2	<1	500	20 ✓
JL51-15+00N-SOIL	3	<1	480	30
JL51-14+50N-SOIL	3	<1	440	40
JL51-14+00N-SOIL	4	<1	440	40
JL51-13+50N-SOIL	2	1	520	40
JL51-13+00N-SOIL	3	<1	540	20
JL51-12+50N-SOIL	5	<1	440	40
JL51-12+00N-SOIL	6	1	420	10
JL51-11+00N-SOIL	9	<1	400	50
JL51-10+50N-SOIL	3	1	460	10
JL51-10+00N-SOIL	6	2	460	50
JL51-9+50N-SOIL	3	<1	500	20
JL51-9+00N-SOIL	5	<1	500	30
JL51-8+50N-SOIL	3	<1	480	20
JL51-8+00N-SOIL	5	<1	520	20
JL51-7+70N-SOIL	5	<1	500	20
JL51-7+00N-SOIL	5	<1	500	10
JL51-6+50N-SOIL	2	<1	500	20
JL51-6+00N-SOIL	<2	<1	480	20
JL51-5+50N-SOIL	<2	<1	560	20
JL51-5+00N-SOIL	9	<1	400	10
JL66-21+00S-SOIL	6	<1	400	40
JL66-21+50S-SOIL	11	3	260	50
JL66-22+00S-SOIL	2	1	300	20
JL66-22+50S-SOIL	<2	<1	320	40
JL66-23+00S-SOIL	3	2	460	100
JL66-23+50S-SOIL	2	2	460	30
JL66-24+00S-SOIL	3	<1	520	30
JL66-24+50S-SOIL	<2	<1	480	40
JL66-25+00S-SOIL	<2	<1	400	40
JL66-25+50S-SOIL	5	<1	520	40
JL66-26+00S-SOIL	2	<1	520	30
JL69E-11+00N-SOIL	2	<1	380	40
JL69E-10+50N-SOIL	2	2	500	60
JL69E-10+00N-SOIL	8	1	520	50
JL69E-9+50N-SOIL	5	1	520	70
JL69E-9+00N-SOIL	<2	<1	480	30

SAMPLE	AU PPB	MO PPM	BA PPM	HG PPB
JL69E-8+50N-SOIL	2	<1	340	280
JL69E-8+00N-SOIL	4	<1	360	100
JL69E-6+50N-SOIL	3	<1	480	10
JL69E-6+00N-SOIL	2	1	500	50
JL71AE-1+00N-SOIL	4	2	120	10
JL71AE-0+50N-SOIL	2	1	480	10
JL71AE-0+00N-SOIL	5	<1	420	10
JL71AE-0+50S-SOIL	5	<1	420	70
JL71AE-1+00S-SOIL	3	1	480	50
JL71AE-1+50S-SOIL	<2	<1	520	10
JL71AE-2+00S-SOIL	4	<1	460	10
JL2810W-0+95N-SOIL	<2	<1	360	30 ✓
JL2810W-0+45N-SOIL	<2	<1	340	30 ✓
JL2810W-0+00S-SOIL	4	<1	400	20 ✓
JL2810W-0+50S-SOIL	8	<1	480	20 ✓
JL2810W-1+70S-SOIL	3	2	440	80
K2-5-SOIL	2	<1	320	10
K2-6-SOIL	2	1	360	20
K2-7-SOIL	3	<1	420	10
K3-1-SOIL	3	<1	480	30
K3-2-SOIL	7	3	400	30

APPENDIX B

Expenditures Receipts

Ketchikan Lake Group
Expenditure Receipts

<u>Cheque no.</u>	<u>Description</u>	<u>Amount</u>
5898	X-Ray Assay	1,331.20
5898	X-Ray Assay	734.82 only
—	Greyhound Lines	233.05
5620	X-Ray Assay	1,097.65
5620	X-Ray Assay	112.25
5776	X-Ray Assay	640.30
5776	X-Ray Assay	180.50
		4,319.77

PAID



ASSAY LABORATORIES LIMITED

700 LESLIE STREET • DON MILLS ONTARIO M8B 5J4 • (416) 445-5755

COPY 70

CUSTOMER NO. 301

INVOICE NO.	INVOICE DATE	WORK ORDER NO.	DATE SUBMITTED
2257	02-OCT-84	89186	17-SEP-84

TERMS NET 30 DAYS
 1.5% PER MONTH INTEREST ON ACCOUNT OVER 30 DAYS

1187348

QTY	UNIT PRICE	AMOUNT	TAXES	TOTAL
11.7	0.00	0.00	2.30	147.20
210.7	0.00	0.00	7.00	440.00
59.0	0.00	0.00	5.30	339.20
90.5	0.00	0.00	5.50	352.00
99.2	0.00	0.00	0.70	44.80

431

SUB-TOTAL \$ 1331.20

TOTAL \$ 1331.20

X-RAY ASSAY LABORATORIES

LIMITED

1885 LESLIE STREET • DON MILLS ONTARIO M3B 3J4 • (416) 445-5755

COPY TO:

CUSTOMER NO. 301

INVOICE NO.	INVOICE DATE	WORK ORDER NO.	ANALYSIS PERIOD
22691	16-OCT-84	18159	13-SEP-84

TERMS NET 30 DAYS
1.5% PER MONTH INTEREST ON ACCOUNT OVER 30 DAYS

WAL & ASSOCIATES LIMITED
1807 HWY. 7, SUITE 606
SCARBOROUGH, ONTARIO
M1B 4Y6

TYPE OF SAMPLES SUBMITTED
ROCK

CMS

RAW BILL NO.
T187347

QTY	DESCRIPTION METHOD	XRAY CODE	UNIT COST	AMOUNT
226	WET NITRIC ACID DIGESTION	1, 7, 0, 0, 0, 0	2.30	519.00
226	ALL PPS	2, 10, 7, 0, 0, 0	7.00	1960.00
226	HP	5, 9, 0, 0, 0, 0	5.30	1197.00
9	ALL MD. BA. BIOGEOCHEMISTRY, REGULAR DETECTION LIMIT	13, 2, 20, 0, 0, 0	8.50	76.50
226	BA. SEMI-QUANT.	90, 5, 0, 0, 0, 0	5.50	1243.00
84	ROCK, CRUSHING & MILLING (CHROME STEEL MILL)	99, 1, 0, 0, 0, 0	2.75	148.50
226	SOIL, DRYING & SCREENING	99, 2, 0, 0, 0, 0	0.70	158.20
9	MUNUS, DRYING & BLENDING	99, 2, 0, 0, 0, 0	0.70	6.30
			SUB-TOTAL	\$ 5310.10

734.82 unused expenditures

431 5898

24.10

\$ 24.10

TOTAL IN CANADIAN FUNDS

\$ 5334.20

ORIGINAL INVOICE

DESTINATION STATION GREYHOUND LINES OF CANADA LTD.		FORWARDING AGENT 10545698	
Don Mills PROV. ONT.		PHONE	TIME 06 26 84
CONSIGNEE X-RAY ASSAY LAB		CHARGE ACCOUNT	ACTUAL WEIGHT 90 LBS
STREET ADDRESS 1835 LESLIE ST.		TARIFF WEIGHT	DECLARED VALUE LBS \$
NO. OF PIECES 3		RECEIVED AT DESTINATION STATION DATE TIME	
PKG <input type="checkbox"/> BOX <input type="checkbox"/> ENV <input type="checkbox"/> SACK <input type="checkbox"/> BGGE <input type="checkbox"/> CTN <input type="checkbox"/>		RECEIVED IN GOOD ORDER UNLESS SPECIFIED	
CONTENTS SAMPLES		COMPANY	TO
SHIPPER'S NAME W. NEIL		EXPRESS CHARGES \$ 21.20	
STREET ADDRESS % KYRO'S AIR		PICKUP CHARGES \$	
ORIGIN CITY & PROV. JELICOE		CHARGES ADVANCED \$	
1. SHIPPER'S RECEIPT		LIABILITY LIMITED TO \$50.00 UNLESS GREATER VALUE DECLARED AND EXCESS CHARGE PAID	
PREPAID		SHIPPER'S SIGNATURE X <i>Karyka</i>	
		DELIVERY CHARGES \$	
		VALUE CHARGES \$	
		TOTAL PREPAID \$ 21.20	
		NO DATE AMOUNT	

The Carrier agrees to carry and deliver the packages described hereon upon the terms and conditions prescribed by the proper authority of the province in which this shipment originates and published in the tariff of the Carrier which is open for inspection by the public at the principal office of the Carrier and at the terminal of each route over which the Carrier is licensed to operate, and to which the Shipper agrees by accepting this receipt.

THIS COPY MUST BE REMOVED BY RECEIVING EXPRESS AGENT

DESTINATION STATION GREYHOUND LINES OF CANADA LTD.		FORWARDING AGENT 10545698	
Don Mills PROV. ONT.		PHONE	TIME 06 26 84
CONSIGNEE X-RAY ASSAY LABS		CHARGE ACCOUNT	ACTUAL WEIGHT 50 LBS
STREET ADDRESS 1885 LESLIE AV		TARIFF WEIGHT	DECLARED VALUE LBS \$
NO. OF PIECES 1		RECEIVED AT DESTINATION STATION DATE TIME	
PKG <input type="checkbox"/> BOX <input checked="" type="checkbox"/> ENV <input type="checkbox"/> SACK <input type="checkbox"/> BGGE <input type="checkbox"/> CTN <input type="checkbox"/>		RECEIVED IN GOOD ORDER UNLESS SPECIFIED	
CONTENTS EQUIPT		COMPANY	TO
SHIPPER'S NAME W. NEIL		EXPRESS CHARGES \$ 14.75	
STREET ADDRESS % KYRO'S AIR		PICKUP CHARGES \$	
ORIGIN CITY & PROV. JELICOE		CHARGES ADVANCED \$	
1. SHIPPER'S RECEIPT		LIABILITY LIMITED TO \$50.00 UNLESS GREATER VALUE DECLARED AND EXCESS CHARGE PAID	
PREPAID		SHIPPER'S SIGNATURE X <i>Karyka</i>	
		DELIVERY CHARGES \$	
		VALUE CHARGES \$	
		TOTAL PREPAID \$ 14.75	
		NO DATE AMOUNT	

The Carrier agrees to carry and deliver the packages described hereon upon the terms and conditions prescribed by the proper authority of the province in which this shipment originates and published in the tariff of the Carrier which is open for inspection by the public at the principal office of the Carrier and at the terminal of each route over which the Carrier is licensed to operate, and to which the Shipper agrees by accepting this receipt.

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DESTINATION STATION GREYHOUND LINES OF CANADA LTD.		FORWARDING AGENT 10545909	
Don Mills PROV. Ont		PHONE	TIME 8 13 84
CONSIGNEE X-Ray Assay Lab		CHARGE ACCOUNT	ACTUAL WEIGHT 40 LBS
STREET ADDRESS 1885 LESLIE ST.		TARIFF WEIGHT	DECLARED VALUE LBS \$
NO. OF PIECES 1		RECEIVED AT DESTINATION STATION DATE TIME	
PKG <input type="checkbox"/> BOX <input checked="" type="checkbox"/> ENV <input type="checkbox"/> SACK <input type="checkbox"/> BGGE <input type="checkbox"/> CTN <input type="checkbox"/>		RECEIVED IN GOOD ORDER UNLESS SPECIFIED	
CONTENTS SAMPLES		COMPANY	TO
SHIPPER'S NAME C. HORNER		EXPRESS CHARGES \$ 14.75	
STREET ADDRESS		PICKUP CHARGES \$	
ORIGIN CITY & PROV. Geraldton Ont.		CHARGES ADVANCED \$	
1. SHIPPER'S RECEIPT		LIABILITY LIMITED TO \$50.00 UNLESS GREATER VALUE DECLARED AND EXCESS CHARGE PAID	
PREPAID		SHIPPER'S SIGNATURE X <i>Carrie Quaka</i>	
		DELIVERY CHARGES \$	
		VALUE CHARGES \$	
		TOTAL PREPAID \$ 14.75	
		NO DATE AMOUNT	

The Carrier agrees to carry and deliver the packages described hereon upon the terms and conditions prescribed by the proper authority of the province in which this shipment originates and published in the tariff of the Carrier which is open for inspection by the public at the principal office of the Carrier and at the terminal of each route over which the Carrier is licensed to operate, and to which the Shipper agrees by accepting this receipt.

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Shipping
Samples
Total
\$ 223.00

LIABILITY LIMITED TO \$50.00 FOR LOSS, DAMAGE OR DELAY HOWSOEVER OCCASIONED UNLESS A GREATER VALUE DECLARED AND EXPRESS AND OTHER CHARGES PAID FOR AT THE TIME OF SHIPPING.

DESTINATION STATION GREYHOUND LINES OF CANADA LTD.		FORWARDING AGENT 10545910	
DONMILLS PROV. <i>Ont</i>		PHONE	TIME AM PM 8 13 84
CONSIGNEE X-RAY Assay Lab		CHARGE ACCOUNT	ACTUAL WEIGHT 100
STREET ADDRESS 1885 Leslie St		TARIFF WEIGHT	DECLARED VALUE LBS \$
NO. OF PIECES 2		RECEIVED AT DESTINATION STATION DATE TIME AM PM	
PKG <input checked="" type="checkbox"/> BOX <input type="checkbox"/> ENV <input type="checkbox"/> SACK <input type="checkbox"/> BQGE <input type="checkbox"/> CTN <input type="checkbox"/>		RECEIVED IN GOOD ORDER UNLESS SPECIFIED	
CONTENTS SAMPLES		COMPANY	TO
SHIPPER'S NAME C. Horner		EXPRESS CHARGES \$ 33.45	
STREET ADDRESS		PICKUP CHARGES \$	
ORIGIN CITY & PROV. Georgetown Ont		CHARGES ADVANCED \$	
SHIPPER'S RECEIPT		LIABILITY LIMITED TO \$50.00 UNLESS GREATER VALUE DECLARED AND EXPRESS CHARGE PAID	
PREPAID		DELIVERY CHARGES \$	
		VALUE CHARGES \$	
		TOTAL PREPAID \$ 33.45	
		NO DATE AMOUNT	

The Carrier agrees to carry and deliver the packages described hereon upon the terms and conditions prescribed by the proper authority of the province in which this shipment originates and published in the tariff of the Carrier which is open for inspection by the public at the principal office of the Carrier and at the terminal of each route over which the Carrier is licensed to operate, and to which the Shipper agrees by affixing this receipt.

THIS COPY MUST BE REMOVED BY RECEIVING EXPRESS AGENT

LIABILITY LIMITED TO \$50.00 FOR LOSS, DAMAGE OR DELAY HOWSOEVER OCCASIONED UNLESS A GREATER VALUE DECLARED AND EXPRESS AND OTHER CHARGES PAID FOR AT THE TIME OF SHIPPING.

DESTINATION STATION GREYHOUND LINES OF CANADA LTD.		FORWARDING AGENT 10545908	
DONMILLS PROV. <i>Ont</i>		PHONE	TIME AM PM 8 13 84
CONSIGNEE X-RAY Assay Lab		CHARGE ACCOUNT	ACTUAL WEIGHT 70
STREET ADDRESS 1885 Leslie St		TARIFF WEIGHT	DECLARED VALUE LBS \$
NO. OF PIECES 2		RECEIVED AT DESTINATION STATION DATE TIME AM PM	
PKG <input checked="" type="checkbox"/> BOX <input type="checkbox"/> ENV <input type="checkbox"/> SACK <input type="checkbox"/> BQGE <input type="checkbox"/> CTN <input type="checkbox"/>		RECEIVED IN GOOD ORDER UNLESS SPECIFIED	
CONTENTS SAMPLES		COMPANY	TO
SHIPPER'S NAME C. Horner		EXPRESS CHARGES \$ 22.65	
STREET ADDRESS		PICKUP CHARGES \$	
ORIGIN CITY & PROV. Georgetown Ont		CHARGES ADVANCED \$	
SHIPPER'S RECEIPT		LIABILITY LIMITED TO \$50.00 UNLESS GREATER VALUE DECLARED AND EXPRESS CHARGE PAID	
PREPAID		DELIVERY CHARGES \$	
		VALUE CHARGES \$	
		TOTAL PREPAID \$ 22.65	
		NO DATE AMOUNT	

The Carrier agrees to carry and deliver the packages described hereon upon the terms and conditions prescribed by the proper authority of the province in which this shipment originates and published in the tariff of the Carrier which is open for inspection by the public at the principal office of the Carrier and at the terminal of each route over which the Carrier is licensed to operate, and to which the Shipper agrees by affixing this receipt.

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OWF 2101 - 2403b VTE
 3000

General Store

Meats - Produce - Gas - Dry Goods - Fishing Tackle & Licenses
 ONE STOP - SHOP ALL

DATE Aug 8 1984

M. H E Neal

	ACCT. FWD.
	24946
1 / Quaker oats	259
2 1/2 lb unch Bens Rice	289
3 1 granola bars Raisin	185
4 1 Nature valley snacks	229
5 2 c tuna 199	398
6 7 english muffin	NONE
7 4 c sardines 159	636
8 1 golden cress	149
9 1 potato chips lg	169
10 1 lg stone topatuf	329
11 gas	1195
12 bus freight	2065
	30849
	98
	30947

Tx

2978

THIS IS ALSO YOUR STATEMENT. PLEASE
 PAY IN FULL EVERY 14 DAYS.

ALCOE GENERAL STORE

AGENCY STORE UNDER CONTROL BOARD OF ONTARIO
 PRODUCE - GAS - BUCK SHOP

DATE Aug 2 1984

M. H E Neal

	ACCT. FWD.
	32320
✓ 2 c tuna 179	358
✓ 2 1/2 - red salmon	169
✓ 2 - draft salmon	150
✓ 1 - med mustard	145
✓ 5 1/2 lb unch Bens	289
6	1197
7 bus freight	2575
8	37203
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SPERMWOOD O CROWN ZELLENBACH PAPER COMPANY LIMITED

STORE

GENERAL STORE

STORER LIQUOR CONTROL BOARD OF ONTARIO
GROCERIES - GAS - ROCK SHOP

Date July 26 1954

H.F. Allen

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1949 184
 M.P.E. Deal

	Acct. Fwd.
✓ 1/2 dozen brownie	249
✓ 1/2 dozen light soap bars	159
✓ 1-3/4 saucepan	749
✓ 1 c salmon	289
✓ 1/2 lb can ham	569
✓ 1 tin sardines	69
✓ 1 foil wrap	129
✓ 1 doat bandages	289
✓ 1 table ^{48x} cloth	519
10 gas	2498
11 bus freight	1265
12	
13	26596
14	Tax 215
15	29 26811

SPERMBOOK O GARDNER & THELFBACH PAPER COMPANY LIMITED

total \$ 223 05

X-RAY ASSAY LABORATORIES LIMITED

1885 LESLIE STREET • DON MILLS ONTARIO M3B 3J4 • (416) 445-5755

COPY TO:

⑤

ED TO:
 X-RAY ASSAY LABORATORIES LIMITED
 1885 LESLIE STREET
 DON MILLS ONTARIO M3B 3J4
SAME

INVOICE NO.	INVOICE DATE	WORK ORDER NO.	DATE SUBMITTED
12738	10/11/73	1000	10/11/73

TERMS: NET 30 DAYS
 1.5% PER MONTH INTEREST ON ACCOUNT OVER 30 DAYS

CHECK, 1973

12738

QTY	DESCRIPTION	UNIT PRICE	TOTAL PRICE	AMOUNT
50	ANALYSIS (TESTION)	1.70	85.00	85.00
10	ANALYSIS (TESTION)	7.00	70.00	155.00
30	ANALYSIS (TESTION)	5.90	177.00	332.00
20	ANALYSIS (TESTION)	29.50	590.00	922.00
20	ANALYSIS (TESTION)	11.25	225.00	1147.00
20	ANALYSIS (TESTION)	11.25	225.00	1372.00
1	ANALYSIS (TESTION)			1372.00

431

1092.65

		5.00
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TOTAL IN CANADIAN FUNDS 1097.65

DUPLICATE COPY

X-RAY ASSAY LABORATORIES LIMITED

1885 LESLIE STREET • DON MILLS ONTARIO M3B 3J4 • (416) 445-5755

COPY TO:

SPECIALS LIMITED

4

SAME

SENT TO:

SPECIALS LIMITED

SAME

WARRANT NO.

NUMBER	DATE	WORK ORDER NO.	DATE SUBMITTED
431	11-10-84	1000	11-10-84

THIS ORDER IS VALID FOR THE ANALYSIS OF THE SAMPLES LISTED HEREIN. IT IS NOT VALID FOR THE ANALYSIS OF OTHER SAMPLES. THE ANALYSIS IS SUBJECT TO THE TERMS AND CONDITIONS OF THE ANALYSIS AGREEMENT.

REGARDING THE ANALYSIS OF THE SAMPLES LISTED HEREIN, THE ANALYST HAS CONDUCTED THE ANALYSIS AND THE RESULTS ARE AS FOLLOWS:

NO.	DESCRIPTION	FINAL Q. L.	UNIT COST	AMOUNT
1	WINDY EVIDENCE - 10 L. WINDY EVIDENCE - 10 L.			
			431	\$5620
				107.25
				5.00

DUPLICATE COPY TOTAL IS ANALYSIS FUNDUS 107.25 112.25

XRAL

X-RAY ASSAY LABORATORIES LIMITED

1885 LESLIE STREET • DON MILLS ONTARIO M3B 3J4 • (416) 445-5755

COPY TO:

SEE TO:

E. NEAL & ASSOCIATES LIMITED
ATTN: BUZZ NEAL
55 QUEEN STREET EAST, SUITE 606
TORONTO, ONTARIO
M5C 1R6

ATTN TO:

E. NEAL & ASSOCIATES LIMITED
ATTN: BUZZ NEAL
55 QUEEN STREET EAST, SUITE 606
TORONTO, ONTARIO
M5C 1R6

CUSTOMER NO. 301

INVOICE NO	INVOICE DATE	WORK ORDER NO.	DATE SUBMITTED
21624	18-JUL-84	17232	18-JUL-84

TERMS

TERMS NET 30 DAYS
1.5% PER MONTH INTEREST ON ACCOUNT OVER 30 DAYS

PROJECT NO.	CLIENT PROJECT NO.	TYPE OF SAMPLES SUBMITTED	WAY BILL NO.	SHIPPED FROM
		ROCK HUNTS SOIL	11710	
		SMALL FR		

QTY	DESCRIPTION METHOD	XRAL CODE	UNIT COST	AMOUNT
11	NO. MIXED ACID DIGESTION	10 00 00 00 00	1.00	11.00
13	ALL PPB	210 00 00 00 00	0.00	117.00
11	NO	50 00 00 00 00	0.00	11.00
10	ALL NO. 24. BIOCHEMISTRY, REGULAR DETECTION LIMIT	18 210 00 00 00	0.50	5.00
11	24. SEMI-QUANT.	90 50 00 00 00	0.50	5.50
31	ROCK, CRUSHING & MILLING (CHROME STEEL MILL)	95 10 00 00 00	0.75	23.25
11	SOIL, DRYING & SCREENING	95 20 00 00 00	0.70	7.70
10	HUMUS, DRYING & BLENDING	95 20 00 00 00	0.70	7.00
			SUB-TOTAL	\$ 632.80

431

\$577.60

7.50				
				7.50

TRIPPLICATE COPY

TOTAL IN CANADIAN FUNDS

\$ 640.30

55 QUEEN STREET
TORONTO

ATTN: 12155
55 QUEEN STREET
TORONTO, ONTARIO
M5C 1R6

21459

TERMS NET 30 DAYS
1.5% PER MONTH INTEREST ON ACCOUNT

ROCK

2 BOXES

SKILL TRY

12155

13
12

ALL PPT
ROCK CRUSHING & MILLING (CHROME STEEL MILL)

2,10,7,0,0,0
99,1,0,0,0,0

①

43

25,716

SUB-TOTAL \$ 175.00

5.00

6 5

TOTAL CANADIAN FUNDS \$ 100

Ketchikan Lake Group

ASSESSMENT WORK BREAKDOWN

1. FIELD WORK

<u>Type of Work</u>	<u>Name & Address</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
Rock, soil & humus sampling	E. Froebel	July 5 - Aug. 15/84	31.5
	K. David	" "	31.5
	D. Stachiw	" "	31.5
	G. Wallerius	" "	31.5
	C. Horner	" "	31.5

2. CONSULTANTS

<u>Name & Address</u>	<u>Dates Worked (specify in field or office)</u>	<u>Number of 8 hour days</u>
H. E. Neal	July 12-14, Aug 2-4/84 Field Sept. 84 - Apr. 85 Office	10
C. Horner	Sept. '84 to Apr. '85 Office	43.26
P. Atherton	Sept. '84, Nov., Dec. 84, Jan. 85 Office	1.6
R. Risto	Oct. '84, Dec. 84 Office	0.73

3. DRAUGHTSMAN, TYPING, OTHERS (specify)

<u>Name & Address</u>	<u>Type of Work</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
D. Longman	Typing		1

TOTAL 8 HOUR TECHNICAL DAYS 214.1

4. LINE-CUTTING

<u>Name</u>	<u>Address</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
Frank Houghton		June 26 - July 5/84	13.5
Rick MacAdam		" "	13.5
Name unknown		" "	13.5

TOTAL 8 HOUR LINE-CUTTING DAYS 40.5

ASSESSMENT WORK BREAKDOWN

1. Type of Survey Geochemical
2. Township or Area Junior, Toronto, Falcon & Return Lake Areas
3. Numbers of Mining Claims Traversed by Survey see attached list.
4. Number of Miles of Line Cut 8 Flown _____
- *5. Number of Stations Established _____
- *6. Make and type of Instrument Used _____
- *7. Scale Constant or Sensitivity _____
- *8. Frequency Used and Power Output _____

9. Summary of Assessment Credits (details on reverse side)

Total 8 hour Technical Days (Include Consultants, Draughting etc.) 214.1

Total 8 hour Line-Cutting Days 40.5

Calculation

$$\frac{214.1}{\text{Technical}} \times 7 = \frac{1,498.7}{\text{Line-cutting}} + \frac{40.5}{\text{Line-cutting}} = \frac{1,539.2}{\text{Number of claims}} \div \frac{72}{\text{Number of claims}} = \frac{21.38}{\text{Assessment credits per claim}}$$

The dates listed on this form represent working time spent entirely within the limits of the above listed claims Check

If otherwise, please explain Dates also include interpretation of geochemical analyses and report compilation.

Dated: May 21/85 Signed: Barolyn Horner

- Note:
- (A) * Complete only if applicable.
 - (B) Complete list of names, addresses and dates on reverse side.
 - (C) Submit separate breakdown for each type of survey.
 - (D) Submit in duplicate.

PERSONNEL:

P. Atherton	5425 Croydon Road, Burlington, Ont. L7L 3J2
K. David	299 Roehampton Ave. Apt. 828, Toronto, Ont. M4P 1S2
E. Froebel	54 Cumber Ave. West Hill, Ont. M1E 1T3
C. Horner	70 Spadina Road, Apt. 303, Toronto, Ont. M5R 2T6
F. Houghton	Beardmore, Ont.
K. Kinnear	310 Bloor Street West, Rm. 946, Toronto, Ont. M5S 1W4
D. Longman	17 Redwing Place, Don Mills, Ont.
R. MacAdam	Beardmore, Ont.
H.E. Neal	124 Roxborough Drive, Toronto, Ont. M4W 1X4
Line Cutter (name unknown)	Beardmore, Ont.
R. Risto	22 Northridge Ave. Toronto, Ont.
D. Stachiw	30 Charles Street West, Apt. 1214, Toronto, Ont. M4V 1R5
G. Wallenius	81 Blake Street, Sault Ste. Marie, Ont.

Ketchikan Lake Group

Work Performed on Claims

TB 766 301
766 302
766 303
766 306
766 308
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766 312
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766 319
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52108NE0004 2.7916 FALCON LAKE

030

Mining Lands Section

File No 2.7916

Control Sheet

TYPE OF SURVEY GEOPHYSICAL
 GEOLOGICAL
 GEOCHEMICAL
 EXPENDITURE

MINING LANDS COMMENTS:

bedrock outcrops rock type not indicated
- traverse lines on file 2.7558 - check!

Checked

Signature of Assessor

Date

Report on
SURFICIAL GEOLOGY SURVEY
Performed on
TORONTO LAKE PROJECT CLAIMS
TORONTO, JUNIOR, FALCON & RETURN LAKE AREAS
THUNDER BAY MINING DIVISION
ONTARIO
for
QUEBEC COBALT AND EXPLORATION LIMITED
by
CAROLYN HORNER B. Sc.
H.E. NEAL & ASSOCIATES LTD.
TORONTO - CANADA

March 1985

RECEIVED
MAR 22 1985
MINING LANDS SECTION



52108NE0004 2.7916 FALCON LAKE

030C

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Appendix

Maps

Key Map

Property Map

Location Map

Surficial Geology Maps - 6 sheets A - F at
a scale of 1" to 400'
accompany the report.

1.0 SUMMARY

This surficial geology survey was carried out by H.E. Neal & Associates Ltd. from June 6th to August 31, 1984. The survey was conducted over the claims at a scale of 1" to 400'. Claim lines were traversed and pace and compass lines were established at 400 foot intervals. Flagging was placed at 100 foot intervals on all traverse lines. Eight miles of line were cut by a contractor on the Ketchikan Lake claim block.

Topographic features, bedrock exposure, vegetation, soil types and glacial features were mapped. Detailed soil profiles were obtained from 362 pits dug on the property. Soil profile descriptions are included in the appendix.

2.0 INTRODUCTION

The 170 claim property held by Quebec Cobalt and Exploration Limited was mapped. This property consists of two claim blocks. The Ketchikan Lake group consists of 76 contiguous claims in the Juneau and Ketchikan Lakes region. The Toronto Lake group consists of 94 contiguous claims in the Toronto and Joy Lakes region.

A five member crew carried out the survey. Four different camps were established during the summer.

Six map sheets cover the area at a scale of 1 inch to 400 feet. Sheets A, B and C cover the Ketchikan Lake claims. Sheets D, E and F cover the Toronto Lake group. Topography, drainage, bedrock exposure, vegetation, glacial features and soil type are shown on the maps.

3.0 THE PROPERTY

The property consists of 170 claims held by Quebec Cobalt and Exploration Limited. The claims are located in four areas in the Thunder Bay Mining District as follows:

Toronto	Lake Area	-	138	claims
Junior	Lake Area	-	26	
Falcon	Lake Area	-	4	
Return	Lake Area	-	2	
	Total		<u>170</u>	claims

The claims were staked by Quebec Cobalt and Exploration Limited in May 1983. The property is composed of two claim groups containing 76 and 94 contiguous claims.

Ketchikan Lake Group

Toronto	Lake Area	-	44
Junior	Lake Area	-	26
Falcon	Lake Area	-	4
Return	Lake Area	-	<u>2</u>
			76

Toronto Lake Group

Toronto	Lake Area	-	94
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4.0 LOCATION AND ACCESS

The claims are located northeast of Lake Nipigon, approximately 15 miles north of Auden, Ontario.

Access was by float plane to Juneau, Ketchikan, Toronto and Joy Lakes from Kyro's Airways base in Jellicoe, Ontario. An Otter was used for camp moves and a Cessna 185 was used for weekly service flights. The distance from the float plane base to the property is approximately 50 miles.

5.0 LINECUTTING

Linecutting was done by a contractor in the Ketchikan Lake Claim group. A total of 8 miles of line was cut. These cut lines were used for control on the location of the pace and compass traverses. Pickets were placed at 100 foot intervals. A baseline and a tieline to the south were cut.

6.0 PREVIOUS WORK

1953 - Kennco Exploration (Canada) Limited did ground magnetometer and electromagnetic surveys.

? - Zmudzinski and Despard geological survey.

1955 - N.A. Timmins Explorations (Ontario) Limited did a ground magnetometer survey and drilled 4 holes totalling 2958 feet.

1959 - Panther International Mining Company Limited did an airborne magnetometer survey and 1438 feet of drilling.

1967 - Canadian Dyno Mines Ltd. performed ground magnetometer and electromagnetic surveys.

1969 - International Mogul Mines Limited and North Coldstream Mines Limited drilled 6 holes for a total of 1644 feet.

1977 - Rickaby Mines Limited (McAdam Mining Corporation Limited) performed a ground magnetometer survey.

7.0 GENERAL GEOLOGY

Bedrock exposed in the area is Precambrian in age. The oldest rocks are Archean volcanic and sedimentary rocks including some iron formation. These rocks trend in an easterly and northeasterly direction. They have been isoclinally folded, intensely metamorphosed and intruded by large masses of granitic rocks and by dikes of porphyry and pegmatite. Basic eruptives, which are both pre-granite and post-granite in age, cross-cut the volcanic and sedimentary rock. The pre-granitic basic rocks have undergone regional metamorphism. Possibly they represent a late intrusive phase of the Archean volcanism. The post-granitic basic rocks are relatively unaltered Keweenawian diabases. They occur as steeply dipping dikes and as flat or gently dipping sheets.

Pleistocene geology in the area consists mainly of glacial till with boulders, gravel, sand, silt and clay also present. A northwest trending esker is present at the west end of Ketchikan Lake.

TABLE OF FORMATIONS

CENOZOIC:

RECENT AND PLEISTOCENE: Glacial drift, gravel, sand, silt, clay

Unconformity

PRECAMBRIAN

PROTEROZOIC:

KEWEENAWAN: Diabase, porphyritic diabase.

Intrusive Contact

ARCHEAN:

ACID (GRANITIC) ROCKS: Granite (gneiss), porphyritic granite (gneiss), migmatite, pegmatite, quartz porphyry, feldspar porphyry, quartz-feldspar porphyry.

Intrusive Contact

BASIC AND ULTRABASIC ROCKS: Metagabbro, metapyroxenite, anorthosite, anorthositic metagabbro, serpentinite, basic dike rocks.

Intrusive Contact

MARSHALL LAKE GROUP: Metasediments: Biotite gneiss, biotite-quartz-feldspar gneiss, quartzite, conglomerate, iron formation.
Metavolcanics: Massive amphibolite, schistose amphibolite, pillow lava, metadiabase, tuff, agglomerate.

(Pye, 1968)

8.0 TOPOGRAPHY & GLACIAL FEATURES

Airphotos, topographic maps and the mapping data were used to compile a surficial geology map.

The relief on the property is generally low to moderate. The maximum relief in the area is about 150 feet. The greatest relief tends to occur in areas of granite and basic to ultrabasic intrusive outcrops.

The south shore of the western part of Toronto Lake has rugged hilly terrain consisting of bedrock knobs.

A vertical cliff with a drop of about 75 feet trends in a north-south direction. It is located to the southwest of Ketchikan Lake on the southernmost claim line.

Large flat, wet areas exist between Juneau and Ketchikan Lakes and between Joy and Toronto Lakes.

The best outcrop exposures are located between Ketchikan Lake and East Ketchikan Lake, at the west end of Ketchikan Lake and in the vicinity of Toronto Lake. Outcrop on the rest of the claims is sparse.

A southwest trending esker is present along the northwest shore of Ketchikan Lake. This is the most prominent glacial feature on the property. The esker has a maximum relief of about 50 feet and is about 100 feet wide at the base.

The claims partially cover six lakes in the area and several creeks, ponds and beaver swamps. This property is located in the Great Lakes drainage basin and the lakes drain towards the south.

9.0 VEGETATION

The large flat areas between Juneau and Ketchikan Lakes, and elsewhere, are covered by open black spruce and tamarack. Areas of denser, mature spruce have an undergrowth of moss and labrador tea. Alder occurs in wet areas especially along streams. Many old trails on the property have been completely overgrown by alders. Cedar bush is found in areas of low relief and poor drainage and along the shores of Joy and Horsetail Lakes.

Areas of higher relief are covered by mixed poplar, birch and spruce with moose maple undergrowth. In the Toronto Lake vicinity this vegetation type nearly always indicates the presence of outcrop.

The timber on the claims to the south of Joy Lake have been logged at some time. The vegetation is predominated by a dense undergrowth of young balsam fir. Outcrop is difficult to find in this area and, where present, is covered by a thick layer of moss. There is an abundance of large boulders scattered on this area.

A few stands of jackpine are present on the claims. Jackpine is especially prominent on the north shore of Ketchikan Lake and grows on a southwest trending esker in this area.

10.0 SOIL PROFILE

During the summer program 362 pits were dug and soil profiles were recorded. Three pits were dug in the esker. Pits were one to two feet deep. The colour, texture and thickness of each layer in the profile were recorded. In general the soil profile shows an organic layer underlain by a thin grey leached layer which is underlain by a layer of red-brown till. The till is most commonly a silty-sandy texture which often contains pebbles, cobbles and boulders. In some pits a grey-brown silty clay underlies the organics.

An esker is the most prominent glacial landform on the property. It occurs as a well-defined ridge on the northwest shore of Ketchikan Lake. It trends in a northeast-southwest direction. Three pits were dug in the esker. These varied from 2 to 3 feet in depth. A generalized profile would be 3" of organics underlain by 2" of grey clay which overlies 12" of silty sand with abundant pebbles and cobbles overlying 20" of medium to coarse-grained sand containing pebbles, cobbles, and boulders. No preferred orientation of the pebbles and cobbles was recognized.

Glacial striations were not observed in the bedrock exposures on the property. Glacial striations on ODM Map 2100 indicate glacial ice movement was to the southwest.

11.0 CONCLUSIONS

A till layer covers a large portion of the property. The amount of outcrop was estimated for each map sheet as follows:

Map sheet	% outcrop exposure
A	1 %
B	2 %
C	4 %
D	1 %
E	5 %
F	5 %

The most prominent glacial landform on the property is a NE-SW trending esker ridge to the northwest of Ketchikan Lake.

The direction of glacial ice was to the southwest.

Vegetation generally reflects the topography with mixed poplar, birch and spruce dominant in the areas of moderate relief and dry surface drainage conditions. Low lying, poorly drained areas are covered by spruce, tamarack and cedar. These areas have a thick layer of organic material.

Carolyn Horner
 Carolyn Horner B. Sc.
 H.E. Neal & Associates Ltd.
 March 18, 1985

APPENDIX

Soil Profile Descriptions

SOIL SAMPLING - TORONTO LAKE.

NOTE Samples are taken from the lowest layer described unless otherwise indicated.

SAMPLE #	LOCATION	DESCRIPTION	ASSAY RESULT.
			AU PPM, MO PPM, BA PPM, HG PPM
1)	L11W 19+90S	→ Organics → Fine, grey, silty, clay layer → Red-brown, silty sandy layer ↳ some slightly darker spots	5-6" 10" 4" 42 41 200, <10
2)	L11W 20+50S	→ Organics → Lt. grey-brown silty clay ↳ red-brown silty mottling throughout.	6" 18" 42 41 440, 10
3)	L11W 21+00S	→ Organic → Lt. grey clay layer ↳ some red-brown spots → Dk. brown clay-like layer	5" 9" 6" <2, <1, 580, 30
4)	L11W 21+50S	→ Organic → Lt. grey-brown clay layer with occasional red brown spots → Rock at bottom of pit.	7" 14" <2, <1, 460, 10
5)	L11W 22+00S	→ Organic → Brown silty layer → Lt. grey-brown clay → Rock at 12"	4" 2" 6" <2, <1, 520, <10
6)	L11W 22+80S	→ Organic → Grey-brown silty-clay layer → Red-brown cobble layer	6" 8" 6" 4, <1, 340, <10

SAMPLE #	LOCATION	DESCRIPTION		ASSAY RESULT	
				AU PPM	HG PPM
7)	L11W 23+25S	→ Organic	8"		
		→ Grey clay layer & occ. brown spots	5"		
		→ Red-brown silty-sandy, cobbly layer & some occasional grey spots	6"	<2,	<1, 380, <10
8)	L11W 23+95S	→ Organic	6"		
		→ Red-brown silty layer	4"		
		→ Fine grey clay layer	6"		
		→ Dark red-brown silty-clay layer	3"	<2,	<1, 340, 20
9)	L11W 24+50S	→ Organic	4"		
		→ Grey-clay layer	2"		
		→ Red-brown silty clay layer (sample)	4"	<2,	<1, 460, 10
		→ Grey-brown clay layer	6"		
10)	L11W 25+00S	→ Organic	6"		
		→ Grey-brown silty clay & some red-brown spots	15"	<2,	<1, 500, 10
11)	L6W 27+00S	→ Organic	5"		
		→ Lt. grey clay layer	3"		
		→ Red-brown sandy, silt & pebbles & cobbles	8"	<2,	<1, 420, 40

SAMPLE #	LOCATION	DESCRIPTION	ASSAY RESULT
12)	L6W 27+50S	<ul style="list-style-type: none"> → Organics 6" → Lt. Grey clay layer 2" → Red-brown sandy silt & pebbles & cobbles 8" 	Au PPB, MO PPM, BA PPM, HQ PPB 2, 1, 420, 30
13)	L6W 28+00S	<ul style="list-style-type: none"> → Organics 5" → Fine, grey clay layer 2 1/2" → Dk. red-brown sandy silt & pebbles & cobbles 5" 	2, 1, 440, 40
14)	L6W 28+50S	<ul style="list-style-type: none"> → Organics 4" → Fine, grey clay layer 2" → Red-brown pebbly-cobby clay-like silt 6" 	2, 1, 480, 20
15)	L6W 29+10S	<ul style="list-style-type: none"> → Organics 7" → Fine, grey clay layer 2 1/2" → Red-brown pebbly clay-like silt 4" 	2, 1, 360, 20
16)	L6W 29+55S	<ul style="list-style-type: none"> → Organics 5" → Fine, grey clay layer 1" → Red-brown, very cobby sandy silt 7" 	2, 1, 340, 20
17)	L6W 30+00S - 25' east of L6W	<ul style="list-style-type: none"> → Organics → Fine, grey clay layer 1" → Med. brown silty, cobby sand 9" 	no sample received

TORONTO LAKE

SAMPLE #	LOCATION	DESCRIPTION	RESULT
18)	L6W 31140S (on line)	<ul style="list-style-type: none"> -> Organic 5" -> Grey clay layer 0" -> Grey-brown clay-like pits with cobbles & pebbles 8" -> lg cobbles at bottom 	<p>Au ppb, Mo PPM, BA PPM, Hg</p> <p><2, <1, 440, 20</p>
19)	L6W L6W 32100S	<ul style="list-style-type: none"> -> 15" of not dark humus then water. - No soil 	
20)	L12E 0140N	<ul style="list-style-type: none"> -> Organics (15") then rock encountered. - No soil. 	
21)	L12E 0140N	<ul style="list-style-type: none"> -> Organics (12") then rock - No soil. 	
22)	L12E 2100N -50' east of L12E	<ul style="list-style-type: none"> -> Organics 4" -> Dr. grey clay layer 1" -> Med. brown silty clay layer (SAMPLE) 5" -> Lt. grey-brown clay layer 6" 	<p><2, <1, 460, 20</p>
23)	L12E 2150N	<ul style="list-style-type: none"> -> Organic 4" -> Dark grey clay layer 1" -> Dark red-brown silty clay layer 6" 	<p><2, 1, 460, 60</p>
24)	L12E 3100N	<ul style="list-style-type: none"> -> Organic 4" -> Dark grey clay layer 1/2" -> Dark red-brown silty clay layer 8" 	<p><2, 1, 440, 40</p>

TORONTO LAKE

(5)

SAMPLE #	LOCATION	DESCRIPTION	RESULT.	
25)	L12E	3150N	<ul style="list-style-type: none"> → Organic 5" → Dk. grey clay layer 1" → Lt. grey brown silty clay layer is abundant (50%) pebbles 12" 	<p>ALPPB, MOPPM, BA PPM, TGP</p> <p><2, <1, 480, 10</p>
26)	L12E	4100N	<ul style="list-style-type: none"> → Organic 3" → Med. grey-brown silty clay 2" → Red-brown fine silty clay is occasional pebbles 7" 	<2, 3, 460, 30
27)	L12E	4150N	<ul style="list-style-type: none"> → Organic 4" → Med. grey silty clay 3" → Red-brown fine silty soil 7" 	<2, 2, 420, 40
28)	L12E	5100N	<ul style="list-style-type: none"> → Organics 4" → Grey-brown clay layer 4" → Lt. brown fine silty-clay layer is some red-brown mottles 6" 	<2, 1, 460, 10
29)	L12E	5150N	<ul style="list-style-type: none"> → Organics 4" → Lt. Grey-brown silty clay layer is abundant cobbles & pebbles - some darker brown spots 12" 	<2, 1, 360, 10
30)	L12E	6100N	<ul style="list-style-type: none"> → 8" of organics then cobbles → No soil 	

TORONTO LAKE

SAMPLE #	LOCATION	DESCRIPTION	RESULT
31)	L12E 6150N	→ Organics 4" → Med. grey silty clay 1 1/2"	AU PPB, MO PPB, BA PPB, HG-PPB <2, 1, 420, 20
32)	L12E 7100N	→ Organics 3" → Med. grey silty clay 2" → Med. brown sandy silty layer ± ~70% pebbles & cobbles 6" -- SAMPLE -- → Lt. grey-brown silty layer 4"	* <2, 3, 440, 20
33)	L12E 8125N	→ Organics 4" → Med. grey fine clay 1 1/2" → Lt. grey fine clay ± mottling of Lt. red-brown silt 12"	<2, 3, 500, 10
34)	L12E 9100N	→ Organics 3" → Lt. grey fine clay 1 1/2" → Red-brown silty layer 8"	<2, 2, 480, 20
	L12E 9100 → 12100	OUTCROP	
35)	L12E 13100N (20' E. of 1.02)	→ Organics (18") then large boulders - NO SOIL SAMPLE	
36)	L12E 14100N	→ Organics (8") then rock NO SOIL SAMPLE → outcrop to West → Cedar Bog 90 East.	

TORONTO LAKE.

⑦

SAMPLE #	LOCATION	DESCRIPTION	RESULT.
37)	L6E(S) (ON SOUTH SHORE OF LAKE)	6100N → Organic → Med. grey clay layer → Dk. brown silty, sandy pebbly layer → Flat Rock at bottom of pit.	4" 1" 6" Au PPB, HOPPM, BAPPM, ^{Hg} Pb
38)	L6E(S)	5150N → Organics → Dark brown silty pebbly layer → lg. cobbles encountered at bottom of pit.	5" 8" Au PPB, HOPPM, BAPPM, ^{Hg} Pb
39)	L6E(S)	5100N → Organics → Med. grey silty sandy pebbly layer → Red brown sandy pebbly layer (SAMPLE) → Lt. brown sandy pebbly layer	3" 3" 7" 4" Au PPB, HOPPM, BAPPM, ^{Hg} Pb
40)	L6E(S)	4150N - OUTCROP - No SOIL	
41)	L6E(S)	4100N → Organics → Dark grey clay layer → Lt. grey clay layer → Outcrop at 12"	8" 2" 2" Au PPB, HOPPM, BAPPM, ^{Hg} Pb
42)	L6E(S)	3150N → Organics for 7" then horizontal outcrop. ∴ hole dug to west of line	

TORONTO LAKE

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AU. PPH, MO PPH, BA PPH, HG PPH

42) (cont'd)

L6E(S)

3150N
-10 ft. west of
line

- > Organics 4"
- > Lt. grey clay 1"
- > Red-brown silty
sandy layer & minor
small pebbles 8"
- > Outcrop at 13"

<2, 2, 420, 50

43) L6E(S)

3100N

- > organics (6") then outcrop.

44) L6E(S)

2190N

- > Organics 2"
- > Med. grey silty clay 2 1/2"
- > Red brown silty
pebbly layer 9"

<2, 1, 330, 50

45) L6E(S)

2150N

- > Organics 5"
- > Lt. grey clay 1/2"
- > Th. red-brown
mottled sandy silt
(dk & light layers) 8"

AVA

<2, <1, 380, 20

46) L6E(S)

2100N

- > Organics (4-6") then outcrop.

47) L6E(S)

1140N

- > Organics 4"
- > Med. grey silty layer 2"
- > Th. red-brown silty
sandy pebbly layer 8"

<2, <1, 380, 60

48) L6E(S)

1100N

- > Organics (6") then outcrop.

TORONTO LAKE

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	SAMPLE #	LOCATION	DESCRIPTION		RESULT
49)	L6E(S)	0100N ~ 10ft EAST of C.P. 428-2	→ Organics	2"	All PPB, 140 PPM, BA PPH, Hg PPB
			→ Lt. grey clay layer	1"	
			→ Mottled lt. brown & red brown silty sandy layer	9"	<2, <1, 460, 10
50)	L5E	22+70S	Organics	- 8"	L2, 3, 460, 40
			G.L.L.	- 1 1/2"	
			Red-brn. cobbly, sandy silty till	- to bottom	
51)	L5E	23+00S	Organics	- 3"	L2, 1, 460, 30
			G.L.L.	- 1"	
			Sandy, silty pebbly red-brn till	- 6"	
			Red-grey clayey till	- 6"	
52)	L5E	23+25S	Organics	- 5"	L2, 3, 540, 50
			G.L.L.	- 2"	
			Red-brn. pebbly, sandy, silty clay till	- to bottom	
53)	L5E	23+50S	Organics	- 6"	L2, 1, 480, 80
			G.L.L.	- 1 1/2"	
			Red-brn. pebbly, sandy, clayey till	- 4"	
54)	L5E	24+00S	Organics	- 2"	5, <1, 420, 40
			G.L.L.	- 3/4"	
			Pebble layer	- 1 1/2"	
			Rd-brn. silty till	- 3 1/2"	
			Grey-brn. sandy till	- 4 1/2"	

TORONTO LAKE SOIL

Assay Results

APPB, MOPPA, BAPPA, HGPP

Sample #	Location	Description	Assay Results
55) L5E	24.30 S	Organics -7" * Dk grey clay layer with flecks of mica -7" (soil sample from clay layer, right next to %, just to N)	L2, L1, 380, 20
56) L5E	24.60 S	Organics -2" Grey-brn sandy, silty layer -6" Beefweld. -bottom (just south of %)	L2, L1, 380, 410
57) L5E	25.00 S	Organics -3" G.L.L. -2" Brn-red sandy, pebbly fill -5 1/2"	L2, L1, 360, 40
58) L5E	25.75 S	Organics -2" Cobble layer -1" * Grey-brn sandy clay with pebbles (fill) reddish spots throughout -8"	L2, L1, 440, 10
59) L5E	26.00 S	Organics -4" * Grey-brn pebbly, sandy clay -6"	L2, L2, 400, 20
60) NP-1			L2, L1, 240, 10

TORONTO L. SOIL

Sample #	Location	Description	Assay Results			
			As ppb	Mo ppm	Ba ppm	Hg ppb
LIE-26+50S	26+50S	Med. brown silty clay	<2	<1	520	40
LIE	26+00S	Light brown silty, pebbly, clay layer	2	<1	540	10
LIE	25+50S	Red brown, sandy, pebbly layer	5	<1	460	20
LIE	25+00S	Red-brown sandy, pebbly, cobbly layer	3	<1	460	20
LIE	24+50S	Red-brown sandy, pebbly, cobbly layer	3	<1	400	20

JUNEAU LAKE SOIL

G.L.L. = grey leached layer

Sample #	Description	Au ppb	Mo ppm	Assay Ba ppm	Results Hg ppb
1)	L32E-16+50 Organics - 4" Red-brown silty layer - 1" G.L.L. - 1" Red-brown silty layer - 4" Grey silty layer - 1 1/2" Red brown silty Cobble till - 6"	2	<1	480	20
2)	L32E-17+00S Organics - 2" G.L.L. - 3" Red-brown silty sand - 12"	<2	<1	420	20
3)	L32E-17+50S Organics - 2" G.L.L. - 1" Red-brown to grey, sandy pebbly layer - 12"	5	<1	420	10
4)	L32E-18+00S Organics - 2" G.L.L. - 2" Red-brown sandy, pebbly till - 11"	5	<1	780	20
5)	L32E-18+50S Organics - 5 1/2" Grey, silty, pebbly till - 7 1/2" Red-brown sandy, silty, pebbly till - 5"	9	1	300	40
6)	L32E-19+00S Organics - 3" G.L.L. - 2 1/2" Red-brown clay, silty pebbly till - 7"	4	<1	430	20
7)	L32E-19+50S Organics - 4" G.L.L. - 3" Red-brown sandy, cobble till - 5"	<2	<1	380	20
8)	L32E-20+50S Organics - 11" Red-brown to grey pebbly sandy till - 3"	12	2	340	50

Note:
at 100' W 7)
line

JUNEAU LAKE SOIL

G.L.L. = grey leached layer
 * red-brn layer sampled unless indicated with *

Sample #	Description	As ppb	Pb assay mo ppm	Ba ppm	Hg ppb	Results
9) L29aE-1800S	Organics - 4"			540		
L29aE-1800S	Brn-gry silty clay - 5"*	4	<1	480	30	
1800S	Light grey clay - 7"					
10) L29aE-1750S	Organics - 3 1/2"					
	Red-brn silty sand - 3"	9	<1	380	30	
	Grey silty clay - 5"					
11) L29aE-1700S	Organics - 3"					
	G.L.L. - 3"					
	Red-brn silty sand - 9"	2	<1	440	30	
12) L29aE-1650S	Organics - 1 1/2"					
	G.L.L. - 1"					
	Red-brn silty sand - 11"	4	<1	700	40	
13) L29aE-1600S	Organics - 3"					
	G.L.L. - 2"					
	Red-brn silty sand - 9"	3	<1	500	40	
14) L29aE-1550S	Organics - 3"					
	G.L.L. - 2"					
	Red-brn clay, silty, pebbly layer - 3"	3	2	420	60	
	Brown sandy, pebbly layer - 5"					
15) L29aE-1500S	Organics - 3"					
	Dark grey silty clay - 2"					
	Red-brn to grey silt - 6"	<2	<1	480	20	
16) L29aE-1450S	Organics - 2 1/2"					
	* Brown grey silt - 10"	2	<1	480	20	
17) L29aE-1400S	Organics - 3"					
	Red-brn silt interbedded with light grey silty clay - 12"	7	<1	480	30	
18) L29aE-1350S	Organics - 2"					
	G.L.L. - 1"					
	Red-brown sandy					

JUNE Au LAKE SOIL

G.L.L. - grey leached layer

* red-brn layer sampled unless indicated with *

Sample #	Inscription	Assay Results			
		Au ppm	Mo ppm	Ba ppm	Hg ppm
18(cont'd)	silt - 4" Light grey silty clay pebble till - 3"	2	<1	520	20
19)	L29aE-13:00S Organics - 5" G.L.L. - 2" Red-brn silty sand - 6" Light grey silty pebble layer - bottom	2	<1	520	30
27E 20)	L27E-9:00N Organics - 2" G.L.L. - 1/2" Red-brn silty sand - 5" Grey sandy pebble - 6"	<2	<1	420	20
21)	L27E-9:50N Organics - 4" G.L.L. - 2" Red-yellow brown silty sandy cobble till - 6"	<2	<1	520	20
22)	L27E 10:00N Organics - 2" G.L.L. - 1/2" Red-brn sand - 3" Light grey silty clay - 1" Light brown sandy pebble layer - 6"	<2	<1	460	50
23)	L27E 10:50N Organics - 5" G.L.L. - 1/2" Red-brn sandy, pebbly till - 6"	<2	1	460	40
24)	L27E-11:00N Organics - 4" * Dark grey, sandy pebble layer - 2" Rock - bottom	3	<1	260	20
25)	L27E 11:50N Organics - 2" Red-brown sandy, silty layer - 12"	<2	<1	500	30

JUNEAU LAKE SOIL
 G.L.L. - grey leached layer

* red-brn layer sampled unless indicated with *

Sample #	Description	Assay Results			
		Au PPB	Mo PPM	Ba PPM	Hg PPB
26)	L27E-11.70N Organics - 5" G.L.L. - 2" Red-brn sand - 5"	<2	<1	500	30
-26E27)	L26E-26.00S Organics - 7" G.L.L. - 2" Red-brn sandy cobble layer - 4"	4/nd	<2	<1	440, 30
28)	L26E-26.50S Organics - 5" G.L.L. - 1 1/2" Red-brown sand - 9"	<2	<1	520	40
29)	L26E-27.60S Organics - 2" G.L.L. - 1 1/2" Red-brn sandy pebbly layer - 8"	<2	<1	540	40
30)	L26E-27.50S Organics - 1 1/2" G.L.L. - 1/2" Red-brn, sandy, pebbly, cobble layer - 8"	<2	<1	460	50
31)	L26E-28.00S Organics - 5" G.L.L. - 2" Red-brn, silty sand - 6"	3	<1	500	30
32)	L26E-28.50S Organics - 4" Red-brown sandy, silty layer interbedded with grey sand - 10"	<2	<1	480	30
33)	L26E-29.00S Organics - 2" G.L.L. - 2" Red-brn sandy cobble layer - 8"	<2	<1	440	50

JUNEAU L. Soil

Sample #	Description	Au ppb	Assay Mo ppm	Pb ppm	Results Hg ppb
34)	L26E-29.50S Organics - 4" Red-brn sandy, cobbly layer - 3½" Light-brn sandy pebbly layer - 9"	3,	<1,	320,	50
35)	L26E-30.00S Organics - 3½" G.L.L. - 1" Red-brn silty, sandy cobbly layer - 8"	<2,	<1,	500,	30

JANEAU LAKE

SAMPLE #	LOCATION	DESCRIPTION	RESULT.				
			Au ppb	Mn ppm	Ba ppm	Hg ppb	
1)	JL1E	11+00N → Organics 4" → Lt. grey clay layer 2" → Lt. red-brown silty clay layer (SAMPLE) 5" → Grey clay 3"					< 2, 1, 520, 40
2)	JL1E	11+50N → Organics 5" → Lt. grey silty clay layer 1" → Med. red-brown silty clay layer 6"					< 2, 3, 460, 40
3)	JL1E	11+90N → Organics 4" → Lt. grey clay layer 1" → Med. red-brown silty sandy layer (SAMPLE) 4" → Lt. brown silty clay layer 6"					2, 1, 380, 30
4)	JL1E	12+05N → Organics 18" No SOIL SAMPLE					
5)	JL1E	12+50N → Organics 18" then rock boulders No SOIL					
6)	JL1E	13+00N → Organics for 12" then water No SOIL					
7)	JL1E	13+50N → Organics 9" then water No SOIL					
8)	JL1E	14+00N → Organics 4" → Lt. grey clay layer 3" → Med. red-brown silty- sandy layer 7"					3, 2, 520, 30

JUNEAU LAKE

SAMPLE#	LOCATION	DESCRIPTION	RESULT			
			Au ppb	Mo ppm	Cu ppm	Hg ppb
9)	JL1E	14+50N → Organics 4" → lt. grey clay 1/2" → lt. brown sandy-pebbly layer & occ. red-brown spots 11"	3,	1,	420,	30
10)	JL1E	15+00N → Organics 6" → lt. grey clay layer 1" → lt. red-brown silty sand layer & lt. grey mottling 9"	42,	1,	520,	20
11)	JL1E	15+50N → Organics 4" → lt. grey clay layer 1" → lt. brown silty sandy pebbly layer & occ. grey mottling 10" - very wet	2,	5,	340,	40
12)	JL1E	15+85N → Organics 18" - No soil				
13)	JL5E	11+00S → Organics 15" then rock boulders.				
14)	JL5E	11+50S → Organics 6" → lt. grey clay 1" → dk. red brown sandy pebbly layer 9" - fairly wet	4,	41,	380,	30

JUNEAU LAKE

SOIL

SAMPLE #	LOCATION	DESCRIPTION	RESULT			
			Au ppb	Mo ppm	Ba ppm	Hg ppb
18)	JLSE	12100S				
		→ Organics				
		→ Lt. grey clay layer				
		→ Dk. red-brown sandy layer				
						<2, <1, 520, 30
10)	JLSE	12150S				
		→ Organics				
		→ Lt. grey clay				
		→ Lt. red-brown silty layer & some darker brown areas				
		→ Boulders				
						3, <1, 540, 40
17)	JLSE	13100S				
		→ Organics				
		→ Lt. grey clay				
		→ Lt. red-brown silty clay & grey mottling				
						<2, <1, 540, 20
18)	JLSE	13150S				
		→ Organics				
		→ Lt. grey clay layer				
		→ Dk. red-brown & some Lt. red-brown mottling (SAMPLE)				
		→ Lt. brown clay layer & cobbles				
						4, 1, 520, 30
19)	JLSE	14100S				
		→ Organics				
		→ Lt. grey clay				
		→ Dk. red-brown silty sandy layer				
		→ lg. Boulder				
						<2, 5, 520, 40

JUNEAU LAKE

SAMPLE #	LOCATION	DESCRIPTION	RESULT			
			Au ppb	Mo ppm	Pb ppm	Hg ppb
20)	JL9E	29100N				
		→ Organics				
		→ Lt. grey clay layer				
		→ Dk. red-brown silty silty pebbly layer				
		→ Boulders.				
			2,	41,	440,	40
21)	JL9E	28150N				
		→ Organics				
		→ Lt. grey clay layer				
		→ Dk red-brown silty clay layer				
			4,	1,	480,	30
22)	JL9E	28100N				
		→ Organics				
		→ Lt. grey silty clay layer				
		→ Dk. red-brown silty clay layer				
			2,	1,	480,	50
23)	JL9E	27150N				
		→ Organics				
		→ Lt. grey silty clay				
		→ Dk. grey-brown silty clay layer & broken rock fragments				
			4,	41,	500,	20
24)	JL9E	27100N				
		→ Organics for 2-1" -NO SOIL SAMPLE				
25)	JL9E	26150N				
		→ Organics for 36" -NO SOIL				
26)	JL9E	26100N				
		→ Organics for at least 36" -NO SOIL				

JUNEAU LAKE

SAMPLE #	LOCATION	DESCRIPTION	RESULT			
			Au ppb	Mn ppm	Ba ppm	Hg ppb
27) JL9E	25+50N	- Organics for 18" then water				
28) JL9E	25+100W	- Organics for 18" then water				
29) JL15E	17+00S	→ Organics 3" → Lt. grey clay layer 3" → Dk. red-brown silty layer 8"	5,	<1,	460,	30
30) JL15E	17+50S	→ Organics 5" → Lt. grey clay layer 3" → Lt. brown silty clay & red-brown mottling 6" → Boulders.	4,	<1,	500,	20
31) JL15E	18+00S	→ Organics 6" → Med grey clay layer 1" → Lt. brown silty clay & red-brown mottling 8"	<2,	<1,	540,	20
32) JL15E	18+50S	→ Organics 6" → Lt. grey clay layer 2" → Med. red-brown silty sandy layer 9"	5,	<1,	540,	40
33) JL15E	19+00S	→ Organics 5" → Lt. grey clay layer 1 1/2" → Dk. red-brown silty sandy layer 8"	4,	<1,	520,	90

JUNEAU LAKE

SAMPLE#	LOCATION	DESCRIPTION	RESULT			
			Au ppb	Mo ppm	Ba ppm	Hg ppb
34)	JL15E 19156S	→ Organics 4" → Lt. grey clay layer 1" → Dk. red-brown silty sandy layer - pebbly near bottom of the pit 10"	16,	1,	480,	50
35)	JL2810W 1170S	→ Organics 5" → Lt. grey clay 1" → Dk. red-brown silty clay layer 10"	3,	2,	440,	80
36)	JL2810W 1150S	→ Outcrop				
37)	JL2810W 1100S	→ Outcrop				
38)	JL2810W 0150S	→ Organics 4" → Lt. grey clay layer 1" → Med brown silty clay ± red-brown mottling & root fragments - very wet 8"	8,	<1,	480,	20
39)	JL2810W 0100S (on B.L. at 2810W)	→ Organics 1" → Lt. grey silty clay 2" → Dk. red-brown silty- sandy layer (SAMPLE) 2" → Lt. brown sandy silt 12"	4,	<1,	400,	20

JUNEAU LAKE.

SAMPLE #	LOCATION	DESCRIPTION	RESULT						
			Au ppb	Mo ppm	Ba ppm	Hg ppb			
40) JL 2810 W	0145N	→ Organics							
		→ Lt. grey silty clay							
		→ Dt. red-brown silty clay layer (SAMPLE)							
		→ Lt. golden brown silty clay							
41) JL 2810 W	0190N	→ Organics							
		→ Lt. grey silty sandy layer							
		→ Dt. red-brown sandy layer							
42) JL 2810 W	1150N	→ Organics 18" thru water No Soil							

<2, <1, 340, 30

<2, <1, 360, 30

SOIL SAMPLES - KETCHIKAN LAKE

①

NOTE: Sample from bottom most layer unless otherwise indicated.
 L50 - S of LAKE.

SAMPLE	LOCATION	DESCRIPTION	RESULT			
			Au ppb	Mo ppm	Ba ppm	Hg ppb
1) JL50	0+00N	→ Organics 3"	4,	<1,	440,	40
		→ lt. grey silty clayey layer 5"				
		→ deep red-brown layer - sandy & pebbly - a little silty. 7"				
JL50	0+50N	OUTEROP.				
2) JL50	0+60N	→ Organics 6"	9,	<1,	440,	50
		→ lt. grey, silty clayey (not an even break between grey & red-brown layer) 4"				
		→ deep red-brown silty layer 6"				
3) JL50	1+00N	→ Organics 3"	3,	<1,	460,	50
		→ very lt. grey-brown mostly silty & a little clay 2"				
		→ red-brown sandy layer - a little silty 10"				
4) JL50	1+55N	→ Organics 2"	2,	<1,	500,	30
		→ lt. grey clay layer - a little silty. 1"				
		→ light red-brown clayey silty layer (SAMPLE) 2"				
		→ light grey-brown clay layer mottled & light red-brown 12"				

KETCHIKAN

L50 S of lake

(2)

SAMPLE	LOCATION	DESCRIPTION	RESULT.			
			Au ppb	Mn ppm	Ba ppm	Hg ppb
5) J L50	2+00N	→ organics 2"	4,	<1,	500,	20
		→ lt. grey silty-clayey layer 2"				
		→ lt. grey clay mottled ± light red-brown clay 8"				
6) J L50	2+50N	→ organics 4"	3,	1,	500,	10
		→ lt. grey clay layer (very fine) 4"				
		→ fairly dark red-brown layer - silty to clayey 6"				
7) J L50	3+00N	→ organics 4"	3,	<1,	500,	20
		→ lt. grey clay layer (very fine) 3"				
		→ light red-brown silty layer (a little clayey) 10"				
8) J L50	3+50N	→ organics 3"	3,	1,	460,	10
		→ v. light grey (almost white) clay layer 4"				
		→ deep red-brown silty-clayey layer & cobbles.				
		→ rock at bottom 2"				

KETCHIKAN

(3)

L50 S of lake

SAMPLE-	LOCATION	DESCRIPTION	RESULT			
			Au PPb	Mo PPm	Ba PPm	Hg PPb
9) JL50	4100N	<ul style="list-style-type: none"> → Organics 3" → Lt. grey (almost white) clay layer 1" → bright orange-brown silty, very pebbly layer 9" 	6,	<1,	400,	10
10) JL50	4150N	<ul style="list-style-type: none"> → Organics 6" → light grey-white clay layer (a little silty) 3" → deep red-brown layer - silty-sandy & very pebbly. 6" 	<2,	1,	480,	20
11) JL50	5100N	<ul style="list-style-type: none"> → Organics 3" → dark grey clay layer - very clayey. 2" → dark grey clay mottled with red-brown clay (mostly dark grey) & a few pebbles. 9" 	3,	<1,	500,	10
12) JL50	5150N	<ul style="list-style-type: none"> → Organics 6" → Med. grey silty clayey layer 2" → med. grey-brown & slight red-brown mottling (mostly silty) 7" 	3,	<1,	500,	30

KETCHIKAN

SOIL

(4)

L50 - South of lake.

SAMPLE - LOCATION

DESCRIPTION

RESULT.
Au Mo Ba Hg
P/b ppm ppm ppb

13) J L50

6100N

- organics 2"
- lt. grey silty layer 1/2"
(very narrow)
- deep red-brown very sandy & pebbly layer 9"

4, 2, 260, 30

14) J L50

6150N

- all organics & boulders 30"
No Soil

15) J L50

7100N

- organics 4"
- lt. grey clay layer 2"
- mottled light brown to dark red brown 4"
- light brown is silty
- red-brown is sandy
(SAMPLE)
- med. grey clay 4"

4, 41, 520, 30

16) J L50

7150N

- organics 5"
- lt. grey-white silty-clayey layer 2"
- light tan brown layer & some pebbles - mostly silty but sandy in some places - also dark brown 3"
- rock at bottom of hole.

5, 2, 480, 30

17) J L50

8100N

- edge of lake - No P/b

SOIL - KETCHIKAN LAKE

(5)

L50 North of Lake & Creek.

SAMPLE	LOCATION	DESCRIPTION	RESULTS			
			Au ppb	Mn ppm	Ba ppm	Hg ppb
1)	JL50 1430N	→ on esker - organics & boulders.				
2)	JL50 2100N	→ organics → dk. brown clayey soil → - very wet (SAMPLE) → Note: no grey layer seen	13"	3"		<2, <1, 500, 20
3)	JL50 2150N	→ organics → dk. brown silty-sandy soil - very wet	13"	7"		3, <1, 520, 20
4)	JL50 2190N	→ organics → thin grey silty layer → grey-brown layer - slight red-brown mottling - silty-sandy. → outcrop at bottom	5"	1/2"	3"	<2, <1, 320, 10
5)	JL50 3160N	→ organics → silty dark-grey brown layer → deep red-brown grey layer - sandy & pebbly → rock at bottom.	6"	4"	3"	<2, <1, 440, 50
6)	JL50 4100N	→ organics → dk. brown layer. silty, fine sand & very wet (SAMPLE) → water at bottom of hole	9"	4"		<2, <1, 460, 20

KETCHIKAN LAKE

⑥

SAMPLE	LOCATION	DESCRIPTION	RESULT			
			Au PPb	Mo PPm	Ba PPm	Hg PPb
7) JL50	4+50N	→ organics 5" → lt grey-brown silty layer 1" → deep red-brown silty-sandy layer 5"	<2	1	440	50
8) JL50	5100N	→ organics 6" → narrow med grey silty layer 1/2" → deep red-brown mottled & a dk. grey & dk. brown -silty-sandy & some pebbles 5" → rock at bottom.	3	3	400	30
9) JL50	5+50N	→ organics 13" → very wet at bottom when rock is hit NO SAMPLE.	/			
10) JL50	6100N	→ organics 6" → silty med. grey layer 3" → dk. brown slightly red sandy soil & small pebbles 4" → rock at bottom.	<2	7	440	30
11) JL50	6+60N	→ organics 12" → very wet & rock at bottom NO SAMPLE	/			

KETCHIKAN LAKE

①

L50 - N of Lake & Creek.

SAMPLE	LOCATION	DESCRIPTION	RESULT.			
			Au ppb	Mo ppm	Ba ppm	Hg ppb
12)	L50	7100N → organics 3" → med. grey-brown, clay & silty layer 1" → red-brown sandy (a little silty) layer & small pebbles 5" → rock at bottom	3,	<1,	440,	30
13)	L50	7150N → organics 5" → med. grey-brown clayey-silty layer 5" → light red-brown sandy (a little silty) layer - slight grey mottling 6"	<2,	<1,	440,	20
14)	L50	8100N → organics 7" → dk brown silty-clay layer & a few pebbles 7" ⇒ no grey layer	2,	<1,	460,	10
15)	L50	8150N → organics 8" → lt. grey-brown tan silty to clayey layer (mottled) 3" → lt. red brown to dark red brown mottled clay to silty layer 8"	2,	<1,	480,	20

KETCHIKAN LAKE

⑤

SAMPLE	LOCATION	DESCRIPTION	RESULT			
			Au ppb	Mo ppm	Ba ppm	Hg ppb
16) JL50	9100N	<ul style="list-style-type: none"> → organics 4" → grey (med.) silty layer 1" → deep red-brown layer - mainly sandy & lots of pebbles. (SAMPLE) 2" → lt. yellow brown mottled & grey very fine clay 11" 				<2, <1, 460, 40
17) JL50	9150N	<ul style="list-style-type: none"> → organics 5" → lt. grey silty layer 4" - very silty → red brown orange pit - very silty 10" 				2, <1, 460, 30
LINE 49E - North of Creek						
→ 18) JL49E	23100S	<ul style="list-style-type: none"> → organics 7" → G.L.L. 2" → Dark red-brown silty sandy pebbly layer 5" → cobbles at bottom 				3, 1, 420, 30
19) JL49E	23150S	<ul style="list-style-type: none"> → organics 7" → G.L.L. 1 1/2" → dk. red-brown silty sandy, lg pebbly layer 6" 				3, <1, 460, 40
20) JL49E	24100S	<ul style="list-style-type: none"> → organics 7" → G.L.L. 2" → mottled dk. red brown & light red brown silty sandy pebbly layer. 6" 				3, <1, 420, 10

KETCHIKAN LAKE SOIL

N. of Creek	Description	Assay Ppb ppm Ba ppm Hg Ppb
21) JL49E - 24+50S	<ul style="list-style-type: none"> → organics 5" → G.L.L. 1" → deep red-brown spots in med. brown silty, sandy, a little pebbly layer - wet. 7" 	3, <1, 420, 30
22) JL49E - 25+00S	<ul style="list-style-type: none"> → organics 4" → G.L.L. 1" → med. red brown silty clay, slightly pebbly 9" 	4, <1, 420, 20
23) JL49E - 25+50S	<ul style="list-style-type: none"> → organics 5" → G.L.L. 2" → narrow band of dk. red brown silty sand slightly pebbly (SAMPLE) 2" → grey silty clay & wisps of lt red-brown silty clay 6" 	3, <1, 380, 10 4, <1, 420, 20
24) JL49E - 26+00S	<ul style="list-style-type: none"> → organics 5" → G.L.L. 1" → mottled dk. red brown & med. red-brown silty fine sandy layer. 8" 	3, <1, 440, 10
25) JL49E - 26+50S	<ul style="list-style-type: none"> → organics 4" → G.L.L. (almost white) 3" → dk. red brown silty sandy, small pebbly layer 6" 	4, 2, 480, 20

KETCHIKAN LAKE

(10)

N. of Creek

SAMPLE#-LOCATION

DESCRIPTION

Au ppb ASSAY.
 mo Cu Hg
 ppm ppm ppb

26) JL49E-27100S.	<ul style="list-style-type: none"> → organics 5" → G.L.L. 1/2" → dk red brown silty, coarse sandy layer & sm. pebbles (SAMPLE) 2" → dk grey-brown silty clay 6" 	4, 4, 420, 20
27) JL49E-27+50S.	→ organics + water - alder swamp.	
28) JL49E-28100S	<ul style="list-style-type: none"> → organics 4" → G.L.L. 1/2" → dk. red brown silty sandy, pebbly layer - a few grey splotches. 12" 	3, <1, 400, 20
29) JL49E-28+50S	<ul style="list-style-type: none"> → organics 2" → G.L.L. 1/2" → dk. red-brown silty sandy pebbly layer 10" 	<2, <1, 320, 20
30) JL49E-29100S	<ul style="list-style-type: none"> → organics 4" → G.L.L. 1" → lt. red-brown silty clay & lt grey clay mottling 10" 	4, <1, 340, 30
31) JL49E-29150S	<ul style="list-style-type: none"> → organics 4" → G.L.L. 1" → dk red-brown silty sandy layer grading into lighter red brown silt (sample from dk red-brown) 12" 	6, <1, 400, 10

KETCHIKAN LAKE

(11)

SAMPLE # - LOCATION	DESCRIPTION	Au ppb Mo ppm Ba ppm Hg ppb ASSAY.
32) JL49E - 30100S N of Creek.	<ul style="list-style-type: none"> → organics 6" → G.L.L. 3" → dk. red-brown silty sandy pebbly layer 6" 	3, 1, 440, 20
<u>JL49E - South of Creek</u>		
33) JL49E - 2100N	<ul style="list-style-type: none"> → organics 4" → G.L.L. 2" → dk. red-brown silty sandy layer & small pebbles 5" → boulders at bottom 	<2, <1, 480, 50
34) JL49E - 2160N	<ul style="list-style-type: none"> → organics 4" → G.L.L. 4" → lt. grey silty clay & dk. red brown silty clay & cobbles 6" 	4, <1, 500, 10
35) JL49E - 3100N	<ul style="list-style-type: none"> → organics 4" → G.L.L. 2" → dk. red brown silty sandy pebbly layer 7" 	4, <1, 320, 20
36) JL49E - 3150N	<ul style="list-style-type: none"> → organics 6" → <u>no.</u> grey layer — → dk. grey-brown silty clay & pebbles & cobbles 8" 	<2, <1, 380, 30

KETCHIKAN LAKE

(12)

SAMPLE# - LOCATION	DESCRIPTION	6"	2"	7"	3, <1, 540, 10
37) JL49E - 4+00N	→ organics → G.L.L. → lt. grey-brown silty clay & dk red brown silty sandy mottling				
38) JL49E - 4+50N	→ organics then o/e No soil.				
39) JL49E - 4+90N	→ organics → G.L.L. → dk. red-brown silty clay & grey brown silty clay mottling	4"	2"	9"	2, <1, 460, 30
40) JL49E - 5+50N	→ organics → G.L.L. → med. red brown silty sandy layer & some pebbles	5"	1/2"	8"	4, <1, 360, 10
41) JL49E - 6+00N	→ organics → lt. grey fine clay & pebbles & lg. cobbles	6"		10"	3, <1, 460, 10
42) JL49E - 6+50N	→ organics for 6-8" then rock.				
43) JL49E - 7+00N	→ organics → G.L.L. → v. light red brown & med red brown fine silty clay & mottling of lt. grey	5"	3"	6"	3, <1, 440, 10

Au ppb Mo ppm Ba ppm Hg ppb
 ASSAY

KETCHIKAN LAKE

Assay
 Au ppb Mo ppm Ba ppm Hg ppb

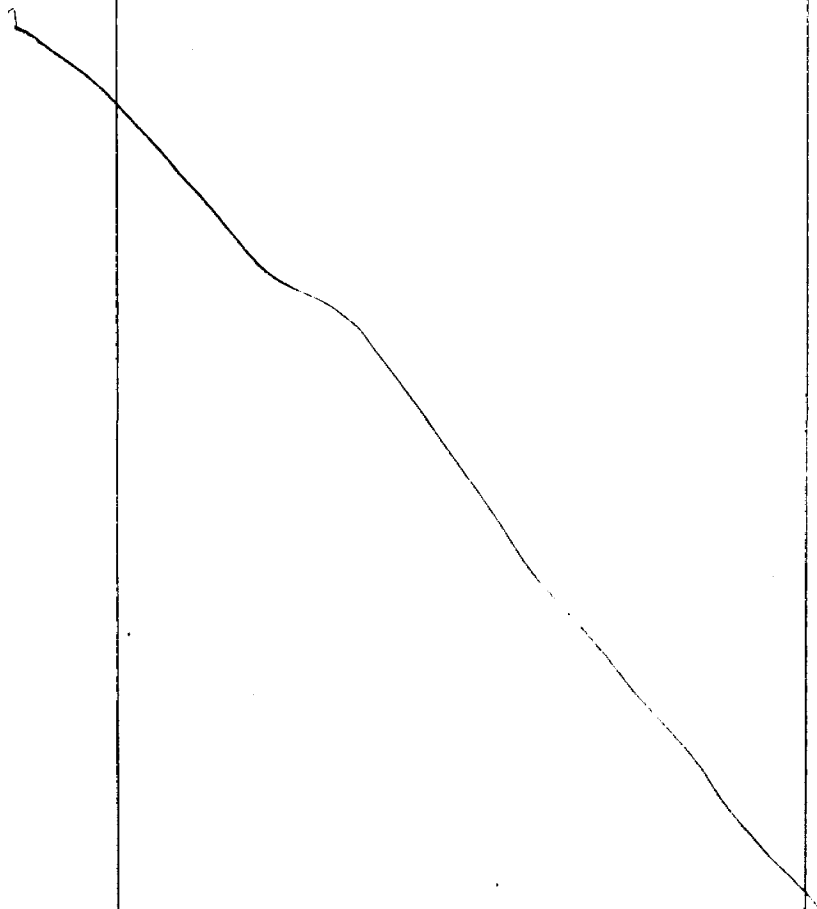
Sample #	Description	
44) JL51-15+00N	- organics 3" - g.l.l. 1" - med. brown → dk. red brown - sandy, mottling (3-6") - med. grey silty clay 4"	
45) JL51-14+15N	- organics 6" - g.l.l. 1/2" - med. & dk. red-brown, (6") silty sandy	
46) JL51-14+00N	- organics 6" - g.l.l. 1" - dk. red. brown & med. red-brown mottled. (4") - med. grey clay layer 3"	
47) JL51-13+50N	- organics 12" - med. grey-brown fine clay (3")	
48) JL51-13+00N	- organics 9" - g.l.l. 2" - med. brown silty-clay layer (4")	
49) JL51-12+50N	- organics 5" - g.l.l. 2" - med. red-brown sandy. (6")	

Sample #	Description	Assay
50) JL51 12+00N	<ul style="list-style-type: none"> - organics - (g.l.l.) dk grey - silty; small pebbles. 	<p>6" 2"</p>
51) JL51 11+00N	<ul style="list-style-type: none"> - organics - g.l.l. - dk. red-brown, silty - sand & few pebbles. 	<p>4" 1" 3"</p>
52) JL51 10+50N	<ul style="list-style-type: none"> - organics - g.l.l. - lt. grey-brown - silty - clay 	<p>6" 2" 4-5"</p>
53) JL51 10+00N	<ul style="list-style-type: none"> - organics - g.l.l. - med. red-brown - v. dk brown spots - silty; cobbles. 	<p>6" 3" 3"</p>
54) JL51 9+50N	<ul style="list-style-type: none"> - organics - g.l.l. - lt. grey-brown - silty, clay - lg. cobbles. 	<p>8" 2" 4"</p>
55) JL51 9+00N	<ul style="list-style-type: none"> - organics - g.l.l. - lt. red-brown - silty, sandy, cobbles - dk red-brown spots. 	<p>6" 1.5"</p>

Sample #	Description	Assay
56) JL51 8150N	<ul style="list-style-type: none"> - organics - lt. grey clay - med. red-brown silty clay, dk brown spots. 	<p>5" 2" <u>9"</u></p>
57) JL51 8100N	<ul style="list-style-type: none"> - organics - g. l. l. - dk. brown clayey layers & slightly lighter mottling & large cobbles. 	<p>5" 1" <u>6"</u></p>
58) JL51 7170N	<ul style="list-style-type: none"> - organics - g. l. l. - lt. grey clay & lt. red-brown clay mottling 	<p>5" 1" 9"</p>
59) JL51 7100N	<ul style="list-style-type: none"> - organics - med. grey silty clay & small white sandy grains. 	<p>10" 6"</p>
60) JL51 6150N	<ul style="list-style-type: none"> - organics - g. l. l. - med. grey-brown silty, slightly sandy. 	<p>5" 4" <u>6"</u></p>
61) JL51 6100N	<ul style="list-style-type: none"> - organics - g. l. l. - med. grey silty clay 	<p>5" 1-2" <u>5"</u></p>

KETCHIKAN LAKE

Sample #	Description	Assay
62) JL51 5150N	<ul style="list-style-type: none"> - organics - g. l. l. - g. l. red brown (11) silty clay 	<p>4"</p> <p>1"</p> <p>(6")</p>
63) JL51 5100N	<ul style="list-style-type: none"> - organics - g. l. l. - very deep red - brown silty sandy soil. 	<p>8"</p> <p>3"</p> <p>(12")</p>



KETCHIKAN LAKE

SAMPLE #	DESCRIPTION		ASSAY
64) JL42-4+0311	<ul style="list-style-type: none"> organics gbb top of basin sandy fine sand 	<ul style="list-style-type: none"> 1' 2' 6' 	
65) JL42-3+0311	<ul style="list-style-type: none"> organics gbb orange brown sandy sandy fine to pebbles 	<ul style="list-style-type: none"> 1' 5' 5' 	
66) JL42-3+0311	<ul style="list-style-type: none"> organics gbb medium and brown orange sandy fine to pebbles 	<ul style="list-style-type: none"> 3' 3' 3' 	
67) JL42-3+0311	<ul style="list-style-type: none"> organics gbb medium and brown sandy fine to pebbles 	<ul style="list-style-type: none"> 1' 1' 1' 	
68) JL42-3+0311	<ul style="list-style-type: none"> organics gbb medium and brown sandy fine to pebbles 	<ul style="list-style-type: none"> 1' 1' 5' 	

KETCHIKAN 1/12/72

SAMPLE #	DESCRIPTION	ASSAY
6) JL42-1450N	<ul style="list-style-type: none"> - organics - g.l. - orange-brown-red - sandy-silty - 10% pebbly (pebbles angular and rounded) 	<ul style="list-style-type: none"> 2" 1" 9"
7) JL42-1400N	<ul style="list-style-type: none"> - organics - g.l. - med brown to med. red-brown - very pebbly (some tabbles) 	<ul style="list-style-type: none"> 4" 1" 7"
71) JL42-0450N	<ul style="list-style-type: none"> - organics - g.l. - red-brown orange - sandy silty - small pebbles 	<ul style="list-style-type: none"> 3" 3" 7"
72) JL42-0400N	<ul style="list-style-type: none"> - organics - g.l. - light orange-brown silty clay - few pebbles 	<ul style="list-style-type: none"> 3" 2" 4"

KETCHIKAN LAKE

SAMPLE #

DESCRIPTION

ASSAY

72) JL48-0+00N

- organics 4"
- g.D. 2"
- light brown to medium (7")
red brown, clay
mottled colour

74) JL48-0+50N

- organics 4"
- g.D. 2"
- light brown (tan) (7")
silty clay
- few pebbles
- slight grey mottling

75) JL48-1+00N

- organics 5"
- g.D. 2"
- dark red brown (6")
silty clay
- lighter colour as you
go deeper

76) JL48-1+50N

- organics 6"
- g.D. 1"
- light red-brown to med (8")
red brown silty clay
- slight mottling
- little sand

77) JL48-2+00N

- organics 5"
- g.D. 2"
- med. brown silty clay (4")
- slight red mottling
- pebbles
- iron at bottom

KETCHIKAN

SAMPLE #	DESCRIPTION	ASSAY
7) JL48-2450N	- organics 4" - g.D. 3" - light red brown to dark red-brown silt - slight mottling (6")	
7) JL48-3400N	- organics 4" - g.D. 3" - light tan to light red-brown to med. red-brown silty clay - mottled throughout (6")	
8) JL48-3450N	- organics 5" - g.D. 3" - deep red-brown silty sand - a lot of pebbles (7")	
8) JL48-4000N	- organics, tan brown clay 8" - g.D. 1" - light brown/tan silt (white clay) (5") - a lot of pebbles	
8) JL48-4500N	- organics 4" - g.D. 1" - mottled light brown to med. brown-grey silty clay - slightly sandy pebbles (6")	
8) JL48-5000N	- organics 5" - g.D. 1" - light brown tan silty sand - pebbles, whibbles (6")	

ASSAY

L39 soil and humus -
(north of creek).

SAMPLE #	DESCRIPTION	ASSAY
JL 39 24+00N	<ul style="list-style-type: none"> - organics - g.l.l. - dark brown-red layer - sandy, little silt 	(5") 2" (6")
JL 39 23+50N	<ul style="list-style-type: none"> - organics - g.l.l. - mottled light brown (tan) and medium red-brown silty sandy layer - pebbly 	(5") 3" (5")
JL 39 23+00N	<ul style="list-style-type: none"> - organics - g.l.l. - med. red-brown silty sand - slight tan mottling 	(5") 1" (9")
JL 39 22+50N	<ul style="list-style-type: none"> - organics - g.l.l. - med. red-brown silty-sandy layer - gradually gets lighter in colour (yellow brown) at bottom of hole 	(3") 1" (11")
JL 39 22+00N	<ul style="list-style-type: none"> - organics - g.l.l. - med. red-brown silty-sandy layer - gradually changes to a yellow-brown at the bottom of the hole 	(6") 2" (6")

L39
-soil and humus

SAMPLE #	DESCRIPTION	ASSAY
JL 39 21+50N	- organics - g.l.l. - red. brown (slightly red) silty - fine sand layer - grey mottling near the bottom of the hole	(4") 2" (9")
JL 39 21+00N	- organics - g.l.l. - silty clay with dark brown layer - slight red mottling - water at bottom	(12") 1" (2")
JL 39 20+50N	- organics - water at bottom.	(15")
JL 39 20+00N	- organics - water at bottom.	(3")

L44 - soil

SAMPLE #	DESCRIPTION	ASSAY
JL 44 5+00S	<ul style="list-style-type: none"> - organics - g.l.l. - dark red-brown sandy and silty layer - few pebbles 	6" 2" <u>5"</u>
JL 44 5+50S	<ul style="list-style-type: none"> - organics - g.l.l. - med. to dark red-brown sandy silty layer - pebbly (sub ang. to sub rounded) 	5" 1" <u>7"</u>
JL 44 6+00S	<ul style="list-style-type: none"> - organics - g.l.l. - med. red-brown to dark red-brown mottling in silty sand - pebbles (sub ang. to sub. round) 	5" 2" <u>6"</u>
JL 44 6+50S	<ul style="list-style-type: none"> - organics - g.l.l. - red-brown to light yellow brown mottling in silty sand - pebbly (sub angular) 	5" 1" <u>10"</u>
JL 44 7+00S	<ul style="list-style-type: none"> - organics - g.l.l. - med. red brown sand - pebbles and cobbles (sub. ang. to sub. rounded) 	6" 1" <u>7"</u>
JL 44 7+50S	<ul style="list-style-type: none"> - organics - g.l.l. - dark red-brown silt - pebbly sub ang. to sub rounded 	8" $\frac{1}{2}$ " <u>5"</u>

L44 soil

SAMPLE#	DESCRIPTION	ASSAY.
JL 44 8+00S.	- organics - g.l.l. - orange-red-brown silty clay gradually gets lighter to a yellow brown at bottom of hole, few pebbles.	5" 3" (6)
JL 44 8+50S	- organics - g.l.l. - dark red-brown silt - slightly sandy - a lot of pebbles sub. ang. to sub rounded	7" 1/2" (8)
JL 44 9+00S	- organics - g.l.l. - med red-brown silty- fine sand - pebbles (sub. ang. to sub rounded)	5" 2" (5)
JL 44 9+50S	- organics - g.l.l. - med. red-brown-orange silty clay - slight tan mottling	5" 1" (8)
JL 44 10+00S	- organics - g.l.l. - light red-brown silty clay lighter colored (tan) at bottom of hole.	5" 1" (9)

245 - soil

SAMPLE #	DESCRIPTION	ASSAY
JL 45 4+10 N	<ul style="list-style-type: none"> - organics - g.l.l. - mottled light brown to dark red-brown sandy silt - pebbly - rock at bottom 	4" 2" (3)
JL 45 3+50 N	<ul style="list-style-type: none"> - organics - g.l.l. - mottled dark brown-grey, and light brown red silty clay. 	7" 1" (5)
JL 45 3+00 N	<ul style="list-style-type: none"> - organics - g.l.l. - dark brown silty layer - slight red mottling - some pebbles 	6" 1" (6)
JL 45 2+50 N	<ul style="list-style-type: none"> - organics - no grey layer - dark brown silty - fine sand - rock at bottom 	6" (5)
JL 45 2+00 N	<ul style="list-style-type: none"> - organics - g.l.l. - dark brown-red silt - slightly sandy - slight grey mottling 	5" 2" (5)

L45 - soil

SAMPLE #	DESCRIPTION	ASSAY.
JL 45 1450N	<ul style="list-style-type: none"> - organics - g. sil. - light brown silty clay - pebbles, cobbles - subrounded 	<p>7" 1" <u>5"</u></p>
JL 45 1400N	<ul style="list-style-type: none"> - organics g. sil. no grey layer - light brown - grey silty clay, no pebbles - outcrop at bottom 	<p>12" <u>2"</u></p>
JL 45 0400N	<ul style="list-style-type: none"> - organics - no grey layer - dark brown grey silty clay 	<p>11" <u>3"</u></p>

Ketchikan L. Soil Samples

Sample	Location	Description	Results
JL66E	21+00S	Organics - 5" G.L.L. - 1/2" Red-brn sandy, pebbly cobbly till - 6"	
JL66E	21+50S	Organics - 9" Water with golden brown micaceous soil - ?	
JL66E	22+00S	Organics - 7" Grey sandy, pebbly layer - 6" outcrop	
JL66E	22+50S	Organics - 4" Cobble layer - 1" Red-brn, sandy, pebbly, layer - 2" Lt brn sandy, pebbly layer - 4"	
JL66E	23+00S	Organics - 3" Red-brn, silty sandy, pebbly layer - 7" Silty, grey layer - 4"	
JL66E	23+50S	Organics - 3" Lt brn, silty, sandy, boulder layer - 9"	
JL66E	24+00S	Organics - 4" Lt grey fine sandy, cobbly layer - 2" Red-brn sandy, pebbly layer - 9"	

Ketchikan L. Soil samples

Sample	Location	Description	Results
JL66E	24+50S	Organics - 4" Lt grey silty sand - 2" Red-brn sandy, pebbly, cobbly layer - 8"	
JL66E	25+00S	Organics - 5" Red-brn sandy layer - 1" Lt-brn sandy, pebbly cobbly layer - 6"	
JL66E	25+50S	Organics - 3" G.L.L. - 1" Red-brn sandy, pebbly layer - 2" Yell-brn silty, sandy, pebbly layer - 8"	
JL66E	26+00S	Organics - 4" Red-brn sandy, bouldery layer with grey silty sand - 9"	
JL7IAE (line made for soil sampling)	1+00N	Organics - 7" Lt grey sandy, pebbly layer - 3" Red-brown coarse sandy, cobbly layer - 6"	
JL7IAE	0+50N (pit on side of %c)	Organics - 9" Grey, sandy, pebbly layer - 2" Red-brn sandy, cobbly layer - 3"	
JL7IAE	0+00	Organics - 4" Lt-brn sandy, cobbly layer - 4"	
JL7IAE	2+00N	Organics - 3"	
	1+00N	Organics - 15"	

Ketchikan L. Soil Samples

Sample	Location	Description	Results
JL71AE	0+50S	Organics -7" G.L.L. -2" Red-brn sandy, pebbly layer -4"	
JL71AE	1+00S	Organics -3" G.L.L. -1/2" Red-brn fine sandy, cobbly layer -9"	
JL71AE	1+50S	Organics -4" Mixed red-brn to lt grey silty sand -8"	
JL71AE	2+00S	Organics -6" Lt-brn silty, pebbly, cobbly layer -6"	
JL71AE JL69E	6+00N	Organics -3" Grey silty sand -2" Red-brn sand -3" Bedrock - granite	
JL69E	6+50N	Organics -7" Mixed lt grey sandy & brown sandy, cobbly layer -4"	
JL69E	7+00N	Organics & water No soil	
JL69E	7+50N	Organics & water No soil	
JL69E	8+00N	Organics -5" lt grey silty, sand -1" Red-brn to yell-brn sandy, pebbly layer -8"	
JL69E	8+50N	Organics -4" G.L.L. Cobble -2" Red-brn sandy, pebbly layer -5"	

Ketchikan L. Soil Samples

Sample	Location	Description	Results
JL69E	9+00N	Organics - 5" Grey sandy layer - 3" Red-brn sandy, cobbly layer - 3"	
JL69E	10+00N	Organics - 4" G.L.L. - 1" Red-brn sandy, pebbly, cobbly layer - 4"	
JL69E	10+50N	Organics - 2" Lt grey silty, sandy, pebbly layer - 3" Red-brn sandy, pebbly layer - 4"	
JL69E	11+00N	Organics - 3" Grey-brn silty sand - 3" Red-brn sandy layer - 4"	
	9+50N	Organics - 1" G.L.L. - 1/4" Red-brown sandy layer - 1 1/2" Yellow-brown sandy layer - 8"	

Ketchikan L.

Esker Pits

Pit # 1

100 ft from end of T.L. (117+50) in direction
of 66°

- Organics 2-2½"
- lt grey clay layer 2"
- med. rd-bn silty-sandy
pebbly, cobbly soil (EP-100)
- ~~wa.~~ ~~pebbles~~ pebbles, cobbles + boulders 8"
- ~~wa.~~ size range varies from ½" to 10"
avg size 2"-3"
- at 15" deep - very pebbly layer
(¼" to 2") - med-coarse sand
layer + cobbles + boulders (EP-101) 21"
- med. brown
- pebbles, cobbles are subrounded,
subangular
- no preferred orientation
recognized
- no sorting

Ketchikan L.

Esker Pits

Pit #2.

@ TL 114.50 ~ 20' south of TL

- Organics 3-5"
- lt. grey clay layer 1 1/2"
- med. rd-brn fine silt (SAMPLE EP-200) 12"
 - very pebbly & cobbly
 - pebbles & cobbles subrounded & vary in size & shape (1" to 1 ft)
 - mean size 3-4"
 - some angular
- med. gry-brn sandy (fine - coarse) with cobbles & pebbles 20"
 - subang. - subrounded
 - no specific orientation or sorting

Ketchikan L.

Esker Pits

Pit # 3

100 ft north of T.L. 110100E

- Organics 2-3"
- lt. grey clay layer 1/2"
- dk. red-brn silty, fine sandy, slightly pebbly (EP-300) 2"
- lt. red-brown silty, fine sand (EP-301)
 - slightly pebbly
 - increase in no. of pebbles 20" downward
- lt red-brn coarse sand with pebbles (1/4"-2")
 - cobbles (2"-5") + boulders (10")
 - gets greyer towards bottom of pit (EP-302)

JOY LAKE SOIL

①

→ circle indicates layer sampled.

SAMPLE/LOCATION		DESCRIPTION	ASSAY
			As ppm Mo ppm Ba ppm Hg ppm
<u>L13W - NORTH OF T.L.</u>			
1)	L13W 4+50N	→ organics 4" → G.L.L. 2" → Lt. red-brown silty-sandy pebbly layer & cobbles (8")	<2, <1, 400, 10
2)	L13W 4+45N	→ Organics 3" → G.L.L. 4" → Dk red-brown fine silty layer - some cobbles. (4")	<2, <1, 500, 10
3)	L13W 4+00N	→ Organics 3" → G.L.L. 4" → Lt. golden brown silty fine, sandy layer & small pebbles (6")	<2, <1, 480, 10
4)	L13W 3+50N	→ Organics + boulders for 18" No soil	
5)	L13W 3+00N	→ Organics 9" → G.L.L. 1/2" → Grey-brown silty clay layer (6")	<2, <1, 480, 10
6)	L13W 2+50N	→ Outcrop	
7)	L13W 2+25N	→ Organics 8" → G.L.L. 1/2" → V. dk red brown fine to coarse sand & pebbles (5")	<2, <1, 360, 10

JOY LAKE SOIL

(2)

SAMPLE #	LOCATION	DESCRIPTION	ASSAY				
			Au PPB	Mo PPM	Ba PPM	Hg PPB	
8)	L13W 1190N	organics for 24" NO SOIL					
	L15W	NORTH OF T.L.					
9)	L15W 16150N	→ organics → G.L.L. → dk red-brown silty sandy pebbly layer w some pebbles	8"				
			1"				
			(5")	3,	<1,	4.00,	10
10)	L15W 16100N	→ organics → yellow lt grey silt amongst lg rock boulders	6"				
			(11")	8,	<1,	560,	10
11)	L15W 15150N	→ organics → G.L.L. → grey-brown fine silty fine sandy layer w some pebbles → Rock at bottom	2" 6"				
			(6")	<2,	<1,	540,	410
12)	L15W 15100N	→ organics → lt. grey, slightly brown silty clay layer w pebbles	5"				
			(8")	<2,	<1,	520,	<10
13)	L15W 14150N	→ organics → G.L.L. → lt grey-brown silty clay layer → Rock at bottom	4"				
			(7")	4,	<1,	560,	<10

Joy LAKE - SOIL

(3)

SAMPLE #/LOCATION				Au ppb	Mo ppm	Ba ppm	Hg ppm
14)	L15W	14100N	→ organics → G.L.L. → med-brown silty clay & some lt. grey silty clay spots	4" 4" (8")			<2, <1, 540, <10
15)	L15W	13150N	→ organics → G.L.L. → med. grey-brown silty clay & some dker brown mottling	3" 2" (7")			4, <1, 540, <10
16)	L15W	12190N	→ organics → G.L.L. → lt. brown silty slightly clayey layer	4" 2" (10")			<2, <1, 500, <10
	L15W	- SOUTH OF T.L.					
17)	L15W	01400S	→ organics → G.L.L. → med red-brown silty sandy layer	3" 4" (5")			<2, <1, 480, 10
18)	L15W	0150S	→ organics → No G.L.L. → dk red-brown fine silt & pieces of rock throughout	11" (3")			7, <1, 360, 30

JOY LAKE - SOIL

(4)

SAMPLE #	LOCATION	DESCRIPTION	DEPTH	ASSAY				
				Au ppb	Mo ppm	Ba ppm	Hg ppb	
19)	L15W	1+00S	→ Organics	3"	2	41	300	20
			→ G.L.L.	1'				
			→ Dk red-brown fine silty sand.	(2")				
			→ Lt grey-brown fine silty clay	4"				
20)	L15W	1+50S	→ Organics	6"	9	41	480	30
			→ G.L.L.	2'				
			→ dk. red-brown silty sandy layer	(3")				
			→ Lt. grey-brown fine silty clay.	3"				
			→ Rock AT BOTTOM.					
21)	L15W	2+18S	→ Organics	3"	6	1	460	10
			→ dk grey-brown silty sandy pebbly layer	(10")				
			→ Rock.					
22)	L15W	2+60S	→ Organics	5"	2	41	500	20
			→ G.L.L.	3"				
			→ Dk red-brown silty fine sandy pebbly layer	(5")				
			→ Boulders AT BOTTOM.					
23)	L15W	3+05S	→ Organics	5"	2	41	500	20
			→ G.L.L.	2"				
			→ Dk red-brown silty sandy pebbly layer	(6")				

Joy LAKE - SOIL

(5)

SAMPLE #	LOCATION	DESCRIPTION	DEPTH	ASSAY			
				Au ppb	Mo ppm	Ba ppm	Hg ppb
24)	L15W 3150S	→ organics → G.L.L. → Dk red-brown silty coarse sandy pebbly layer	5" 1" (6")				2, <1, 400, 10
	L17W - SOUTH OF T.L.						
25)	L17W 27+50N	→ organics → G.L.L. → Lt. red brown silty sandy layer	3" 3" (6")				<2, <1, 540, 20
26)	L17W 28+00N	→ organics → G.L.L. → Dk red brown silty clay layer → gets lighter as you go down but no strict boundary	3" 1" (14")				<2, <1, 540, 10
27)	L17W 28+50N	→ organics → G.L.L. → Dk red-brown silty fine sandy clay	4" 5" (9")				<2, <1, 540, 30
28)	L17W 29+00N	→ organics → G.L.L. → Lt grey brown silty clay & abundant cobbles → lots of rocks at bottom	10" 2" (1")				<2, <1, 540, <10

Joy LAKE - SOIL

SAMPLE #	LOCATION	DESCRIPTION	DEPTH	ASSAY				
				Au ppb	Mo ppm	Ba ppm	Hg ppb	
29)	L17W	29+50N → organics	5"	8)	<2,	<1,	520,	30
		→ G.L.L.	4"					
		→ Mottled dk red brown # light grey brown silty clay layer						
30)	L17W	30+00N → organics	10"	4)	3,	1,	340,	20
		→ G.L.L.	2"					
		→ Dk. grey. brown silty sand						
		→ Rock at bottom						
31)	L17W	30+50N → organics	7"	5)	3,	<1,	480,	<10
		→ G.L.L.	3"					
		→ Dk grey silty clay + abundant cobbles & pebbles. → Rocky AT BOTTOM.						
L18W - NORTH OF T.L.								
32)	L18W	11+20S → organics	6"	6)	<2,	<1,	480,	40
		→ G.L.L.	2"					
		→ Dk. red brown silty sand - mottled dk & ltr. red brown - lighter stuff is silty clay						

Joy Lake - Soil

⑦

SAMPLE #/LOCATION			DESCRIPTION		Au ppb	Mo ppm	ASSAY Ba ppm	Hg ppb
33)	L18W	10+70S	→ organics → G.L.L. → Dk. red brown silty sandy clay - gets lighter nearer bottom	8" 4" ④				<2, <1, 420, 20
34)	L18W	10+30S	→ organics → G.L.L. → Dk. red - brown silty sandy clay becoming lighter red brown silty clay towards bottom	5" 2" ⑤				3, <1, 400, 30
35)	L18W	9+70S	→ organics & boulders for 12"					
36)	L18W	9+20S	→ organics & boulders for 12"					
37)	L18W	9+00S	→ organics 14", boulders, wet.					
L19W - SOUTH OF T.L.								
38)	L18W L19W	8+00S	→ organics → G.L.L. → Med. red - brown silty clay.	3" 3" ⑦				<2, <1, 520, 20
39)	L19W	8+50S	→ organics → G.L.L. → Med. red - brown silty clay.	3" 5" ⑥				<2, <1, 540, 20

JOY L. SOIL

SAMPLE #	LOCATION	DESCRIPTION	ASSAY			
			Au ppb	Mo ppm	Ba ppm	Hg ppb
40)	L19W	9+00S → organics 4" → G.L.L. 1" → Dk-brown silty clayey layer (7") → Rock AT BOTTOM	6,	<1,	540,	20
41)	L19W	9+50S → organics 5" → G.L.L. 3" → red-brown silty sandy layer & small pebbles - some lt. brown mottling (4") → Boulders AT BOTTOM	11,	<1,	280,	10
42)	L19W	10+10S → organics 4" → lt grey fine silty clay & faint mottling of lt brown (13")	<2,	<1,	580,	<10
43)	L19W	10+50S → organics 1" → G.L.L. 2" → dk red brown slightly sandy silty clay → golden brown in spots (7") → Rock.	<2,	<1,	520,	20
44)	L19W	11+00S → organics 2" → G.L.L. 5" → dk red-brown silty clay (7")	<2,	<1,	520,	10

JOY L. SOIL

SAMPLE# / LOCATION	DESCRIPTION	ASSAY			
		Au ppb	Mo ppm	Ba ppm	Hg ppb
45) L19W 11+60S	→ organics → G.L.L. → med. brown, silty sandy pebbly layer	8'			
		1/2'			
		(6')	3,	<1,	420, <10
46) L19W 12+00S	→ organics & boulders.				

Joy L. Soil Samples

Sample	Location	Description	Results			
			Au PPb	Mo PPm	Ba PPm	Hg PPD
L30W	18+50S	Organics - 5" Lt brown silty, sandy pebbly, cobbly till - 4"	3	<1	520	<10
	19+00S	Organics - 2" Red-brown fine sandy, pebbly till - 11"	<2	1	380	10
	19+50S	Organics - 3" Lt brown pebbly, bouldery till - 6"	3	<1	500	10
	20+00S	Organics - 3 1/2" Red-brown sandy, pebbly till - 4" Rock at bottom	3	<1	520	10
	20+50S	Organics - 13" Rock at bottom No soil				
L31W	1+00N	Organics - 2" Lt grey, silty layer - 3"				
	1+00N	Red-brown sandy, pebbly, cobbly till - 6"	2	2	460	20
	1+50N	Organics - 3" Lt grey silty, sand - 1" Red-brown sandy layer - 1 1/2" Yellow-brown & grey silty sand - 4"	<2	<1	520	10
	2+00N	Organics - 3" Lt grey silty clay - 3" Red-brown sandy pebbly till - 9"	<2	<1	520	30

Joy L. Soil Samples

Sample	Location	Description	Results			
			Au ppb	Mn ppm	Ba ppm	Hg ppb
L31W	2+50N	Organics - 4" Lt grey silty, sand - 2" Red-brown fine sandy layer - 2" Yellow-brown silty sand - 4"	<2	<1	520	20
	3+00N	Organics - 2" Red-brown fine sandy layer - 1" Lt. brown silty, sandy layer - 8"	2	<1	520	20
	3+50N	Organics - 5" Red-brown sandy, pebbly till - 9" Rock at bottom.	<2	1	520	20
L36W	2+50N	Organics - 6" Dark grey fine sandy layer - 1" Red-brown sandy, pebbly layer - 6"	<2	<1	500	10
	3+00N	Organics - 2" Lt. grey silty sand - 1 1/2" Red-brown sandy layer - 2" Yellow-brown fine sandy layer - 5"	3	<1	480	40
	3+50N	Organics - 4" Lt. grey silty, sand layer - 1" Red-brown sandy layer - 1" Mixed yellow brown & lt. grey silty sand - 7"	<2	<1	480	10

Joy L. Soil Samples

Sample	Location	Description	Results			
			Au ppb	Mo ppm	Ba ppm	Hg ppb
L36W	4+00N	Organics - 5" Lt. grey fine sand - 1" Red-brown sandy, pebbly till - 5"	3,	1,	500,	30
	4+50N	Organics - 4" Lt. grey silty sand - 2" Red-brown sandy, pebbly till - 6"	<2,	<1,	520,	40
	5+00N	Organics - 5" Lt. brown silty, clay, cobble layer - 4" Lt. grey silty clay - 4"	4,	<1,	560,	20
	5+50N	Organics - 3" Lt. grey sandy, cobble layer - 2" Red-brown sand - 2" Yellow-brown silty sand - 5"	4, 2,	<1, <1,	560, 500,	20 20
L37W	3+50N	Organics - 5" Lt. grey silty sand - 1" Red-brown sandy, pebbly till - 5" Rock at bottom	<2,	<1,	520,	40
	4+00 N	Organics - 2" Boulders & lt. brown silty clay - 12"	<2,	<1,	540,	10
	4+50N	Organics - 8" Lt. grey silty, pebbly, layer - 1/10" Rock at bottom	2,	<1,	500,	40
	5+00N	Organics - 2" Lt. brown fine sandy, pebbly layer - 11"	<2,	<1,	540,	10

Joy L. Soil samples

Sample	Location	Description	Results			
			Au ppb	Mo ppm	Ba ppm	Hg ppb
L37W	5+50N	Organics - 4" Red-brown sandy, pebbly till - 4" Rock at bottom	3	<1	440	40
	4+00N	Organics - 2" Boulders + H. brown silty clay - 12"				
	6+00N	Organics - 2" Medium grey silty sand - 1" Rich Red-brown sandy, pebbly layer - 6"	3	2	380	60
	6+50N	Organics - 4" Rich red-brown sandy, pebbly layer - 10"	<2	3	480	40
	7+00N	Organics - 8" Rock at bottom				
	7+50N (next to %)	Organics - 5" Medium-grey sandy, pebbly layer - 2" Red-brown sandy, pebbly, cobbley till - 5"	3	1	480	20

ONTARIO

QUE.

TORONTO LAKE PROJECT
CLAIMS

THUNDER BAY

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TORONTO
HAMILTON

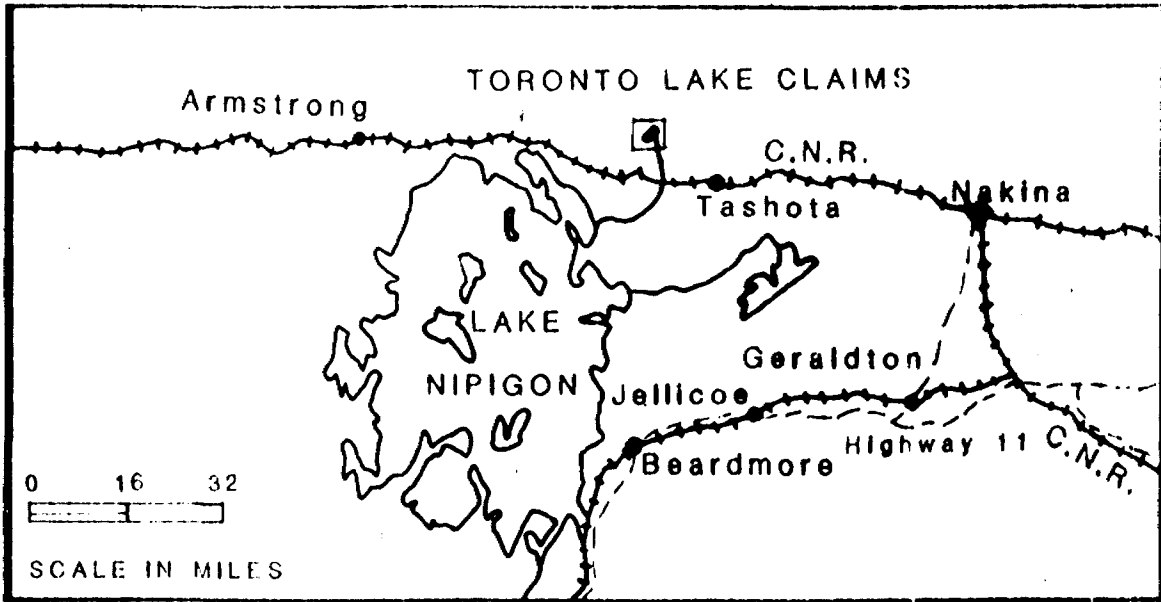
KEY MAP

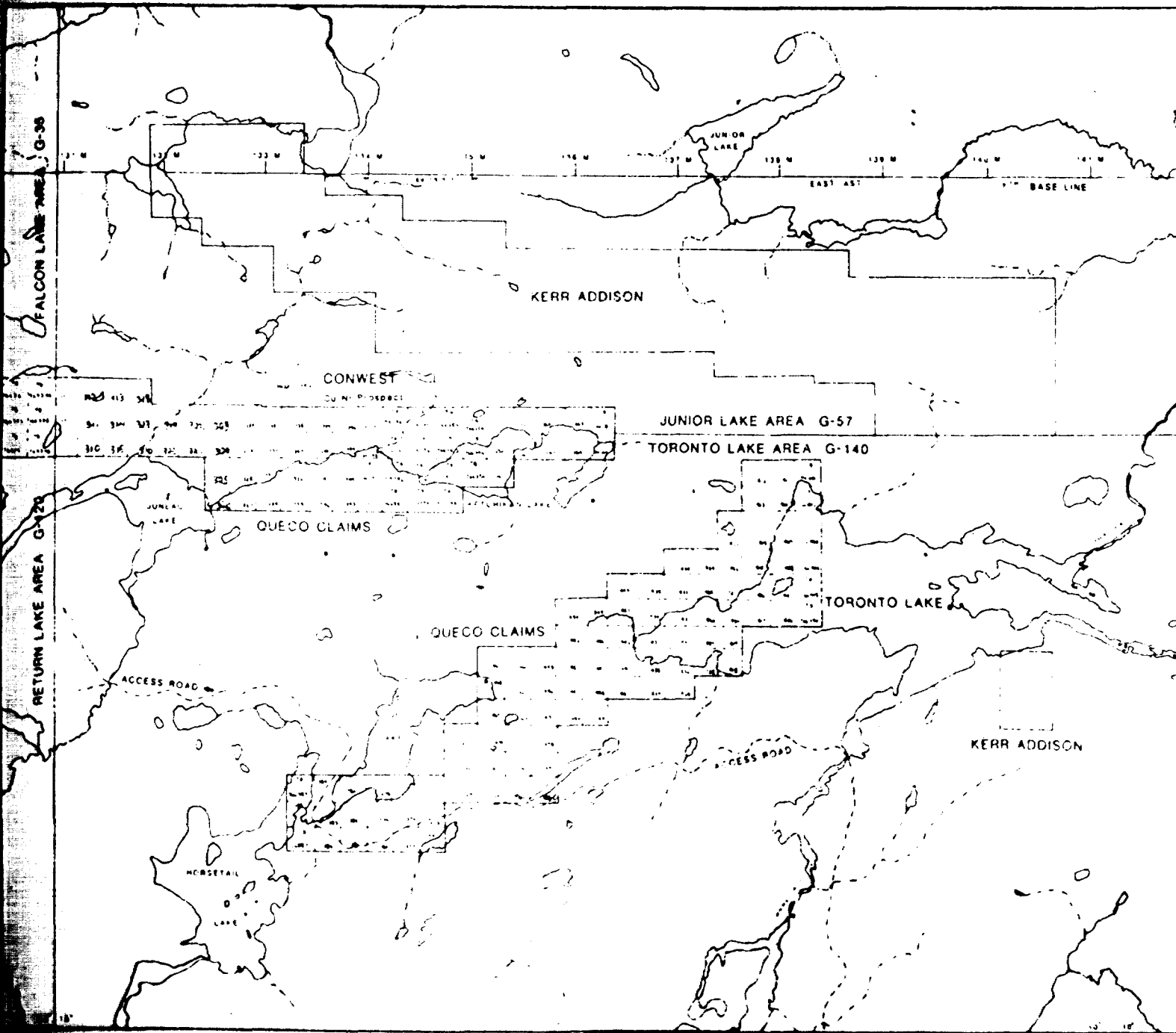


NOT TO SCALE

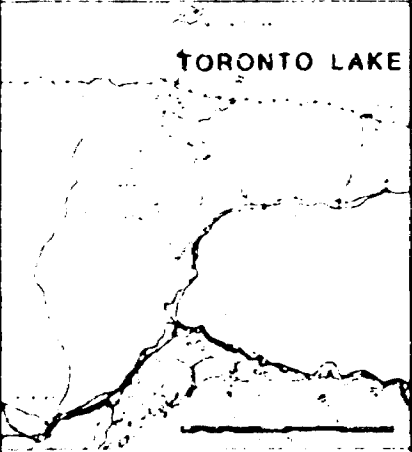


LOCATION MAP





KEY MAP



N.T.S. 42.5 34.8

**QUEBEC COBALT
AND EXPLORATION LIMITED**

TORONTO LAKE PROJECT

PROPERTY MAP

SCALE IN FEET

HE NEAL AND ASSOCIATES LTD
PUNTSI CANADA

DRAWN BY: [] DATE: []



52108NE0004 2.7916 FALCON LAKE

900

2.7916

File No ~~20169~~

Mining Lands Section

Control Sheet

TYPE OF SURVEY GEOPHYSICAL
 GEOLOGICAL
 GEOCHEMICAL
 EXPENDITURE

MINING LANDS COMMENTS:

L.D.
[Handwritten signature]

Signature of Assessor

Date



Report of Work
(Geophysical, Geological,
Geochemical and Expenditures)

LAND MANAGEMENT

52
File 2.7916
766368
Mining Act

Instructions: - Please type or print.
- If number of mining claims traversed exceeds space on this form, attach a list.
Note: - Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
- Do not use shaded areas below.

Mar. 23

Type of Survey(s) SURFICIAL GEOLOGY	Township or Area TORONTO LAKE AREA
Claim Holder(s) QUEBEC COBALT AND EXPLORATION LIMITED	Prospector's Licence No. T 1450
Address 401350 BAY STREET, TORONTO, ONTARIO M5E 2T7 <i>1500 W. DEMARSONNEBE Blvd Montreal, Que. H3G 1N1</i>	
Survey Company H.E. NEAL & ASSOCIATES LTD.	Date of Survey (from & to) Day Mo. Yr. Day Mo. Yr. 01 06 84 31 08 84
Name and Address of Author (of Geo-Technical report) CAROLYN HORNER, % H.E. NEAL & ASSOC. LTD 606-55 QUEEN ST. E., TORONTO, ONTARIO M5C 1R6	

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
For each additional survey: using the same grid: Enter 20 days (for each)	- Other	
	Geological	20
	Geochemical	

Man Days	Geophysical	Days per Claim
Complete reverse side and enter total(s) here	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Airborne Credits	Geophysical	Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim		Expend. Days Cr.	Mining Claim		Expend. Days Cr.
Prefix	Number		Prefix	Number	
JB					
* see attached sheet					
RECEIVED					
FEB 05 1985					
MINING LANDS SECTION					

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures ÷ =

Total Days Credits

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Total number of mining claims covered by this report of work. **84**

For Office Use Only

Total Days Cr. Recorded 1680	Date Recorded Jan. 23 1985	Mining Recorder Audrey M. Hayes
Date Approved as Recorded	Branch Director	

Date **Jan. 18/85** Recorded Holder or Agent (Signature) **Carolyn Horner**

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying
CAROLYN HORNER, % H.E. NEAL & ASSOC. LTD. 606-55 QUEEN ST. E. TORONTO, ONTARIO M5C 1R6

Date Certified **Jan. 18/85** Certified by (Signature) **Carolyn Horner**

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LAND MANAGEMENT

Mar 25th



Report of Work
(Geophysical, Geological,
Geochemical and Expenditures)

51

File
715799 27916
Mining Act

- Instructions: - Please type or print.
- If number of mining claims traversed exceeds space on this form, attach a list.
Note: - Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
- Do not use shaded areas below.

Type of Survey(s) SURFICIAL GEOLOGY	Township or Area JUNIOR LAKE FALCON LAKE, RETURN LAKE TORONTO LAKE
Claim Holder(s) QUEBEC COBALT AND EXPLORATION	Prospector's Licence No. T1450
Address c/o McDougall, Lemay 1560 W. Desai sonneube Blvd. Montreal, Quebec 408-2387 BAY STREET, TORONTO, ONT. M5E 2T1 #36 IN1	
Survey Company H.E. NEAL & ASSOCIATES LTD.	Date of Survey (from & to) 01 Day 06 Mo. 84 Yr. Day Mo. Yr.
Name and Address of Author (of Geo-Technical report) CAROLYN HORNER, c/o H.E. NEAL & ASSOC. LTD 606-55 QUEEN ST. E., TORONTO, ONT. M5C 1R6	

Credits Requested per Each Claim in Columns at right			Mining Claims Traversed (List in numerical sequence)					
Special Provisions	Geophysical	Days per Claim	Mining Claim		Expend. Days Cr.	Mining Claim		Expend. Days Cr.
			Prefix	Number		Prefix	Number	
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic							
	- Magnetometer							
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric							
	- Other							
	Geological	20						
	Geochemical							
Man Days Complete reverse side and enter total(s) here	Geophysical	Days per Claim						
	- Electromagnetic							
	- Magnetometer							
	- Radiometric							
	- Other							
	Geological							
	Geochemical							
Airborne Credits Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	Days per Claim						
	Magnetometer							
	Radiometric							

RECEIVED

FEB 05 1985

MINING LANDS SECTION

See reversal work statements

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures \$ ÷ 15 = Total Days Credits

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Total number of mining claims covered by this report of work. **72**

Date **Jan. 18/85** Recorded Holder or Agent (Signature) *Carolyn Horner*

For Office Use Only

Total Days Cr. Recorded **1440** Date Recorded **Jan. 23/85** Mining Recorder *Audrey M. Hayes*

Date Approved as Recorded **1440** Branch Director *X*

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying
**CAROLYN HORNER, c/o H.E. NEAL & ASSOC. LTD, 606-55 QUEEN ST. E.
TORONTO, ONTARIO M5C 1R6**

Date Certified **Jan 18/85** Certified by (Signature) *Carolyn Horner*

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TB 715800

total ~~75~~ 72

LAND MANAGEMENT



Report of Work
(Geophysical, Geological,
Geochemical and Expenditures)

202-8168
2.7916

File 715792

Mining Act

- Instructions: - Please type or print.
- If number of mining claims traversed exceeds space on this form, attach a list.
Note: - Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
- Do not use shaded areas below.

July 6, 1985

Type of Survey(s) **GEOCHEMICAL** Township or Area **Falcon Lk (G35)**
 Claim Holder(s) **QUEBEC COBALT AND EXPLORATION LIMITED** Return Lk **(G120)** Toronto Lk **(G309)**
 Address **401-357 BAY ST., TORONTO, ONTARIO M5E 2T7** Junior Lk **(G57)** License No. **T1450**
 Survey Company **H.E. NEAL & ASSOCIATES LTD.** Date of Survey (from & to) **05 06 84 31 08 84** Total Miles of line Cut **8**
 Name and Address of Author (of Geo-Technical report) **CAROLYN HORNER % H.E. NEAL & ASSOC. LTD.**
606-55 QUEEN ST. E., TORONTO, ONTARIO M5C 1R6

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
For each additional survey: using the same grid: Enter 20 days (for each)	Geological	
	Geochemical	
Man Days		
Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	21
Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim			Mining Claim		
Prefix	Number	Expend. Days Cr.	Prefix	Number	Expend. Days Cr.
see attached list					
RECEIVED					
MAY 24 1985					
MINING LANDS SECTION					
See revised work statement					

Expenditures (excludes power stripping)

Type of Work Performed **Rock, soil & humus sampling**

Performed on Claim(s) **see attached list**

Calculation of Expenditure Days Credits

Total Expenditures	Total Days Credits
\$ 4,319.77	15 = 288

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Total number of mining claims covered by this report of work. **76**

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
1800	May 17, 1985	<i>Audrey M. Hayes</i>
Date Approved as Recorded	Station Director	

Date **May 14/85** Recorded Holder or Agent (Signature) *Carolyn Horner*

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying **CAROLYN HORNER % H.E. NEAL & ASSOC. LTD. 606-55 QUEEN ST. E., TORONTO, ONT. M5C 1R6**

Date Certified **May 14/85** Certified by (Signature) *Carolyn Horner*

Ketchikan Lake Group

<u>Claim</u>	<u>Expend. Days Credit</u>	<u>Claim</u>	<u>Expend. Days Credit</u>	<u>Claim</u>	<u>Expend. Days Credit</u>
TB 766301		TB 766335		TB 766366	20
766302		766336		766367	
766303		766337			
766304		766338		TB 715792	
766305		766339		715793	
766306		766340		715794	
766307		766341		715795	
766308		766342		715796	
766309		766343		715797	
766310		766344		715798	
766311		766345		715799	
766312		766346		715800	20
766313	5	766347			
766314		766348		Totals	72 claims
766315		766349			traversed
766316	6.7	766350			for man days
766317		766351			<u>4</u> lake claim
766318		766352			76
766319		766353			
766320		766354	20		
766321					
766322					
766323					
766324					
766325					
766326					
766327					
766328		766359			
766329		766360	10		
766330		766361	30		
766331		766362	6.3		
766332		766363	10		
766333		766364			
766334		766365			

Lake claims
for Expend. Credits only

- { 766355 40
- { 766356 40
- { 766357 40
- { 766358 40

No geochemical applied

Assessment Work Breakdown

Days are based on eight (8) hour Technical or Line-cutting days. Technical days include work performed by consultants, draftsmen, etc..

Type of Survey <i>Geochemical</i>							
Technical Days		Technical Days Credits		Line-cutting Days	Total Credits	No. of Claims	Days per Claim
214.1	X	7	=	1,498.7	+	40.5	=
				1539.2	+	72	=
						21.38	

Type of Survey							
Technical Days		Technical Days Credits		Line-cutting Days	Total Credits	No. of Claims	Days per Claim
[]	X	7	=	[]	+	[]	=
				[]	+	[]	=
						[]	

Type of Survey							
Technical Days		Technical Days Credits		Line-cutting Days	Total Credits	No. of Claims	Days per Claim
[]	X	7	=	[]	+	[]	=
				[]	+	[]	=
						[]	

Type of Survey							
Technical Days		Technical Days Credits		Line-cutting Days	Total Credits	No. of Claims	Days per Claim
[]	X	7	=	[]	+	[]	=
				[]	+	[]	=
						[]	

THUNDER BAY
 DIVISION
 MAY 17 1985
 12:12:12/12/12/12/12/12 PM



LAND MANAGEMENT

Ministry of Natural Resources

Report of Work (Geophysical, Geological, Geochemical and Expenditures)

#203-28169 File 2.7916 766377 Mining Act

July 6 1985 Instructions: - Please type or print. - If number of mining claims traversed exceeds space on this form, attach a list. Note: - Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns. - Do not use shaded areas below.

Form header with fields: Type of Survey(s) GEOCHEMICAL, Township or Area TORONTO LAKE AREA, Claim Holder(s) QUEBEC COBALT AND EXPLORATION LIMITED, Prospector's Licence No. T1450, Address 401-357 BAY ST., TORONTO, ONTARIO M5E 2T7, Survey Company H.E. NEAL & ASSOCIATES LTD, Date of Survey (from & to) 05 06 84 31 08 84, Total Miles of line Cut, Name and Address of Author (of Geo-Technical report) CAROLYN HORNER 606-55 QUEEN ST. E., TORONTO, ONTARIO MSC 1R6

Table for Credits Requested per Each Claim in Columns at right. Columns include Special Provisions, Man Days, Airborne Credits, and various survey types (Geophysical, Geological, Geochemical) with Days per Claim.

Table for Mining Claims Traversed (List in numerical sequence). Columns include Mining Claim Prefix, Mining Claim Number, Expend. Days Cr., and another set of Mining Claim Prefix, Mining Claim Number, Expend. Days Cr. Includes a 'RECEIVED' stamp dated MAY 24 1985 and 'MINING LANDS SECTION'.

Form section for Expenditures (excludes power stripping). Includes Type of Work Performed (Rock soil and humus sampling), Performed on Claim(s) (see attached list), Calculation of Expenditure Days Credits (\$5,223.48 / 15 = 348.2), and Instructions.

Date May 14/85, Recorded Holder or Agent (Signature) Carolyn Horner

For Office Use Only. Total Days Cr. Recorded 348.2, Date Recorded May 17/85, Mining Recorder Audrey M. Hayes, Date Approved as Recorded, Branch Director.

Certification Verifying Report of Work. I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying CAROLYN HORNER % H.E. NEAL & ASSOC. LTD. 606-55 QUEEN ST. E., TORONTO, ONT. MSC 1R6, Date Certified May 14/85, Certified by (Signature) Carolyn Horner

Toronto Lake Group

	<u>Claim</u>	<u>Expend.</u> <u>Days Credit</u>
(TB 766377	15
	766378	2
	766383	5
	766389 ✓	40
	766401	5
	766402 ✓	40
	766403 ✓	40
	766404 ✓	40
	766408 ✓	40
	766409	10.2
	766420	5
	766423	5
	766426 ✓	40
	766430	10
	766437	12
(766438	10
	766460	10
	766468	14
	766469	5
		<u>348.2</u>

Toronto Lake Group
Mining Claims Traversed

Claim
TB 766 368
766 369
766 370
766 371
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766 375
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Claim
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Total 78

Assessment Work Breakdown

Man Days are based on eight (8) hour Technical or Line-cutting days. Technical days include work performed by consultants, draftsmen, etc..

Type of Survey <i>Geochemical</i>						
Technical Days		Technical Days Credits	Line-cutting Days	Total Credits	No. of Claims	Days per Claim
227.1	X	7	=	1,589.7	+	—
			=	1,589.7	+	78
			=			20.4

Type of Survey						
Technical Days		Technical Days Credits	Line-cutting Days	Total Credits	No. of Claims	Days per Claim
[]	X	7	=	[]	+	[]
			=	[]	+	[]
			=			[]

Type of Survey						
Technical Days		Technical Days Credits	Line-cutting Days	Total Credits	No. of Claims	Days per Claim
[]	X	7	=	[]	+	[]
			=	[]	+	[]
			=			[]

Type of Survey						
Technical Days		Technical Days Credits	Line-cutting Days	Total Credits	No. of Claims	Days per Claim
[]	X	7	=	[]	+	[]
			=	[]	+	[]
			=			[]

THUNDER CITY
 COAL
 MARYLAND
 1981

1985 08 02

Your Files: 202, 203, 204
51 & 52
Our File: 2.7916

Mining Recorder
Ministry of Natural Resources
P.O. Box 5000
Thunder Bay, Ontario
P7C 5G6

Dear Madam:

RE: Notice of Intent dated July 15, 1985
Geochemical Survey and Data for Assaying
on Mining Claims TB 766301, et al, in
the Areas of Falcon Lake, Return Lake,
Toronto Lake and Junior Lake

The assessment work credits, as listed with the
above-mentioned Notice of Intent, have been **approved**
as of the above date.

Please inform the recorded holder of these mining
claims and so indicate on your records.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6043
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: (416) 965-4888

D. Kinvig:mc

cc: Quebec Cobalt & Exploration Limited
Suite 401
357 Bay Street
Toronto, Ontario
M5E 2T7

cc: Carolyn Horner
c/o H.E. Neal & Associates Ltd
Suite 605
55 Queen Street East
Toronto, Ontario
M5C 1R6

cc: Mr. G.H. Ferguson
Mining & Lands Commissioner
Toronto, Ontario
cc: Resident Geologist
Thunder Bay, Ontario

Encl.

Recorded Holder	QUEBEC COBALT & EXPLORATION LIMITED
Township or Area	FALCON LAKE, RETURN LAKE, TORONTO LAKE JUNIOR LAKE AREAS

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	TB 766301
Electromagnetic _____ days	766303
Magnetometer _____ days	766305
Radiometric _____ days	766307-08
Induced polarization _____ days	766311-12 766314
Other _____ days	766317 to 19 inclusive
Section 77 (19) See "Mining Claims Assessed" column	766323 to 25 inclusive
Geological _____ days	766328 to 33 inclusive
Geochemical _____ 40 _____ days	766339
Man days <input type="checkbox"/>	766341
Airborne <input type="checkbox"/>	766343-44
Special provision <input type="checkbox"/>	766346-47
Ground <input checked="" type="checkbox"/>	766349 to 53 inclusive
<input type="checkbox"/> Credits have been reduced because of partial coverage of claims.	766359 to 63 inclusive
<input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	766365-66
	715793 to 800 inclusive

Special credits under section 77 (16) for the following mining claims

20 DAYS GEOCHEMICAL

TB 766302	TB 766320 to 22 inclusive	TB 766348
766304	766326-27	766354
766306	766334 to 38 inclusive	766364
766309-10	766340	766367
766313	766342	715792
766315-16	766345	

No credits have been allowed for the following mining claims

- not sufficiently covered by the survey Insufficient technical data filed

- NO GEOLOGICAL CREDITS ALLOWED

AMENDED

Recorded Holder QUEBEC COBALT & EXPLORATION LIMITED
Township or Area FALCON LAKE, RETURN LAKE, TORONTO LAKE, JUNIOR LAKE AREAS

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	
Electromagnetic _____ days	TB 766375 to 81 inclusive
Magnetometer _____ days	766383 to 86 inclusive
Radiometric _____ days	766409 to 11 inclusive
Induced polarization _____ days	766413
Other _____ days	766416
	766420
	766425
	766429
	766432 to 34 inclusive
	766436-37
Section 77 (19) See "Mining Claims Assessed" column	766440-41
	766443
Geological _____ days	766445 to 48 inclusive
	766450 to 53 inclusive
Geochemical _____ 40 days	766456 to 59 inclusive
	766463 to 65 inclusive
	766469-70
Man days <input type="checkbox"/> Airborne <input type="checkbox"/>	
Special provision <input type="checkbox"/> Ground <input checked="" type="checkbox"/>	
<input type="checkbox"/> Credits have been reduced because of partial coverage of claims.	
<input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

20 DAYS GEOCHEMICAL		10 DAYS GEOCHEMICAL	5 DAYS GEOCHEMICAL
TB 766368 to 74 inclusive	TB 766421 to 24 inclusive	TB 766407	
766382	766435	766430	TB 766408
766387-88	766439	766438	766402
766401	766442	766468	766418
766412	766444		766426 766428
766414-15	766449	766454-55	
		766460 to 62	
		inclusive	
		766466-67, 766471	

No credits have been allowed for the following mining claims

<input type="checkbox"/> not sufficiently covered by the survey	<input type="checkbox"/> Insufficient technical data filed
- NO GEOLOGICAL CREDITS ALLOWED	

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical — 80; Geological — 40; Geochemical — 40; Section 77(19)—60:

Recorded Holder	QUEBEC COBALT & EXPLORATION LIMITED
Township or Area	FALCON LAKE, RETURN LAKE, TORONTOLAKE, JUNIOR LAKE AREAS

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical Electromagnetic _____ days Magnetometer _____ days Radiometric _____ days Induced polarization _____ days Other _____ days Section 77 (19) See "Mining Claims Assessed" column Geological _____ days Geochemical _____ days Man days <input type="checkbox"/> Airborne <input type="checkbox"/> Special provision <input type="checkbox"/> Ground <input type="checkbox"/> <input type="checkbox"/> Credits have been reduced because of partial coverage of claims. <input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	\$5223.48 SPENT ON ANALYSES OF SAMPLES TAKEN FROM MINING CLAIMS: TB 766375 to 81 inclusive 766383 to 86 inclusive 766402 766407 766409 to 11 inclusive 766413 766416 766418 766420 766425-26 766428-29 766432 to 34 inclusive 766436-37 766440-41 766443 766445 to 48 inclusive 766450 to 53 inclusive 766456 to 59 inclusive 766463 to 65 inclusive 766469-70 348.2 ASSESSMENT WORK DAYS ARE ALLOWED WHICH MAY BE GROUPED IN ACCORDANCE WITH SECTION 76(6) OF THE MINING ACT.

Special credits under section 77 (16) for the following mining claims

No credits have been allowed for the following mining claims

<input type="checkbox"/> not sufficiently covered by the survey	<input type="checkbox"/> Insufficient technical data filed
---	--

Recorded Holder
 QUEBEC COBALT & EXPLORATION LIMITED

Township or Area
 FALCON LAKE, RETURN LAKE, TORONTO LAKE, JUNIOR LAKE AREAS

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
<p>Geophysical</p> <p>Electromagnetic _____ days</p> <p>Magnetometer _____ days</p> <p>Radiometric _____ days</p> <p>Induced polarization _____ days</p> <p>Other _____ days</p> <p>Section 77 (19) See "Mining Claims Assessed" column</p> <p>Geological _____ days</p> <p>Geochemical _____ days</p> <p>Man days <input type="checkbox"/> Airborne <input type="checkbox"/></p> <p>Special provision <input type="checkbox"/> Ground <input type="checkbox"/></p> <p><input type="checkbox"/> Credits have been reduced because of partial coverage of claims.</p> <p><input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.</p>	<p>\$4319.77 SPENT ON ANALYSES OF SAMPLES TAKEN FROM MINING CLAIMS:</p> <p>TB 766301 766303 766305 766307-08 766311-12 766314 766317 to 19 inclusive 766323 to 25 inclusive 766328 to 33 inclusive 766339 766341 766343-44 766346-47 766349 to 53 inclusive 766359 to 63 inclusive 766365-66 715793 to 800 inclusive</p> <p>288 ASSESSMENT WORK DAYS ARE ALLOWED WHICH MAY BE GROUPED IN ACCORDANCE WITH SECTION 76(6) OF THE MINING ACT.</p>

Special credits under section 77 (16) for the following mining claims

No credits have been allowed for the following mining claims

not sufficiently covered by the survey
 Insufficient technical data filed

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical — 80; Geological — 40; Geochemical — 40; Section 77(19)—60:

for file

The Surficial Geological Survey as recorded on January 23, 1985 (Your Reports of Work #51 and 52) was reviewed by the Ontario Geological Survey. It was their considered opinion that the survey be more appropriately assessed under ~~the~~ as a Geochemical Survey.

Mining Lands Section assessed this survey in conjunction with another Geochemical submission for a maximum of forty assessment days Geochemical credit.



July 30/85

1985 07 15

Your Files: 202,203 & 204, 51 & 52
Our File: 2.7916

Mining Recorder
Ministry of Natural Resources
P.O. Box 5000
Thunder Bay, Ontario
P7C 5G6

Dear Madam:

Enclosed are two copies of a Notice of Intent with statements listing a reduced rate of assessment work credits to be allowed for a technical survey. Please forward one copy to the recorded holder of the claims and retain the other. In approximately fifteen days from the above date, a final letter of approval of these credits will be sent to you. On receipt of the approval letter, you may then change the work entries on the claim record sheets.

For further information, if required, please contact Mr. R.J. Pichette at 416/965-4888.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3

RSK D. Kinvig:mc

Encls.

cc: Quebec Cobalt & Exploration Limited
Suite 401
357 Bay Street
Toronto, Ontario
M5E 2T7

cc: Mr. G.H. Ferguson
Mining & Lands Commissioner
Toronto, Ontario

cc: Carolyn Horner
c/o H.E. Neal & Associates Ltd
Suite 606
55 Queen Street East
Toronto, Ontario
M5C 1R6



Ministry of
Natural
Resources

AMENDED
Notice of Intent
for Technical Reports

1985 07 15

2.7916/202,203 & 204, 51 & 52

An examination of your survey report indicates that the requirements of The Ontario Mining Act have not been fully met to warrant maximum assessment work credits. This notice is merely a warning that you will not be allowed the number of assessment work days credits that you expected and also that in approximately 15 days from the above date, the mining recorder will be authorized to change the entries on his record sheets to agree with the enclosed statement. Please note that until such time as the recorder actually changes the entry on the record sheet, the status of the claim remains unchanged.

If you are of the opinion that these changes by the mining recorder will jeopardize your claims, you may during the next fifteen days apply to the Mining and Lands Commissioner for an extension of time. Abstracts should be sent with your application.

If the reduced rate of credits does not jeopardize the status of the claims then you need not seek relief from the Mining and Lands Commissioner and this Notice of Intent may be disregarded.

If your survey was submitted and assessed under the "Special Provision-Performance and Coverage" method and you are of the opinion that a re-appraisal under the "Man-days" method would result in the approval of a greater number of days credit per claim, you may, within the said fifteen day period, submit assessment work breakdowns listing the employees names, addresses and the dates and hours they worked. The new work breakdowns should be submitted direct to the Land Management Branch, Toronto. The report will be re-assessed and a new statement of credits based on actual days worked will be issued.



July 15/85

1985 06 27

Your Files: 202,203 & 204
Our File: 2.7916

Mining Recorder
Ministry of Natural Resources
P.O. Box 5000
Thunder Bay, Ontario
P7C 5G6

Dear Madam:

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S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3

R.D. Kinvig:mc

Encls.

cc: Quebec Cobalt & Exploration Limited
Suite 401
357 Bay Street
Toronto, Ontario
M5E 2T7

cc: Mr. G.H. Ferguson
Mining & Lands Commissioner
Toronto, Ontario

cc: Carolyn Horner
c/o H.E. Neal & Associates Ltd
Suite 606
55 Queen Street East
Toronto, Ontario
M5C 1R6



Ministry of
Natural
Resources

Notice of Intent
for Technical Reports

1985 06 27

2.7916/202,203 & 204

An examination of your survey report indicates that the requirements of The Ontario Mining Act have not been fully met to warrant maximum assessment work credits. This notice is merely a warning that you will not be allowed the number of assessment work days credits that you expected and also that in approximately 15 days from the above date, the mining recorder will be authorized to change the entries on his record sheets to agree with the enclosed statement. Please note that until such time as the recorder actually changes the entry on the record sheet, the status of the claim remains unchanged.

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Recorded Holder
QUEBEC COBALT & EXPLORATION LIMITED

Township or Area
FALCON LAKE, RETURN LAKE, TORONTO LAKE, JUNIOR LAKE AREAS

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical Electromagnetic _____ days Magnetometer _____ days Radiometric _____ days Induced polarization _____ days Other _____ days Section 77 (19) See "Mining Claims Assessed" column Geological _____ days Geochemical <u>40</u> days Man days <input type="checkbox"/> Airborne <input type="checkbox"/> Special provision <input type="checkbox"/> Ground <input checked="" type="checkbox"/> <input type="checkbox"/> Credits have been reduced because of partial coverage of claims. <input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	TB 766375 to 81 inclusive 766383 to 86 inclusive 766402 766407 766409 to 11 inclusive 766413 766416 766418 766420 766425-26 766428-29 766432 to 34 inclusive 766436-37 766440-41 766443 766445 to 48 inclusive 766450 to 53 inclusive 766456 to 59 inclusive 766463 to 65 inclusive 766469-70

RECORDED

Special credits under section 77 (16) for the following mining claims

20 DAYS GEOCHEMICAL		10 DAYS GEOCHEMICAL
TB 766368 to 74 inclusive	TB 766421 to 24 inclusive	TB 766430
766382	766435	766438
766387-88	766439	766468
766401	766442	
766412	766444	5 DAYS GEOCHEMICAL
766414-15	766449	TB 766408
	TB 766454-55	
	766460 to 62 inclusive	
	766466-67	
	766471	

No credits have been allowed for the following mining claims

not sufficiently covered by the survey
 Insufficient technical data filed

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical — 80; Geological — 40; Geochemical — 40; Section 77 (19)

2.8168

(#51)
2.7916

	Sun.	Sea		Sun.	Grade		Sun.	Grade
TB-766301	✓	✓	766325	✓	✓	766349	✓	✓
02	✓	0	26	✓	0	50	✓	✓
03	✓	✓	27	✓	0	51	✓	✓
04	✓	0	28	✓	✓	52	✓	✓
05	✓	✓	29	✓	✓	53	✓	✓
06	✓	0	30	✓	✓	766354	✓	0
07	✓	✓	31	✓	✓	766359	✓	✓
08	✓	✓	32	✓	✓	60	✓	✓
09	✓	0	33	✓	✓	61	✓	✓
10	✓	0	34	✓	0	62	✓	✓
11	✓	✓	35	✓	0	63	✓	✓
12	✓	✓	36	✓	0	64	✓	0
13	✓	0	37	✓	0	65	✓	✓
14	✓	✓	38	✓	0	66	✓	✓
15	✓	0	39	✓	✓	766367	✓	0
16	✓	0	40	✓	0	715792	✓	0
17	✓	✓	41	✓	✓	93	✓	✓
18	✓	✓	42	✓	0	94	✓	✓
19	✓	✓	43	✓	✓	95	✓	✓
20	✓	0	44	✓	✓	96	✓	✓
21	✓	0	45	✓	0	97	✓	✓
22	✓	✓	46	✓	✓	98	✓	✓
23	✓	✓	47	✓	✓	99	✓	✓
766324	✓	✓	766348	✓	0	715800	✓	✓

Mandays
→ 46

$$(214.12 \div 1) + 40.5 \div 46 = 33.5 \text{ days}$$

(204)

2.7916
(#52)

2.8109

	Surf	Sec		Surf	Sec		Surf	Sec
JB: 766368	✓	0	766411	✓	✓	766442	✓	0
69	✓	0	12	✓	0	43	✓	✓
70	✓	0	13	✓	✓	44	✓	0
71	✓	0	14	✓	0	45	✓	✓
72	✓	0	15	✓	0	46	✓	✓
73	✓	0	766416	> 1/4	✓	47	✓	✓
74	✓	0	766418	3/4	X	48	✓	✓
75	✓	✓	766420	3/4	✓	49	✓	0
76	✓	✓	21	✓	0	50	✓	✓
77	1/2	✓	22	✓	0	51	✓	✓
78	> 1/4	✓	23	✓	0	52	✓	✓
79	✓	✓	24	✓	0	53	✓	✓
80	✓	✓	25	✓	✓	54	✓	0
81	✓	✓	766426	3/4	X	55	✓	0
82	✓	0	766428	3/4	X	56	✓	✓
83	3/4	✓	29	✓	✓	57	✓	✓
84	✓	✓	766430	1/2	0	58	✓	✓
85	✓	✓	766432	1/4	✓	59	✓	✓
86	✓	✓	33	✓	✓	60	1/4	0
87	✓	0	> 3/4	✓	✓	61	✓	0
766388	✓	0	35	✓	0	62	✓	0
766401	✓	0	36	✓	✓	63	✓	✓
766402	3/4	X	37	3/4	✓	64	✓	✓
766407	1/2	X	38	1/2	0	65	✓	✓
08	3/4	X	39	✓	0	66	✓	0
09	1/2	✓	40	✓	✓	67	✓	0
766410	✓	✓	766441	✓	✓	68	1/2	0
						69	✓	✓
						70	✓	✓
						766471	✓	0

49 Clinis covered.

(227.1x7) ÷ 43 = 36.97

÷ 43 = 36.97

(37)

20 Canotek Rd.,
Ottawa, Ontario,
Canada K1J 8N5
Phone: (613) 749 2220
Telex: 053 3231

BONDAR-CLEGG

Geo
La

REPORT: 015-0220

PROJECT:

PAGE 3

SAMPLE NUMBER	ELEMENT UNITS	SiO2 PCT	TiO2 PCT	Al2O3 PCT	Fe2O3* PCT	MnO PCT	MgO PCT	CaO PCT	Na2O PCT	K2O PCT	P2O5 PCT	LOI PCT	TOTAL PCT	NOTE
03-L200-1-ROCK		67.90	0.32	15.90	2.67	0.04	0.96	2.64	5.10	1.89	0.10	0.90	98.42	
03-L200-7-ROCK		67.70	0.25	16.20	3.49	0.04	1.30	3.93	4.39	1.00	0.05	0.95	99.30	
04-20-3-ROCK		50.10	1.35	13.40	14.00	0.20	6.43	10.20	2.25	0.74	0.16	0.85	99.68	

REPORT: 015-0220

PROJECT:

PAGE 2

SAMPLE NUMBER	ELEMENT UNITS	SiO2 PCT	TiO2 PCT	Al2O3 PCT	Fe2O3* PCT	MnO PCT	MgO PCT	CaO PCT	Na2O PCT	K2O PCT	P2O5 PCT	LOI PCT	TOTAL PCT	NOTES
01-L13E-1-ROCK		72.40	0.30	13.10	2.22	0.02	0.60	0.79	2.58	4.42	0.21	0.85	97.49	
01-L13E-3-ROCK		63.40	0.41	18.80	3.01	0.08	0.93	2.39	4.19	4.48	0.12	1.20	99.01	
01-L13E-7-ROCK		69.00	0.41	17.10	1.52	0.02	0.57	2.65	2.35	3.57	<0.01	1.05	98.24	
01-L15E-2		75.10	0.05	12.30	2.27	0.04	0.30	0.50	1.37	4.26	<0.01	1.35	97.54	
02-JL12V-3-ROCK		42.80	1.02	16.70	16.00	0.23	7.86	10.80	1.94	0.34	0.16	1.35	99.20	
02-JYLS-1-ROCK		47.40	0.96	14.40	11.90	0.20	6.19	12.90	1.45	0.39	0.18	1.15	97.12	
02-ND-6-ROCK		47.70	0.95	14.60	12.30	0.23	6.34	14.50	1.63	0.41	0.08	0.80	99.54	
02-L1W-7-ROCK		52.20	0.18	4.04	8.02	0.19	18.10	13.20	0.52	0.16	<0.01	0.55	97.16	
02-L13V-6-ROCK		52.60	1.25	15.60	11.20	0.18	4.77	8.96	3.83	0.14	0.10	0.65	99.28	
02-L13V-7-ROCK		53.87	0.62	13.18	9.40	0.18	5.64	9.68	0.34	1.93	<0.01	3.20	98.04	
02-L15W-1-ROCK		51.29	0.79	12.40	12.20	0.19	11.10	7.08	2.30	0.11	0.09	1.60	99.15	
02-L15W-2-ROCK		54.59	1.49	13.50	14.40	0.20	4.93	7.01	1.55	0.64	0.14	0.85	99.30	
02-L15W-9-ROCK		53.70	0.69	13.90	9.90	0.17	6.85	10.10	1.83	0.29	0.08	0.70	98.21	
02-L17W-1-ROCK		44.50	1.31	13.80	20.50	0.59	5.29	8.69	1.51	0.42	0.09	1.40	98.10	
02-L17W-6-ROCK		43.82	1.04	12.60	13.22	0.34	7.07	10.70	1.16	0.58	0.13	10.45	101.11	
02-L20W-2-ROCK		49.00	1.10	13.20	16.40	0.26	6.19	11.30	2.03	0.23	0.14	0.30	100.15	
02-L30W-2-ROCK		51.80	1.07	14.30	13.40	0.21	5.16	9.81	2.33	0.29	0.05	1.15	99.57	
02-L30W-3-ROCK		45.00	1.03	13.10	8.67	0.37	5.28	20.40	1.12	0.57	0.22	3.40	99.16	
02-L30W-6-ROCK		47.70	0.68	16.80	9.46	0.22	6.68	11.90	2.05	0.66	0.04	1.65	97.84	
02-L30W-9-ROCK		59.10	0.87	16.50	7.56	0.11	3.45	5.23	3.53	2.10	0.05	0.55	99.05	
02-L31W-1-ROCK		47.70	0.88	18.90	11.00	0.23	5.78	8.57	0.47	2.88	0.01	3.30	99.72	
02-L31W-5-ROCK		51.00	0.79	13.60	12.30	0.21	6.87	8.02	3.43	0.49	0.09	1.50	98.30	
02-L31W-6-ROCK		51.77	1.02	14.30	13.16	0.22	7.35	10.80	1.79	0.46	<0.01	0.60	101.47	
02-L32W-1-ROCK		49.30	1.07	14.00	15.30	0.24	7.43	9.97	2.56	0.23	0.13	0.50	100.73	
02-L32W-4-ROCK		48.10	1.24	12.92	16.70	0.25	5.18	9.71	2.16	0.30	0.14	0.40	97.10	
02-L33W-1-ROCK		48.90	0.97	14.90	13.10	0.23	6.99	13.00	1.43	0.19	0.06	1.15	100.92	
02-L33W-2-ROCK		47.90	1.11	13.80	15.10	0.25	5.91	10.40	2.64	0.49	0.13	1.25	98.98	
02-L33W-5-ROCK		54.40	0.85	16.50	9.84	0.20	5.28	9.22	2.41	1.13	0.34	0.80	100.97	
02-L36V-5-ROCK		68.60	0.24	15.70	1.83	0.03	0.50	1.16	0.22	2.70	0.08	1.65	97.71	
02-L37W-1-ROCK		51.60	0.95	16.40	9.67	0.17	4.43	9.81	3.56	0.83	0.14	0.95	98.51	
02-L37W-3-ROCK		51.50	0.91	15.70	10.00	0.18	4.52	12.40	1.84	0.59	0.06	0.60	98.30	
02-L4E-10-ROCK		40.91	1.14	16.70	17.95	0.39	7.21	7.20	1.78	0.83	0.07	1.85	97.03	
02-L4E-11-ROCK		46.16	0.94	14.18	14.99	0.32	7.19	8.48	1.84	1.99	0.09	1.15	97.33	
03-43S-1		49.40	0.13	15.20	1.14	0.03	0.37	1.24	0.99	3.97	0.05	0.65	97.17	
03-JYLS-2-ROCK		59.90	0.66	20.20	5.18	0.07	1.12	3.27	5.45	3.83	0.10	0.70	100.49	
03-L5-13-ROCK		70.70	0.23	16.70	1.86	0.03	0.52	1.25	5.60	2.87	0.11	0.75	100.62	
03-TL-4-ROCK		70.60	0.10	15.30	1.19	0.04	0.45	1.85	5.20	3.11	<0.01	0.45	98.29	
03-L2W-3-ROCK		55.20	0.19	14.50	5.89	0.13	7.64	9.07	3.24	0.33	0.06	0.75	97.00	
03-L2W-5-ROCK		73.60	0.02	14.50	0.74	0.06	0.05	0.86	5.34	3.74	0.23	0.30	99.44	
03L108W-12-ROCK		71.70	0.03	14.50	0.82	0.02	0.05	0.86	5.66	3.07	0.11	0.20	97.02	

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PROJECT:

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	SiO2 PCT	TiO2 PCT	Al2O3 PCT	Fe2O3* PCT	MnO PCT	MgO PCT	CaO PCT	Na2O PCT	K2O PCT	P2O5 PCT	LOI PCT	TOTAL PCT	NOTES
01-JYTL-1-ROCK		73.50	0.11	12.70	1.88	0.02	0.18	0.60	4.81	3.39	<0.01	0.80	97.99	
01-L8-35		65.90	0.27	15.80	5.06	0.04	2.22	2.29	0.83	4.14	0.25	1.75	98.55	
01-L8-20		67.90	0.27	15.00	2.93	0.03	1.65	2.63	3.64	1.92	0.17	0.95	97.09	
01-L8-1-ROCK		64.00	0.70	15.90	5.54	0.12	2.79	5.01	1.55	3.50	0.22	1.75	101.08	
01-L8-2-ROCK		79.80	0.11	12.20	1.68	0.03	1.15	1.66	1.30	2.58	<0.01	0.75	101.26	
01-L8-4-ROCK		73.50	0.16	13.50	2.33	0.03	1.29	0.73	0.28	3.99	<0.01	2.00	97.81	
01-L8-5-ROCK		57.10	0.89	17.00	7.05	0.13	2.20	9.93	1.22	1.38	0.28	1.15	98.33	
01-L11-1		68.50	0.48	17.90	1.61	0.02	1.07	1.65	7.25	0.74	0.16	1.10	100.48	
01-L11-3		78.40	0.05	11.10	0.50	<0.01	0.36	0.25	1.23	5.71	<0.01	0.60	98.20	
01-L11-1-ROCK		63.60	0.39	15.10	6.72	0.11	3.06	5.22	4.21	0.51	0.07	1.00	99.99	
01-L12-2-ROCK		66.70	0.26	16.40	3.27	0.05	1.39	2.91	4.33	1.66	0.20	0.80	97.97	
01-L12-1-ROCK		71.20	0.16	16.10	1.63	0.02	0.48	2.08	5.17	2.12	<0.01	0.60	99.56	
01-L12-3-ROCK		70.80	0.24	15.50	2.53	0.05	0.90	4.44	4.85	1.00	<0.01	1.65	101.96	
01-L12-1-ROCK		69.20	0.30	14.00	3.45	0.05	0.67	2.29	4.36	2.20	0.11	0.50	97.13	
01-L12-4-ROCK		73.50	0.06	11.50	1.25	0.12	0.57	0.95	2.42	3.80	0.09	7.30	101.46	
01-L15-5-ROCK		70.20	0.12	11.30	1.75	0.02	0.15	0.39	3.62	3.36	0.13	6.95	97.99	
01-L16-3-ROCK		62.90	0.26	15.83	4.07	0.07	2.33	4.18	3.36	1.89	0.19	1.95	97.03	
01-L17-5-ROCK		74.20	0.13	12.80	1.95	0.06	0.22	1.97	4.07	1.62	0.18	0.55	97.75	
01-L18-2-ROCK		62.40	0.64	14.00	8.31	0.10	1.37	3.60	1.80	2.31	0.03	3.50	98.06	
01-L19-1-ROCK		74.90	0.11	12.50	1.55	0.02	0.47	1.15	4.61	1.37	<0.01	0.45	97.13	
01-L30-4-ROCK		60.10	0.65	17.10	4.71	0.12	1.54	7.30	3.87	1.04	0.14	0.65	97.22	
01-L30-8-ROCK		77.70	0.12	12.60	1.46	0.02	1.04	0.92	1.20	4.10	<0.01	1.25	100.41	
01-L31-3-ROCK		73.50	0.18	11.70	3.29	0.05	1.22	2.80	1.67	1.62	<0.01	1.20	97.23	
01-L32-2-ROCK		70.60	0.29	14.30	2.88	0.03	0.70	2.12	5.38	0.94	0.06	0.40	97.70	
01-L32-3-ROCK		67.70	0.53	14.70	4.95	0.06	1.00	2.54	4.54	2.53	0.21	0.60	99.36	
01-L34-2-ROCK		67.10	0.77	13.40	6.96	0.10	2.87	3.22	1.25	1.99	0.23	1.20	99.09	
01-L34-3-ROCK		48.70	2.20	16.40	17.90	0.28	4.09	2.79	1.46	2.42	0.19	1.40	97.83	
01-L37-3-ROCK		61.30	0.65	20.00	4.35	0.06	1.18	4.06	4.83	2.81	0.29	1.40	100.93	
01-L1E-3		76.00	0.11	12.20	1.82	0.02	1.51	0.87	2.26	2.71	0.02	0.95	98.47	
01-L1E-4		76.50	0.11	12.20	1.89	0.02	1.23	1.34	3.59	1.77	<0.01	0.65	99.30	
01-L1E-9		71.30	0.14	11.80	2.23	0.02	1.59	1.14	3.29	1.92	0.19	7.09	100.67	
01-L1E-11		72.50	0.12	11.80	1.50	0.02	1.43	1.02	2.62	2.33	0.02	0.45	101.81	
01-L1E-2		77.69	0.11	11.55	1.26	0.04	0.55	0.75	0.01	4.99	<0.01	0.55	98.30	
01-L1E-5-ROCK		77.69	0.13	12.54	1.60	0.03	0.69	1.43	1.89	2.58	0.22	0.60	99.40	
01-L1E-6-ROCK		60.20	0.09	10.60	5.43	0.16	3.75	9.76	0.30	2.62	<0.01	6.40	99.31	
01-L1E-7-ROCK		60.00	0.61	20.20	4.09	0.06	1.13	3.98	4.81	2.73	<0.01	1.65	99.26	
01-L1E-11-ROCK		69.16	0.37	14.98	3.06	0.06	0.99	1.74	3.52	2.12	0.23	1.25	97.48	
01-L1E-4		76.40	0.12	12.50	1.58	0.03	0.81	1.05	2.08	3.54	0.06	1.35	99.52	
01-L1E-5-ROCK		66.30	0.24	16.54	3.25	0.04	1.09	3.17	3.82	2.76	0.20	0.90	98.31	
01-L1E-1-ROCK		76.90	0.35	11.90	2.66	0.06	0.34	2.12	1.65	3.01	0.05	1.35	100.39	

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SAMPLE NUMBER	ELEMENT UNITS	SiO2 PCT	TiO2 PCT	Al2O3 PCT	Fe2O3 PCT	MnO PCT	MgO PCT	CaO PCT	K2O PCT	P2O5 PCT	LOI PCT	TOTAL PCT	NO
L1E-3-01		74.49	0.15	12.44	1.87	0.01	1.29	0.79	3.48	1.99	0.16	1.00	97.66
L1E-4-01		75.40	0.15	12.96	2.00	0.02	1.47	1.21	2.94	2.42	0.10	1.25	99.92
L1E-7-01		74.26	0.17	12.35	2.65	0.03	1.87	1.26	2.15	2.95	0.09	1.25	99.01
L1E-8-01		74.50	0.10	12.20	2.20	0.02	1.28	0.49	2.03	2.99	0.07	1.15	97.03
L1E-10-01		75.20	0.11	12.10	1.41	0.02	1.22	0.79	3.13	2.32	0.11	1.00	97.32
L1E-12-01		51.00	0.34	14.40	8.81	0.16	9.29	10.40	0.83	4.93	0.06	2.10	99.33
L1E-13-01		50.40	0.34	13.80	8.99	0.17	9.00	9.02	0.82	6.14	0.09	1.95	97.51
L1E-14-01		50.50	0.93	14.60	13.80	0.26	7.39	10.10	2.65	0.22	0.22	0.35	101.02
L1E-15-01		77.30	0.12	11.60	2.16	0.02	1.84	0.60	3.00	1.97	0.11	0.85	99.57
L1E-16-01		64.62	0.69	14.20	5.18	0.10	2.55	6.24	2.31	1.20	0.25	0.45	97.79
L1E-17-01		49.70	0.27	12.20	8.08	0.15	10.40	11.70	2.33	0.31	0.20	0.40	98.04
L1E-18-01		73.70	0.07	12.20	1.43	0.03	0.47	0.54	1.34	6.38	0.11	0.70	97.09
L1E-19-01		70.00	0.07	11.88	1.37	0.02	0.36	0.50	3.00	3.44	0.12	0.65	99.40
L1E-20-01		72.52	0.08	10.41	4.69	0.03	0.51	1.52	1.04	3.78	0.11	2.55	97.24
L1E-21-01		67.00	0.51	16.34	2.22	0.04	1.85	2.04	3.35	2.23	0.11	1.50	97.19
L1E-22-01		63.55	0.46	18.15	3.35	0.05	2.82	1.60	1.95	2.38	0.05	2.80	97.16
L1E-23-01		70.70	0.32	16.20	2.07	0.03	1.15	1.49	3.31	3.11	0.15	1.95	100.48
L1E-24-01		69.43	0.48	16.63	2.09	0.04	1.96	1.65	3.26	2.45	0.18	1.65	99.81
L1E-25-01		70.70	0.29	14.60	3.23	0.06	0.91	2.92	3.49	3.04	0.13	1.75	101.11
L1E-26-01		73.80	0.21	13.96	2.78	0.08	0.49	2.00	1.32	3.70	0.23	1.55	100.12
L1E-27-01		79.60	0.14	8.78	3.52	0.13	1.46	2.34	0.59	1.85	0.23	0.90	99.54
L1E-28-01		79.47	0.08	12.20	1.35	0.05	0.38	1.11	1.70	2.56	0.38	0.90	100.18
L1E-29-01		71.10	0.27	16.50	0.57	0.01	0.31	0.86	7.16	1.43	0.08	0.55	98.85
L1E-30-01		76.10	0.12	11.40	1.73	0.03	0.72	0.68	3.49	2.81	0.03	0.65	97.76
L1E-31-01		67.60	0.39	15.80	2.93	0.04	1.25	2.83	4.29	3.12	0.28	0.70	99.23
L1E-32-01		70.49	0.31	14.80	2.13	0.04	0.78	2.25	4.27	2.94	0.21	0.75	98.97
L1E-33-01		70.54	0.25	13.24	2.46	0.05	1.14	2.00	1.77	4.04	0.39	1.20	97.08
L1E-34-01		68.40	0.30	16.00	1.98	0.03	0.74	2.42	5.86	0.83	0.24	0.45	97.44
L1E-35-01		69.00	0.27	16.30	1.97	0.04	0.85	1.86	4.31	2.59	0.23	1.30	98.72
L1E-36-01		59.00	0.75	15.60	8.02	0.13	3.66	5.88	3.66	1.89	0.06	0.55	99.40
L1E-37-01		60.20	0.74	17.84	7.14	0.08	3.54	1.09	2.46	3.14	0.15	2.10	98.49
L1E-38-01		67.68	0.29	16.58	3.38	0.44	0.93	2.42	5.28	2.41	0.25	2.30	101.96
L1E-39-01		54.77	1.89	17.74	12.34	0.35	2.90	4.10	3.06	2.19	0.53	0.55	100.42
L1E-40-01		70.20	0.29	14.60	1.79	0.03	0.52	1.41	4.47	3.07	0.10	0.70	97.17
L1E-41-01		70.00	0.28	15.00	2.04	0.03	0.67	1.67	4.96	2.14	0.12	0.35	97.26
L1E-42-01		70.25	0.32	14.02	3.24	0.04	0.53	1.52	3.47	3.07	0.04	0.80	97.30
L1E-43-01		74.30	0.13	11.20	1.96	0.04	1.70	2.30	3.85	2.47	0.01	1.40	97.36
L1E-44-01		65.00	0.28	12.32	6.14	0.10	3.62	3.26	3.08	2.88	0.40	1.95	99.09
L1E-45-01		65.60	0.26	16.16	3.86	0.05	2.12	2.28	5.92	1.21	0.10	0.60	98.17
L1E-46-01		71.90	0.33	14.50	2.41	0.02	1.34	0.61	2.87	5.87	0.17	0.90	100.92

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REPORT: 014-3517

PROJECT:

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SAMPLE NUMBER	ELEMENT UNITS	SiO2 PCT	TiO2 PCT	Al2O3 PCT	Fe2O3* PCT	MnO PCT	K2O PCT	CaO PCT	Na2O PCT	K2O PCT	P2O5 PCT	LOI PCT	TOTAL PCT	NOTE
L8-22-01		69.20	0.46	13.20	6.16	0.65	0.62	1.30	3.28	3.56	0.10	2.05	99.98	
L8-23-01		76.30	0.18	12.10	1.45	0.01	0.68	0.44	4.12	1.85	0.04	0.70	97.88	
L8-228-01		80.20	0.17	10.80	1.12	0.01	0.41	0.93	4.41	0.95	0.07	0.50	99.47	
L8-224-01		72.00	0.63	13.80	4.63	0.04	0.34	0.45	0.89	4.42	0.23	2.20	100.13	
L8-24-01		76.00	0.11	12.40	1.95	0.02	1.58	0.70	2.02	2.97	0.02	1.00	98.80	
L8-25-01		65.40	0.30	16.10	4.86	0.04	1.80	3.19	3.39	2.94	0.14	1.55	99.71	
L8-26-01		66.10	0.55	16.60	4.45	0.06	1.60	1.07	6.36	2.00	0.09	0.75	99.62	
L8-27-01		68.80	0.31	16.30	2.26	0.03	0.80	1.27	4.49	2.73	0.11	1.30	98.41	
L8-28-01		70.70	0.33	16.50	1.90	0.03	0.82	0.94	1.68	3.35	0.14	2.75	99.14	
L8-29-01		64.30	0.47	15.70	4.77	0.08	2.16	2.00	2.73	3.67	0.14	1.55	97.57	
L8-30-01		67.20	0.33	16.00	3.93	0.10	2.51	2.34	3.46	2.91	0.17	0.80	99.74	
L8-31-01		64.30	0.51	16.60	3.60	0.07	2.62	2.36	2.41	1.62	0.09	2.90	97.08	
L8-32-01		63.90	0.47	15.50	4.79	0.07	1.62	3.64	4.39	1.79	0.15	0.70	97.04	
L8-33-01		74.77	0.13	12.90	2.71	0.08	1.12	1.46	3.50	2.18	0.07	0.65	99.57	
L8-34-01		69.43	0.30	14.40	2.88	0.03	1.21	2.62	2.34	4.45	0.10	1.40	99.16	
L8-35-01		76.51	0.07	12.90	1.67	0.02	0.54	0.39	1.30	5.88	0.01	1.10	99.73	
L8-36-01		75.07	0.07	14.20	1.33	0.04	0.58	0.71	1.01	5.20	0.08	1.35	99.64	
L8-37-01		49.60	0.76	14.00	11.20	0.18	8.03	10.50	2.47	1.11	0.10	1.50	99.45	
L8-38-01		65.00	0.46	15.70	7.17	0.23	2.04	1.99	1.36	3.52	0.17	1.55	99.19	
L8-39-01		47.80	0.76	14.70	19.50	0.89	6.11	8.73	3.57	4.80	0.23	0.80	101.48	
L8-40-01		75.10	0.26	12.90	5.15	0.15	1.25	3.27	2.34	2.55	0.10	0.95	101.93	
L8-41-01		67.31	0.29	16.00	2.52	0.04	0.89	1.88	3.14	2.10	0.08	1.20	97.45	
L8-42-01		63.65	0.29	18.70	3.02	0.05	1.80	3.97	4.48	2.35	0.16	1.20	99.67	
L8-43-01		73.28	0.21	12.90	2.03	0.11	1.53	1.23	1.84	2.69	0.12	1.90	97.75	
L8-44-01		75.76	0.15	9.93	2.64	0.03	0.95	0.56	4.64	0.94	0.15	1.30	97.05	
L8-45-01		71.20	0.35	13.30	3.43	0.05	1.00	1.22	4.59	2.07	0.12	0.95	98.27	
L8-46-01		69.36	0.25	16.44	1.72	0.02	0.81	1.95	4.78	2.38	0.15	0.80	98.67	
L8-47-01		62.06	0.61	19.26	2.72	0.07	1.25	4.18	5.57	1.43	0.16	0.95	98.26	
L8-48-01		69.60	0.22	13.46	3.38	0.08	2.52	2.28	3.47	3.16	0.38	2.00	99.52	
L8-49-01		79.00	0.14	11.14	1.22	0.03	0.59	1.64	1.67	3.04	0.27	1.05	99.79	



GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL
TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) GEOCHEMICAL
Township or Area JUNIOR, TORONTO, FALCON & RETURN LAKES AREAS
Claim Holder(s) QUEBEC COBALT AND EXPLORATION LIMITED
Survey Company H.E. NEAL & ASSOCIATES LTD.
Author of Report CAROLYN HORNER
Address of Author c/o H.E. NEAL & ASSOC., 606-55 QUEEN ST. E.
TORONTO, ONT. M5C 1R6
Covering Dates of Survey June 5/84-May 21/85
(linecutting to office)
Total Miles of Line Cut 8

MINING CLAIMS TRAVERSED
List numerically

SEE ATTACHED LIST
(prefix) (number)

Table with 2 columns: (prefix), (number). Contains 'SEE ATTACHED LIST' and a 'TOTAL CLAIMS' field at the bottom.

If space insufficient, attach list

SPECIAL PROVISIONS
CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

Geophysical DAYS per claim
-Electromagnetic _____
-Magnetometer _____
-Radiometric _____
-Other _____
Geological _____
Geochemical _____

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: May 29/85 SIGNATURE: Carolyn Horner
Author of Report or Agent

Res. Geol. _____ Qualifications 2-5691

Previous Surveys

Table with 4 columns: File No., Type, Date, Claim Holder. Contains a grid for listing previous surveys.

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS - If more than one survey, specify data for each type of survey

Number of Stations _____ Number of Readings _____

Station interval _____ Line spacing _____

Profile scale _____

Contour interval _____

MAGNETIC

Instrument _____

Accuracy - Scale constant _____

Diurnal correction method _____

Base Station check-in interval (hours) _____

Base Station location and value _____

ELECTROMAGNETIC

Instrument _____

Coil configuration _____

Coil separation _____

Accuracy _____

Method: Fixed transmitter Shoot back In line Parallel line

Frequency _____
(specify V.L.F. station)

Parameters measured _____

GRAVITY

Instrument _____

Scale constant _____

Corrections made _____

Base station value and location _____

Elevation accuracy _____

INDUCED POLARIZATION
RESISTIVITY

Instrument _____

Method Time Domain Frequency Domain

Parameters - On time _____ Frequency _____

- Off time _____ Range _____

- Delay time _____

- Integration time _____

Power _____

Electrode array _____

Electrode spacing _____

Type of electrode _____

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

Corrections made _____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth - include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

Additional information (for understanding results) _____

AIRBORNE SURVEYS

Type of survey(s) _____

Instrument(s) _____

(specify for each type of survey)

Accuracy _____

(specify for each type of survey)

Aircraft used _____

Sensor altitude _____

Navigation and flight path recovery method _____

Aircraft altitude _____ Line Spacing _____

Miles flown over total area _____ Over claims only _____

GEOCHEMICAL SURVEY - PROCEDURE RECORD

Numbers of claims from which samples taken SEE ATTACHED LIST

Total Number of Samples 447

Type of Sample ROCK, SOIL & HUMUS
(Nature of Material)

Average Sample Weight R-5 lb., S-1 lb., H-1/2 lb.

Method of Collection grab sampling, dug soil
and humus pits with shovel.

Soil Horizon Sampled B

Horizon Development moderate

Sample Depth up to 2 feet.

Terrain Hilly

Drainage Development good to poor

Estimated Range of Overburden Thickness
unknown

SAMPLE PREPARATION
(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis _____

General _____

ANALYTICAL METHODS

Values expressed in: per cent
p. p. m.
p. p. b.

Cu, Pb, Zn, Ni, Co, Ag, Mo, As, -(circle)

Others Au, Ba, Hg

Field Analysis (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Field Laboratory Analysis

No. (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Commercial Laboratory (1128 tests)

Name of Laboratory X-Ray Assay

Extraction Method See Report page 8-Table 1

Analytical Method _____

Reagents Used _____

General _____

Ketchikan Lake Group

Mining Claims Traversed

TB 715 792
715 793
715 794
715 795
715 796
715 797
715 798
715 799
715 800
766 301
766 302
766 303
766 304
766 305
766 306
766 307
766 308
766 309
766 310
766 311
766 312
766 313
766 314
766 315
766 316
766 317
766 318
766 319
766 320
766 321
766 322

TB 766 323
766 324
766 325
766 326
766 327
766 328
766 329
766 330
766 331
766 332
766 333
766 334
766 335
766 336
766 337
766 338
766 339
766 340
766 341
766 342
766 343
766 344
766 345
766 346
766 347
766 348
766 349
766 350
766 351
766 352
766 353

TB 766 354

766 359
766 360
766 361
766 362
766 363
766 364
766 365
766 366
766 367

Total 72 Claims

Ketchikan Lake Group

Work Performed on Claims

TB 766 301
766 302
766 303
766 306
766 308
766 311
766 312
766 314
766 317
766 318
766 319
766 323
766 324
766 325
766 328
766 329
766 331
766 332
766 333
766 339
766 341
766 344
766 346
766 347
766 349
766 350
766 351
766 352
766 353
766 354
766 359
766 360
766 361

TB 766 362
766 363
766 365
766 366

TB 715 793
715 794
715 795
715 796
715 797
715 798
715 799
715 800

H. E. NEAL & ASSOCIATES LTD.
Mineral Consultants

Ste. 606, 55 Queen Street East, Toronto, Canada M5C 1R6 Telephone: (416) 368-0166

May 29, 1985

Ms. S.E. Yundt
Director,
Land Management Branch,
Whitney Block, Rm. 6643,
Queen's Park,
Toronto, Ontario
M7A 1W3

Dear Ms. Yundt:

Re: Quebec Cobalt and Exploration Limited

Enclosed please find the following property reports submitted for assessment work credits by H.E. Neal & Associates Ltd. on behalf of Quebec Cobalt and Exploration Ltd.

- 2 copies - Report on the Geochemical Survey and Expenditures on the Ketchikan Lake Claim Group, Toronto, Junior, Falcon and Return Lake Areas, Thunder Bay Mining Division, Ontario. Three Geology and Gold Assay Maps and three Geology and Geochemistry Maps, scale 1" to 400', accompany each report.
- 2 copies - Report on the Geochemical Survey and Expenditures on the Toronto Lake Claim Group, Toronto Lake Area, Thunder Bay Mining Division, Ontario. Three Geology and Gold Assay Maps and three Geology and Geochemistry Maps, scale 1" to 400', accompany each report.

Yours truly,

Carolyn Horner

Carolyn Horner B.Sc.

RECEIVED

MAY 30 1985

MINING LANDS SECTION



Mining Lands Comments

Clarence:

This was submitted as a surficial geological survey, with 362 test pits & no bedrock geology. Do you feel this is adequate?

- Dennis

To: Geophysics

Comments

Approved

Wish to see again with corrections

Date

Signature

To: Geology - Expenditures

Clarence Kustra

Comments

This is not surficial geology (-maps on report) - Maps primarily show vegetation, topography, limited soils, - no contacts for geology, no glacial features, - Should be resubmitted as a geochem (soil) program & credited accordingly. R.S.G.
- Main map unit "S" (presumably Spruce) missing from legend.

Rob Giddis

Approved

Wish to see again with corrections

Date

April 9/85

Signature

Kustra

To: Geochemistry

Comments

This work should be considered as an elementary geochemical study as results became gold and other elements determined in soil samples
H.A.C. Adams 9/4/85

Approved

Wish to see again with corrections

Date

Signature



Ministry of Natural Resources

File _____

GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL
TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) SURFICIAL GEOLOGY

Township or Area TORONTO, JUNIOR, FALCON & RETURN LAKE AREAS

Claim Holder(s) QUEBEC COBALT AND EXPLORATION LIMITED

Survey Company H.E. NEAL & ASSOCIATES LTD.

Author of Report CAROLYN HORNER

Address of Author c/o H.E. NEAL & ASSOCIATES LTD., 606-55

Covering Dates of Survey June 1/84 to March 21/85
QUEEN ST. E. TORONTO, ONT. M5C 1R6
(linecutting to office)

Total Miles of Line Cut _____

MINING CLAIMS TRAVERSED
List numerically

TB	715792
(prefix)	(number)
TB	715793
TB	715794
TB	715795
TB	715796
TB	715797
TB	715798
TB	715799
TB	715800
TB	766301
TB	766302
TB	766303
TB	766304
TB	766305
TB	766306
TB	766307
TB	766308
TB	766309
TB	766310
TB	766311
TB	766312

If space insufficient, attach list

see attached list

TOTAL CLAIMS 156

SPECIAL PROVISIONS
CREDITS REQUESTED

ENTER 40 days (includes
line cutting) for first
survey.

ENTER 20 days for each
additional survey using
same grid.

Geophysical

- Electromagnetic _____
- Magnetometer _____
- Radiometric _____
- Other _____

Geological 20

Geochemical _____

DAYS
per claim.

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: Mar. 21/85 SIGNATURE: Carolyn Horner
Author of Report or Agent

Res. Geol. _____ Qualifications 2.5691

Previous Surveys

File No.	Type	Date	Claim Holder

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS — If more than one survey, specify data for each type of survey

Number of Stations _____ Number of Readings _____

Station interval _____ Line spacing _____

Profile scale _____

Contour interval _____

MAGNETIC

Instrument _____

Accuracy — Scale constant _____

Diurnal correction method _____

Base Station check-in interval (hours) _____

Base Station location and value _____

ELECTROMAGNETIC

Instrument _____

Coil configuration _____

Coil separation _____

Accuracy _____

Method: Fixed transmitter Shoot back In line Parallel line

Frequency _____
(specify V.L.F. station)

Parameters measured _____

GRAVITY

Instrument _____

Scale constant _____

Corrections made _____

Base station value and location _____

Elevation accuracy _____

Instrument _____

Method Time Domain Frequency Domain

Parameters — On time _____ Frequency _____

— Off time _____ Range _____

— Delay time _____

— Integration time _____

Power _____

Electrode array _____

Electrode spacing _____

Type of electrode _____

**INDUCED POLARIZATION
RESISTIVITY**

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

Corrections made _____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth – include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

Additional information (for understanding results) _____

AIRBORNE SURVEYS

Type of survey(s) _____

Instrument(s) _____
(specify for each type of survey)

Accuracy _____
(specify for each type of survey)

Aircraft used _____

Sensor altitude _____

Navigation and flight path recovery method _____

Aircraft altitude _____ Line Spacing _____

Miles flown over total area _____ Over claims only _____

GEOCHEMICAL SURVEY – PROCEDURE RECORD

Numbers of claims from which samples taken _____

Total Number of Samples _____

Type of Sample _____
(Nature of Material)

Average Sample Weight _____

Method of Collection _____

Soil Horizon Sampled _____

Horizon Development _____

Sample Depth _____

Terrain _____

Drainage Development _____

Estimated Range of Overburden Thickness _____

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis _____

General _____

ANALYTICAL METHODS

Values expressed in: per cent
p. p. m.
p. p. b.

Cu, Pb, Zn, Ni, Co, Ag, Mo, As, -(circle)

Others _____

Field Analysis (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Field Laboratory Analysis

No. (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Commercial Laboratory (_____ tests)

Name of Laboratory _____

Extraction Method _____

Analytical Method _____

Reagents Used _____

General _____

Mining Claims Traversed (cont'd)

TB 766313	TB 766341	TB 766373	TB 766421	TB 766451
TB 766314	TB 766342	TB 766374	TB 766422	TB 766452
TB 766315	TB 766343	TB 766375	TB 766423	TB 766453
TB 766316	TB 766344	TB 766376	TB 766424	TB 766454
TB 766317	TB 766345	TB 766377	TB 766425	TB 766455
TB 766318	TB 766346	TB 766378	TB 766426	TB 766456
TB 766319	TB 766347	TB 766379	TB 766428	TB 766457
TB 766320	TB 766348	TB 766380	TB 766429	TB 766458
TB 766321	TB 766349	TB 766381	TB 766430	TB 766459
TB 766322	TB 766350	TB 766382	TB 766432	TB 766460
TB 766323	TB 766351	TB 766383	TB 766433	TB 766461
TB 766324	TB 766352	TB 766384	TB 766434	TB 766462
TB 766325	TB 766353	TB 766385	TB 766435	TB 766463
TB 766326	TB 766354	TB 766386	TB 766436	TB 766464
TB 766327	TB 766359	TB 766387	TB 766437	TB 766465
TB 766328	TB 766360	TB 766388	TB 766438	TB 766466
TB 766329	TB 766361	TB 766401	TB 766439	TB 766467
TB 766330	TB 766362	TB 766402	TB 766440	TB 766468
TB 766331	TB 766363	TB 766407	TB 766441	TB 766469
TB 766332	TB 766364	TB 766408	TB 766442	TB 766470
TB 766333	TB 766365	TB 766409	TB 766443	TB 766471
TB 766334	TB 766366	TB 766410	TB 766444	TB 766471
TB 766335	TB 766367	TB 766411	TB 766445	
TB 766336	TB 766368	TB 766412	TB 766446	
TB 766337	TB 766369	TB 766413	TB 766447	
TB 766338	TB 766370	TB 766414	TB 766448	
TB 766339	TB 766371	TB 766415	TB 766449	
TB 766340	TB 766372	TB 766416	TB 766450	
		TB 766418		
		TB 766420		
				Total 156

H. E. NEAL & ASSOCIATES LTD.
Mineral Consultants

Ste. 606, 55 Queen Street East, Toronto, Canada M5C 1R6 Telephone: (416) 368-0166

March 21, 1985

Ms. S.E. Yundt
Director
Land Management Branch
Whitney Block, Rm. 6643
Queen's Park
TORONTO, Ontario
M7A 1W3

Dear Ms. Yundt:

Re: Quebec Cobalt and Exploration Limited

Enclosed please find the following property reports submitted by H.E. Neal & Associates Ltd. on behalf of Quebec Cobalt and Exploration Limited.

2 copies - Report on Surficial Geology Survey Performed on Toronto Lake Project Claims, Toronto, Junior, Falcon & Return Lake Areas, Thunder Bay Mining Division, Ontario. Six Surficial Geology Maps, scale 1" to 400', accompany each report.

Data for the surficial geology maps was collected during the 1984 field season as a separate survey. This included recording topographic slopes, vegetation type, drainage patterns, glacial features and detailed descriptions of the soil profile in 362 pits dug on the property.

Respectfully submitted,

Carolyn Horner

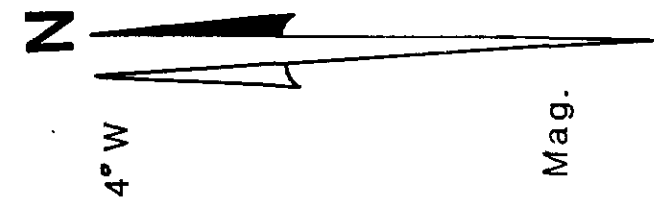
Carolyn Horner B.Sc.

*Will phone in
to us the file
number which has
maps showing traverse
lines
file # 2.7558*

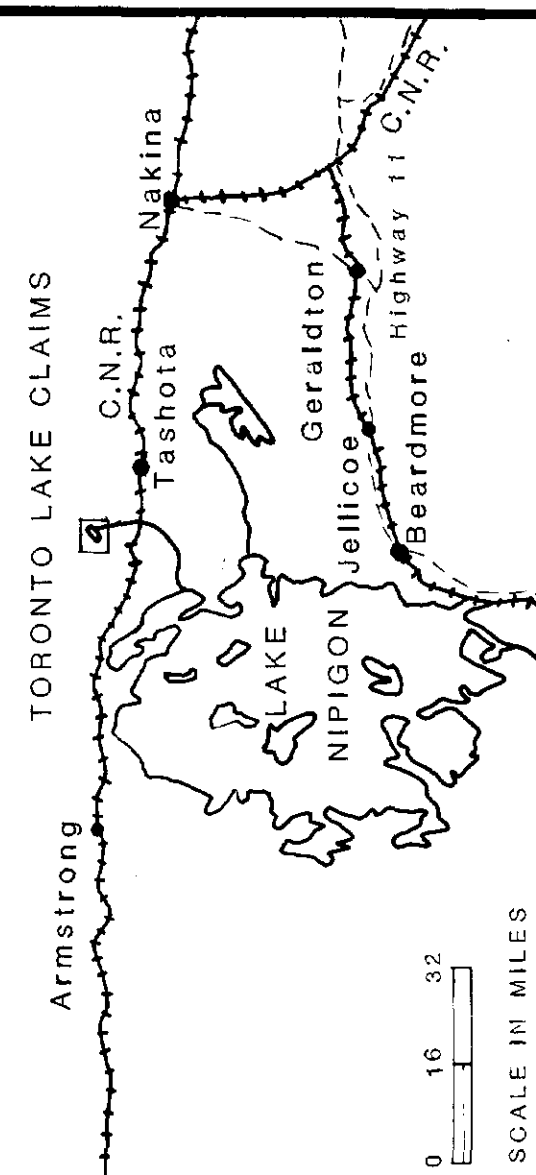
RECEIVED

MAR 22 1985

MINING LANDS SECTION



KEY MAP



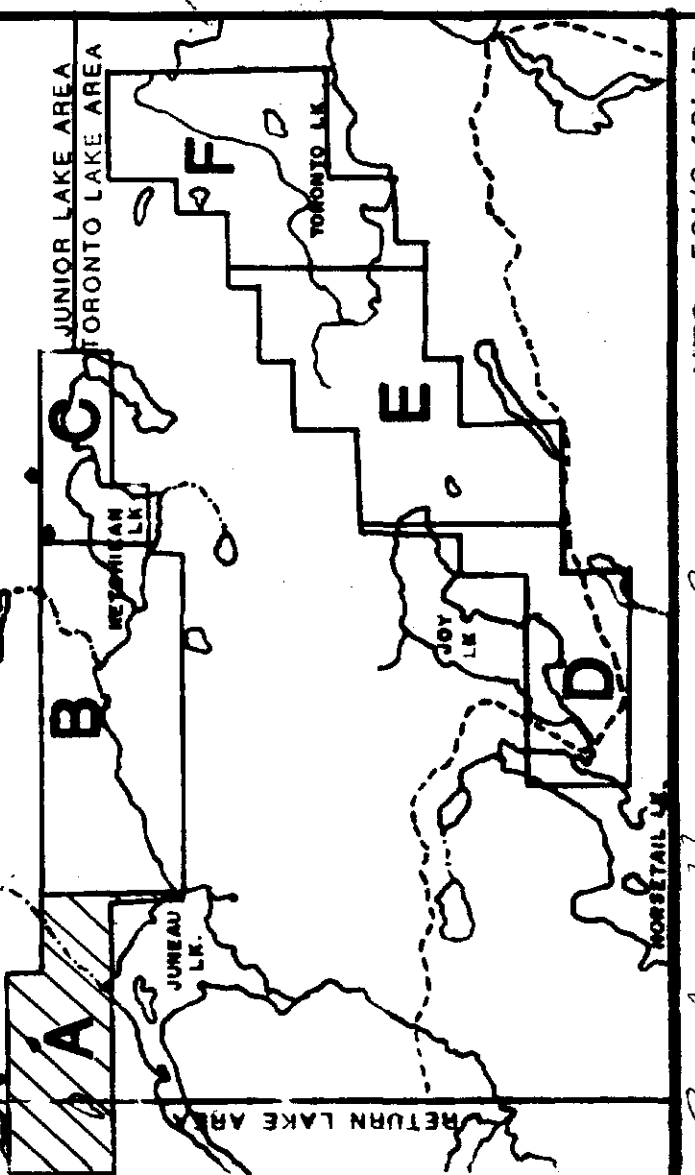
LEGEND

- 6** DIABASE
 - 6a) Diabase
 - 6b) Porphyritic diabase
- 5** GRANITIC ROCKS
 - 5a) Undifferentiated gneiss
 - 5b) Granite, granite gneiss
 - 5c) Porphyritic granite, porphyritic granite gneiss
 - 5d) Pegmatite
- 4** BASIC & ULTRABASIC INTRUSIVE ROCKS
 - 4a) Gabbro to diorite
 - 4b) Ultrabasic gabbro to diorite
 - 4c) Serpentine
 - 4d) Amphibolite schist
 - 4e) Amphibolite schist
- 3** IRON FORMATION
- 2** METASEDIMENTS
 - 2a) Quartz-biotite gneiss, biotite-quartz-feldspar gneiss
 - 2b) Quartzite
 - 2c) Quartz-schist, biotite-schist, schist or gneiss
 - 2d) Quartz-feldspar schist, quartz-biotite schist
 - 2e) Biotite-quartz-garnet-feldspar schist
- 1** METAVOLCANICS
 - 1a) Undifferentiated
 - 1b) Massive amphibolite
 - 1c) Schistose amphibolite
 - 1d) Metadiabase

SYMBOLS

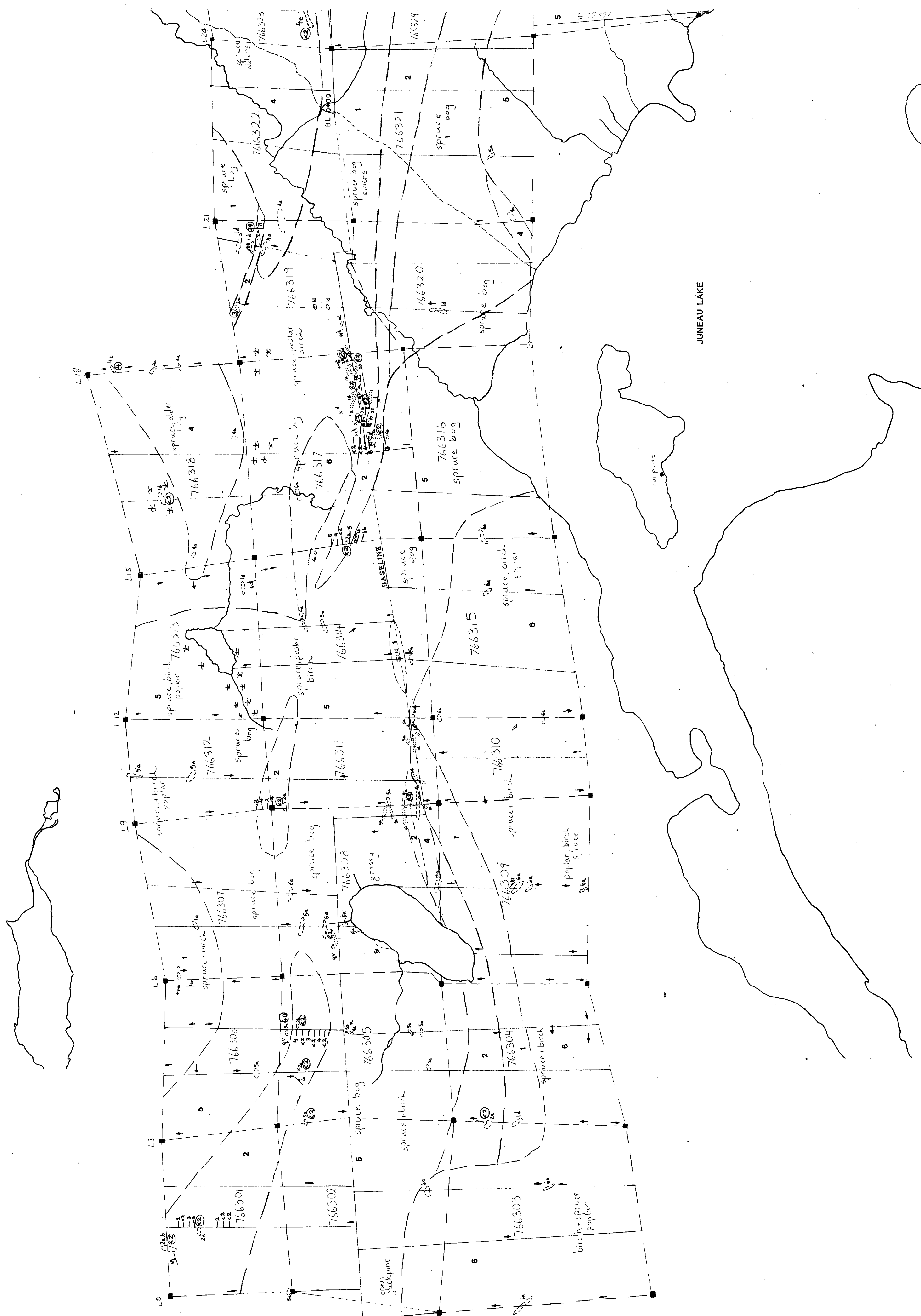
- Boundary of rock outcrop.
- Small rock outcrop
- Geological boundary, defined, assumed.
- Schistosity: Inclined dip, vertical dip, dip unknown.
- Gneissosity: Inclined dip, vertical dip, dip unknown.
- Jointing: Inclined dip, vertical dip.
- Fault or shear zone (arrows indicate direction of movement).
- Drag-fold (arrow indicates direction of plunge).
- Synclinal axis
- Claim post: located, not located
- Swamp
- Creek with flow direction indicated.
- Road
- Trail
- Slope (arrow points downslope).
- Esker
- Quartz vein
- Pyrite
- Chalcocopyrite
- Sphalerite
- Magnetite
- Garnet
- Gold ppb in rock
- Gold ppb in soil
- Gold ppb in humus

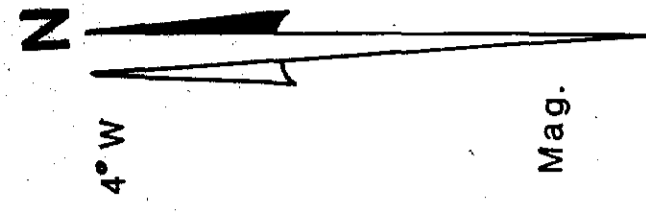
MAP SHEET LOCATION



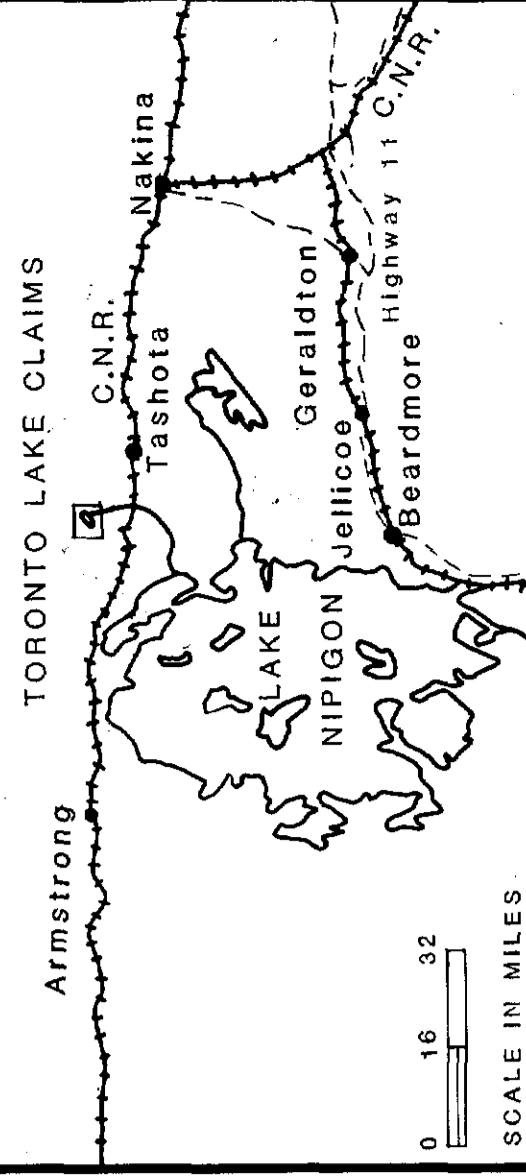
NTS: 521/642L/S
QUEBEC COBALT
AND EXPLORATION LIMITED
TORONTO LAKE PROJECT
 SHEET A
GEOLOGY
& GOLD ASSAYS

SCALE IN FEET
 0 400 800 1200
 H.E. NEAL & ASSOCIATES LTD.
 TORONTO
 CANADA
 DRAWN BY: C.J.H.
 APPROVED BY: H.E.N.
 DATE: Dec. 1984
 REVISION: Apr. 1985
 279C





KEY MAP



SCALE IN MILES
0 10 20

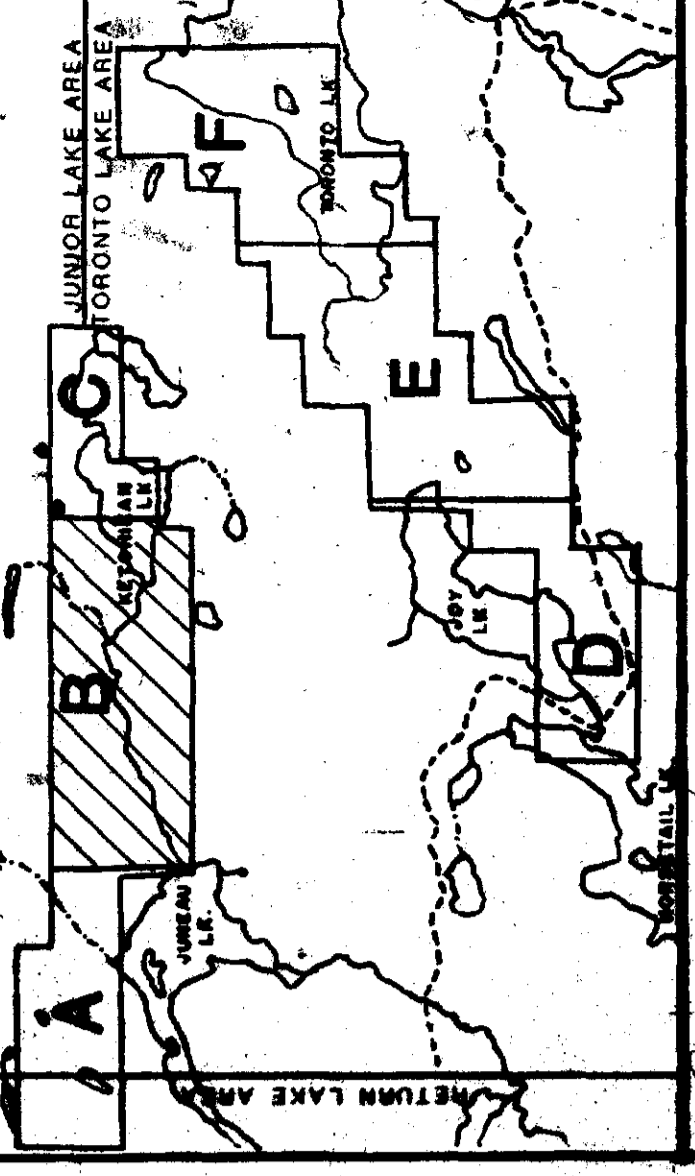
LEGEND

- 6 DIABASE
 - 6a) Diabase 6b) Porphyritic diabase
- 5 GRANITIC ROCKS
 - 5a) Granite (hornblende) gneiss
 - 5b) Granite gneiss
 - 5c) Porphyritic granite, porphyritic granite gneiss
 - 5d) Pegmatite
- 4 BASIC & ULTRABASIC INTRUSIVE ROCKS
 - 4a) Mesogabbro
 - 4b) Mesopyroxenite, hornblende
 - 4c) Serpentinite
 - 4d) Peridotite
 - 4f) Talc-chlorite schist
- 3 IRON FORMATION
- 2 METASEDIMENTS
 - 2a) Quartz-biotite gneiss, biotite-quartz-feldspar gneiss
 - 2b) Quartzite
 - 2c) Blue quartz augen-biotite-serpentine schist or gneiss
 - 2d) Quartz-serpentine (mafic) schist, quartz-biotite schist
 - 2f) Biotite quartz-garnet-feldspar schist
- 1 METAVOLCANICS
 - 1a) Undifferentiated
 - 1b) Massive amphibolite
 - 1c) Schistose amphibolite
 - 1d) Metadiabase

SYMBOLS

- Boundary of rock outcrop.
- Small rock outcrop
- Geological boundary, defined, assumed.
- Schistosity: inclined dip, vertical dip, dip unknown.
- Gneissosity: inclined dip, vertical dip, dip unknown.
- Jointing: inclined dip, vertical dip.
- Fault or shear zone (arrows indicate direction of movement).
- Drag-fold (arrow indicates direction of plunging).
- Synclinal axis
- Claim post: located, not located
- Swamp
- Creek with flow direction indicated.
- Road
- Trail
- Slope (arrow points downslope).
- Esker
- Quartz vein
- Pyrite
- Chalcopyrite
- Sphalerite
- Magnetite
- Garnet
- Gold pbb in rock -2 Gold pbb in soil
- Gold pbb in humus

MAP SHEET LOCATION



NTS. 521/6.42/L7S

QUEBEC COBALT
AND EXPLORATION LIMITED

TORONTO LAKE PROJECT

SHEET B

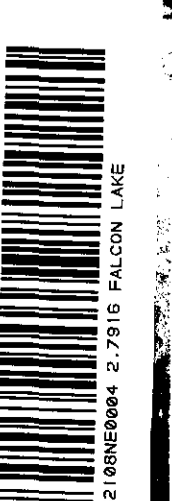
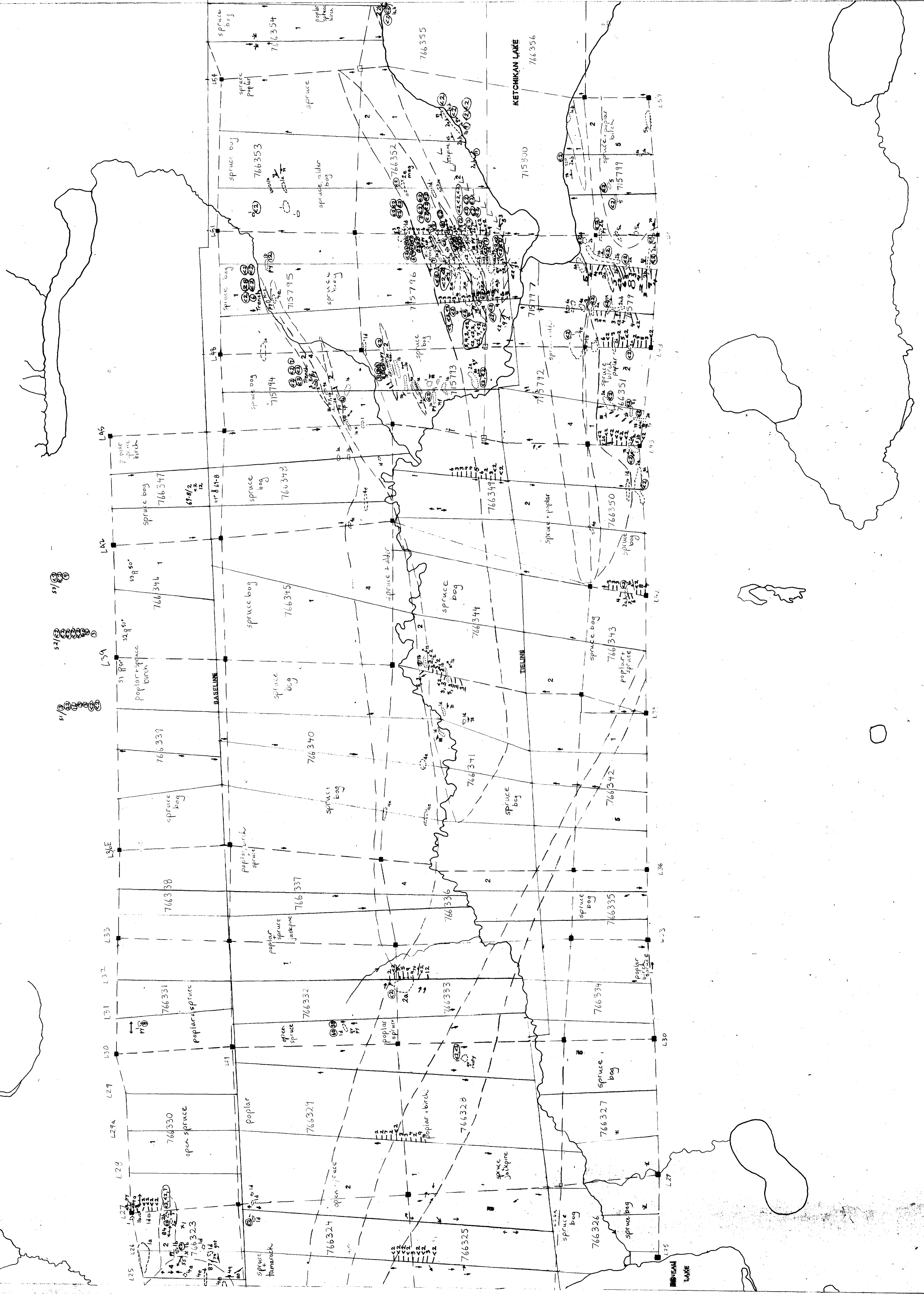
GEOLOGY
& GOLD ASSAYS

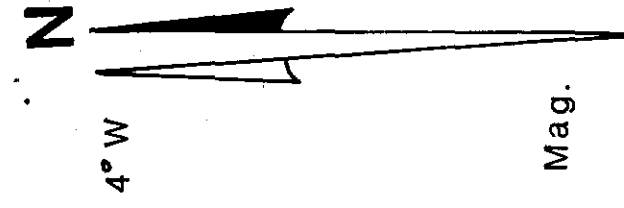
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0 400 800 1200

H.E. NEAL & ASSOCIATES LTD.
TORONTO
CANADA

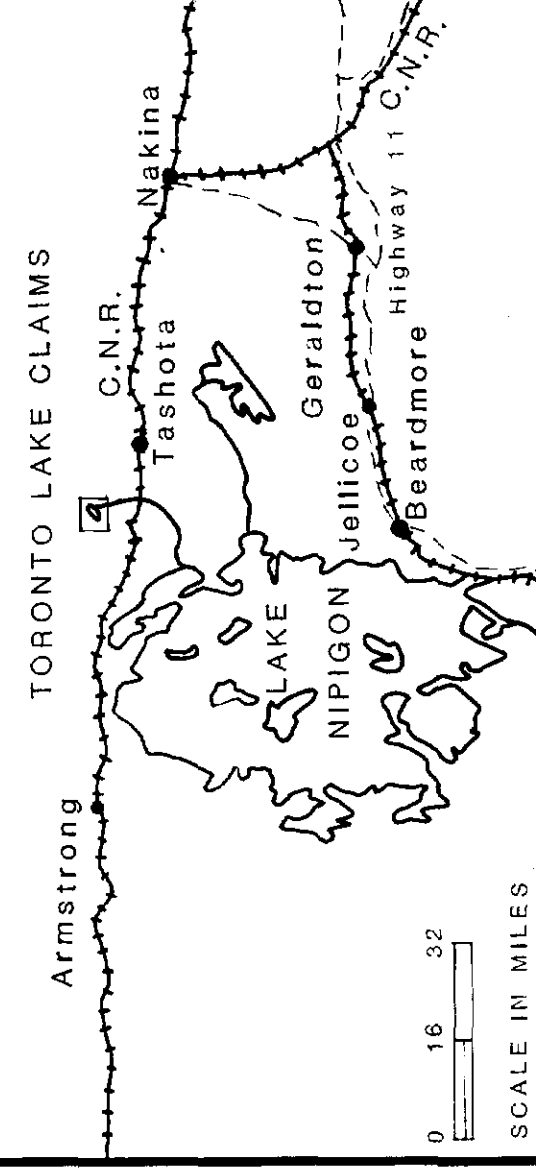
DRAWN BY: C.J.H. DRAWING NO. [unclear]
APPROVED BY: H.E.N. [unclear]

DATE: Dec. 1984





KEY MAP



SCALE IN MILES
0 16 32

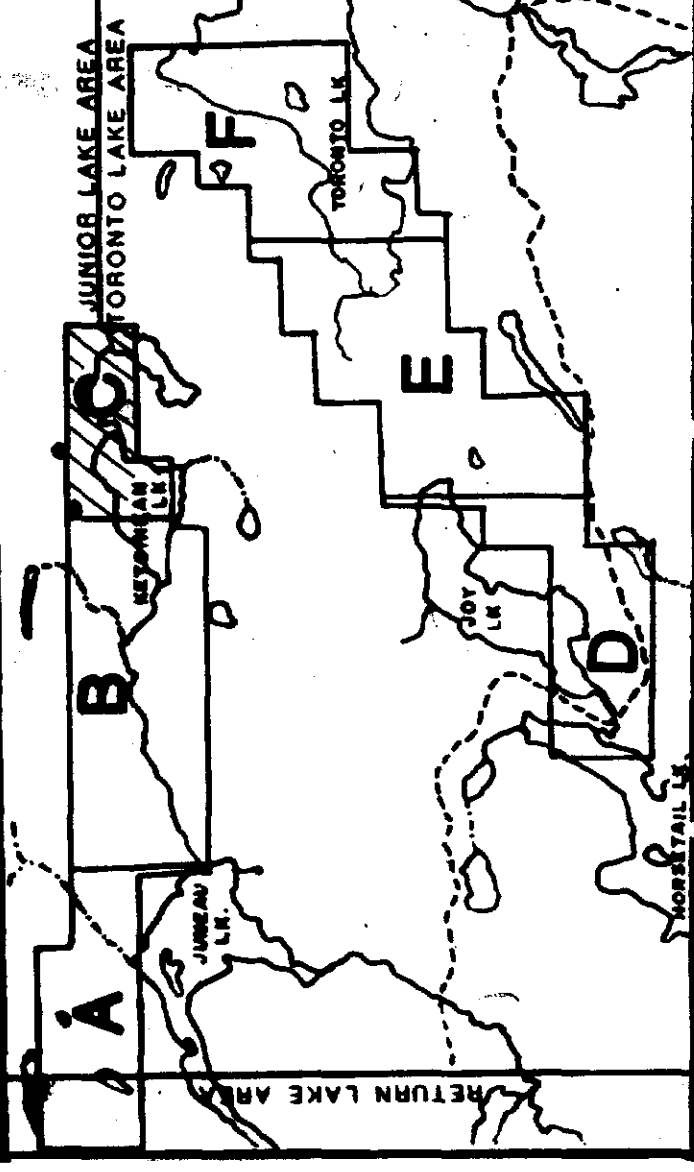
LEGEND

- 6 DIABASE
 - 6a) Diabase 6b) Porphyritic diabase
- 5 GRANITIC ROCKS
 - 5a) Undifferentiated 5a) Granite, granite gneiss
 - 5b) Porphyritic granite, porphyritic granite gneiss
 - 5c) Pegmatite
- 4 BASIC & ULTRABASIC INTRUSIVE ROCKS
 - 4a) Ultrabasic 4b) Basic
 - 4c) Serpentine 4d) Peridotite 4e) Amphibolite schist
- 3 IRON FORMATION
- 2 METASEDIMENTS
 - 2a) Quartz-biotite gneiss, biotite-quartz-feldspar gneiss
 - 2b) Quartzite, muscovite-biotite schist or gneiss
 - 2c) Quartz-schist(muscovite) schist, quartz-biotite schist
 - 2d) Biotite-quartz-garnet-feldspar schist
- 1 METAVOLCANICS
 - 1a) Undifferentiated 1a) Massive amphibolite
 - 1b) Schistose amphibolite 1c) Metadiabase

SYMBOLS

- Boundary of rock outcrop.
- x Small rock outcrop
- Geological boundary: defined, assumed.
- Schistosity: inclined dip, vertical dip, dip unknown.
- Gneissosity: inclined dip, vertical dip, dip unknown.
- Jointing: inclined dip, vertical dip.
- Fault or shear zone (arrows indicate direction of movement).
- Drag-fold (arrow indicates direction of plunge).
- Synclinal axis
- Claim post: located, not located
- Swamp
- Creek with flow direction indicated.
- Road
- Trail
- Slope (arrow points downslope).
- Esker
- QV Quartz vein
- PY Pyrite
- CP Chalcopyrite
- Sph Sphalerite
- mag Magnetite
- gnt Garnet
- Gold pbb in rock -2. Gold pbb in soil

MAP SHEET LOCATION

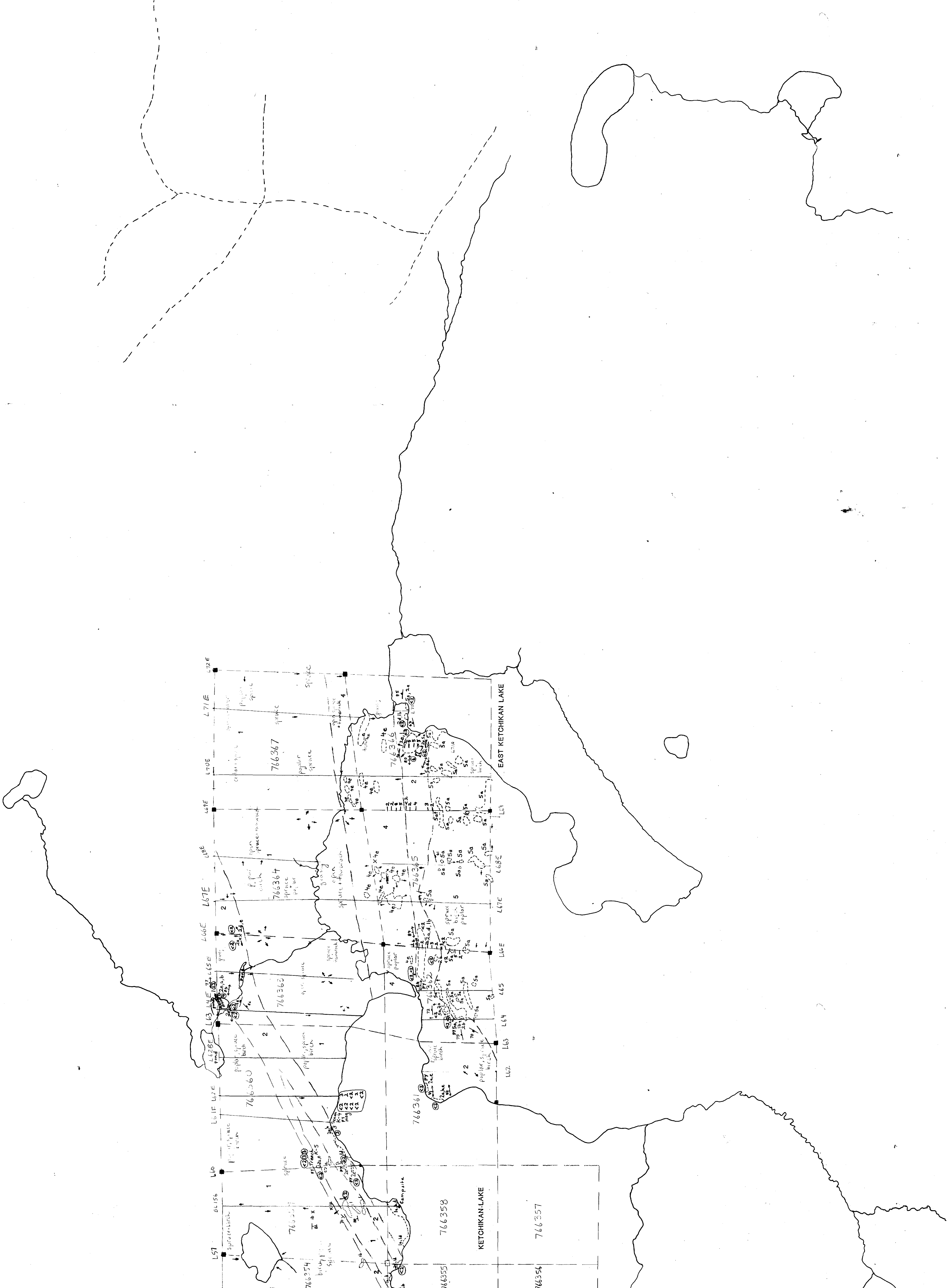


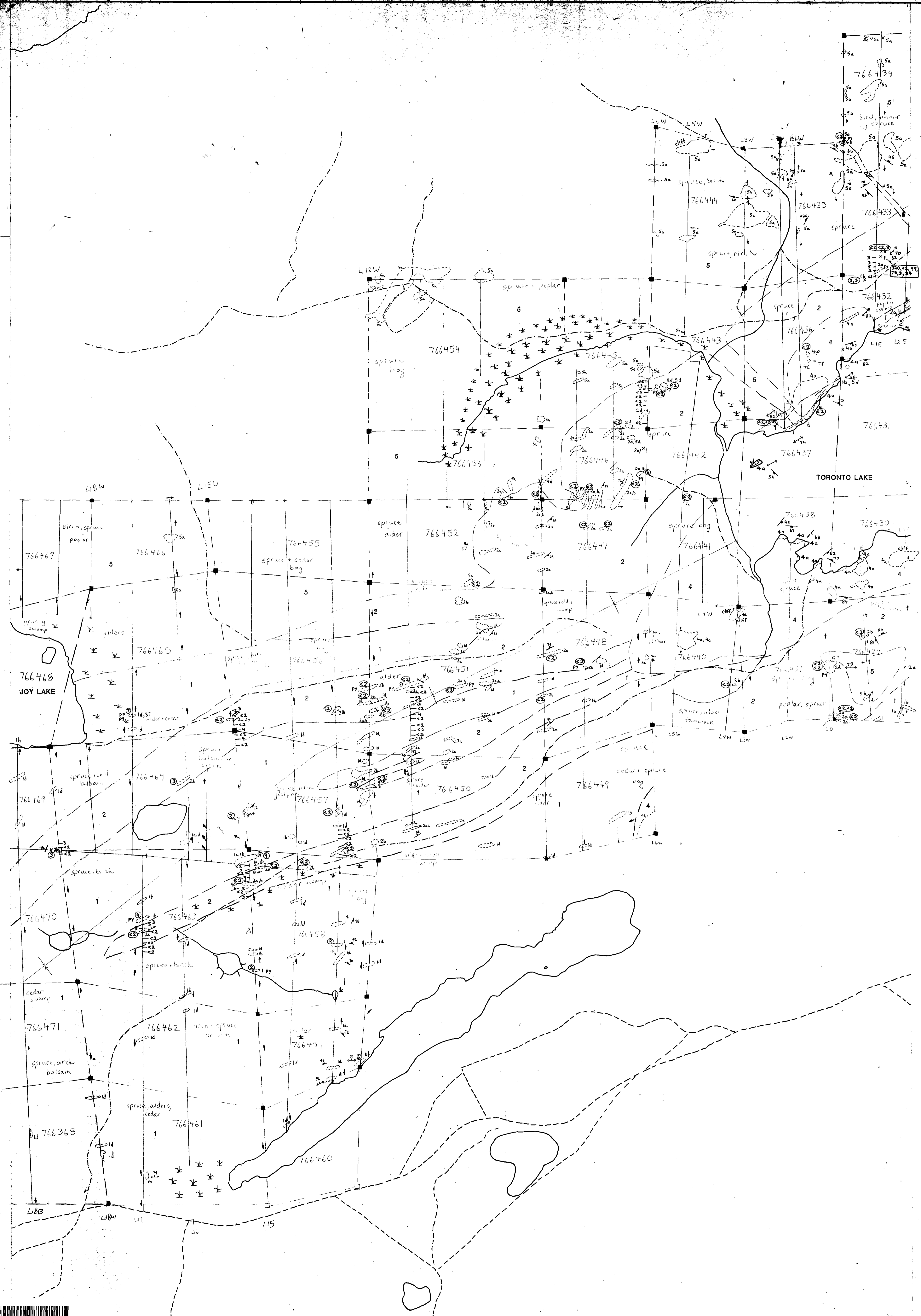
QUEBEC COBALT
AND EXPLORATION LIMITED
N.T.S. 321/8,421/0

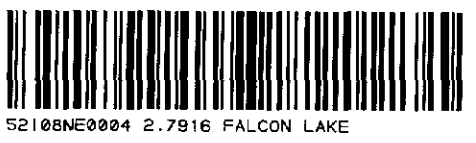
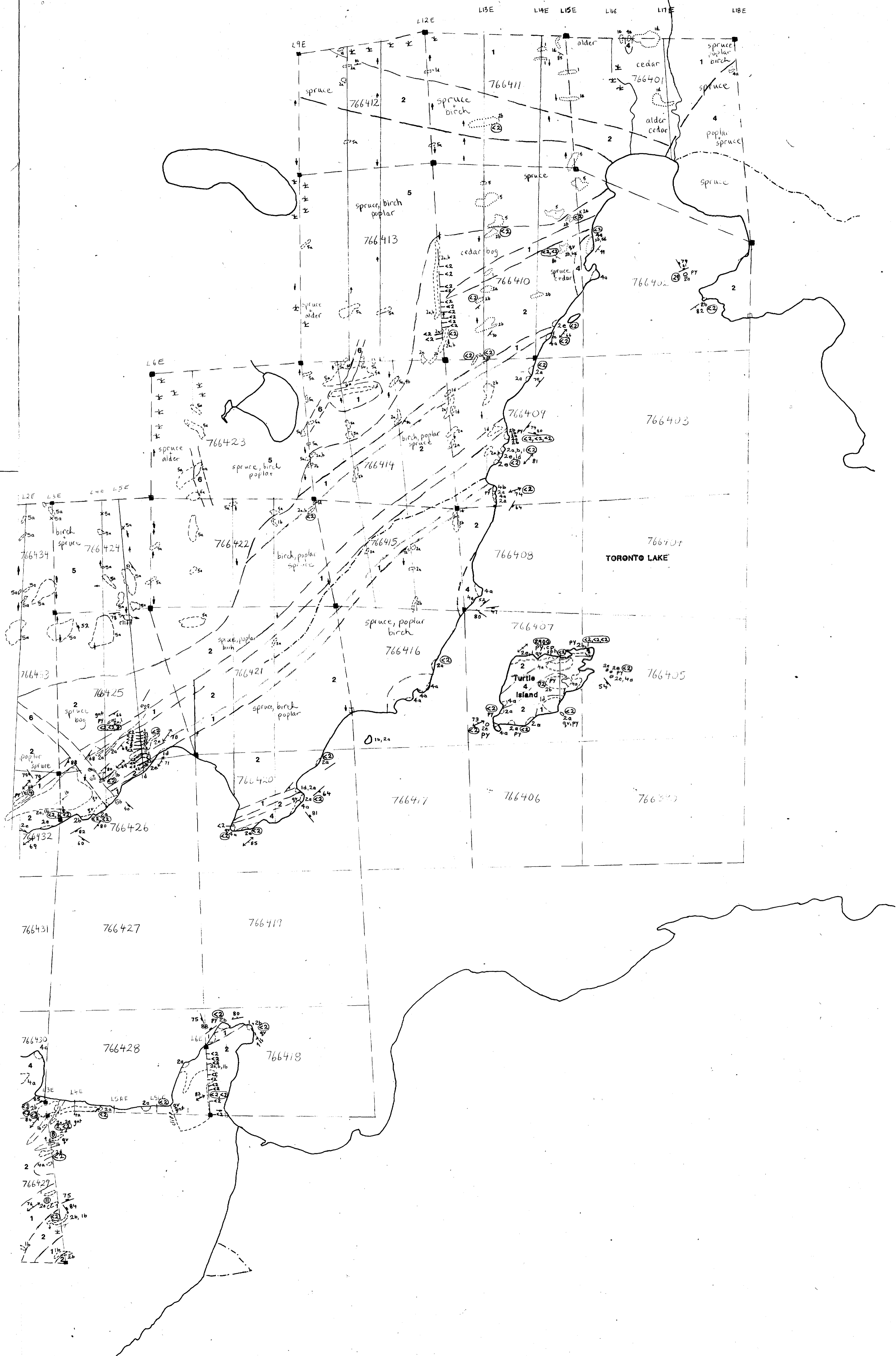
TORONTO LAKE PROJECT
SHEET C
GEOLOGY
& GOLD ASSAYS

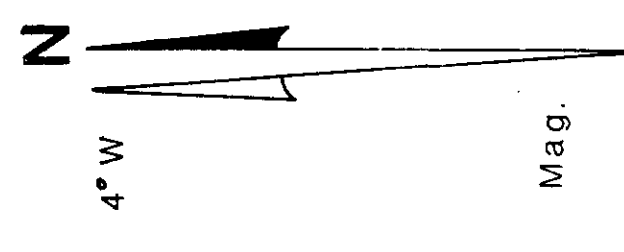
SCALE IN FEET
0 400 800 1200

H.E. NEAL & ASSOCIATES LTD.
TORONTO CANADA
DRAWN BY: C.J.H. DATE: Dec. 1984
APPROVED BY: M.E.N. (E) 184/85
279/C

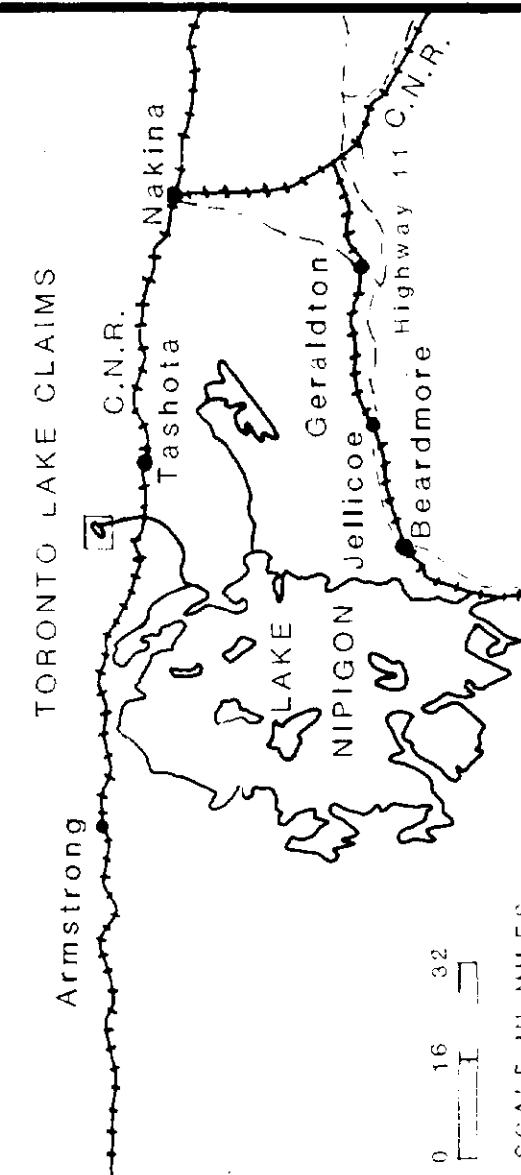








KEY MAP



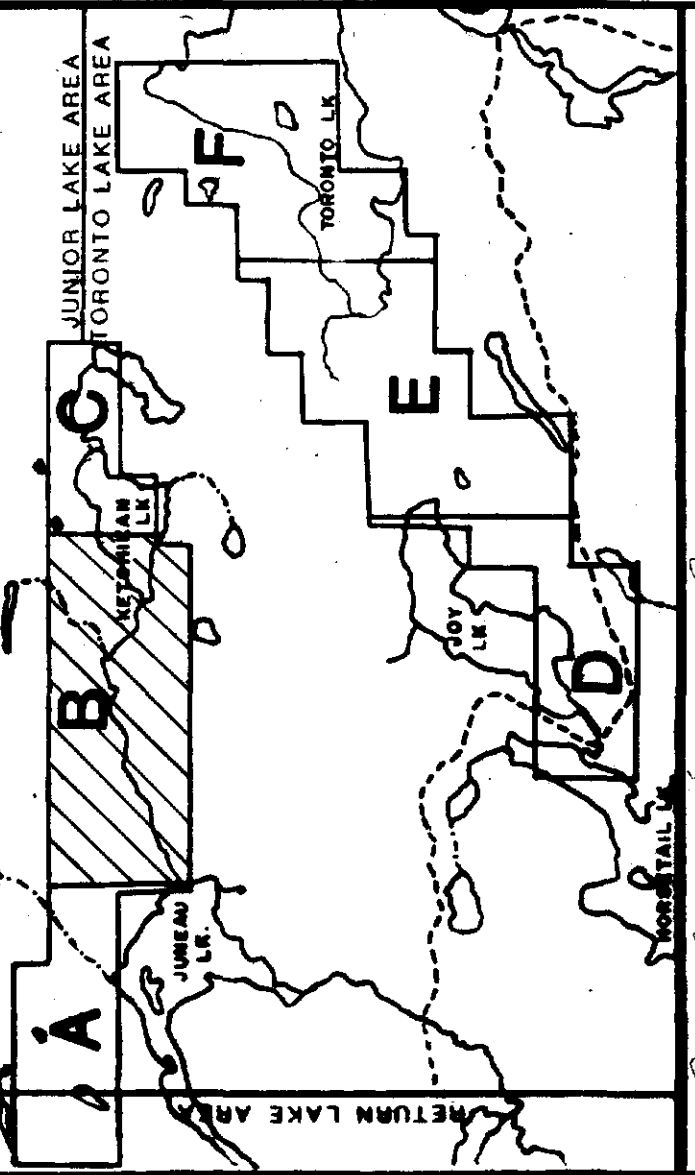
LEGEND

- 6** DIABASE
6a) Diabase 6b) Porphyritic diabase
- 5** GRANITIC ROCKS
5a) Undifferentiated 5a) Granite, granite gneiss
5b) Porphyritic granite, porphyritic granite gneiss
5c) Pegmatite
- 4** BASIC & ULTRABASIC INTRUSIVE ROCKS
4a) Metagabbro 4b) Metapyroxenite, hornblende
4c) Serpentine 4d) Peridotite 4f) Talc-chlorite schist
- 3** IRON FORMATION
- 2** METASEDIMENTS
2a) Quartz-biotite gneiss, biotite-quartz-feldspar gneiss
2b) Quartzite
2c) Blue quartz augen-biotite-sericite schist or gneiss
2d) Quartz-sericite-muscovite schist, quartz-biotite schist
2e) Biotite-quartz-gneiss-feldspar schist
- 1** METAVOLCANICS
1a) Undifferentiated 1a) Massive amphibolite
1b) Schistose amphibolite 1d) Metadiabase

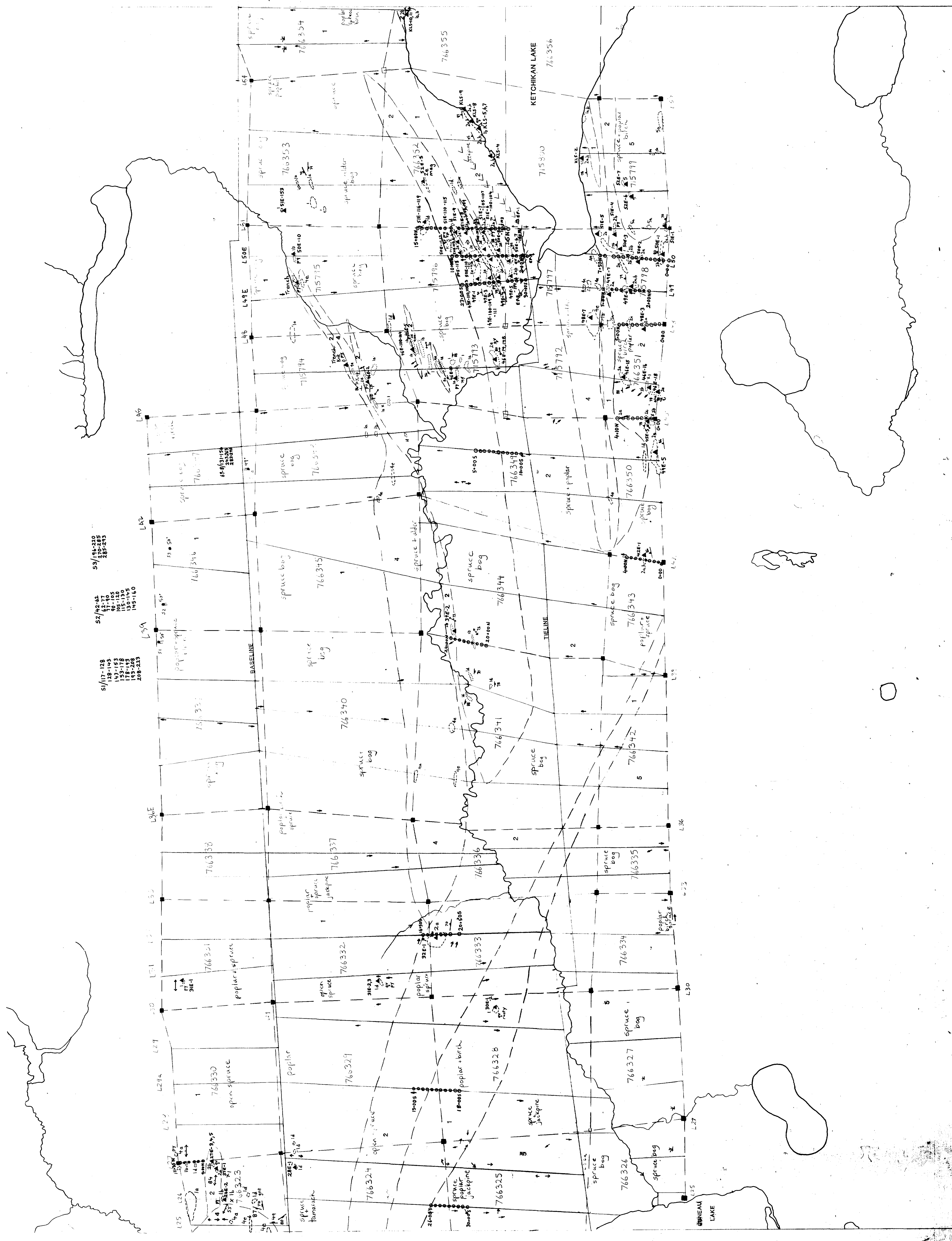
SYMBOLS

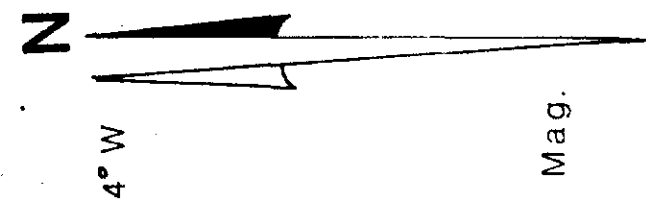
- Boundary of rock outcrop.
- Small rock outcrop
- Geological boundary: defined, assumed.
- Schistosity: inclined dip, vertical dip, dip unknown.
- Schistosity: inclined dip, vertical dip, dip unknown.
- Jointing: inclined dip, vertical dip.
- Fault or shear zone (arrows indicate direction of movement).
- Drag-fold (arrow indicates direction of plunge).
- Synclinal axis
- Claim post: located, not located
- Swamp
- Creek with flow direction indicated.
- Road
- Trail
- Slope (arrow points downslope).
- Esker
- Quartz vein
- Pyrite
- Chalcopyrite
- Sphalerite
- Magnetite
- Garnet
- Soil/Humus sample
- Rock sample

MAP SHEET LOCATION

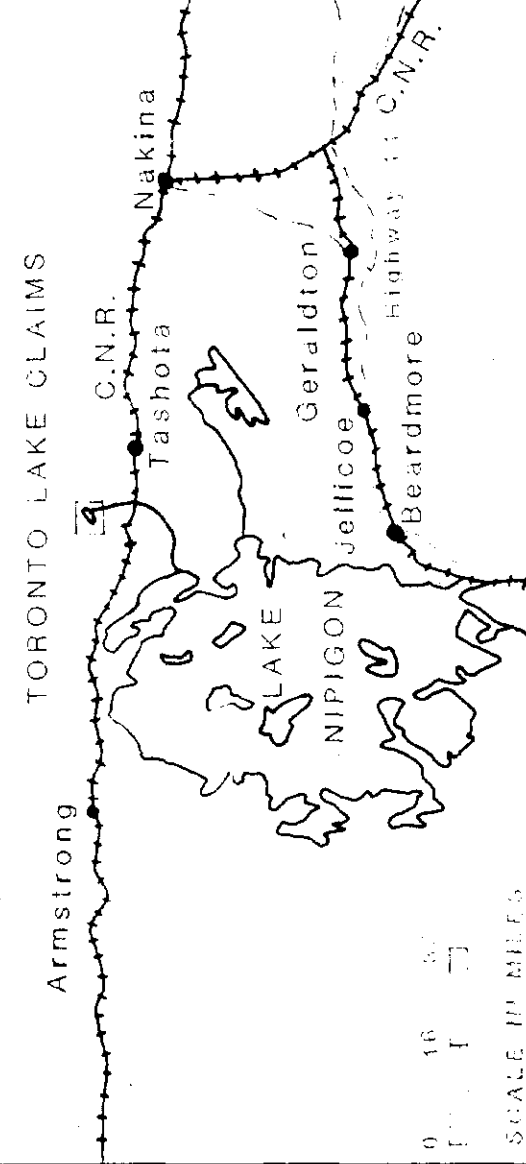


NTS: 5218.82L/S
**QUEBEC COBALT
AND EXPLORATION LIMITED**
TORONTO LAKE PROJECT
SHEET B
GEOLOGY & GEOCHEMISTRY
SCALE IN FEET
H.E. NEAL & ASSOCIATES LTD.
TORONTO
CANADA
DATE: Dec. 1984
DRAWN BY: C.J.H. DRAWING NO.: 88-101
APPROVED BY: H.E. NEAL
REVISED: MAR. 1985





KEY MAP



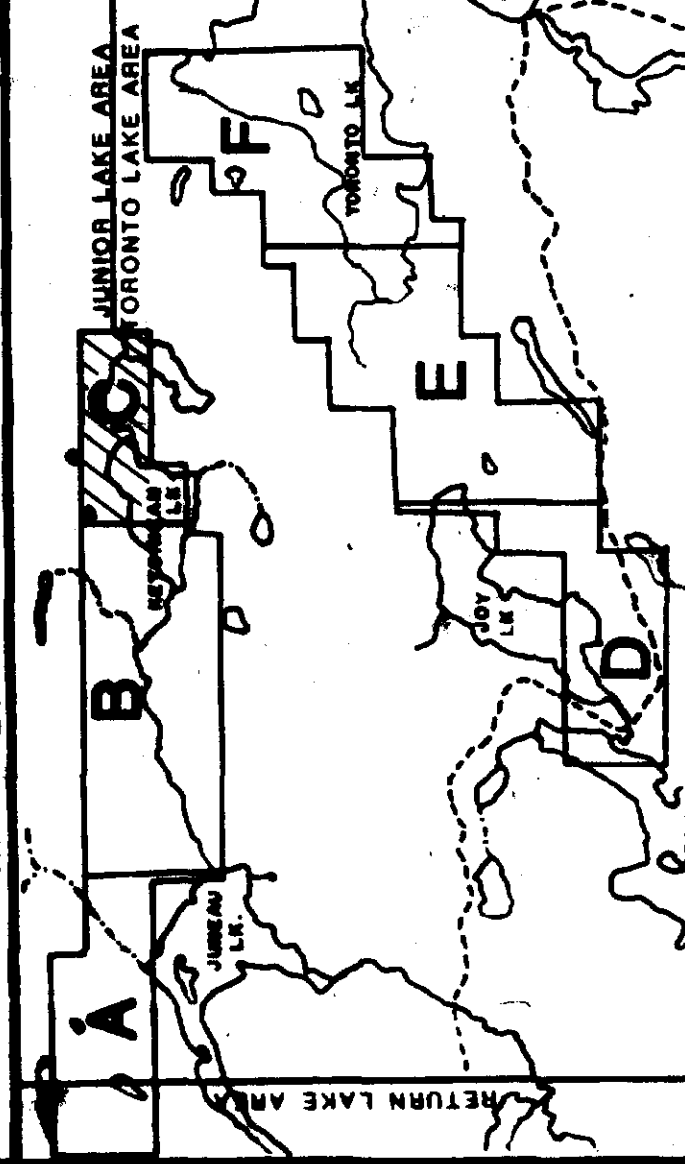
LEGEND

- 6 DIABASE
 - 6a) Diabase 6b) Porphyritic diabase
- 5 GRANITIC ROCKS
 - 5a) Granite 5b) Gneiss, granitic gneiss
 - 5c) Porphyritic granite, porphyritic granite gneiss
 - 5d) Pegmatite
- 4 BASIC & ULTRABASIC INTRUSIVE ROCKS
 - 4a) Metagabbro 4b) Metapyroxenite, hornblende
 - 4c) Serpentine 4d) Peridotite 4f) Taic chlorite schist
- 3 IRON FORMATION
- 2 METASEDIMENTS
 - 2a) Quartz-biotite gneiss, biotite-quartz-feldspar gneiss
 - 2b) Quartzite
 - 2c) Blue quartz augen-biotite-vermicular schist or gneiss
 - 2d) Quartz-sericite(muscovite) schist, quartz-biotite schist
 - 2f) Biotite-quartz-garnet-feldspar schist
- 1 METAVOLCANICS
 - 1a) Undifferentiated 1a) Massive amphibolite
 - 1b) Schistose amphibolite 1d) Metadiabase

SYMBOLS

- Boundary of rock outcrop.
- x Small rock outcrop
- Geological boundary: defined, assumed.
- Schistosity: inclined dip, vertical dip, dip unknown.
- Gneissosity: inclined dip, vertical dip, dip unknown.
- Jointing: inclined dip, vertical dip.
- Fault or shear zone (arrows indicate direction of movement).
- Drag-fold (arrow indicates direction of plunge).
- Synclinal axis
- Claim post: located, not located
- ~ Swamp
- ~ Creek with flow direction indicated.
- Road
- Trail
- Slope (arrow points downslope).
- Esker
- qv Quartz vein
- py Pyrite
- cp Chalcopyrite
- sph Sphalerite
- mag Magnetite
- gnt Garnet
- o Soil/Humus sample
- ▲ Rock sample

MAP SHEET LOCATION



NTS: 52178.421/5

QUEBEC COBALT AND EXPLORATION LIMITED

TORONTO LAKE PROJECT SHEET C

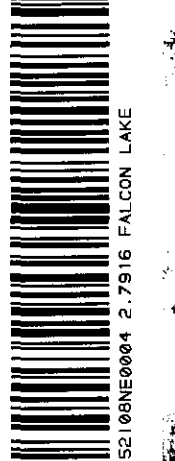
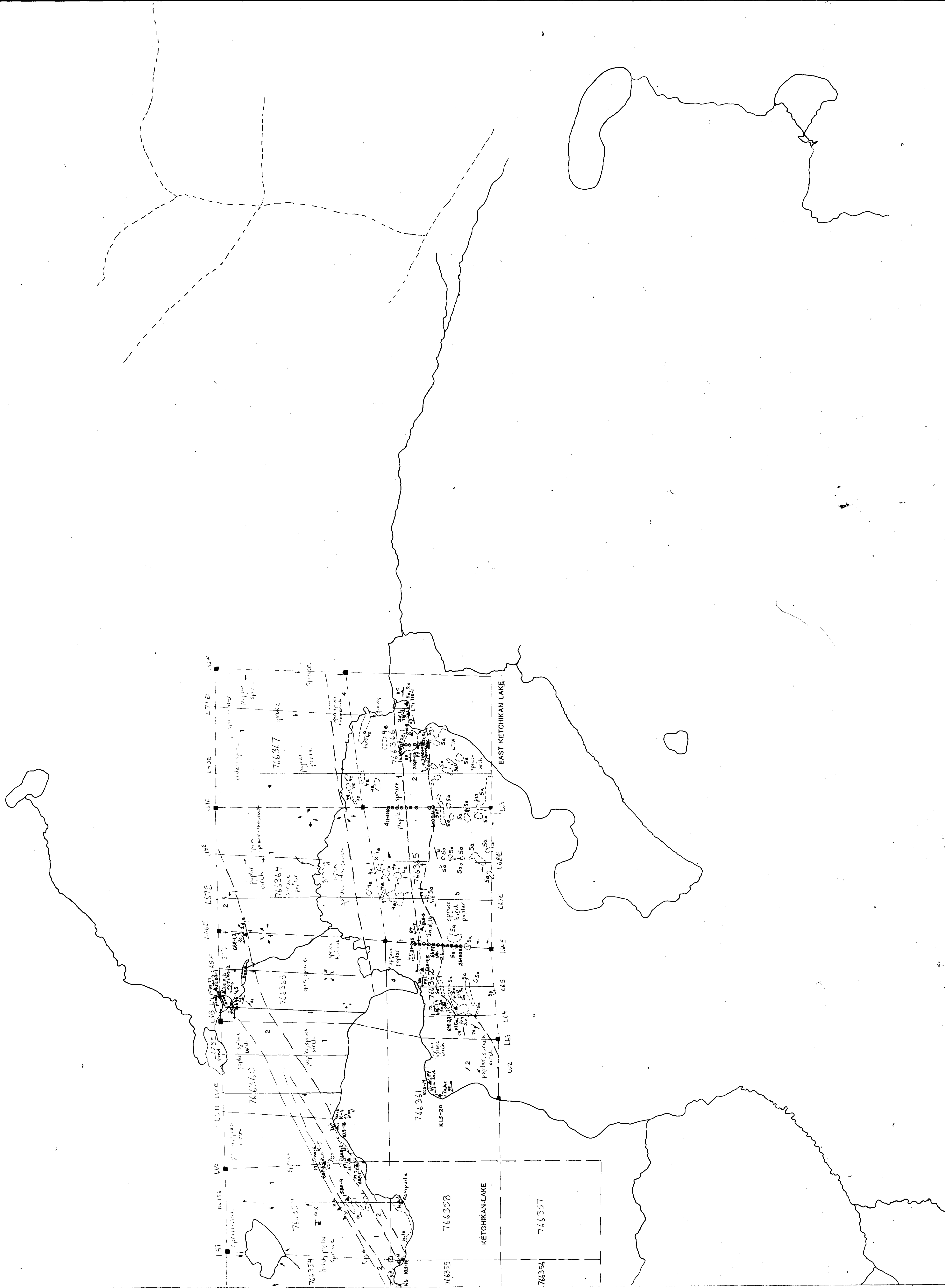
GEOLOGY & GEOCHEMISTRY

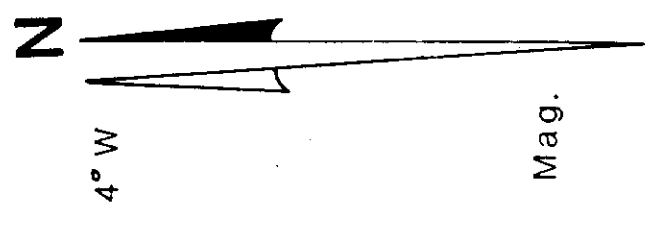
SCALE IN FEET 0 400 800 1200

H.E. NEAL & ASSOCIATES LTD. TORONTO CANADA

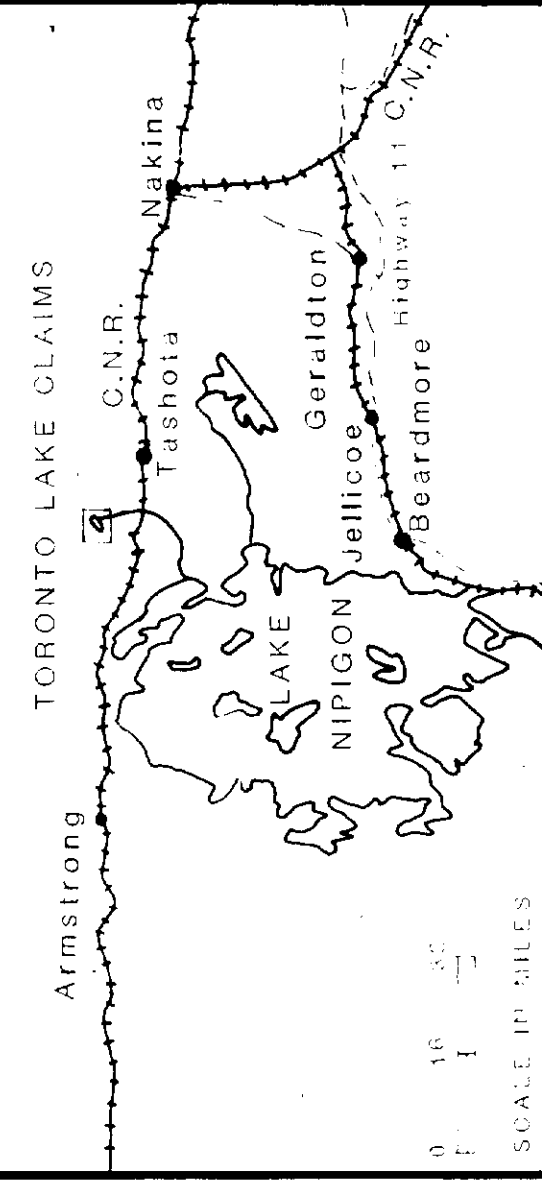
DRAWN BY: C.T.H. DATE: Dec. 1984

APPROVED BY: H.E.N. REVISION: 1/8/85





KEY MAP



LEGEND

- 6** DIABASE
 - 6a) Diabase (b) Porphyritic diabase
- 5** GRANITIC ROCKS
 - 5a) Undifferentiated granite, porphyritic granite gneiss
 - 5b) Porphyritic granite, porphyritic granite gneiss
 - 5c) Pegmatite
- 4** BASIC & ULTRABASIC INTRUSIVE ROCKS
 - 4a) Magnetite, bornblende
 - 4b) Magnetite, bornblende
 - 4c) Serpentine
 - 4d) Talc-chlorite schist
- 3** IRON FORMATION

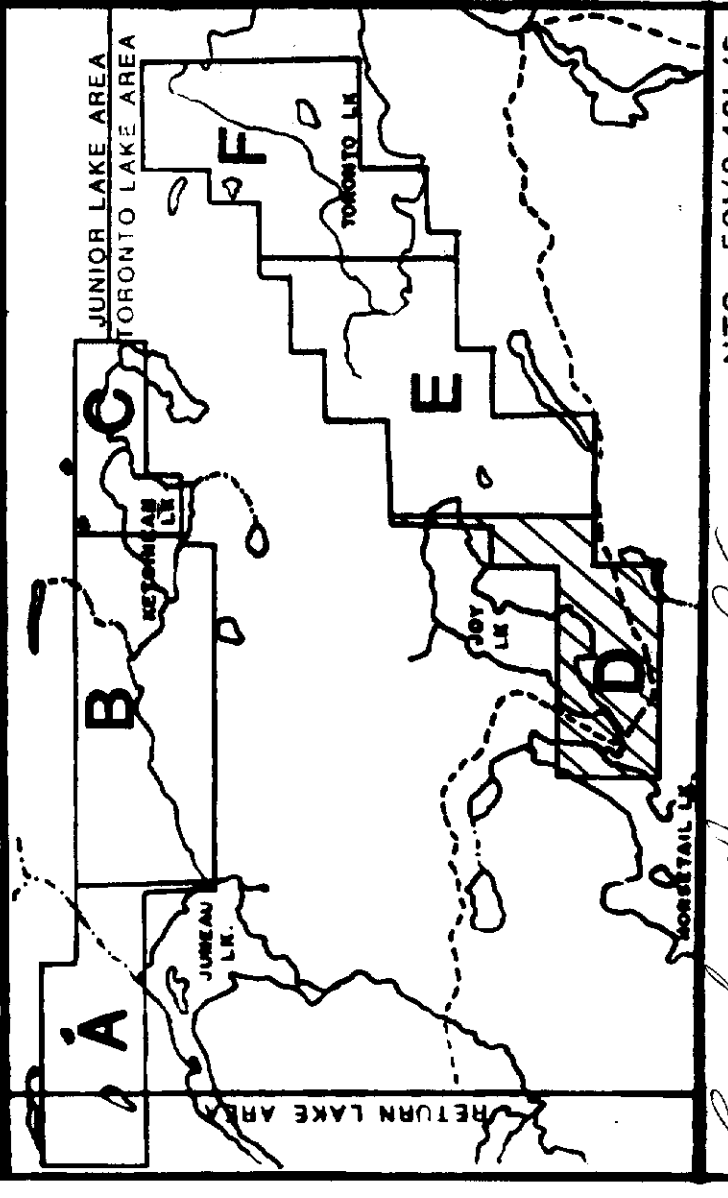
- 2** METASEDIMENTS
 - 2a) Quartz-biotite gneiss, biotite-quartz-feldspar gneiss
 - 2b) Quartzite, augen-biotite-sericite schist or gneiss
 - 2c) Quartz-sericite(muscovite) schist, quartz-biotite schist
 - 2d) Biotite-quartz-garnet-feldspar schist

- 1** METAVOLCANICS
 - 1a) Undifferentiated 1a) Massive amphibolite
 - 1b) Schistose amphibolite 1b) Metadiabase

SYMBOLS

- Boundary of rock outcrop.
- x Small rock outcrop
- Geological boundary: defined, assumed.
- Schistosity: inclined dip, vertical dip, dip unknown.
- Gneissosity: inclined dip, vertical dip, dip unknown.
- Jointing: inclined dip, vertical dip.
- Fault or shear zone (arrows indicate direction of movement); Drag-fold (arrow indicates direction of plunge).
- Synclinal axis
- Claim post: located, not located
- * Swamp
- Creek with flow direction indicated.
- Road
- Trail
- Slope (arrow points downslope).
- Esker
- Quartz vein
- py Pyrite
- cp Chalcopyrite
- sph Sphalerite
- mag Magnetite
- gnt Garnet
- Soil/Humus sample
- ▲ Rock sample

MAP SHEET LOCATION



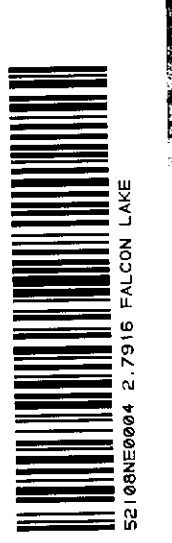
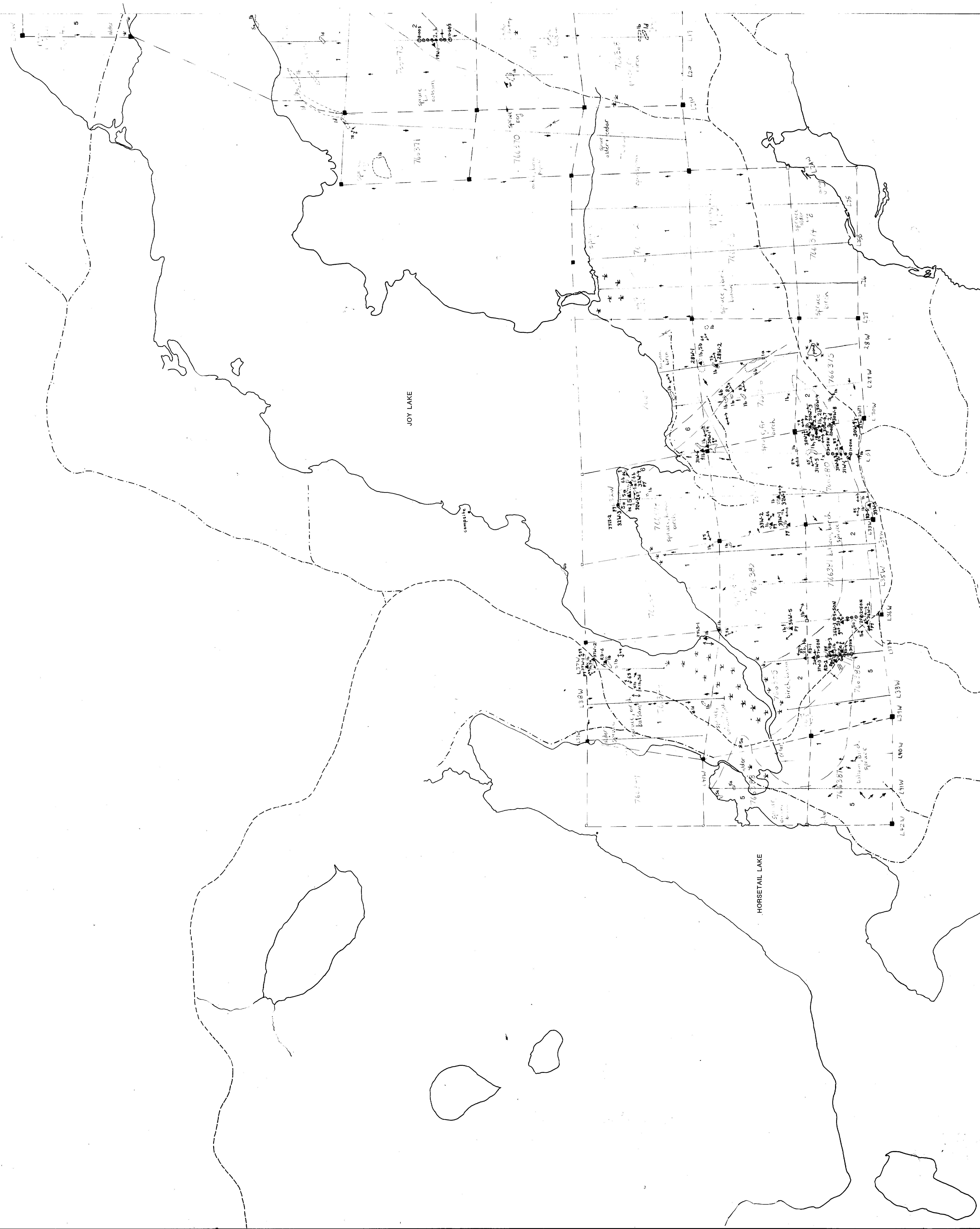
QUEBEC COBALT AND EXPLORATION LIMITED

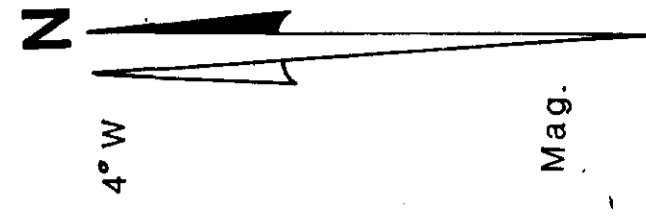
TORONTO LAKE PROJECT SHEET D

GEOLOGY & GEOCHEMISTRY

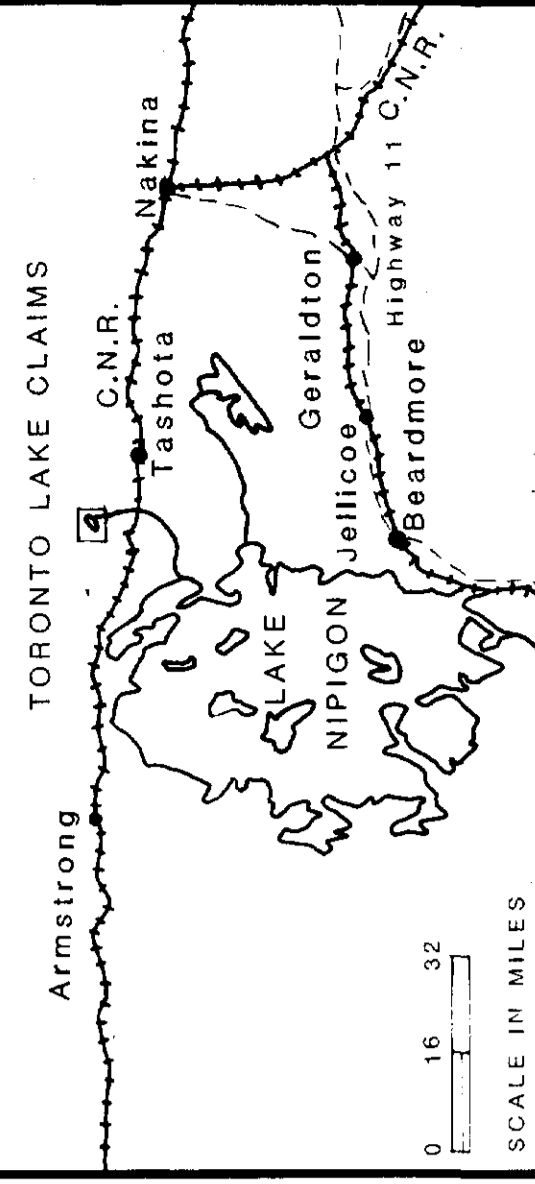
SCALE IN FEET

H.E. NEAL & ASSOCIATES LTD.
 TORONTO CANADA
 DRAWN BY: C.J.H. DRAWING No. DATE: Dec. 1984
 APPROVED BY: J.H.N. 8796 ASB





KEY MAP



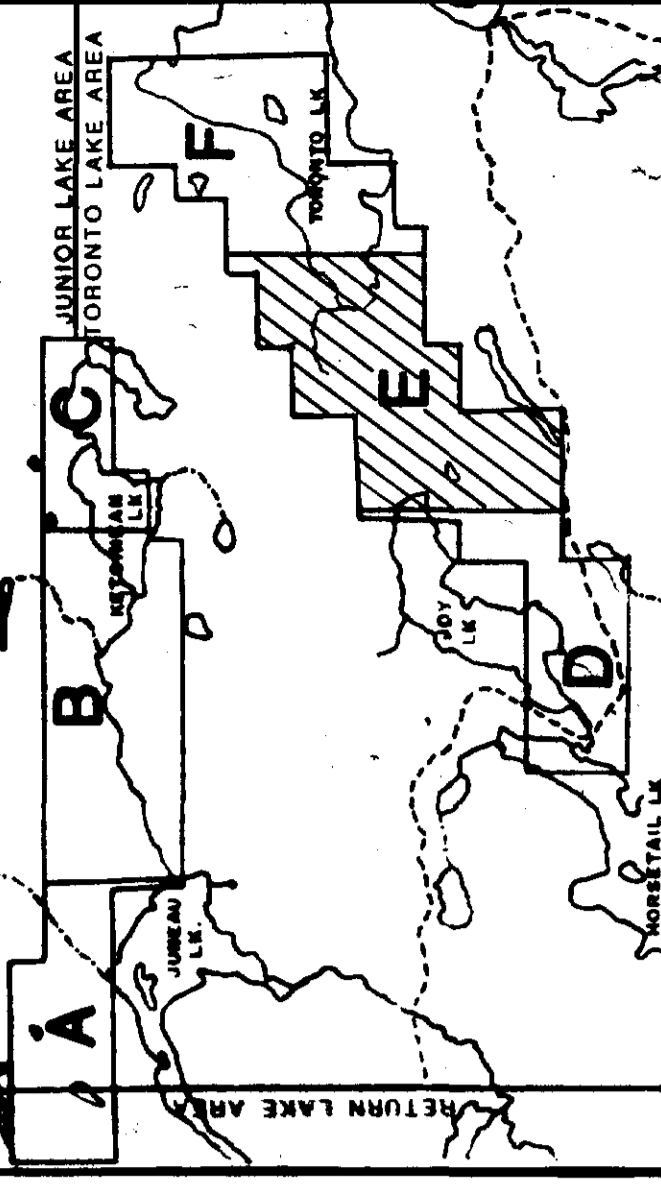
LEGEND

- 6 DIABASE
 - 6a) Diabase 6b) Porphyritic diabase
- 5 GRANITIC ROCKS
 - 5a) Undifferentiated 5b) Granite, granite gneiss
 - 5c) Porphyritic granite, porphyritic granite gneiss
 - 5d) Pegmatite
- 4 BASIC & ULTRABASIC INTRUSIVE ROCKS
 - 4a) Metagabbro 4b) Metapyroxenite, hornblende
 - 4c) Serpentinite 4d) Peridotite 4f) Talc-chlorite schist
- 3 IRON FORMATION
- 2 METASEDIMENTS
 - 2a) Quartz-biotite gneiss, biotite-quartz-feldspar gneiss
 - 2b) Quartzite
 - 2c) Blue quartz mugan-biotite-sericite schist or gneiss
 - 2d) Quartz-sericite(muscovite) schist, quartz-biotite schist
 - 2f) Biotite-quartz-garnet-feldspar schist
- 1 METAVOLCANICS
 - 1a) Undifferentiated 1b) Massive amphibolite
 - 1c) Schistose amphibolite 1d) Metadiabase

SYMBOLS

- Boundary of rock outcrop.
- x Small rock outcrop
- Geological boundary: defined, assumed.
- Schistosity: inclined dip, vertical dip, dip unknown.
- Gneissosity: inclined dip, vertical dip, dip unknown.
- Jointing: inclined dip, vertical dip.
- Fault or shear zone (arrows indicate direction of movement).
- Drag-fold (arrow indicates direction of plunge).
- Synclinal axis
- Claim post: located, not located
- Swamp
- Creek with flow direction indicated.
- Road
- Trail
- Slope (arrow points downslope).
- Esker
- QV Quartz vein
- Py Pyrite
- cp Chalcopyrite
- sph Sphalerite
- mag Magnetite
- gnt Garnet
- Soil/Humus sample
- ▲ Rock sample

MAP SHEET LOCATION



46° 00' 00" N 80° 00' 00" W
 SCALE IN FEET
 1" = 1000'
 1:62,500

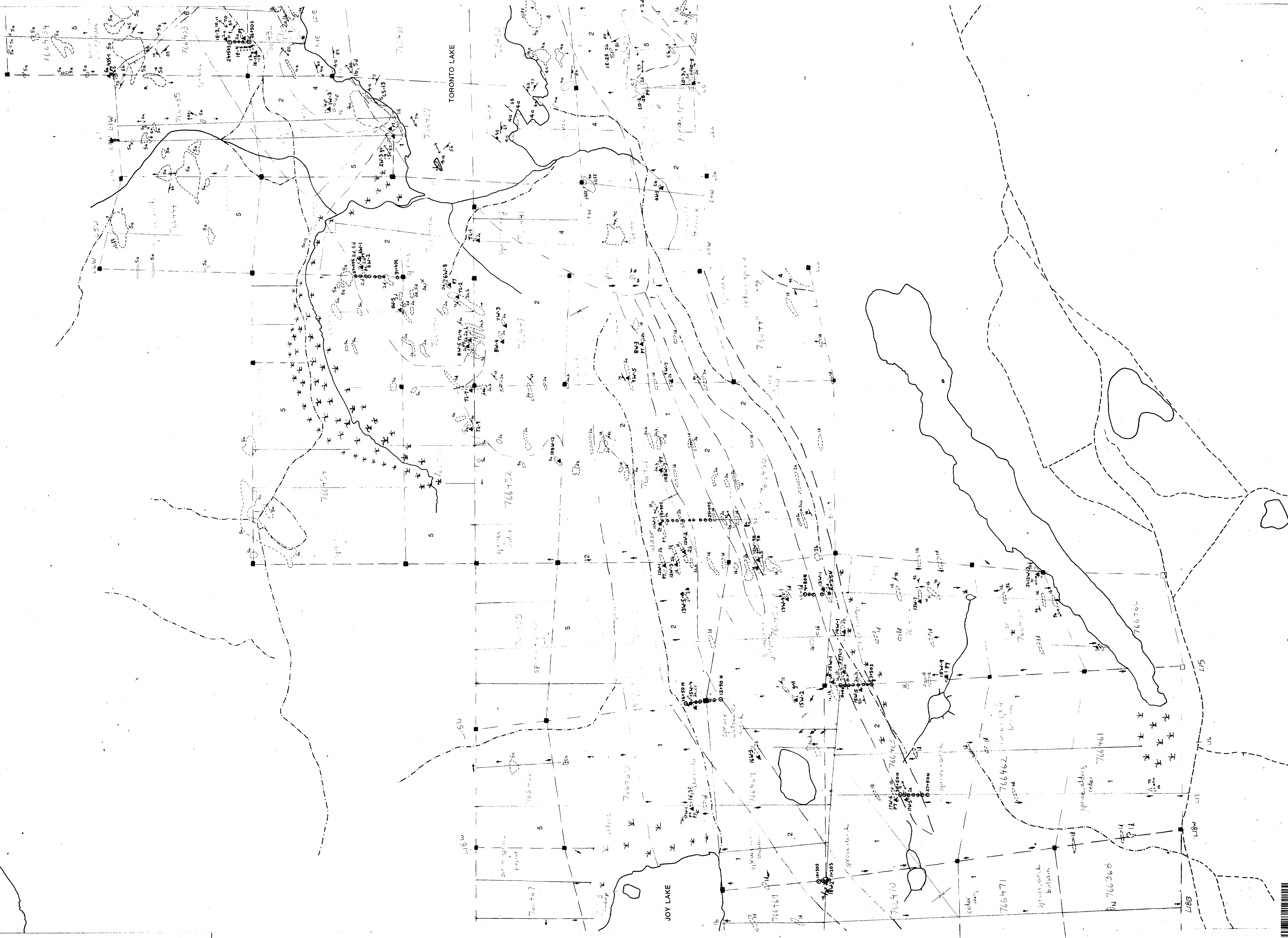
QUEBEC COBALT
 AND EXPLORATION LIMITED

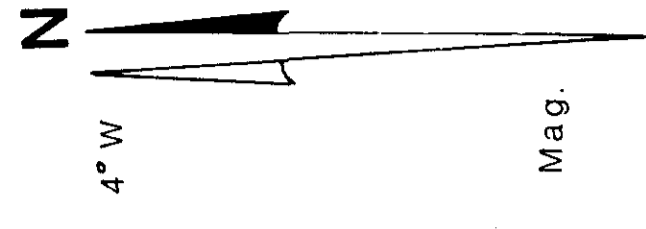
TORONTO LAKE PROJECT
 SHEET E

GEOLOGY & GEOCHEMISTRY

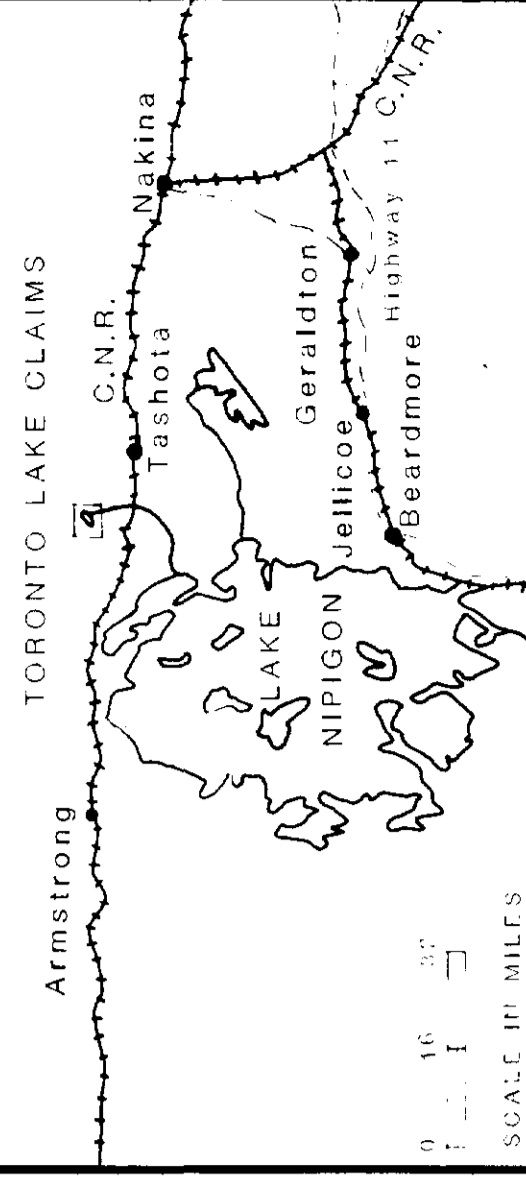
H.E. NEAL & ASSOCIATES LTD.
 TORONTO, CANADA

DRAWN BY: C.T.H. [DRAWING NO. 766471] DATE: Dec. 1984
 APPROVED BY: E.H. [SIGNATURE]





KEY MAP



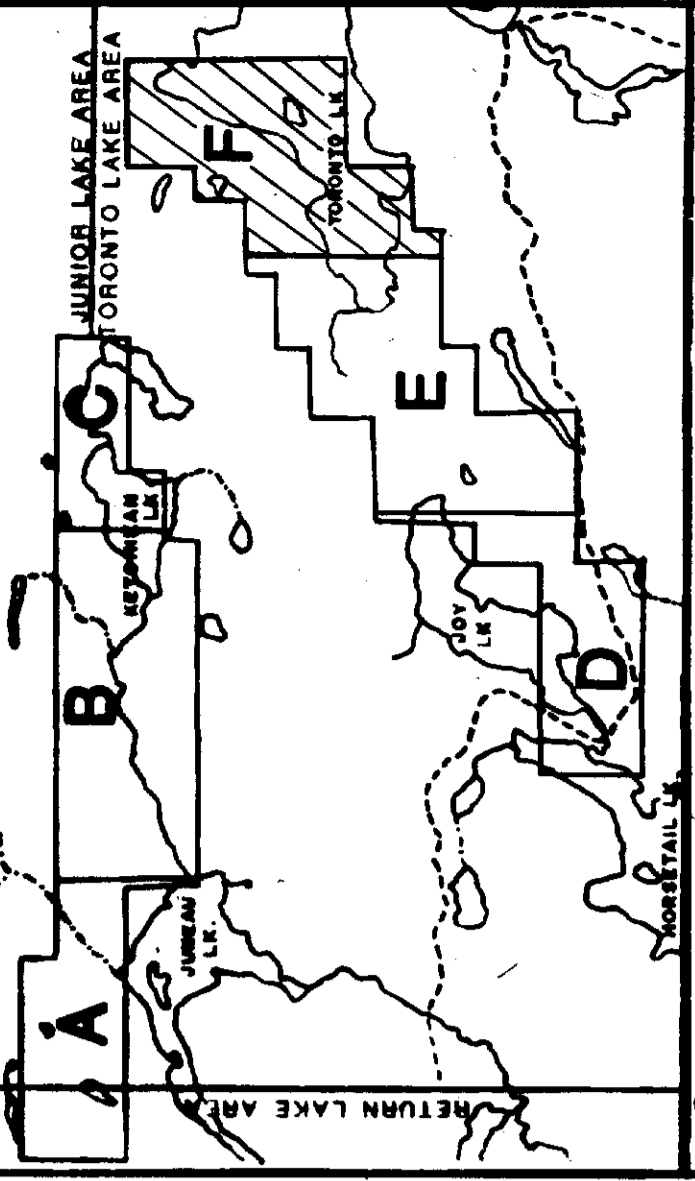
LEGEND

- 6 DIABASE
 - 6a) Diabase 6b) Porphyritic diabase
- 5 GRANITIC ROCKS
 - 5a) Undifferentiated granite, granite gneiss
 - 5b) Porphyritic granite, porphyritic granite gneiss
 - 5c) Pegmatite
- 4 BASIC & ULTRABASIC INTRUSIVE ROCKS
 - 4a) Metagabbro 4b) Metapyroxenite, hornblende
 - 4c) Serpentinite 4d) Peridotite 4f) Talc-chlorite schist
- 3 IRON FORMATION
- 2 METASEDIMENTS
 - 2a) Quartz-biotite gneiss, biotite-quartz-feldspar gneiss
 - 2b) Quartzite
 - 2c) Blue quartz augen-biotite-sericite schist or gneiss
 - 2d) Quartz-sericite(muscovite) schist, quartz-biotite schist
 - 2f) Biotite-quartz garnet-feldspar schist
- 1 METAVOLCANICS
 - 1a) Undifferentiated 1a) Massive amphibolite
 - 1b) Schistose amphibolite 1c) Metadiabase

SYMBOLS

- Boundary of rock outcrop
- Small rock outcrop
- Geological boundary: defined, assumed.
- Schistosity: inclined dip, vertical dip, dip unknown.
- Gneissosity: inclined dip, vertical dip, dip unknown.
- Joining: inclined dip, vertical dip.
- Fault or shear zone (arrows indicate direction of movement).
- Drag-fold (arrow indicates direction of plunge).
- Synclinal axis
- Claim post: located, not located
- Swamp
- Creek with flow direction indicated.
- Road
- Trail
- Slope (arrow points downslope).
- Esker
- Quartz vein
- Pyrite
- Chalcocopyrite
- Sphalerite
- Mag Magnetite
- Grt Garnet
- Soil/Humus sample
- Rock sample

MAP SHEET LOCATION



NTS: 5218.421/S

QUEBEC COBALT AND EXPLORATION LIMITED

TORONTO LAKE PROJECT SHEET F

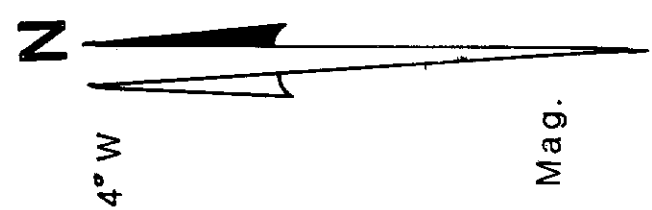
GEOLOGY & GEOCHEMISTRY

SCALE IN FEET 0 400 800 1200

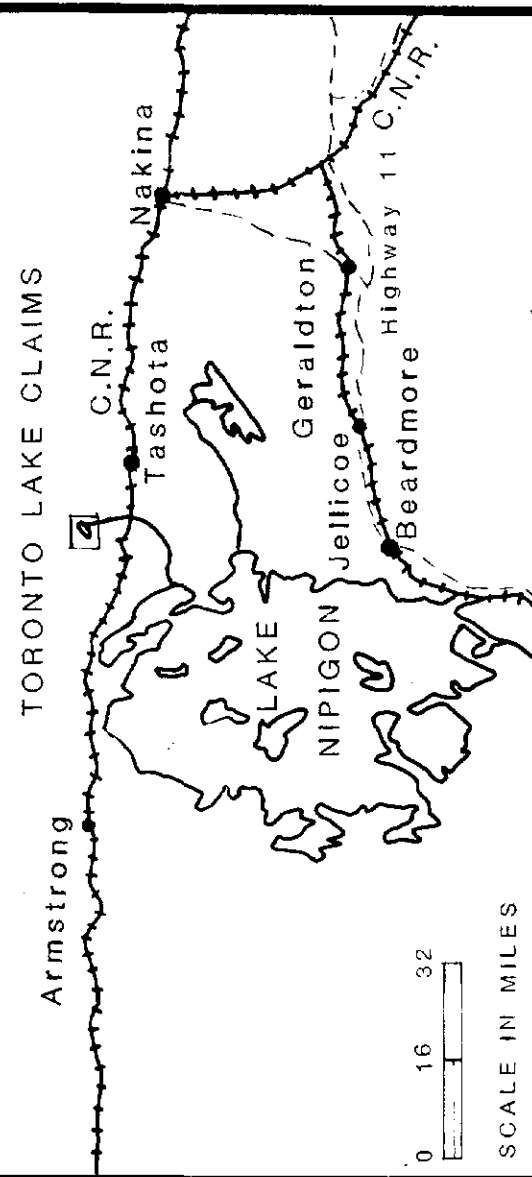
H.E. NEAL & ASSOCIATES LTD. TORONTO CANADA

DRAWN BY: C.S.T. DRAWING NO. DATE: Dec 1977 APPROVED BY: H.E.N.





KEY MAP



LEGEND

TOPOGRAPHY

- Ridges, hummocks
- High terrain
- Lowlands
- Swamps

VEGETATION

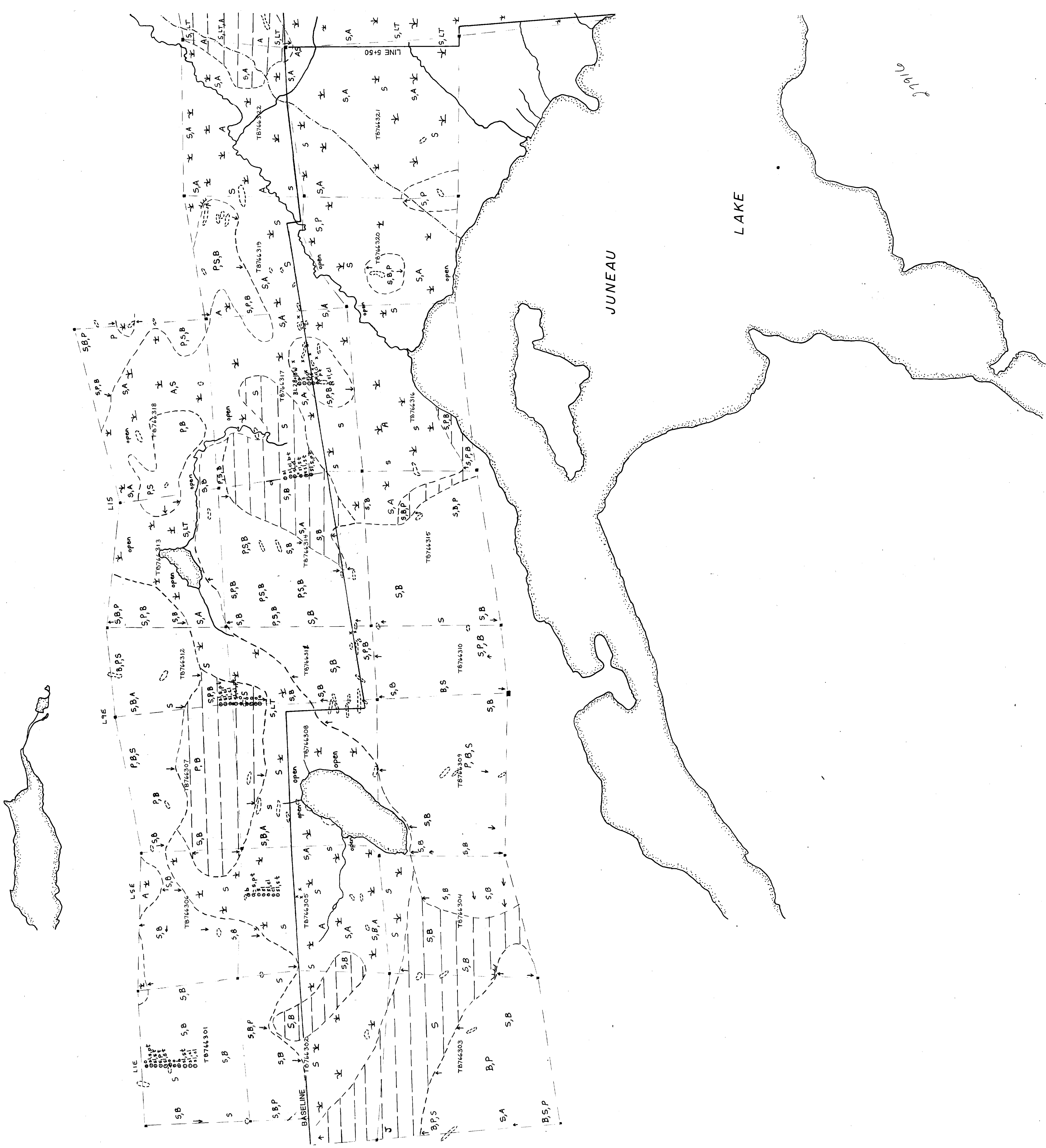
- A Alders
- B Birch
- C Cedar
- F Balsam fir
- J Jackpine
- LT Labrador tea
- P Poplar
- T Tamarack

SOIL TYPE

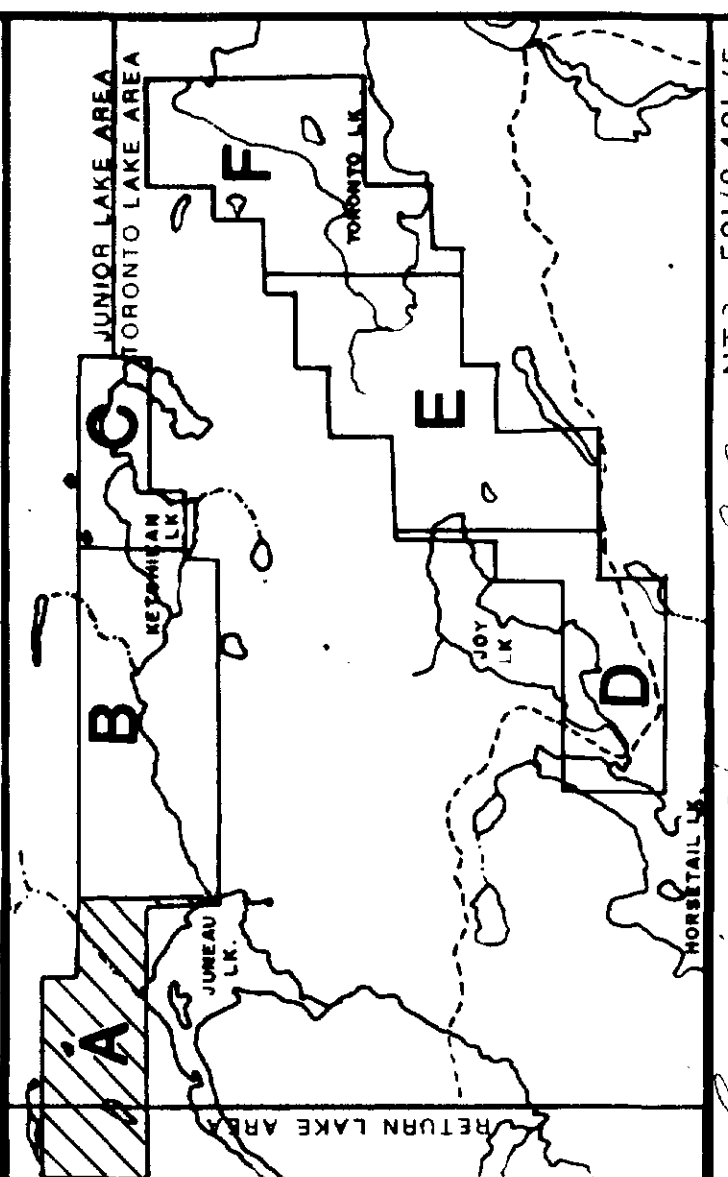
- o Organics
- cl Clay
- s Sand
- p Pebbles
- c Cobbles
- b Boulders
- t Till
- r Bedrock

SYMBOLS

- Outcrop
- Boulder
- Esker
- Slope, arrow indicates downslope.
- Steep drop
- Stream with flow direction indicated.
- Trail
- Soil pit



MAP SHEET LOCATION



QUEBEC COBALT
AND EXPLORATION LIMITED

TORONTO LAKE PROJECT

SHEET A

SURFICIAL GEOLOGY

SCALE IN FEET

0 500 1000 1500

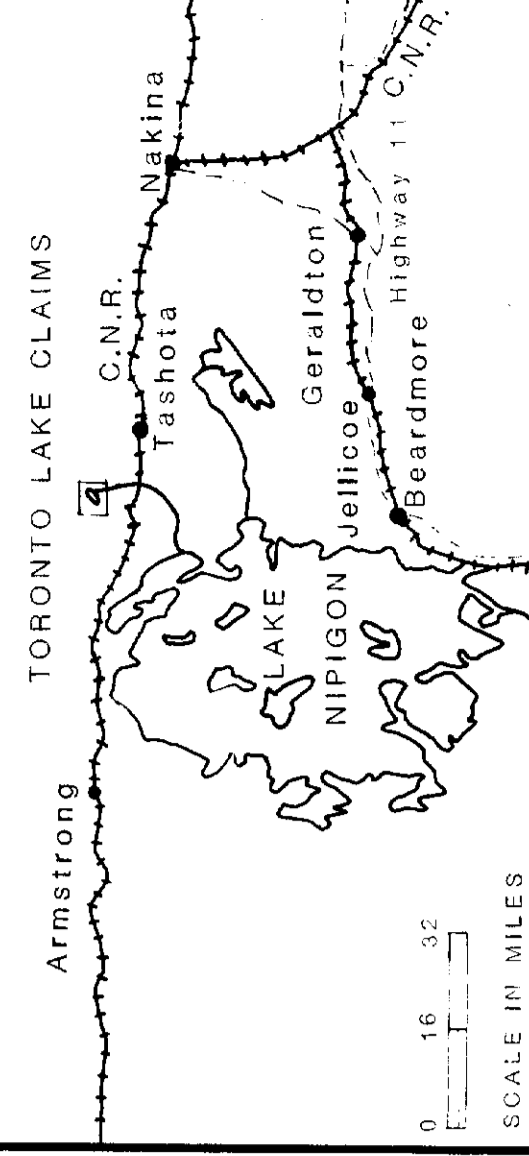
HE NEAL & ASSOCIATES LTD.
TORONTO, CANADA

DRAWN BY: C.J.H. DATE: March 19/85

APPROVED BY: [Signature]



KEY MAP



LEGEND

TOPOGRAPHY

- Ridges, hummocks [Symbol]
- High terrain [Symbol]
- Lowlands [Symbol]
- Swamps [Symbol]

VEGETATION

- A Alders
- B Birch
- C Cedar
- F Balsam fir
- J Jackpine
- LT Labrador tea
- P Poplar
- T Tamarack

Note: Multiple zones are listed in decreasing abundance from left to right.

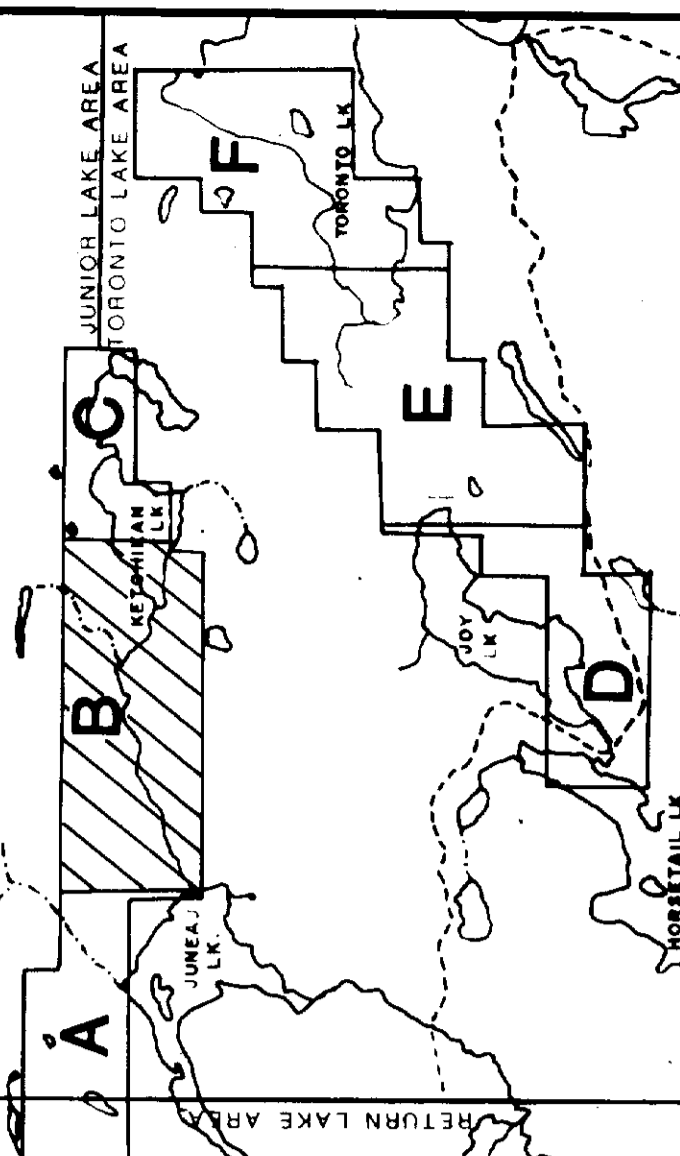
SOIL TYPE - refers to the layer underlying the grey leached layer.

- o Organics
- cl Clay
- sl Silt
- s Sand
- p Pebbles
- c Cobbles
- b Boulders
- t Till
- r Bedrock

SYMBOLS

- Outcrop [Symbol]
- Boulder [Symbol]
- Esker [Symbol]
- Slope, arrow indicates downslope. [Symbol]
- Stream with flow direction indicated. [Symbol]
- Trench [Symbol]
- Soil pit [Symbol]

MAP SHEET LOCATION



Quebec Cobalt and Exploration Limited
NTS: 521/842L/S

QUEBEC COBALT
AND EXPLORATION LIMITED

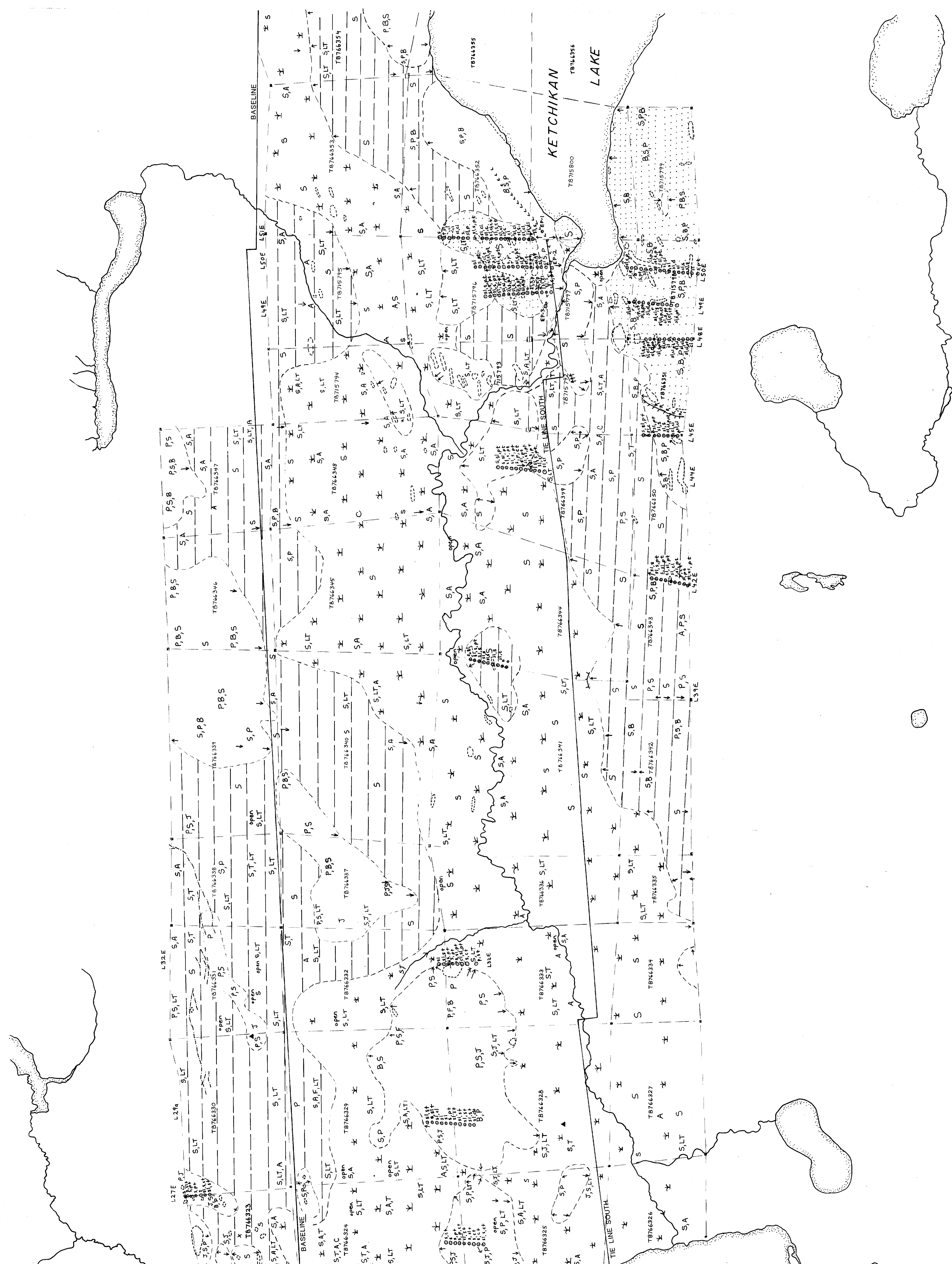
TORONTO LAKE PROJECT
SHEET B

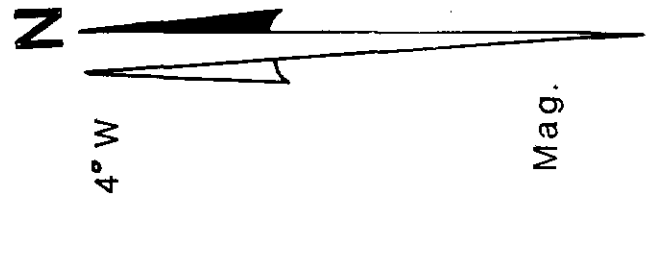
SURFICIAL GEOLOGY

SCALE IN FEET
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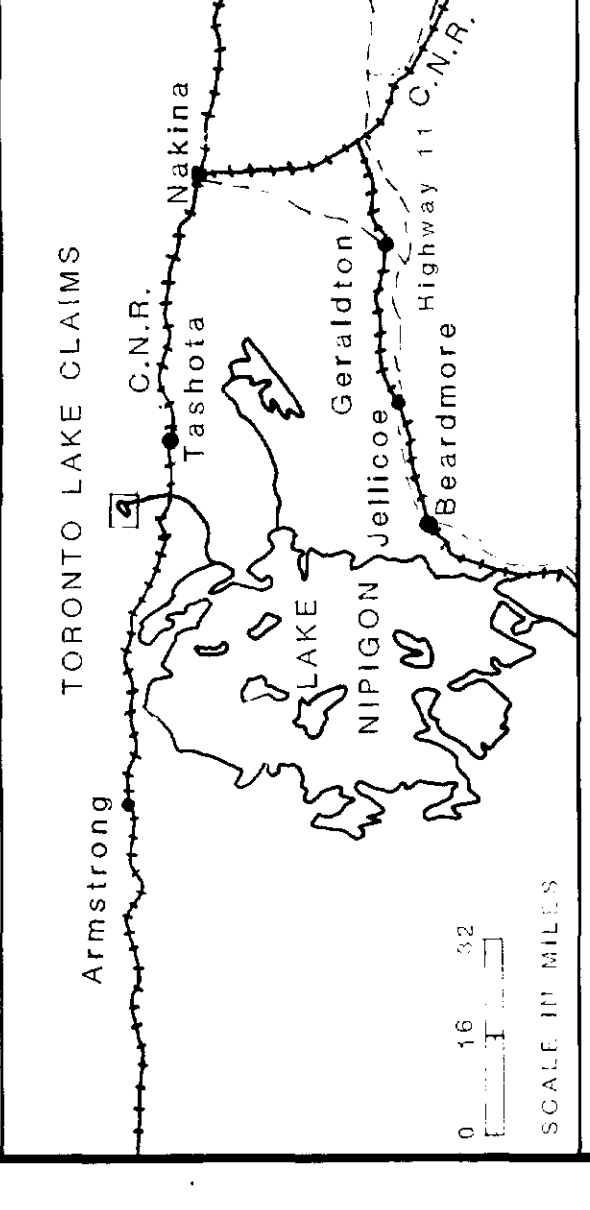
H.E. NEAL & ASSOCIATES LTD.
TORONTO CANADA

DRAWN BY: C.J.H. DRAWING No. DATE: March 1985
APPROVED BY: H.E.N. 2796





KEY MAP



LEGEND

TOPOGRAPHY

- Ridges, hummocks
- High terrain
- Lowlands
- Swamps

VEGETATION

- A Alders
- B Birch
- C Cedar
- F Balsam fir
- J Jackpine
- LT Labrador tea
- P Poplar
- T Tamarack

Note: Multiple zones are listed in decreasing abundance from left to right.

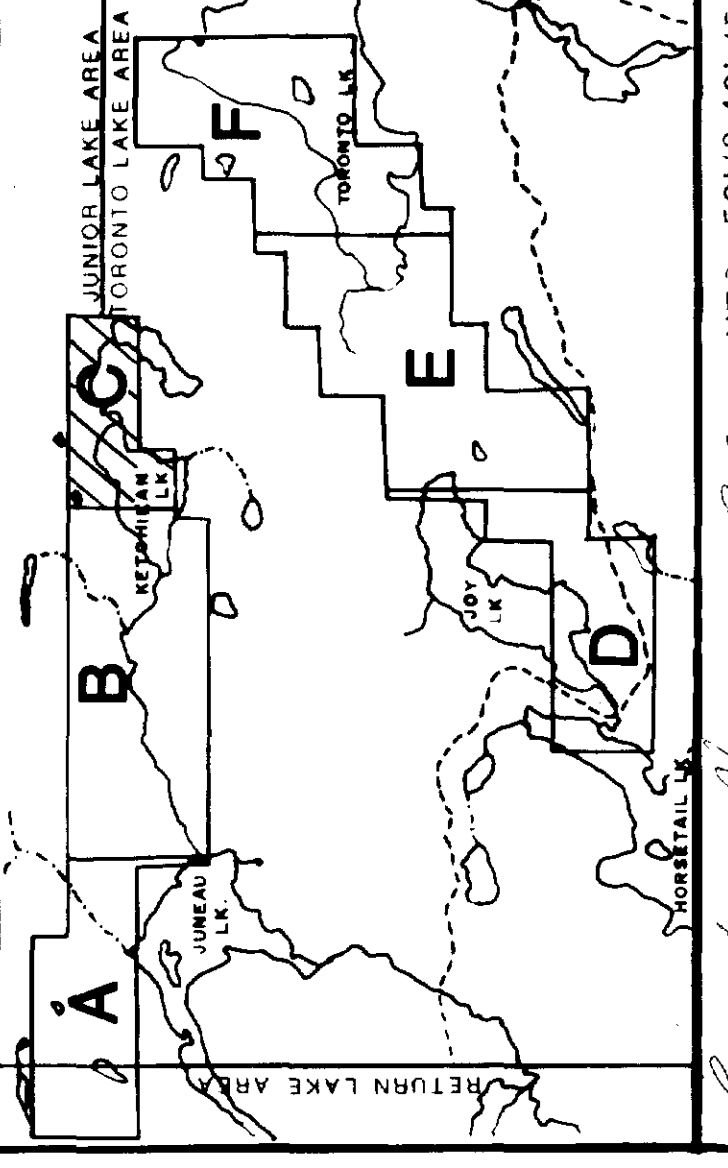
SOIL TYPE - refers to the layer underlying the grey leached layer.

- o Organics
- cl Clay
- sl Silt
- s Sand
- p Pebbles
- c Cobbles
- b Boulders
- t Till
- r Bedrock

SYMBOLS

- Outcrop
- Boulder
- Esker
- Slope, arrow indicates downslope.
- Steep drop
- Stream with flow direction indicated.
- Trail
- Soil pit

MAP SHEET LOCATION



Quebec Cobalt P. Co. NT 5218/421/5

**QUEBEC COBALT
AND EXPLORATION LIMITED**

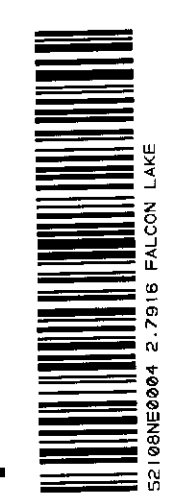
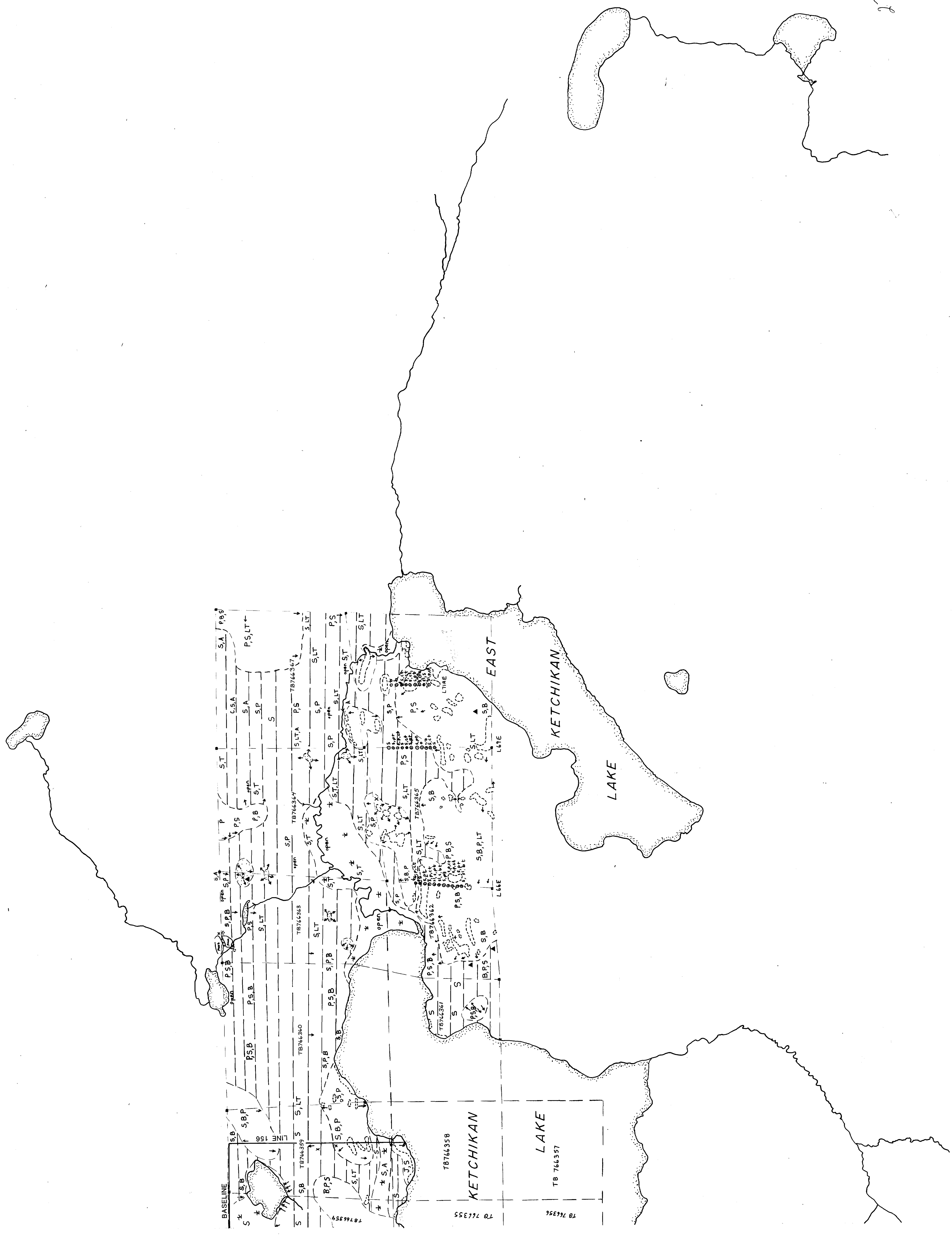
TORONTO LAKE PROJECT
SHEET C

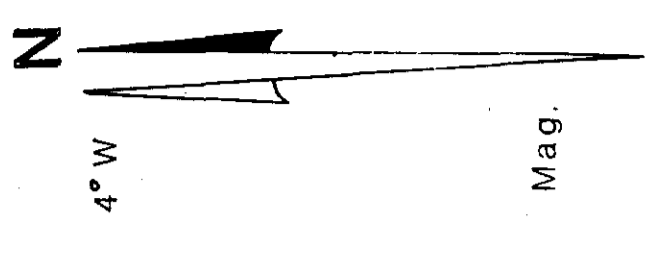
SURFICIAL GEOLOGY

SCALE IN FEET
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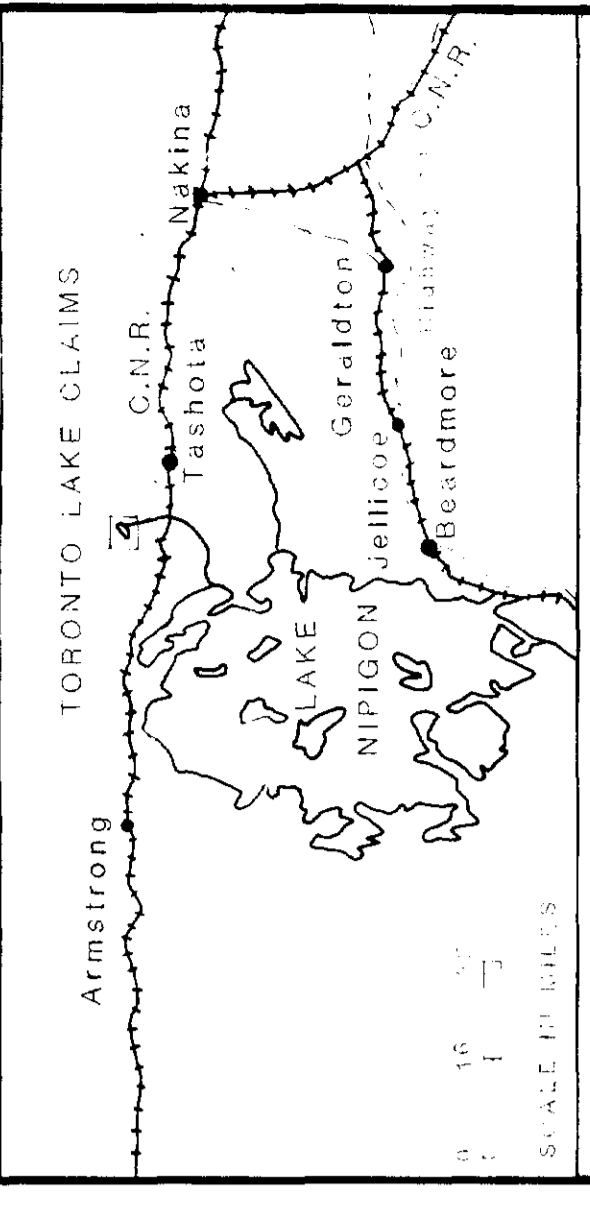
H.E. NEAL & ASSOCIATES LTD.
TORONTO
CANADA

DRAWN BY: C.P.M. DRAWING NO. DATE: March 1985
APPROVED BY: M.E.N.





KEY MAP



LEGEND

TOPOGRAPHY

- Ridges, hummocks
- High terrain
- Lowlands
- Swamps

VEGETATION

- A Alders
- B Birch
- C Cedar
- F Balsam fir
- J Jackpine
- LT Labrador tea
- P Poplar
- T Tamarack

Note: Multiple zones are listed in decreasing abundance from left to right.

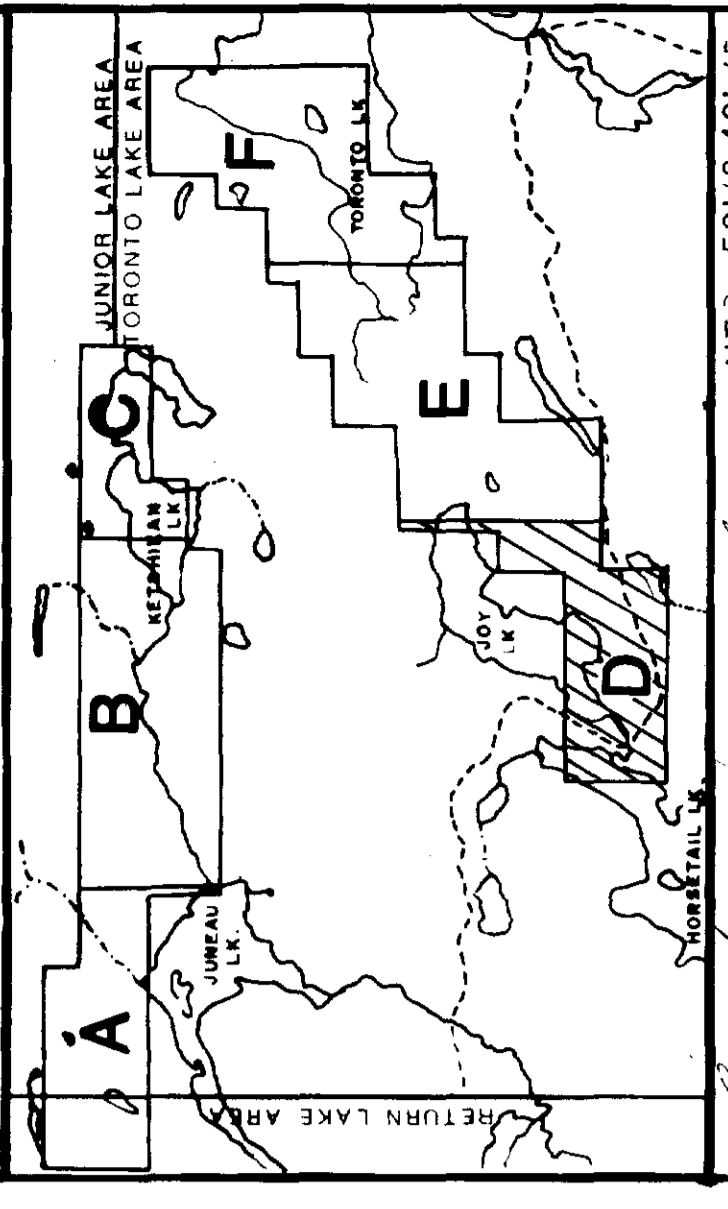
SOIL TYPE - refers to the layer underlying the grey leached layer.

- o Organics
- cl Clay
- sl Silt
- s Sand
- p Pebbles
- c Cobbles
- b Boulders
- t Till
- r Bedrock

SYMBOLS

- Outcrop
- Boulder
- Fsker
- Slope, arrow indicates downslope.
- Steep drop
- Stream with flow direction indicated.
- Trail
- Soil pit

MAP SHEET LOCATION



QUEBEC COBALT AND EXPLORATION LIMITED

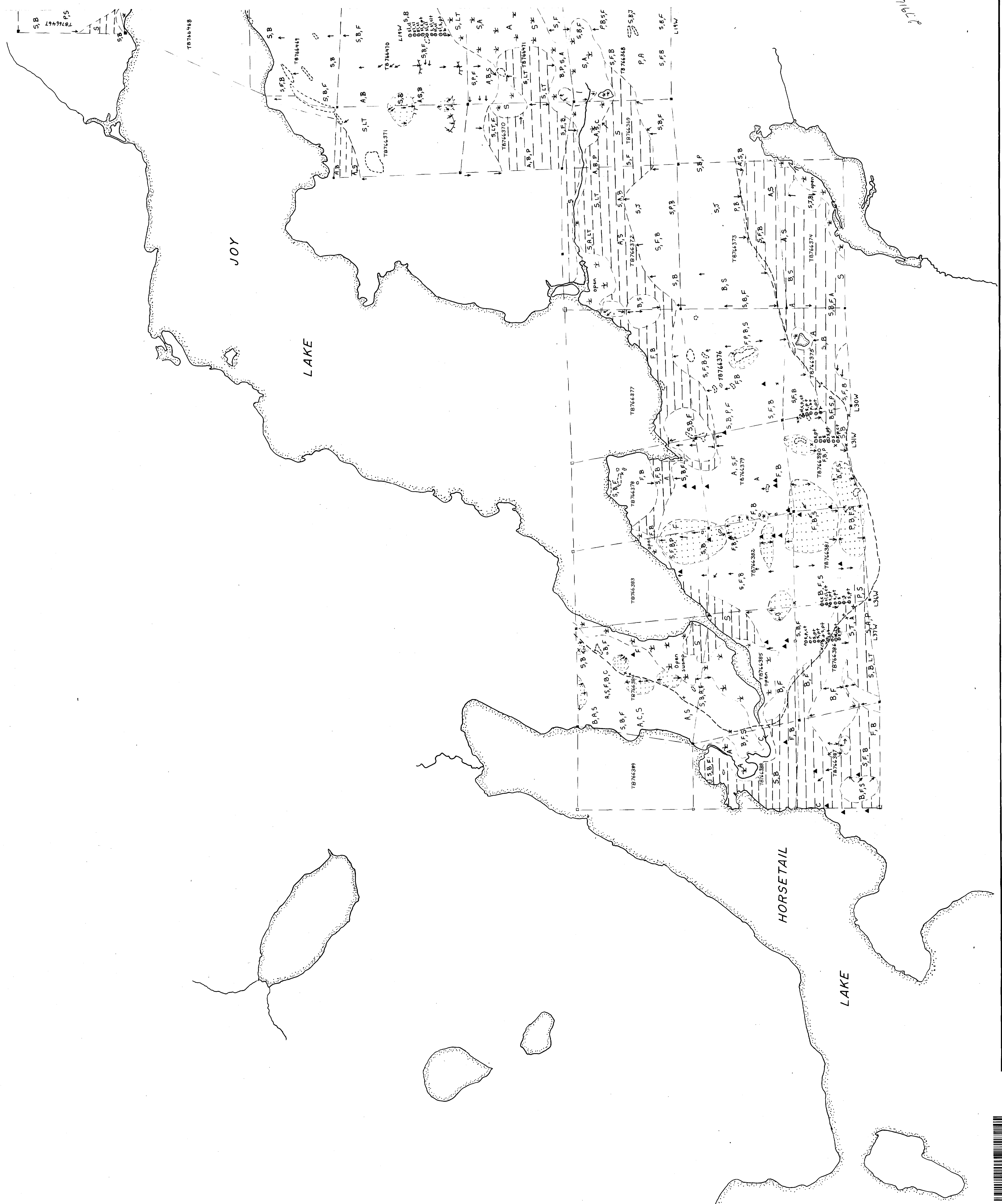
TORONTO LAKE PROJECT SHEET D

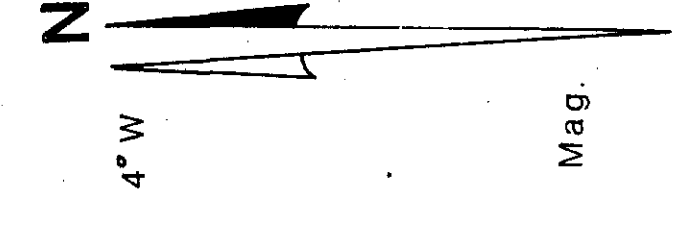
SURFICIAL GEOLOGY

SCALE IN FEET

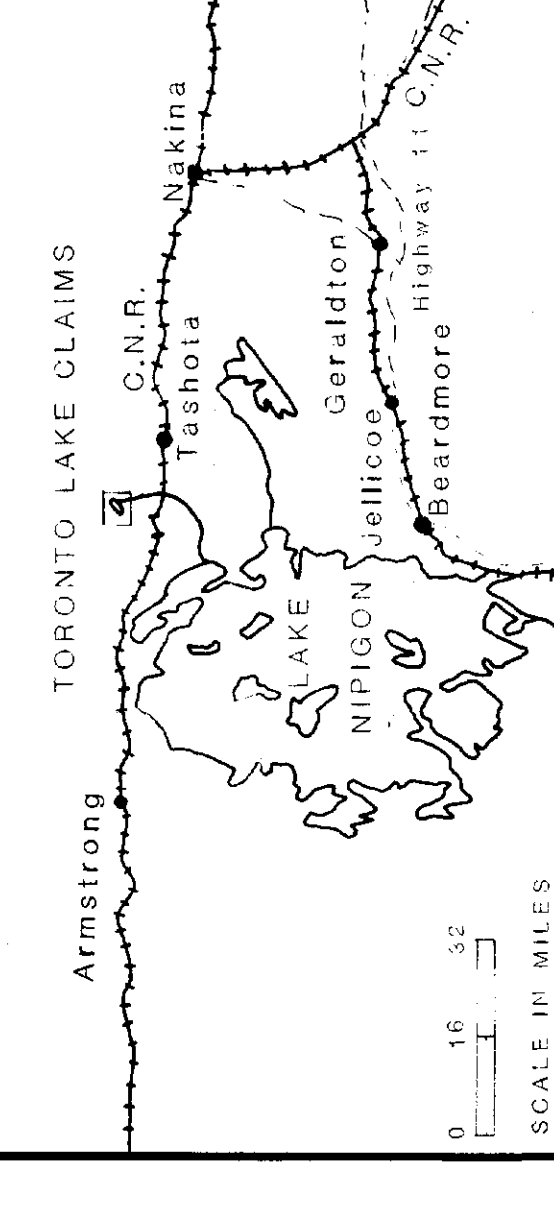
H.E. NEAL & ASSOCIATES LTD. TORONTO CANADA

DRAWN BY: C.J.H. DATE: March 1975 APPROVED BY: H.E.N.





KEY MAP



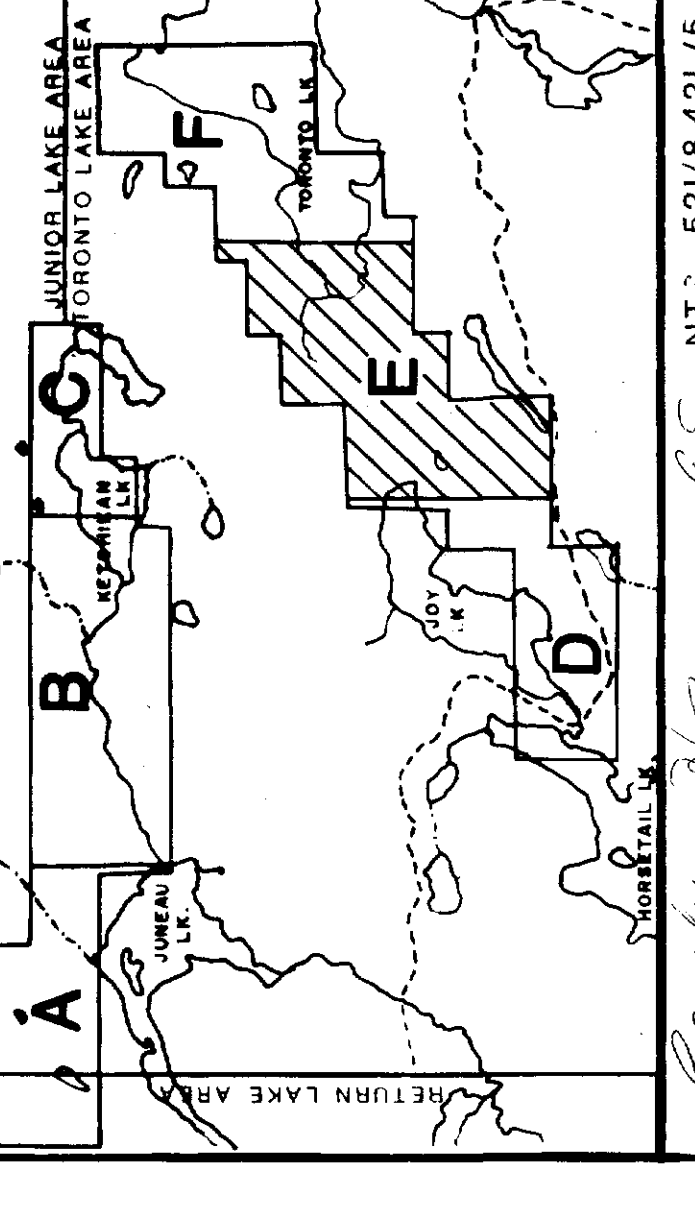
LEGEND

- TOPOGRAPHY**
- Hummocks
 - High terrain
 - Lowlands
 - Swamps
- VEGETATION**
- A Alders
 - B Birch
 - C Cedar
 - F Balsam fir
 - J Jackpine
 - LT Labrador tea
 - P Poplar
 - T Tamarack
- Note: Multiple zones are listed in decreasing abundance from left to right.
- SOIL TYPE - refers to the layer underlying the gray leached layer.**
- o Organics
 - cl Clay
 - s Sand
 - p Pebbles
 - c Cobbles
 - b Boulders
 - t Till
 - r Bedrock

SYMBOLS

- Outcrop
- Boulder
- Esker
- Slope, arrow indicates downslope.
- Steep drop
- Stream with flow direction indicated.
- Trail
- Soil pit

MAP SHEET LOCATION

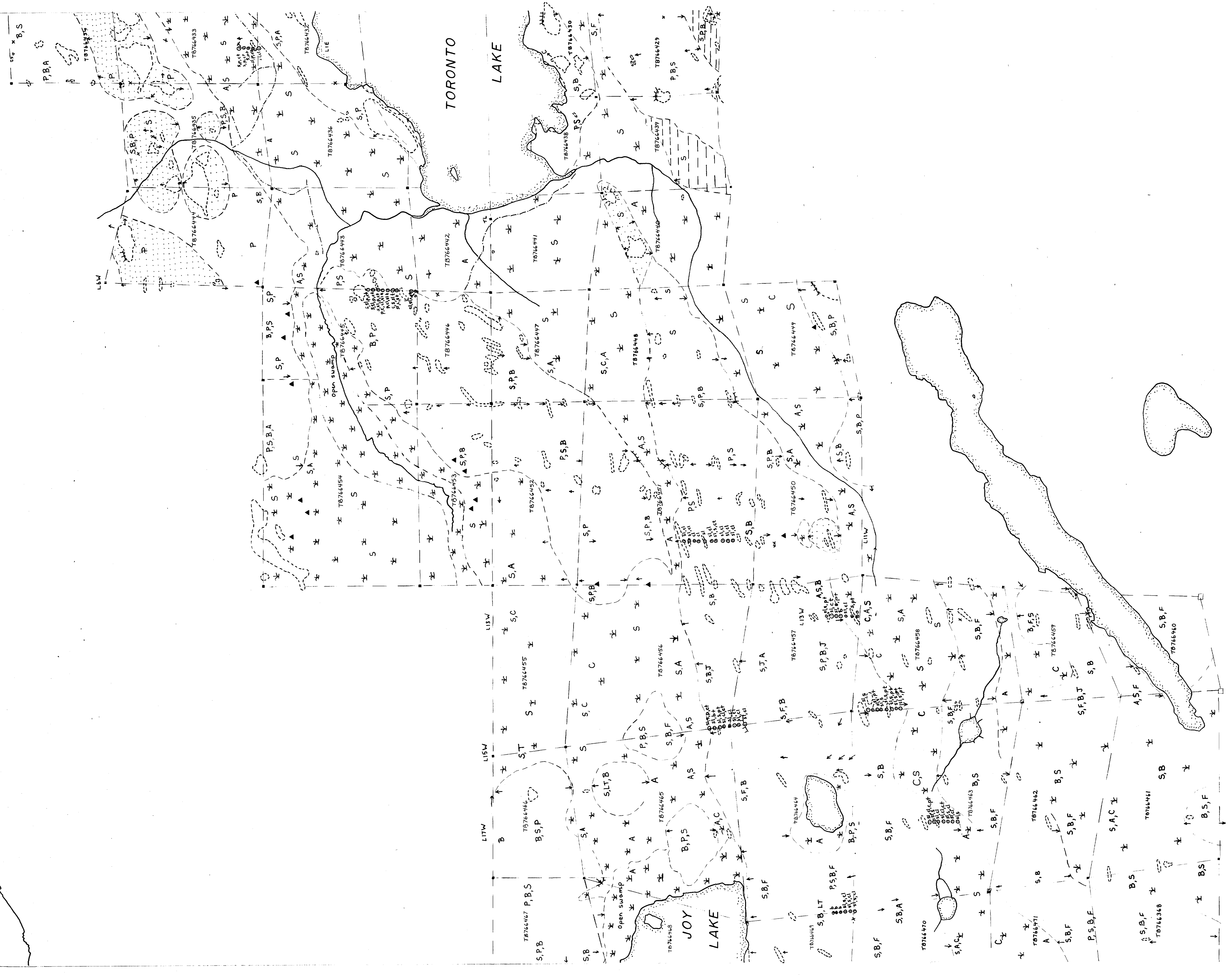


QUEBEC COBALT
AND EXPLORATION LIMITED

TORONTO LAKE PROJECT
SHEET E
SURFICIAL GEOLOGY

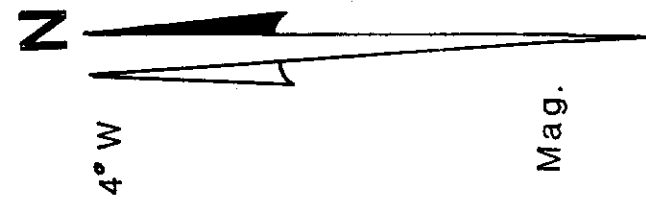
H.E. NEAL & ASSOCIATES LTD.
TORONTO
DRAWN BY: C.F.H.
APPROVED: BY: R.E.N.

DATE: March, 1975

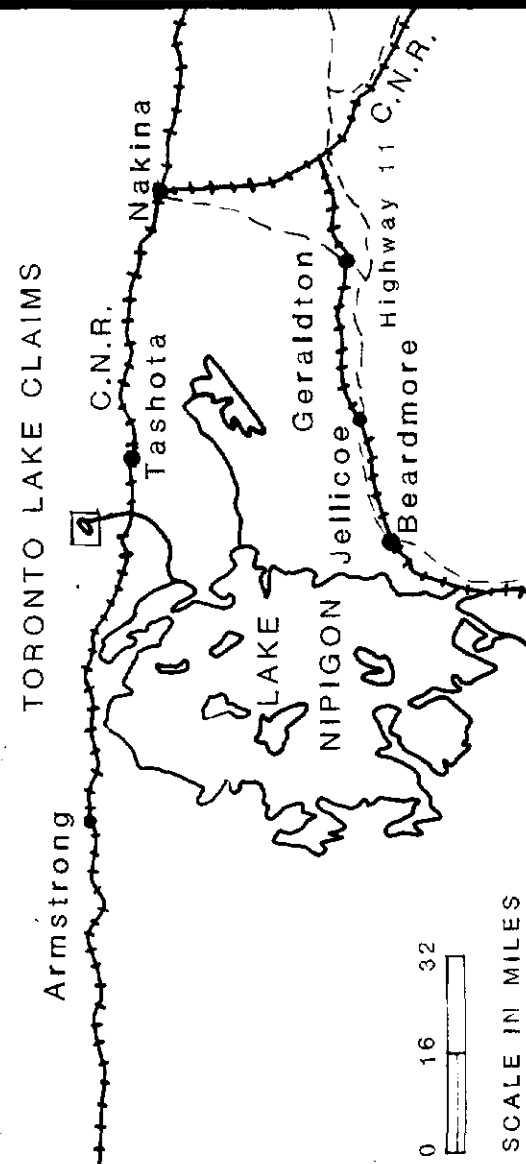


27916





KEY MAP



LEGEND

TOPOGRAPHY

- Ridges, Hummocks
- High terrain
- Lowlands
- Swamps

VEGETATION

- A Alders
- B Birch
- C Cedar
- F Balsam fir
- J Jackpine
- LT Labrador tea
- P Poplar
- T Tamarack

Note: Multiple zones are listed in decreasing abundance from left to right.

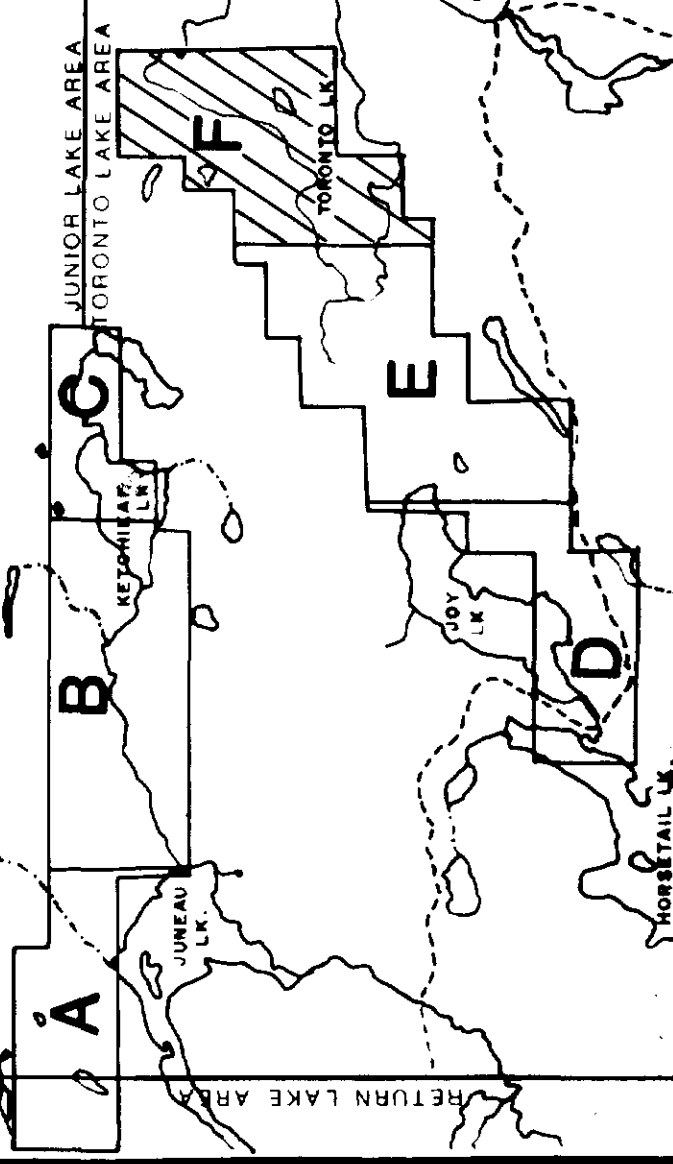
SOIL TYPE - refers to the layer underlying the gray leached layer.

- o Organics
- cl Clay
- sl Silt
- s Sand
- p Pebbles
- c Cobbles
- b Boulders
- t Till
- r Bedrock

SYMBOLS

- Outcrop
- Boulder
- Esker
- Slope, arrow indicates downslope.
- Steep drop
- Stream with flow direction indicated.
- Trail
- Soil pit

MAP SHEET LOCATION



NTS: 521/8, 822/5

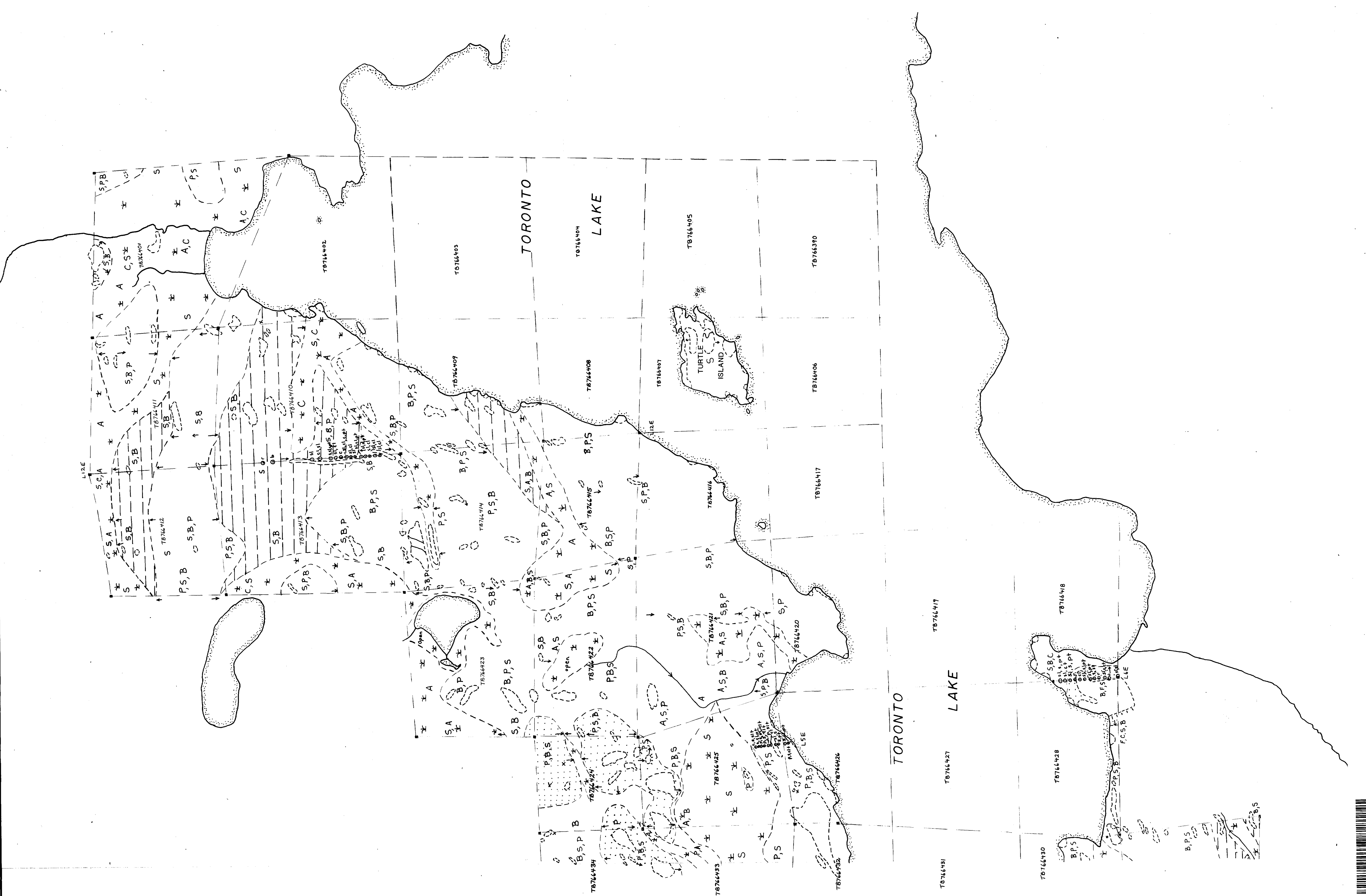
QUEBEC COBALT AND EXPLORATION LIMITED

TORONTO LAKE PROJECT SHEET F

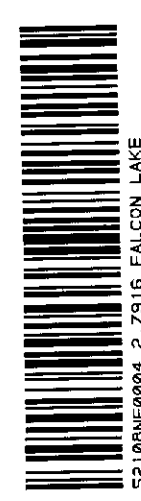
SURFICIAL GEOLOGY

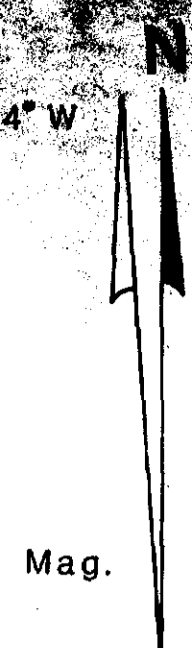
SCALE IN FEET 0 400 800 1200

H.E. NEAL & ASSOCIATES LTD. TORONTO CANADA DRAWN BY: C.J.H. DRAWING No. DATE: March 1965 APPROVED BY: H.E.N.

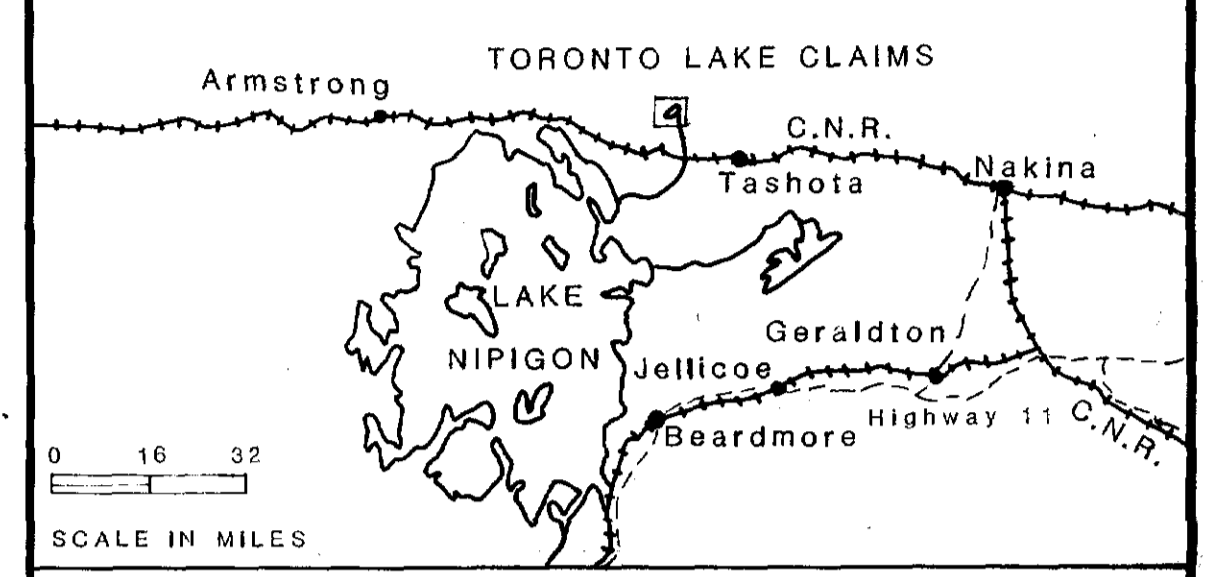


5162





KEY MAP



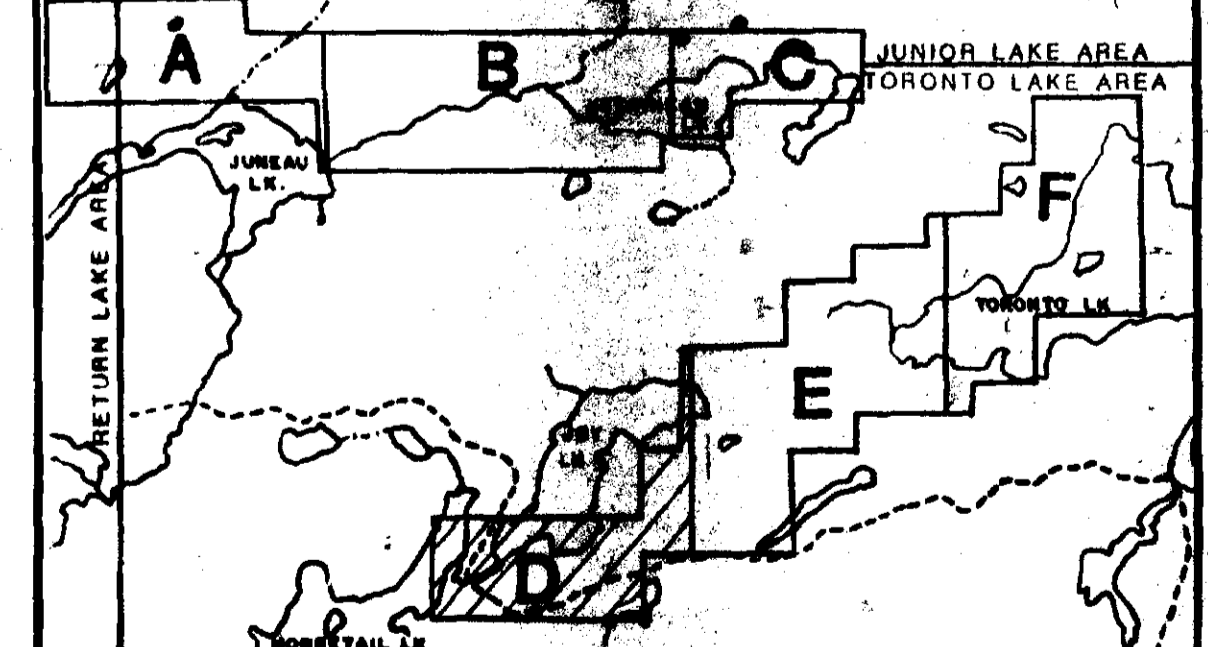
LEGEND

- 6** DIABASE
 - 6a) Diabase 6b) Porphyritic diabase
- 5** GRANITIC ROCKS
 - 5 Undifferentiated 5a) Granite, granite gneiss
 - 5b) Porphyritic granite, porphyritic granite gneiss
 - 5d) Pegmatite
- 4** BASIC & ULTRABASIC INTRUSIVE ROCKS
 - 4a) Metagabbro 4b) Metapyroxenite, hornblende
 - 4c) Serpentinite 4e) Peridotite 4f) Talc-chlorite schist
- 3** IRON FORMATION
- 2** METASEDIMENTS
 - 2a) Quartz-biotite gneiss, biotite-quartz-feldspar gneiss
 - 2b) Quartzite
 - 2d) Blue quartz augen-biotite-sericite schist or gneiss
 - 2e) Quartz-sericite(muscovite) schist, quartz-biotite schist
 - 2f) Biotite-quartz-garnet-feldspar schist
- 1** METAVOLCANICS
 - 1 Undifferentiated 1a) Massive amphibolite
 - 1b) Schistose amphibolite 1d) Metadiabase

SYMBOLS

- Boundary of rock outcrop.
- Small rock outcrop.
- Geological boundary: defined, assumed.
- Schistosity: inclined dip, vertical dip, dip unknown.
- Gneissosity: inclined dip, vertical dip, dip unknown.
- Jointing: inclined dip, vertical dip.
- Fault or shear zone (arrows indicate direction of movement).
- Drag-fold (arrow indicates direction of plunge).
- Synclinal axis.
- Claim post: located, not located.
- Swamp.
- Creek with flow direction indicated.
- Road.
- Trail.
- Slope (arrow points downslope).
- Esker.
- qv Quartz vein
- py Pyrite
- cp Chalcopyrite
- sph Sphalerite
- mag Magnetite
- gnt Garnet
- Gold ppb in rock
- Gold ppb in soil
- Gold ppb in humus

MAP SHEET LOCATION

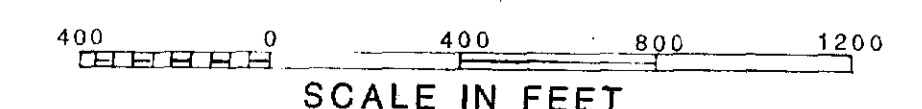


NTS. 521/8,42L/5

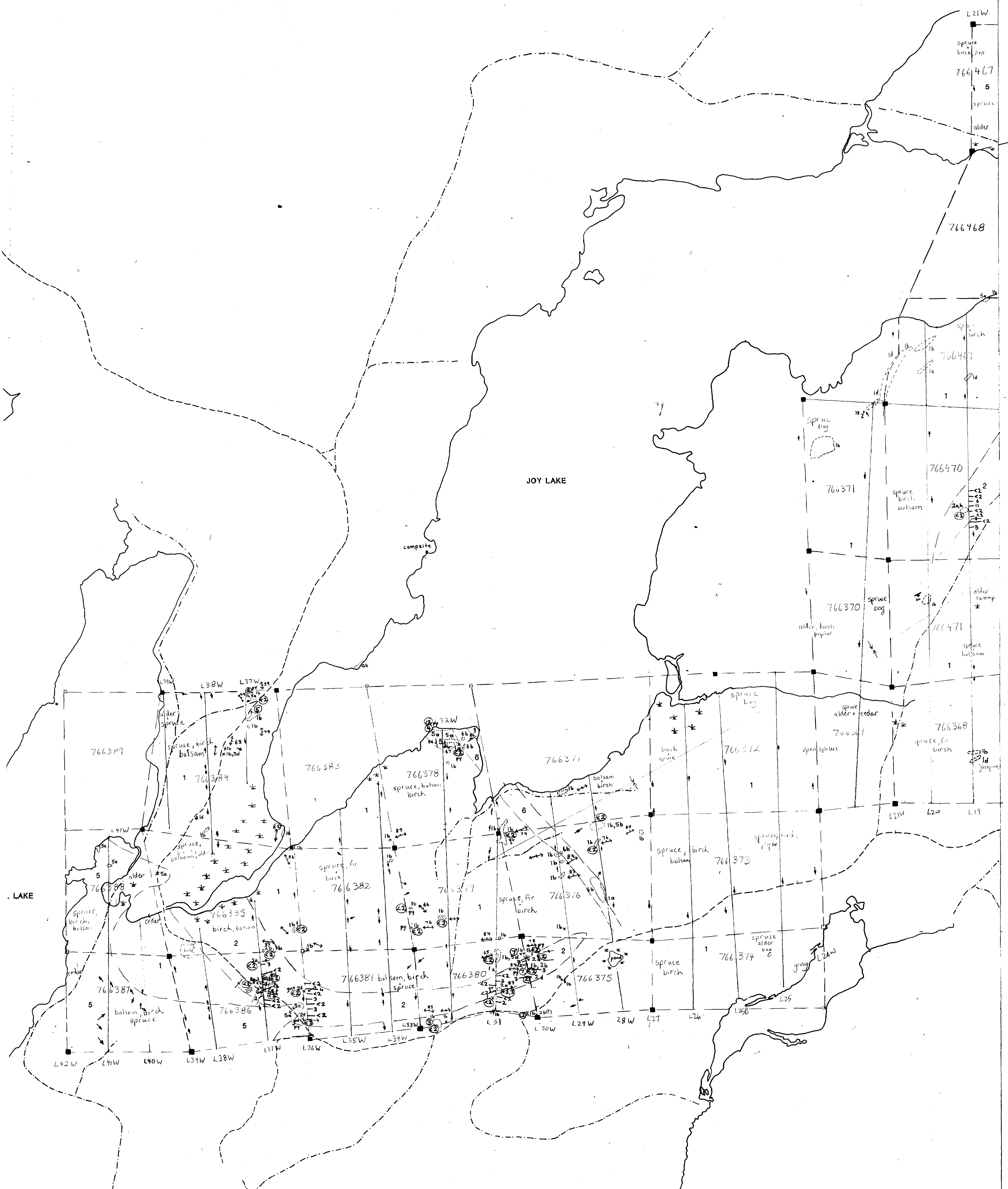
QUEBEC COBALT AND EXPLORATION LIMITED

TORONTO LAKE PROJECT SHEET D

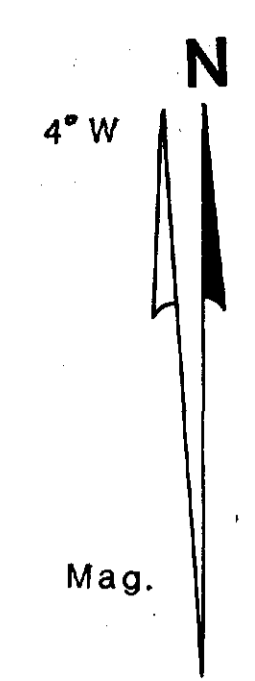
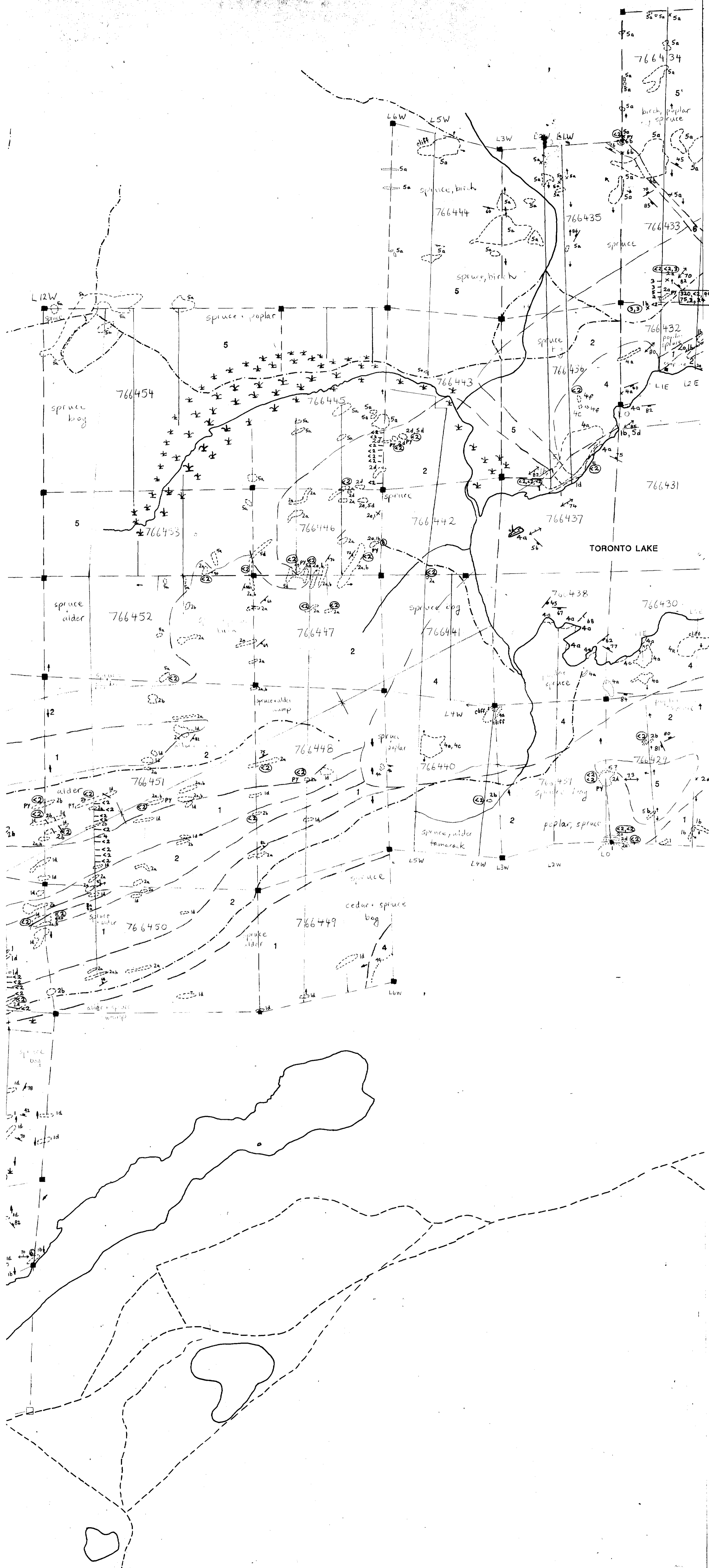
GEOLOGY & GOLD ASSAYS



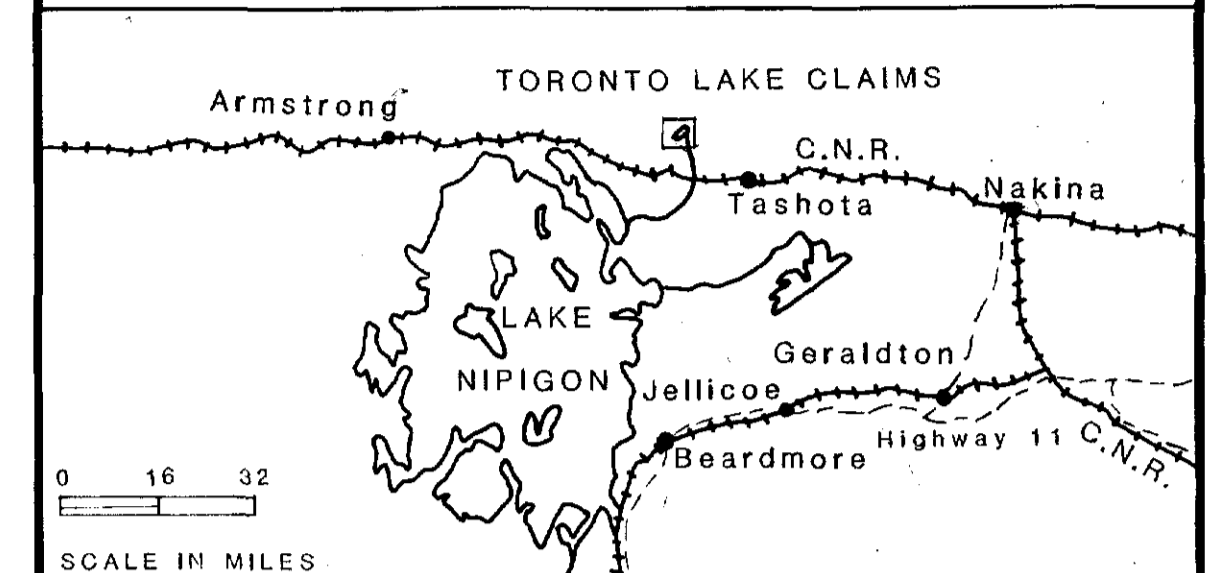
H.E. NEAL & ASSOCIATES LTD.
 TORONTO CANADA
 DRAWN BY: C.J.H. DRAWING No. DATE: Dec. 1984
 APPROVED BY: H.E.N. revised Apr/85



27916 28169



KEY MAP



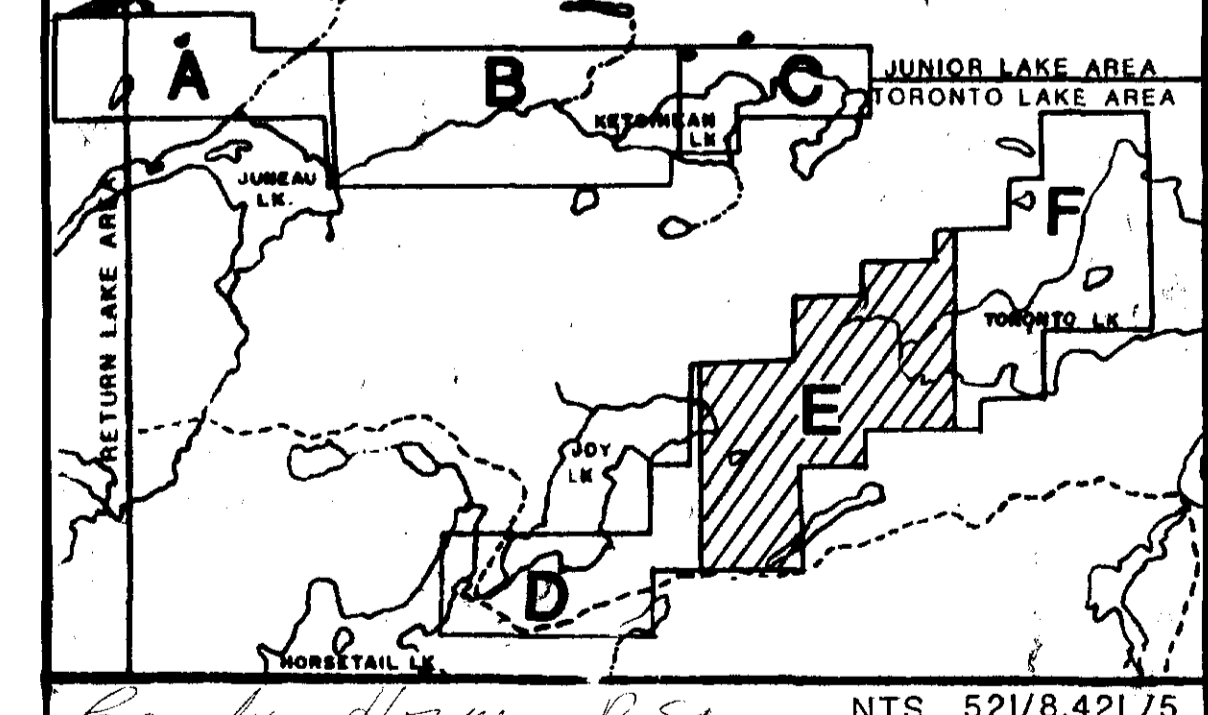
LEGEND

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- 3** IRON FORMATION
- 2** METASEDIMENTS
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2b) Quartzite
2c) Blue quartz augen-biotite-sericite schist or gneiss
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- Synclinal axis
- Claim post: located, not located
- Swamp
- Creek with flow direction indicated.
- Road
- Trail
- Slope (arrow points downslope).
- Esker
- Quartz vein'
- Pyrite
- Chalcocopyrite
- Sphalerite
- Magnetite
- Garnet
- Gold ppb in rock
- Gold ppb in soil
- Gold ppb in humus

MAP SHEET LOCATION



Quebec Cobalt Base NTS. 521/8,42L/5

**QUEBEC COBALT
AND EXPLORATION LIMITED**

TORONTO LAKE PROJECT

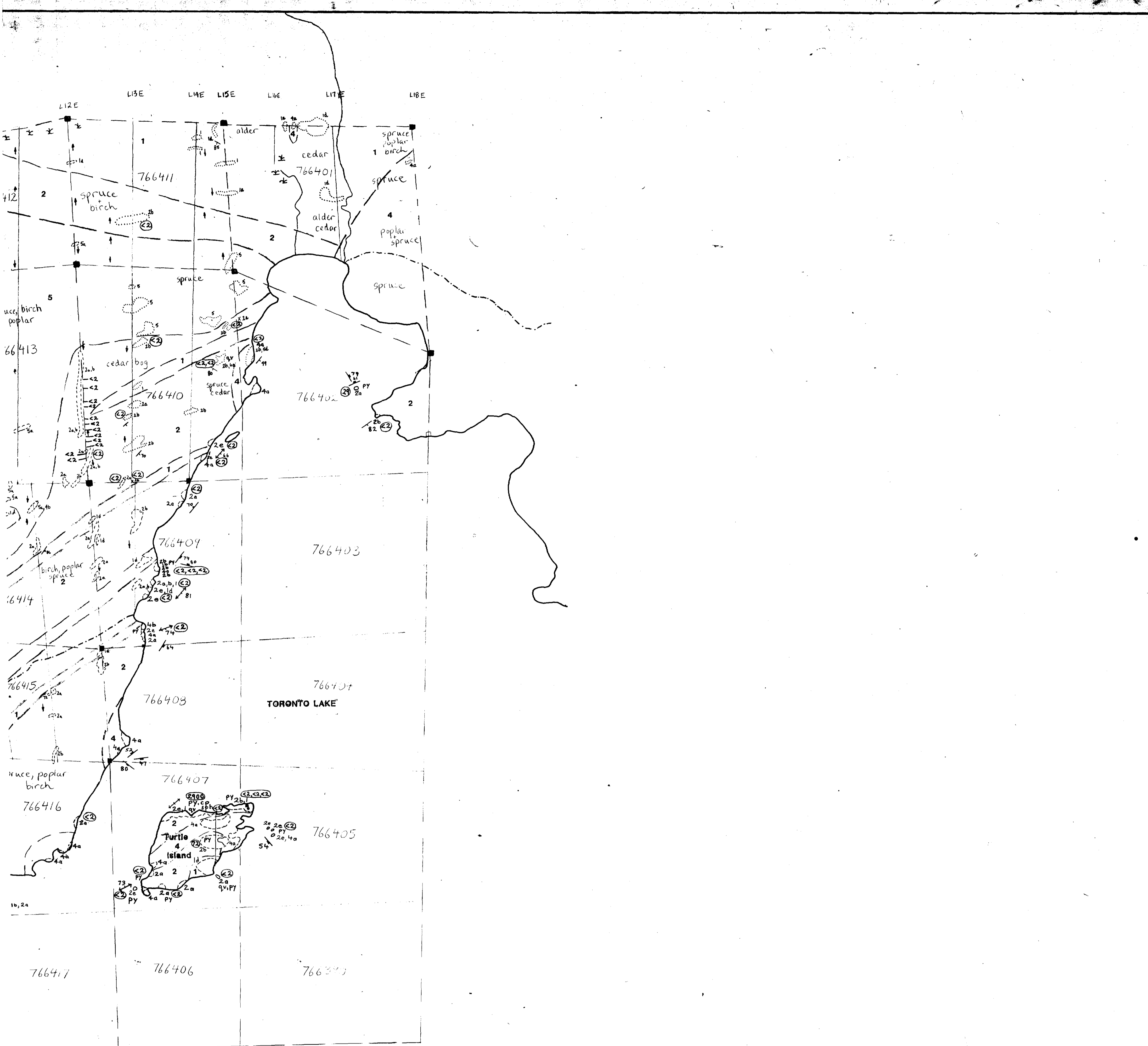
SHEET E

**GEOLOGY
& GOLD ASSAYS**

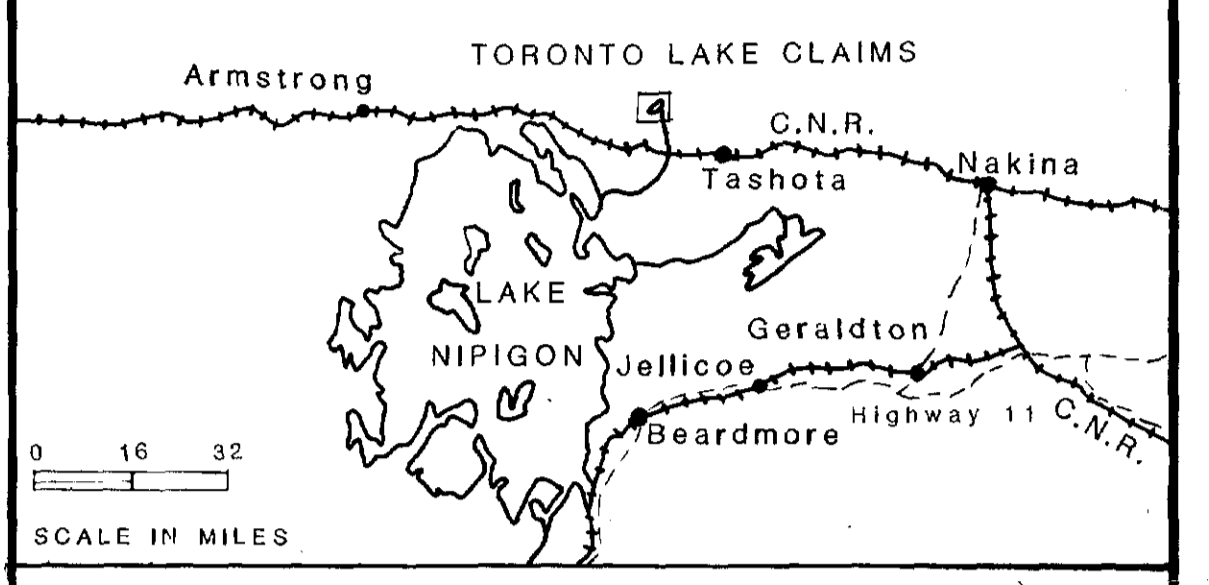
SCALE IN FEET

H.E. NEAL & ASSOCIATES LTD.
TORONTO CANADA

DRAWN BY: C.J.H. DRAWING No. DATE: Dec. 1984
APPROVED BY: H.E.N. REVISED Apr 1985



KEY MAP



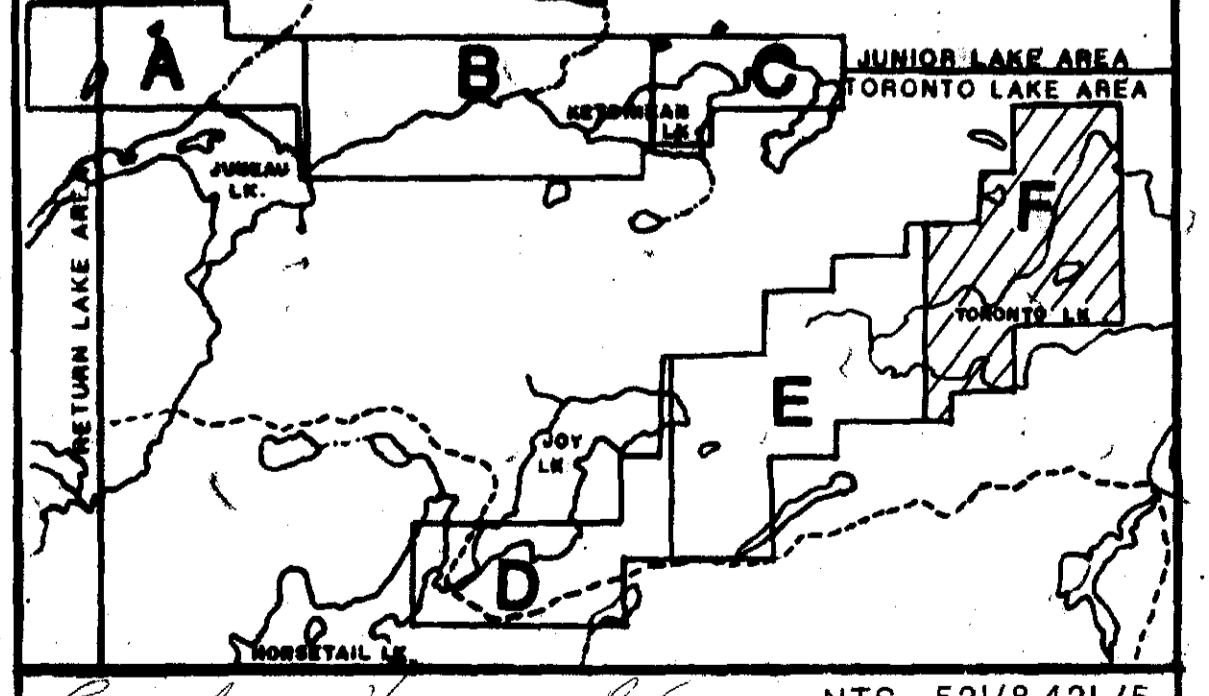
LEGEND

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- 3** **IRON FORMATION**
- 2** **METASEDIMENTS**
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2c) Blue quartz augen-biotite-sericite schist or gneiss
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- Synclinal axis
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- Swamp
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- Road
- Trail
- Slope (arrow points downslope).
- Esker
- Quartz vein
- Pyrite
- Chalcopyrite
- Sphalerite
- Magnetite
- Garnet
- Gold ppb in rock
- Gold ppb in soil
- Gold ppb in humus

MAP SHEET LOCATION



NTS. 521/8,42L/5
QUEBEC COBALT
AND EXPLORATION LIMITED
TORONTO LAKE PROJECT
SHEET F
GEOLOGY
& GOLD ASSAYS
 SCALE IN FEET

H.E. NEAL & ASSOCIATES LTD.
 TORONTO CANADA
 DRAWN BY: C.J.H. | DRAWING No. | DATE: Dec. 1984
 APPROVED BY: H.E.N. | revised Apr. 1985

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