TELEPHONE: 681-7493

#019114

MacDONALD CONSULTANTS LTD.

SUITE 11 • 425 HOWE STREET, VANCOUVER 1, B.C.

December 16, 1966.

Mr. A. W. Johnson, President,
Northlake Mines Ltd.,
1600 - 100 Adelaide Street,
Toronto, Ontario.

Re: Northlake Mines Ltd. - Reprot on 1966 Activities

Dear Mr. Johnson:

The following report covers the work carried out on the Northlake Mines Ltd. property in the Finlayson Lake Area of the Yukon Territory during the summer of 1966.

Attached are:

a) A financial statement to December 19, 1966.
The accounts of the Company have all been coded and segregated into respective areas of work to November 30th and audited by Mr. L. Davenport of Frederick Graham and Co. who is the auditor for MacDonald Consultants.

b) A geological and work assessment statement. This report contains the recommendations with respect to retention of claims and recording of assessment work as detailed by Dr. P. H. Sevensma. The grouping applications and recording of assessment will be filed with the Mining Recorder in Watson Lake, B.C. when approved by the Board of Directors.

c) A breakdown of unit costs.

d) Complete logs of the drill holes.

e) Maps as follows:

1. Claims and Grid Locations @ 1" = ½ mi.
2. Geological Maps (1-10 incl.) @ 1" = 1000 ft.
3. Plan of Mineral Claims and Pan/Silt samples @ 1" = ½ mi.
4. Plan layout of Diamond Drill Holes @ 1" = 100 ft.
5. Logs of D.D.H. @ 1" = 20 ft.
6. Geochemical Maps (lead, zinc and copper plots) @ 1" = 1000 ft.
7. Summary and Disposition of claims @ 1" = ½ mi.

Respectfully submitted,

MACDONALD CONSULTANTS LTD.

A. J. MacDonald, P. Eng.

STATISTICS and UNIT COSTS

1. CLAIMS:

The Northlake Mines Ltd. holdings totaled 824 claims. If the recommendations for retaining claims are adopted the holdings will total 280 claims including the 30 claims to be staked plus 138 on which a decision has not been reached due to soil sample results not yet received.

2. HELIOCOPTER:

The heliocopter flew 333 hours on behalf of Northlake at an average cost of $117.00 per hour. This includes the time servicing the diamond drill. There were 7 heliocopters and 12 pilots on the job during the season.

3. DIAMOND DRILLING:

A total amount of $23,615.51 was paid to Arseneault Diamond drilling for 1596 feet of drilling for a unit cost of $13.97 per foot. This cost includes 565 feet of NX casing and 86 feet of AX casing, 186 feet of BX casing as well as 8 cement jobs, 4 dip tests and the mobilization and demobilization.

4. SOIL SAMPLING:

There were 4615 soil and 653 silt samples taken and analysed for Pb, Zn and Cu at a total cost of $14,023.72 and a unit cost of $2.68 per sample including assaying, field labour and preliminary field maps. The cost of analysis was $1.80 per sample for three metals.

5. LINE CUTTING:

There were 127.2 miles of line cut, chained and picketted at a total cost of $12,282.86 or $96.00 per mile including all supplies.

NORTHLAKE MINES LIMITED (N.P.L.)

REPORT ON THE

HOO, EL, GEE, LEO, P.S.,

P.G. C.W. AND Z

GROUPS OF MINERAL CLAIMS

GRASSY LAKES AREA

YUKON TERRITORY

BY

MACDONALD CONSULTANTS LTD.

11 - 425 Howe St.,

Vancouver, B. C.

December 16th, 1966.

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	MAPS		SCALE
1.	CLAIMS AND GRID LOCATIONS		1 inch = ½ mile
2.	GEOLOGICAL MAPS (1 to 10 INCL.)		1 inch = 1000 feet
3.	PLAN OF MINERAL CLAIMS AND PAN/SILT SAMPLES	:Lead Plot	1 inch = ½ mile
		:Zinc Plot	1 inch = ½ mile
		:Copper Plot	1 inch = ½ mile
4.	PLAN LAYOUT OF DIAMOND DRILL HOLES		1 inch = 100 feet
5.	LOG OF D.D.H. # 18 - 1		1 inch = 20 feet
	LOG OF D.D.H. # 18 - 2		1 inch = 20 feet
	LOG OF D.D.H. # 18 - 3		1 inch = 20 feet
	LOG OF D.D.H. # 18 - 4		1 inch = 20 feet
6.	GEOCHEMICAL MAPS (Lead, Zinc & Copper Plots)		1 inch = 1000 feet
7	GEOCHEMICAL MAPS (Lead, Zinc & Copper Plots) Covering areas 2, 15, 14, 5, 11, 12, 13, 10, 8 & 9, 16, and 19.		1 inch = 400 feet
8.	SUMMARY AND DISPOSITION OF CLAIMS		1 inch = ½ mile

ABSTRACT

MacDonald Consultants Ltd. was employed by Northlake Mines Ltd. to manage a geological investigation under the direction of Dr. P. H. Sevensma of the Grassy Lake area, Yukon Territory, Canada, in search for any mineral of commercial value. Aerial E. M. and magnetic surveys were conducted by Lockwood Survey Corporation Ltd. over the entire claim area containing eight hundred and twenty (824) claims. All anomalies detected by this method were then checked by ground Geophysics, Ronka, Turam, and Gravity. The area was mapped geologically and Geochemical sampled over all anomalies. Stream Silt Sampling of all associated streams, hand trenching and core drilling were carried out. Four core holes were drilled in area eighteen (18), on the Hoole River. Mineralization was detected by soil sampling in area eleven (11), and by stream silt sampling in area seventeen (17).

This report includes an account of the works performed, a description of any mineral occurances, geochemical analysis, geophysical interpretation and stratigraphic correlation of area as determined by geological mapping.

LOCATION AND ACCESSIBILITY

The Northlake Mines property is located some two hundred and seventy (270) miles Northeast of Whitehorse and approximately seventy (70) miles Southeast of the community of Ross River in the Yukon Territory, Canada, at latitude 61 degrees, 30 minutes and longitude 131 degrees, 30 minutes

to 132 degrees, 00 minutes. The immediate area is uninhabited and the nearest dwelling is in the village of Ross River.

The Northlake area is readily accessible by air from Ross River or Whitehorse or by road to within 20 miles of the claims. There is an air strip located on the Ross River-Watson Lake road near Mink Creek on which small fixed wing planes were able to land. In the winter months when the lakes are frozen over it is possible for planes of the DC-3 class to land in Grass Lake in the Southern sector, Riviera Lake in the Northeastern sector and two lakes near area Ten (10) in the Western sector. All of the supplies for the Northlake Camp were shipped from Whitehorse by truck or plane and distributed to the fly camps and working areas by helicopter. The nearest road to area of exploration is twenty two (22) miles, therefore, all freight has to be flown in from the base camp on Mink Creek.

LIVING CONDITIONS

Throughout the Yukon Territory the expansion of communication services and air transport has alleviated the disadvantages of isolation. Field parties can communicate by radio telephone. Repair parts and perishable foods can be delivered by bush planes as required. Food, clothing and many hardware items are stocked by stores in Whitehorse, Watson Lake and Ross River. Light insulated houses or tents are adequate and comfortable in the summer months. Most common practice is tents mounted on wooden frames with netting to keep insects out. Sturdy, well insulated houses or tents would be essential in the winter.

PHYSICAL CONDITIONS

The area of exploration was along and north-east of the Tintina fault zone, part being in the Tintina Fault zone, part being in the Tintina valley and part in the mountains East of the valley. Elevations in this area range from 3,300 feet in the valleys and up to a maximum of 6,950 feet in the mountains. Most of the area is drained by tributaries that run into the Hoole River, which in turn empties into the Pelly River some thirty miles away.

A thick growth of buck brush and spruce extend from the lowest known elevation to about 4,500 feet and a gradually thinning growth extends to an elevation of approximately 5,000 feet. All, of the valleys are covered with muskeg and overburden is from forty to seventy five feet. A moss growth blankets most of the mountains. All of the mountains have been considerably altered and most slopes are covered with heavy talus due to weathering.

CLIMATE

This area has a very mild climate in the summer, temperatures range from 30 degrees to seventy degrees F., some wind on the mountains, very little in the valleys. Some rain and snow although the total precipation in the summer is low. During the winter there is considerable snow and temperatures drop lower than 60 degrees F.

PROPERTY OWNERSHIP

The claims outlined on accompanying maps are held by Northlake Mines Ltd.

and are described in Notices of Location and Grouping on file in the Watson Lake Mine Recorders office, Watson Lake, Yukon Territory. Fifty eight additional claims were staked after exploration began, making a total of 824 claims. Claims are as follows:

Hoo Group	123 claims	P.S. Group	40 claims
El Group	60 claims	P.G. Group	16 claims
Gee Group	530 claims	C.W. Group	23 claims
Leo Group	30 claims	Z. Group	2 claims

There are other claim groups in this area held by other mining companies.

HISTORY OF THE AREA

The first large scale exploration programs were conducted in this immediate area in 1954. No mineral deposits are being developed in this area at the present time. Other than prospecting, no large scale exploration had been conducted in the Finlayson Lake quadrangle until the summer of 1966 when programs were conducted by Northlake Mines Ltd., Riviera Mines Ltd., Kerr Addison Mines Ltd., and Atlas Exploration Ltd.

GENERAL GEOLOGY

The predominate rocks in the Grassy Lake area are quartz biotite, quartz-chlorite schist, micaceous quartzite, hornfels, minor phyllite, dolomite containing mariposite micaceous quartzose gneiss, granitoidal gneiss and minor quartz biotite schist.

The dominate structural configuration is the Tintina Fault. This fault is

not visible on the surface but sheer faults were encountered in core drilling which are assumed to be associated with the Tintina Fault. The fault valley trends Northwest, Southeast and in this vicinity parallels the Hoole River. There has been considerable folding, faulting and weathering of the beds. As evidenced by eskers and glacial material this area was covered by ice in the Pleistocene period. The true structure of Mississipian sedimentary and volcanic rocks is unknown. No extrusive rocks were found in this area.

PERMA FROST

The bedrock and detrital cover on the mountains throughout this area remain permanently frozen, only the top few feet thaw during the summer.

DETRITAL COVER

The principal agent of erosion is frost breaking and the depth of summer thaw varies considerably. The thaw penetrates to depths where surface water percolates through porous strata on the mountains while on relatively flat well drained but impervious surfaces, the thaw may penetrate only a foot or so. In most cases a cover of vegetation insulates the surface from the sun's heat and tends to inhibit thawing.

A lot of the surface especially the hill sides, except for an occasional protruding outcrop of resistant rock is covered by rock debris. The rock debris, from frost erosion may vary from coarse block fragments several feet

in diameter to individual crystals or fragments of crystals of the component minerals. The debris derived from schists generally forms a soil that supports a vigorous growth of moss and buck brush. Where vegetation is abundant, a layer of peat or heavy organic material ranging in thickness from a few inches to a few feet forms on a layer of bentonitic clay. The clay ranging in thickness from a few inches to a few feet overlies the surface which in most instances is glacial material that was transported into this area during the Pleistocene period.

The surface evidence of a rock outcropping depends on the nature of the rocks. The outcrop of a hard, dense rock that resists frost breaking may protrude through the overlying mantel or may be marked by an abundance of larger angular fragments on the surface overlying the outcrop. Rocks of medium resistance to frost breaking ordinarily have no protruding outcroppings, but the outcroppings may be indicated by fragments in the overburden. Other than on the eroded mountains very few outcropping are present.

WORK BY MacDONALD CONSULTANTS LTD.,

This area was investigated in five stages, the detrital cover, the lode outcroppings, geochemical sampling, geophysics and core drilling.

The various sampling procedures are described as they pertain to the succeeding steps in the investigation. The silt stream samples and the geochemical soil samples were examined by Bio-Metals Laboratories in Vancouver, B. C. All core samples and lode samples having quantitative

value were analyzed by J. R. Williams & Sons, Vancouver, B. C. All soil silt samples were checked for copper, lead and zinc. Some lode samples were checked for as many as thrity minerals. The description of the lode deposits or prospects included maps. An index map shows the location of the clai ms and a separate map for each area as designated is included in report. Charts showing soil sample values for each area sampled are included and all geophysical maps, both aerial and ground geophysics.

GEOPHYSICAL MAPPING

The first stage of investigation was to fly the area with aerial geophysics, both E. M. and magnetic. The claims were then divided into areas, each area covering an airborne anomaly or a showing. Second stage was to employ linecutters to cut grids on areas that warranted further investigation. Once the grids were laid out and line cutting completed a geophysical crew and soil sampling crews were moved on in. All grids were sampled on one hundred (100) foot spacings, this included all grid lines, base lines and in some instances the tie lines. Size and terrain of grid determined the spacing. Some grids were laid out on a 400 foot center spacing, others on an 800 foot spacing. The Ronka was used for geophysical evaluation where the overburden was not too deep. Where the overburden was too thick for accurate Ronka reading, the Turam was employed. Some of the areas, the Ronka and the Turam were both used and in Area No 11, a small amount of gravity surveying was completed.

The final stage of investigation was to expose and sample the lode outcroppings by trenching. Hand trenches were dug in Area No. 2.

EXPLORATION RESULTS BY AREA

Area No. 1:

An abundance of chalcopyrite float was reported at this showing. The area was searched carefully by two geologists and one of the prospectors on the ground, but only a minor amount of pyrite in quartz vein material and some specks of pyrrhotite in float was found.

It was noted at this showing, as well as others that the locations given were inaccurate and the amount of mineralization was exaggerated, a steep fault structure was observed on the South facing slope on which the location of showing was given originally.

CLAIMS: Drop all claims in this area.

Area No. 2:

This area has a strong gossan zone, approximately 100 by 200 feet in area on the East slope of the mountain. This gossan zone is near a granite gneiss limonitic schist contact. Granite and schist bed rock in place. Heavy float of nearly massive pyrrhotite with small blebs and specks of chalcopyrite were found in three different places in this area as shown on accompanying map. This area was laid out on a 400 foot grid pattern and 129' soil samples were taken. Also an attempt was made to trench near gossan area where float was found. Due to excessive overburden talus and permafrost the trenching crew was unable to reach bed rock. Samples of the float were assayed. Neither analysis showed any mineralization of commercial value. Major component of samples assayed was ferrous sulphide.

CLAIMS: Retain 30 claims as per map.

Area No. 3a and 2 b:

Showing 2-a on Gee Claim 179 was described as a quartz vein with three feet of massive arsenopyrite and some tetrahedrite in the hanging wall exposed for about twenty feet. This is a three foot wide disseminated quartz vein with minor arsenopyrite mineralization and a few specks of pyrrhotite in the hanging wall. Approximately 100 feet further to the West and a little lower than 2-a, a showing, 2-b was discovered consisting of disseminated mineralization of blebs pyrrhotite and chalcopyrite in a dark green amphibolite like rock dipping gently to the North. The showing can be spotted from the air by its dark brown gossan zone 100 by 50 feet wide.

A sample was taken here and assayed for copper and nickel. Assay was negative, a trace of copper and nickel was present.

CLAIMS: Claims retained are part of Area 2.

Area No. 3:

This area was mapped and prospected by Mr. T. Heard, D. M. Cox and H. Wober. The showing revealed float of replacement type mineralization containing a little galena, black sphalerite, pyrrhotite, pyrite and small blebs of chalcopyrite. A silicified mineralization zone was located at the location given for the No. 3 showing but very little of it was exposed, and the rest was covered by snow which remained all summer. Assay results of samples taken from this area were negative.

CLAIMS: Drop all claims in this area.

Area No. 4:

Showing of small lens of replacement mineralization (galena, sphalerite and

chalcopyrite) in the schist near contact with granite gneiss were of no consequence. A few pieces of pyrrhotite float were found in the creeks below this contact and assayed. Assay showed no commercial mineralization in the float.

CLAIMS: In good standing to July 25, 1967. No Decision at this time.

Area No. 5:

There was a showing of galena in quartz stringers cutting schist and galena in the creek in the Northwest portion of Area No. 5. However, geophysics show no anomaly in this area and the geochemistry shows a small amount of mineralization in the Southeast portion of this area near the Lake. It is the writer's opinion that this mineralization is an accumulation of minerals transported by alluvial erosion and deposited at the mouth of the creek but is not of commercial value. There were 1200 soil samples and 92 silt stream samples taken in this area.

CLAIMS: Retain 26 claims.

Area No. 6:

The showing in this area was located, sampled and area mapped. Location given was approximately 2,000 feet further North than actual showing. The dimensions of this showing were considerably smaller than described by previous owners.

The schist gneiss contact in the No. 6 area is conform, the strike of the formation is approximately East-West dipping moderately to the South. The dip angle of the gneiss formation flattens considerably to the North. The gneiss

schist contact is associated with an East-West trending fault. Due to geographic location, this area would require a very rich ore body to warrant any type mining.

CLAIMS: Drop all claims in this area.

Area No. 7:

This area is noted for its strong iron oxidation coming from wide spread mineralization of pyrite and some pyrrhiotite in the granitoid gneiss.

Several quartz veins with minor amounts of arsenopyrite were located. Some replacement mineralization of pyrrhotite, a little chalcopyrite and bornite was observed in place. Float of a replacement mineralization of black sphalerite, some galena, arsenopyrite and a little chalcopyrite on a gangue of quartz and dolomite was found on the slope above the small lake in the center of this area. This gangue caused by faulting in the area. Assays showed the ore to be a very low grade. No large amount of ore was detected in this vicinity.

CLAIMS: Drop all claims in this area.

Area No. 8 and 9:

This area was staked on a 400 foot grid pattern, 123 soil samples and 24 stream silt samples were taken. A small glacial stream. Three major and three minor faults were mapped in this area. Several massive quartz veins were also mapped. The Northern most fault has a micaceous schist foot wall and a hematitic schist hanging wall with a quartz vein between the two walls. Fault No. 2 has a foot-wall containing micaceous chloritic schist with garnet

crystals in schist and hanging wall is a quartz and limonitic schist. Fault No. 3 the hanging wall is quartzitic schist and a foot-wall is a micaceous ; biotitic schist. All hanging walls being on the South side of each of the three faults.

The reported show was of no consequence. No mineralization was located in place. A few pieces of quartz float containing minute amounts of chalcopyrite were found in the stream at the base of the grid. Float samples were not assayed as mineralization was too minute.

CLAIMS: Drop all claims in this area.

Area No. 10:

Arsenopyrite and chalcopyrite float were found in the Northern portion of this area. However, the geological examination and mapping did not detect the source for the float but it probably came from the crest of the mountain near Area No. 6.

There were 683 soil samples and 32 stream silt samples taken in this area showing no mineralization of commercial value. A Ronka and Turam survey were both conducted in this area, neither survey showed an anomaly of any consequence.

CLAIMS: Retain 20 claims in this area.

Area No. 11:

The aerial magnetic survey showed a strong anomaly in the Southeast portion of this area. Line was cut and grids laid out on 400 foot centers. Soil sampling over the grid consisting of 216 samples outlined a geochemical anomaly in the same sector as the airborne anomaly. Further geophysics

was conducted with a Ronka and a gravity meter. Ronka results also show an anomaly in the Southeast sector of this area. Gravity meter results showed no anomaly, however, it is the writer's opinion that a larger more detailed survey would have to be conducted by gravity before a true interpretation could be made.

As determined by geological mapping there appears to be a Southeasterly trending fault causing a structural contact between graphite schist and ultra basic rocks. Further along this fault zone the contact is between ultra basic and chloritic schist.

CLAIMS: Retain all 32 claims in this area (Area 11)

Area No. 12:

Most of this area is covered by heavy growth and overburden. A few outcrops on the mountain North of this area were mapped. None of the outcrops or float found in this area showed mineralization.

There were 186 soil samples and 26 silt stream samples taken in this area.

CLAIMS: Retain all 23 claims in this area.

Area No. 13:

Area No. 13 joins Area No. 12 and is very similar in topography. Area No. 13 is covered with heavy overburden and vegetation. A few outcropping rocks were found along the mountain North of this area but no mineralization. There were 163 soil samples and 24 stream silt samples taken in this area.

CLAIMS: inclused in the 23 claims in Area 12.

Area No. 14:

This area has no outcropping rock present. Streams running through this area were stream silt sampled (34 samples) and 193 soil samples covering the area over a 400 foot center grid system. A Ronka survey was conducted over the grid. No anomaly or mineralization was detected by these methods.

CLAIMS: Retain 9 claims in this area.

Area No. 15:

Most of this area is situated on the West side of a very steep dipping mountain making it impossible to conduct a Ronka survey over the entire area. A Ronka survey was conducted on the lower portion of this area along the base line in the valley. There were 204 soil samples and 42 stream silt samples taken in this area. Geological examination detected two contact zones, both contacts were schist in contact with granitic gneiss with numerous quartz inclusions in the schist. Altering from a limonitic to a micaceous schist. Mineralization was not detected in this area.

CLAIMS: Drop all claims in this area.

Area No. 16:

Geological examination and soil sampling was conducted in this area. Outcropping rocks in this vicinity are well above the grid laid out on Area 16 and more closely associated to Area No. 4, however, all outcroppings in this general area were examined andno mineralization detected. There were 56 soil samples and 81 stream silt samples taken over a small 400 foot center grid system. Geochemical results were negative.

CLAIMS: In good standing until July 25, 1967. No decision at this time.

Area No. 17:

Prospecting and geological examination was conducted in this area. Asbestos float was found in three localities and asbestos in place was found at one location. This asbestos is a short fiber and of a very poor grade and would have no commercial value. There were 140 stream silt samples taken encircling the complete area. Copper values ranging from 7562 to 145 parts per million were detected in stream silt samples along a creek encircling the Southeast portion of this area for a distance of two and one half miles. Near the Southeast portion of this area but outside of the claim group there is a heavily iron stained outcropping body of rocks that is possibly the source rock for this precipitated copper. In order to cover indicated mineralized zone an additional 30 claims will be staked.

CLAIMS: Retain 30 claims in this area. Drop 30 claims.

Area No. 18:

This area is located on the Hoole River. No soil samples were taken in this area as there was too much overburden present. Airborne geophysics indicated a strong anomaly on the Northwesttern portion of this area. Line was cut on a 400 foot grid pattern and a Turam survey was run. The Turam survey indicated a strong anomaly intersecting lines 32 at Station 300 North, line 36 at Station 200 South and line 40 at Station 200 South. The more pronounced E. M. anomaly was located on line 40 Station 200 South. The following core holes were drilled on this property:

Core Hole No.	Line	Station	Drilling Angle
1	40+00	140-South	-90 degrees
2	36+00	5-North	-45 degrees

Core Hole No.	Line	Station	Drilling Angle
3	37+50	48-North	-45 degrees
4	40+00	62-South	-50 degrees

Mineralization of economic value was not encountered in any of the four core holes. There were 47 silt stream samples taken in this area.

At line 32 x 00 Station 500 North a graphite schist outcrop was located. This outcrop is 5 feet high, 40 feet wide and can be followed along the bank of the Hoole River for a distance of 60 feet. The beds are striking North 50 degrees East and flat lying. From Line 14+85 Station 4+50 North to Station 17+00 Station 400 North an outcrop of dolomite containing mariposite is in contact with a micaceous schist. Strike of outcrop North 50 degrees West. Apparant dip on beds 10 degrees Southwest. These two outcrops were the only ones located in Area N . 18. A Turam anomaly of less prominence than the anomaly' located on Line 40+00 160 South is present near the dolomite and schist contact. There are numerous streams carrying considerable float in this area from adjacent mountains, however, silt stream samples detected no mineralization.

CLAIMS: Retain all 64 Claims in this area.

Area No. 19:

Area No. 19 was laid out on an 800 foot center grid pattern. A Ronka survey was conducted, 421 soil samples were taken and 47 panning and silt stream samples in the associated area.

There appears to be a North-West, South-east trending fault system through the gridded area but too much overburden is present to detail fault system. At line 16+00 Station 13+50 North a dolomite schist contact is outcropping. This outcrop is some 30 feet in height and 200 feet in width, however, due to

weathering and slumping it was impossible to take true dip and strike readings. As determined by the Ronka Survey there is an anomalous condition trending North West, Southeast from Line 0+00 North through Line 40+00 North, this anomalous condition would be coincident with the indicated fault system.

CLAIMS: Included in the 64 claims retained in Area 18.

COPY

DIAMOND DRILL RECORD

PROPERTY Yukon Territory. HOLE No. 1-18.

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. 1-18 Sheet No. 1
Section Hoole River.
Date Begun Sept. 4, 1966.
Date Finished Sept. 13, 1966.

Lat. L 40 W
Dep. 2+50 S
Bearing Vertical
Elev. Collar 3350.

Total Depth 295'
Logged By D.M Lowe.
Claim
Core Size AX.

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				REC.
97 - 99	Gneiss						1.2'
99 - 106	Gneiss						3.0'
106 - 116.6	Gneiss Tr Pyrite At. 108'						6.5'
116.6 - 120.6	Gneiss						2.1'
120.6 - 124	Gneiss						3.3'
124 - 127	Gneiss						3.0'
127 - 131	Gneiss with Quartz Stringers						5.7'
131.6 - 133.6	Gneiss & Altered Graphite Schist						2.0'
133 - 142	" " " " Tr. Pyrite 134'						5.2'
142 - 146	Gneiss						4.0'
146 - 154							8.0'
154 - 158	Gneiss & Chloritic Schist Laminated.						4.0'
158 - 161	Gneiss						3.0'
161 - 165	Gneiss						2.2'
165 - 168	Gneiss Chlorite Schist						3.0'
168 - 172	Tr Pyrite 168.3' - 169.6' Gneiss, Qtz Inclusions, Chl. Sch.						3.9'
172 - 174							2.0'
174 - 179	Tr Pyrite 175 - 176 Qtz Inclusions Gneiss Chl. Schist.						5.0'
179 - 186	Pyrite 179' - 184 Graphite Schist 185 - 186						7.0'
186 - 191.6	Chl. Schist, Qtz, Gneiss Pyrite 186 - 191.6						5.6'
191.6 - [illegible]	Tr. Chalcopyrite 191.6 - 193						1.4'

Copy

DIAMOND DRILL RECORD

PROPERTY Yukon Territory HOLE No. 1-18

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. 1-18 Sheet No. 2 Lat. Total Depth 295'
Section Hoole River Dep. Logged By D.M. Leask.
Date Begun Sept 4, 1966 Bearing Claim
Date Finished Sept 13, 1966. Elev. Collar 3350 Core Size A-X

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				REC.
193 - 196	Gneiss & Quartz						3.0'
196 - 201	Gneiss & Quartz, Chloritic Schist.						5.0'
201 - 203	Gneiss & Quartz						2.0'
203 - 205	Gneiss						2.0'
205 - 208	Gneiss & Quartz						3.0'
208 - 210	" "						2.0'
210 - 211.6	Pyrite, Gneiss, & Quartz						1.4'
211.6 - 217	Pyrite, Gneiss, Quartz, Chloritic Schist						5.4'
217 - 220	Pyrite Chloritic Schist & Quartz						3.0'
220 - 229	Pyrite " " "						9.0'
229 - 233	Pyrite " " " Gneiss						4.0'
233 - 239	Pyrite " " " "						6.0'
239 - 243	Pyrite, Quartz, Chloritic Schist						2.0'
243 - 253	Pyrite " " "						5.0'
253 - 256	Pyrite, Quartz, Chloritic Schist Gneiss						3.0'
256 - 258	Pyrite, Quartz Chloritic Schist						1.0'
258 - 262	Pyrite " " "						1.0'
262 - 265	Pyrite, Quartz, Chloritic Schist, Gneiss						3.0'
265 - 273	Pyrite " " " "						8.0"
273 - 277	Pyrite " " " "						1.0
277 - 2	Pyrite " " " "						1.0'

Copy.

DIAMOND DRILL RECORD

PROPERTY Yukon Territory. HOLE No. 1-18

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. 1-18 Sheet No. 3
Section Hoole River
Date Begun Sept. 4 1966
Date Finished Sept 13, 1966.

Lat.
Dep.
Bearing
Elev. Collar 3350

Total Depth 295
Logged By D. M. Lay.
Claim
Core Size AX.

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				Rec.
281 - 285	Pyrite, Tr. Chalcopyrite, Chloritic Schist						1.0'
285 - 295	Pyrite, Tr. Chalcopyrite, Chloritic Schist.						1.0'
	Overburden To 30', Graphite Schist to 54'						
	From 54' to 93', Granite Gneiss & Highly						
	Altered Graphite Schist.						
	43' Nx Casing.						
	87' Bx Casing						
	181' Ax Casing.						
	At 285' Strong water sand unable to core						
	deeper due to sand & water pressure.						
	Core Recovery - 76.4%						

DIAMOND DRILL RECORD

PROPERTY Northlake Mines HOLE No. 2 - 18

DIP TEST		
	Angle	
Footage	Reading	Corrected
200'	43	

Hole No. 2 - 18 Sheet No. 1
Dip Section 45°
Date Begun Sept 18, 1966
Date Finished Sept 28, 1966

Lat. Line 36+00 N
Dep. Collar on ℄
Bearing 150° Mag.
Elev. Collar S 3350

Total Depth 441'
Logged By R.T. Lierer & D.M. Cox
Claim 11100 111
Core Size AX

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				CORE REC FT
0 - 38	OVERBURDEN						
38 - 56	BROKEN UP ULTRABASIC TO 56						
	WHICH IS THE TOP OF THE GRAPHITE						
	SCHIST						
56 - 61	GRAPHITE SCHIST. BADLY BROKEN UP						
	FIRST CORE @ 61'						
61 - 63	FOLIATED QTZ GRAPHITE SCHIST. MINOR FeS_2						1.0
63 - 89	" " " " " "						26.0
	6" QTZ BETWEEN 81 - 82						
	3 - 2" BANDS QTZ BETWEEN 86 - 87						
89 - 93	FOLIATED GRAPHITE SCHIST WITH QTZ						2.0
	MINOR PYRITE						
93 - 96	FOLIATED QTZ GRAPHITE SCHIST WITH PYRITE						2.5
96 - 100	" " " " " "						2.5
100 - 104	" " " " " "						1.5
104 - 106	" " " " " "						1.5
106 - 108	" " " " " "						2.0
109 - 111	" " " " " "						0.5
111 - 112.5	" " " " " "						1.5
112.5 - 121	" " " " " "						0.4
121 - 173	FOLIATED QTZ GRAPHITE SCHIST WITH MINOR PYRITE						

DIAMOND DRILL RECORD

PROPERTY ..... HOLE No. 2 - 18

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. ..... Sheet No. 2
Section .....
Date Begun .....
Date Finished .....

Lat. .....
Dep. .....
Bearing .....
Elev. Collar .....

Total Depth .....
Logged By D. M. Cox TO 200'
Claim T. HEBRO TO A41
Core Size A X

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				CORE REC FT
173 - 182	QTZ & CALCAREOUS SCHIST						5.0
182 - 184	QTZ CALC SCHIST WITH GRAPHITE SCHIST						1.5
184 - 185	" " " " " "						0.9
185 - 186	QUARTZOSE						1.0
186 - 189	QTZ BIOTITIC SCHIST MINOR PYRITE						2.0
189 - 191	QTZ & " "						1.0
191 - 192	QUARTZ GRANITE GNEISS						1.0
192 - 195	GNEISS CALC & QUARTZ SCHIST						3.0
195 - 197	" " & " "						1.0
197 - 200	QTZ & BIOTITIC SCHIST						1.0
200 - 202	QTZ BIOTITIC SCHIST. FOLIATED. MINOR FeS_2						0.5
202 - 205	GRAPHITE SCHIST. MINOR PYRITE IN						1.0
	CRYSTALS						
205 - 209	FOLIATED QTZ BIOTITIC SCHIST						4.0
	2" QTZ INCLUSION @ 205'						
209 - 220	QTZ BIOTITIC SCHIST						11.0
	1" QTZ @ 217'						
220 - 222	QTZ BIOTITIC SCHIST. THIS SCHIST						2.0
	IS ALMOST A GNEISS. DIFFICULT TO						
	DIFFERENTIATE BETWEEN THESE TYPES						
222 - 231	AS ABOVE 4" QTZ @ 227'						9.0

DIAMOND DRILL RECORD

PROPERTY ..... HOLE No. 2-18

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. ..... Sheet No. 3 Lat. ..... Total Depth. .....

Section ..... Dep. ..... Logged By T. Heard

Date Begun ..... Bearing ..... Claim .....

Date Finished ..... Elev. Collar ..... Core Size .....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				CORE REC FT.
231 - 251	QTZ BIOTITIC SCHIST SL GNEISSIC						20.0
	CONTAINING CHLORITIC & GRAPHITIC						
	SECTIONS. MINOR PYRITE THROUGHOUT						
251 - 254	QTZ CHLORITIC SCHIST. DARK GREENISH						2.0
	TO BLACK CHLORITE. 4" QTZ						
	INCLUSION @ 254'						
254 - 256	VERY SILICEOUS CHLORITIC SCHIST						2.0
	6" QTZ @ 256'						
256 - 258	QTZ STAINED GREEN BY CHLORITE						1.0
258 - 264	QTZ, BIOTITE & CHLORITE SCHIST.						5.0
	PRED QTZ. SOME CHLORITIC SECTIONS						
	(LOSS @ 260. 261.5)						
264 - 265	QTZ BIOTITIC SCHIST						4.0
269 - 271	" " " WITH A GRAPHITE						3.0
	SECTION FROM 270'. MINOR PYRITE.						
	QUITE SILICEOUS IN PART						
271 - 273	QTZ WITH DARK GREEN TO BLACK CHLORITE.						0.2
273 - 275	QTZ BIOTITIC SCHIST. MINOR CHLORITE						2.0
	& GRAPHITE						
275 - 277	AS ABOVE w/ MINOR PYRITE						2.0

DIAMOND DRILL RECORD

PROPERTY ..... HOLE No. 2-18

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. ..... Sheet No. 4 Lat. ..... Total Depth .....

Section ..... Dep. ..... Logged By F. H.

Date Begun ..... Bearing ..... Claim .....

Date Finished ..... Elev. Collar ..... Core Size .....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				CORE REC. FT.
277 - 280	QTZ BIOTITE SCHIST . 2" QTZ						3.0
	INCLUSION @ 277.5 QTZ VEINLETS						
	TO ¼" @ 279						
280 - 287	GRAPHITE SCHIST CONTAINING CHLORITE						7.0
	& QTZ . 2" QTZ @ 282 & 1" @ 283						
287 - 288.6	QTZ BIOTITIC SCHIST						1.6
288.6 - 290	BADLY BROKEN UP QTZ BIOTITIC						0.5
	SCHIST . PRED QTZ						
290 - 296	QTZ BIOTITIC SCHIST . 295-296						5.0
	BROKEN UP GRAPHITE SCHIST						
296 - 299	ALMOST COMPLETELY QTZ IN A						3.0
	MATRIX OF QTZ BIOTITIC SCHIST						
299 - 321	QTZ BIOTITIC SCHIST 2" QTZ @ 303'						20.0
	VERY MINOR PYRITE & CHLORITE						
321 - 329	PRED QTZ BIOTITIC SCHIST QUITE CHLORITIC						8.0
	IN SECTIONS MINOR FeS_2						
329 - 340	PRED QTZ BIO. SCHIST WITH MAJOR BL.						11.0
	CHLORITE SECTIONS @ 329 - 329.5 & 335 - 340						
340 - 345.6	CHLORITE SCHIST BLACK SOME QTZ &						4.0
	MINOR FeS_2						

DIAMOND DRILL RECORD

PROPERTY ..... HOLE No. 2 - 18

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. ..... Sheet No. 5 ..... Lat. .....
Section ..... Dep. .....
Date Begun ..... Bearing .....
Date Finished ..... Elev. Collar .....

Total Depth .....
Logged By T. H.
Claim .....
Core Size .....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
345.6 - 348	BROKEN UP QTZ & CHLORITIC SCHIST						2.0
	WITH BIOTITE						
348 - 369	QTZ CHLORITE SCHIST. GNEISSIC TEXTURE						20.0
	2" QTZ @ 359 4" QTZ WITH CHLORITE						
	STAIN @ 362 SOME MINOR PYRITE.						
369 - 376	BADLY BROKEN CHLORITIC SCHIST (VERY SILICEOUS)						5.0
	GRAPHITIC IN PART.						
376 - 380	QTZ CHLORITIC SCHIST.						3.0
380 - 388	QTZ BIOT. SCHIST CHLORITIC STRONGLY						5.0
	CALC. @ 385 - 388 REACTS STRONGLY TO ACID						
388 - 390	CALC. BASE QTZ & CHLORITE						2.0
390 - 392	CALC. BASE QTZ & CHLORITE						0.5
392 - 397	CALC. BASE QTZ & CHLORITE						1.5
	BADLY BROKEN MINOR FeS_2						
347 - 401	QTZ CHLORITIC SCHIST ALMOST GNEISSIC @ 398						4.0
401 - 405	CALC. CHLORITE & QTZ.						5.0
405 - 411	CALC. CHLORITE & QTZ IN ENTS & STRINGERS						6.0
	MINOR FeS_2						
411 - 421	SLIGHTLY CALC. CHLORITE & QTZ SCHIST						10.0
	WITH BIOTITIC PARTS. ALMOST GNEISS.						
	1" CALCITE @ 420						

DIAMOND DRILL RECORD

PROPERTY ..... HOLE No. 2-18

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. ..... Sheet No. 6 ..... Lat. .....
Section ..... Dep. .....
Date Begun ..... Bearing .....
Date Finished ..... Elev. Collar .....

Total Depth .....
Logged By T. WEBBS
Claim .....
Core Size .....

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
411 - 421 (CONT)	SECTIONS HAVE A PORPHYRITIC APPEARANCE						
	WITH BLUE QTZ EYES TO 1/6".						
	REACTS WITH ACID THROUGHOUT.						
421 - 433	AS ABOVE ONLY SLIGHTLY MORE CALCAREOUS						12.0
	GNEISSIC.						
433 - 441	HIGHLY BROKEN QTZ CHLORITE SERICITIC						3.0
	SCHIST WITH GNEISSIC APPEARANCE. CALCAREOUS						
	6" QTZ SECTION @ 433' CONTAINING CHLORITE						
	WITH MINOR PYRITE.						
	432.5' FRAGMENTS OF BLACK GRAPHITIC QTZITE.						
CASING	0 - 8' NX						
	0 - 15' BX						
	0 - 86' AX						
	CORE RECOVERY 70.0 %						

DIAMOND DRILL RECORD

PROPERTY NORTHLAKE MINES HOLE No. 3 - 18

DIP TEST		
	Angle	
Footage	Reading	Corrected
300	43	

DIP

Hole No. 3 - 18 Sheet No. 1

Section 45°

Date Begun SEPT 30, 1966

Date Finished OCTOBER 12, 1966

Lat. 3771' W

Dep. 58' N of ℄

Bearing 195° MAG

Elev. Collar ± 3350

Total Depth 468 FT.

Logged By R.T. HELMS

Claim 1100 107

Core Size AX

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				CORE REC. FT.
0 - 53	OVERBURDEN						
53 - 59	QTZ. GRAPHITE SCHIST MINOR PYRITE.						1.2
59 - 63.5	" " " " "						2.0
63.5 - 66							1.8
66 - 69							3.0
69 - 74	VERY BADLY BROKEN QUARTZ GRAPHITE SCHIST						2.5
74 - 80	QTZ. GRAPHITE SCHIST MINOR PYRITE						3.5
80 - 81	" " " " "						1.0
81 - 83	" " " " "						0.5
83 - 91	" " " " "						1.8
91 - 95	" " " " "						3.0
95 - 97	" " " " "						1.5
97 - 101	" " " " "						0.75
101 - 105	" " " " "						1.0
105 - 106	QTZ. GRAPHITE SCHIST MINOR PYRITE 4" QTZ						1.0
106 - 109	" " " " "						1.0
109 - 111	" " " " "						0.75
111 - 112.5	" " " " "						1.5
112.5 - 114	" " " " "						.5
114 - 116	" " " " "						1.2
116 - 120	" " " " "						3.0

DIAMOND DRILL RECORD

PROPERTY NORTHLAKE MINES. HOLE No. 3 - 18

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. 3 - 18 Sheet No. 2 Lat. Total Depth

Section Dep. Logged By T. HEARD

Date Begun Bearing Claim

Date Finished Elev. Collar Core Size

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				CORE REC. FT
120 - 124	QTZ GRAPHITE SCHIST MINOR PYRITE						3.0
124 - 125.5	QUARTZOSE SERICITIC CHLORITE SCHIST						1.5
	WITH GNEISSIC TEXTURE.						
125.5 - 127	QUARTZOSE SERICITIC CHLORITE SCHIST						1.5
	WITH GNEISSIC TEXTURE						
129 - 129	QUARTZOSE SERICITIC CHLORITE SCHIST						2.0
	WITH GNEISSIC TEXTURE						
129 - 133	AT 129' - 1" OF GRAPHITE SCHIST						2.5
	129 - 130 . BULL QTZ						
	130 - 133 QUARTZOSE SERICITIC CHLORITE						
	SCHIST WITH GNEISSIC TEXTURE						
133 - 138	133 - 133.3 AS ABOVE						2.0
	133.3 - 133.6 - QTZ						
	@ 133.6 - QTZ GRAPHITE SCHIST						
	1" QTZ TO 138'						
138 - 141	SLIGHT GRAPHITIC SILICIFIED QUARTZ						4.0
	SERICITE SCHIST WITH GNEISSIC TEXTURE						
	MINOR PYRITE - 1" QTZ @ 140'						
141 - 145	AS ABOVE						2.5
145 - 150.5	" "						5.0
150.5 - 151.5	" "						0.5

DIAMOND DRILL RECORD

PROPERTY NORTHLAKE MINES HOLE No. 3 - 18

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. 3 - 18 Sheet No. 3 Lat. Total Depth

Section Dep. Logged By T. HEARD

Date Begun Bearing Claim

Date Finished Elev. Collar Core Size

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				CORE REC FT.
151.5 - 156	SLIGHT GRAPHITIC, SILICIFIED QTZ						5.0
	SERICITE SCHIST WITH GNEISSIC TEXTURE						
	MINOR PYRITE						
156 - 158	AS ABOVE 156 - 156.5 BIOTITIC						1.0
158 - 163	" " SLIGHT FOLIATED						2.0
163 - 169	AT 163' 6" QTZ WITH CHLORITE IN PARTS.						2.2
	GRADES INTO A FOLIATED QTZ BIOTITE AND						
	GRAPHITE SCHIST WITH MINOR PYRITE.						
169 - 170	SLIGHT FOLIATED QTZ GRAPHITE SCHIST						0.8
	MINOR PYRITE						
170 - 174	SLIGHT FOLIATED QTZ GRAPHITE AND BIOTITE						4.0
	SCHIST CHLORITIC IN PART THROUGHOUT.						
	ALSO PYRITE THROUGHOUT.						
	PREP. CHLORITE 170 - 171						
174 - 178	SLIGHTLY SILICIFIED QTZ,						3.3
178 - 185	GRAPHITIC AND BIOTITIC SCHIST WITH						7.0
185 - 187	VERY MINOR PYRITE THROUGHOUT						2.0
187 - 188	AT 188 FOLIATIONS ARE @ 85° TO THE						1.0
	CORE AXIS						
188 - 191	AS ABOVE.						3.0
191 - 192	" "						1.0

DIAMOND DRILL RECORD

PROPERTY NORTHLAKE MINES. HOLE No. 3-18

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. 3-18 Sheet No. 4 Lat. Total Depth

Section Dep. Logged By T. HEARD.

Date Begun Bearing Claim

Date Finished Elev. Collar Core Size

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				CORE REC. FT.
192 - 193	STRONGLY SILICIFIED QTZ. BIOTITE						1.0
	AND GRAPHITE SCHIST. SLIGHTLY FOLIATED						
193 - 200	HIGHLY SILICIFIED QTZ BIOTITE AND						7.0
	GRAPHITE SCHIST. MINOR PYRITE THROUGHOUT						
	1" QTZ @ 195.5. SLIGHTLY FOLIATED.						
200 - 205	AS ABOVE						5.0
205 - 209	" " 4" QTZ @ 208.5						3.0
209 - 211	" "						1.5
211 - 213	SLIGHT FOLIATED AND SILICIFIED QTZ.						2.0
	GRAPHITE BIOTITIC & CHLORITIC SCHIST.						
213 - 219	SLIGHTLY FOLIATED QTZ GRAPHITE AND						4.0
	BIOTITE SCHIST. AT 214.5 APPROX. 10"						
	SECTION VERY SILICIFIED WITH 20-30% PYRITE.						
219 - 220	FOLIATED QTZ. BIOTITE & GRAPHITE SCHIST.						1.0
	MINOR PYRITE. 80 - 85° TO CORE AXIS.						
220 - 238	AS ABOVE.						18.0
238 - 239	" "						1.0
239 - 242	" "						2.0
242 - 244.5	" "						2.5
244.5 - 247	FOLIATED QTZ. BIOTITE & GRAPHITE SCHIST MINOR						2.4
	PYRITE. FINE GRAIN & DISSEMINATED @ 245.5.						

DIAMOND DRILL RECORD

PROPERTY NORTHLAKE MINES. HOLE No. 3 - 18

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. 3 - 18 Sheet No. 5 Lat. Total Depth

Section Dep. Logged By T. HEARD.

Date Begun Bearing Claim

Date Finished Elev. Collar Core Size

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				CORE REC. FT.
247 - 248	FOLIATED QTZ. BIOTITE & GRAPHITE SCHIST.						0.2.
	MINOR PYRITE						
248 - 249	AS ABOVE						1.0
249 - 250	" "						0.5
250 - 251	" "						1.0
251 - 253	" "						1.0
253 - 259	QTZ. BIOT. & GRAPHITE SCHIST, ALMOST						1.2
	GNEISSIC IN APPEARANCE						
259 - 263	AS ABOVE						0.2
263 - 279	THERE WAS A VERY STRONG SEAM OF WATER						1.0
	SAND ENCOUNTERED IN THIS SECTION. THE						
	ONLY CORE RECOVERED IS OF QTZ. BIOTITE &						
	GRAPHITE SCHIST, SLIGHTLY FOLIATED GNEISSIC						
279 - 282	FOLIATED QTZ. BIOTITE & GRAPHITE SCHIST.						1.0
282 - 285	AS ABOVE CHLORITIC IN PART.						2.0
285 - 288	CHLORITE & GRAPHITE SCHIST.						0.8
288 - 291	QTZ. BIOTITE GRAPHITE & CHLORITE SCHIST.						3.0
	SLIGHTLY FOLIATED. GNEISSIC.						
291 - 293	AS ABOVE						1.8
293 - 298	QTZ BIOTITE & GRAPHITE SCHIST.						4.0

DIAMOND DRILL RECORD

PROPERTY NORTHLAKE MINES. HOLE No. 3 - 18

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. 3 - 18 Sheet No. 6 Lat. Total Depth.

Section Dep. Logged By T. HEARD.

Date Begun Bearing Claim

Date Finished Elev. Collar Core Size

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				CORE REC. FT.
298 - 300	SLIGHTLY FOLIATED QTZ BIOTITE & GRAPHITE						2.0
	SCHIST. MINOR PYRITE						
300 - 339	SLIGHTLY FOLIATED QTZ BIOTITE & GRAPHITE						39.0
	SCHIST. PYRITE THROUGHOUT. 4" QTZ @ 310.5 &						
	6" HIGHLY SILICIFIED SECTION FROM						
	311.5 - 312. HIGHLY GRAPHITIC SECTIONS						
	FROM 319 - 321 & 328 - 331 + 95% GRAPHITE.						
339 - 342	AS ABOVE.						1.5
342 - 345	QUITE HIGHLY SILICIFIED QTZ. BIOTITE &						2.5
	GRAPHITE SCHIST WITH A FAIRLY LARGE						
	PERCENTAGE FeS_2 ASSOCIATED WITH THE						
	QTZ 5%						
345 - 392	FOLIATED QTZ. GRAPHITE & BIOTITE SCHIST.						47.0
	SILICIFIED QUITE HIGHLY IN SECTIONS.						
	THESE CARRY UP TO 10% PYRITE. STRONGLY						
	GRAPHITIC 372 - 373 4" @ 385'						
392 - 395	SLIGHTLY FOLIATED QTZ. GRAPHITE & BIOTITE						1.0
	SCHIST. MINOR PYRITE. THROUGHOUT.						
395 - 399	AS ABOVE.						4.0
399 - 401	" " @ 401 BEDDING @ 50°						1.0
401 - 403	" "						2.0

DIAMOND DRILL RECORD

PROPERTY NORTHLAKE MINES. HOLE No. 3 - 18

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. 3 - 18 Sheet No. 2 Lat. Total Depth

Section Dep. Logged By T. HEADS.

Date Begun Bearing Claim

Date Finished Elev. Collar Core Size

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				CORE REC. FT.
403 - 411.5	SLIGHTLY FOLIATED QTZ. GRAPHITIC & BIOTITE						7.5
	SCHIST. MINOR PYRITE THROUGHOUT.						
	STRONGLY GRAPHITIC @ 406.						
411.5 - 418.5	AS ABOVE. STRONGLY GRAPHITIC @ 418						4.5
418.5 - 420	" "						2.5
420 - 421.5	" "						1.0
421.5 - 426.5	" "						5.0
426.5 - 429.5	" "						3.0
429.5 - 435	" "						4.5
435 - 439	THIS IS AN AREA WHERE WATER & SAND						0.2
	WERE ENCOUNTERED ONLY 0.2' OF CORE						
	QTZ. GRAPHITE & BIOTITE SCHIST.						
439 - 440.5	QTZ. GRAPHITE & BIOTITE SCHIST.						1.0
440.5 - 441	" " " " "						0.5
441 - 442	" " " " "						0.5
442 - 443.5	HIGHLY SIL. QTZ GRAPHITE & BIOTITE						1.0
	SCHIST. APPROX. 2% PYRITE IN QTZ.						
443.5 - 445	AS ABOVE.						0.8
445 - 447	" " VERY HIGHLY SILICEOUS						2.0
	20 - 30% PYRITE ASSOC. WITH QTZ.						

DIAMOND DRILL RECORD

PROPERTY NORTHLAKE MINES. HOLE No. 3-18

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. 3-18 Sheet No. 8 Lat. Total Depth.

Section Dep. Logged By T. HEARD.

Date Begun Bearing Claim

Date Finished Elev. Collar Core Size

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				CORE REC. FT.
447 - 450	QTZ. BIOTITE & GRAPHITE SCHIST. FINE						3.0
	GRAIN BIOTITE.						0.
450 - 451	AS ABOVE. SLIGHLY MORE SILICEOUS						0.5
	5% MASSIVE FINE GRAIN PYRITE.						
451 - 454	CONTACT IN HERE BETWEEN THE QTZ						1.0
	BIOTITE & GRAPHITE SCHIST AND A LIGHT GRAIN						
	QTZ CHLORITE ALMOST GNEISS.						
454 - 458	QTZ. CHLORITE GNEISS MINOR PYRITE.						1.0
458 - 462	" " " " "						0.8
462 - 465	" " " " "						1.0
465 - 468	" " " " "						0.8
CASING	10' NX						
	34' BX						
	61' NX						
	CORE RECOVERY — 72.4%						

DIAMOND DRILL RECORD

PROPERTY NORTHLAKE MINES HOLE No. 4

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. 4 - 18 Sheet No. 1 Lat. L 40 W Total Depth 392'

Dip Section 50° Dep. 60 ± 0 S Logged By R.T. HEARD.

Date Begun Oct. 14/66 Bearing 195° MAG Claim

Date Finished Oct 26/66 Elev. Collar Core Size AX

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				CORE REC. FT.
0 - 64	OVERBURDEN						
64 - 80	LIGHT TO DARK GREEN TO BLACK SERPENTINE						
	SCHIST MINOR FINE GRAIN FeS_2.						
	2" QTZ FRAGMENT @ 80'. IT IS DIFFICULT						
	TO TELL MUCH ABOUT THIS SECTION AS IT						
	IS COMPRISED OF FRAGMENTS HELD						
	TOGETHER BY MUD (FROZEN)						
80 - 86	PRED MUD GREY GRAPHITE FRAGMENTS						2.5
	SOME QUARTZ FRAGMENTS						
86 - 89	MUD QTZ CHLORITE SCHIST SOME GRAPHITE						3.0
	MINOR FeS_2 FAULT GOUGE 80-86'						
89 - 92	QTZ BIOTITIC & CHLORITIC SCHIST						2.5
	MINOR F. S_2 BLACK.						
92 - 95	QTZ CHLORITE SCHIST SLIGHTLY FOLIATED						3.0
	BEDDING C.A. APPROX. 65°						
95 - 98	AS ABOVE SLIGHTLY MORE SILICEOUS						3.0
	SOME LIMITE						
98 - 100	VERY BADLY BROKEN QTZ CHLORITE SCHIST						2.0
100 - 102	AS ABOVE MINOR FeS_2						1.0
102 - 105	90% MUD CONTAINING FRAGMENTS OF QTZ						1.0
	& BLACK CHLORITE.						

DIAMOND DRILL RECORD

PROPERTY NORTHLAKE MINES HOLE No. 4

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. 4 - 14 Sheet No. 2 Lat. Total Depth

Section Dep. Logged By T HEARD

Date Begun Bearing Claim

Date Finished Elev. Collar Core Size

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
105 - 111	QTZ CHLORITE SCHIST. DARK GREY TO						6.5
	BLACK. MINOR FeS2						
111 - 115	AS ABOVE						1.0
115 - 116.	PRED QTZ SERICITE & CHLORITE						1.5
	SCHIST MINOR PYRITE THROUGHOUT.						
116 - 120	AS ABOVE						1.0
120 - 122	AS ABOVE.						0.2
122 - 124	AS ABOVE.						1.5
124 - 127	AS ABOVE.						2.0
127 - 129	AS ABOVE.						0.6
129 - 132	AS ABOVE						2.5
132 - 134	AS ABOVE						2.0
134 - 136	DARK GREEN TO BLACK QTZ CHLORITE						1.2
	SCHIST SERICITIC						
136 - 138	AS ABOVE. FINE GRAIN PYRITE IN						1.5
	QTZ STRINGERS						
138 - 140.5	QTZ CHLORITE SERICITE SCHIST MINOR						1.0
	GRAPHITE PYRITE IN QTZ.						
140.5 - 144	PRED. QTZ WITH CHLORITE & SERICITE						0.8
	SCHIST						
144 - 145	QTZ						0.2

DIAMOND DRILL RECORD

PROPERTY NORTHLAKE MINES HOLE No. 4

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. 4 - 18 Sheet No. 3 Lat. Total Depth

Section Dep. Logged By T. HEARD.

Date Begun Bearing Claim

Date Finished Elev. Collar Core Size

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				CORE REC. FT
145 - 147	QTZ SERICITE & CHLORITE SCHIST						0.3
147 - 150	MATERIAL RECOVERED IS QTZ. WITH GREEN						0.3
	CHLORITE STAINED SECTIONS						.
150 - 154	PRPH QTZ WITH CHLORITE & SERICITE						0.5
	SECTIONS.						
154 - 157	AS ABOVE.						0.5
157 - 161	QTZ CHLORITE & SERICITE SCHIST.						1.4
161 - 166	QTZ CHLORITE SCHIST FINE GRAIN						1.0
	BIOTITE VERY MINOR FeS2						
166 - 171	QTZ & DARK GREEN CHLORITE. 4" QTZ @ 176'						1.0
176 - 181	QTZ CHLORITE SCHIST. DARK GREEN TO BLACK.						0.5
181 - 182	AS ABOVE						1.0
182 - 184	AS ABOVE MINOR FeS2						1.7
184 - 186	AS ABOVE						1.0
186 - 188	AS ABOVE						1.0
188 - 190	AS ABOVE						2.2
190 - 192.5	DARK GREEN TO BLACK CHLORITE & QTZ						2.2
	FOLIATED APPEARANCE @ 190.5						
192.5 - 193.5	LIGHT GREY HIGHLY SILICIFIED QTZ						1.0
	CHLORITE & SERICITE.						
193.5 - 196	AS ABOVE.						1.5

DIAMOND DRILL RECORD

PROPERTY NORTHLAKE MINES HOLE No. 4

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. 4 - 18 Sheet No. 4 Lat. Total Depth

Section Dep. Logged By T. HEARD

Date Begun Bearing Claim

Date Finished Elev. Collar Core Size

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				Core Rec. Ft.
196 - 198	0.5' AS ABOVE THEN BLACK GRAPHITE SCHIST						1.0
198 - 199	PRED. QTZ. BIOTITE GRANITE & CHLORITE						0.5
	SCHIST						
199 - 200	DARK GREEN PRED QTZ SERICITE, BIOTITE						0.8
	SCHIST (?) HAS ALMOST THE APPEARANCE						
	OF QUARTZITE						
200 - 202	AS ABOVE.						1.0
202 - 204	AS ABOVE.						1.0
204 - 207	AS ABOVE						1.5
207 - 210	BADLY BROKEN QTZ SERICITE & CHLORITE						0.5
	SCHIST ALMOST A BRECCIA IN APPEARANCE						
	4" QTZ @ 214						
210 - 214	AS ABOVE.						1.5
214 - 217	QTZ. CHLORITE & SERICITE SCHIST SPECK						2.5
	PYRRHOTITE @ 214.2 MINOR FOL. THROUGHOUT.						
217 - 219	QTZ. CHLORITE & SERICITE						1.4
219 - 220	" " " MOTTLED GREY						0.5
	QTZ INCLUSIONS.						
220 - 222	QTZ CHLORITE & SERICITE						1.0
	THE HOLE WAS CEMENTED HERE WHEN						
	DRILLING OUT THE CASING THE ROD						

DIAMOND DRILL RECORD

PROPERTY NORTHLAKE MINES HOLE No. 4

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. 4 - 18 Sheet No. 5 Lat. Total Depth

Section Dep. Logged By T. HEARD

Date Begun Bearing Claim

Date Finished Elev. Collar Core Size

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				CORE REC. FT
(CONT)	KICKED OUT OF THE HOLE @ 110. DID NOT						
	SAVE THE CORE UNTIL BACK DOWN TO 217'						
217 - 224	PRED QTZ SERICITE & CHLORITE ALMOST						7.0
	GOUGE @ 219 MOTTLED IN APPEARANCE						
	WITH QTZ. TO 1/4" GALENA SPECK. AT 223'						
224 - 228	SCHIST - QTZ SERICITE & CHLORITE MINOR						4.0
	FINE GRAINED PYRITE & ARSENO @ 228						
228 - 231	SCHIST - QTZ SERICITE & CHLORITE MINOR						3.0
	FINE GRAINED PYRITE & ARSENO @ 230 IN						
	3/8" QTZ. INCL.						
231 - 235	SCHIST QTZ. CHLORITE & SERICITE						3.0
	MINOR PYR.						
235 - 237	SCHIST - QTZ CHLORITE & SERICITE						1.5
	GRAPHITIC @ 237 WITH PYRITE & MINOR						
	ARSENO.						
237 - 239	SCHIST QTZ GRAPHITE & CHLORITE						1.0
	SLIGHTLY SERICITIC						
239 - 240	AS ABOVE						1.0
240 - 242	AS ABOVE @ 241 APPROX. 2% PYRITE						2.0
242 - 244	AS ABOVE						1.0

DIAMOND DRILL RECORD

PROPERTY NORTHLAKE MINES. HOLE No. 4

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. 4 – 12 Sheet No. 6 Lat. Total Depth

Section Dep. Logged By T. HEARD

Date Begun Bearing Claim

Date Finished Elev. Collar Core Size

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				CORE REC. FT.
244 – 249.5	SLIGHTLY MORE SILICEOUS SCHIST						4.5
	GRAPHITE SERICITE & CHLORITIC. 6" QTZ						
	SECTION @ 246. AT 249.5 BEDDING IS						
	APPROX. 50° TO CORE AXIS						
249.5 – 251	VERY SILICEOUS GRAPHITE, SERICITE &						1.2
	CHLORITIC SCHIST MINOR PYRITE						
251 – 253	AS ABOVE.						2.0
253 – 255	253 – 254 AS ABOVE THEN SLIGHTLY						
	FOLIATED QTZ. GRAPHITE SCHIST SOME						
	BIOTITE UP TO 5% PYRITE IN SECTIONS						
255 – 256	AS ABOVE						1.0
256 – 257.5	AS ABOVE						1.5
257.5 – 260	AS ABOVE						1.5
260 – 262	AS ABOVE						1.5
	FROM 262 – ANGILLACEOUS SCHIST FAIRLY						
	SOFT – NOT QUITE AS MUCH QTZ.						
262 – 266	DARK GREY TO BLACK SCHIST SERICITE QTZ.						4.0
	& CHLORITE. MINOR GRAPHITE MINOR PYRITE						
	THROUGHOUT.						
266 – 270	AS ABOVE						4.0
270 – 272	AS ABOVE.						2.0

DIAMOND DRILL RECORD

PROPERTY NORTHLAKE MINES HOLE No. 4

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. 4 - 18 Sheet No. 7
Section
Date Begun
Date Finished

Lat.
Dep.
Bearing
Elev. Collar

Total Depth
Logged By T. HEARD
Claim
Core Size

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				CORE REC. FT.
272 - 275	AS ABOVE						3.0
275 - 277	AS ABOVE						2.0
277 - 281.5	SCHIST ? QTZ. CHLORITE & SERICITE. SOME						4.5
	SLIGHTLY GRAPHITIC SECTIONS MINOR FeS2						
	THROUGHOUT						
281.5 - 283.5	AS ABOVE.						2.0
283.5 - 285.5	AS ABOVE						2.0
285.5 - 288.5	AS ABOVE						3.0
288.5 - 290	AS ABOVE						1.5
290 - 295	AS ABOVE - 292 - 295 CONTAINS A REAL						4.5
	BRIGHT GREEN MICA STAINED BY						
	CHLORITE (MARIPOSITE?)						
295 - 297	AS ABOVE						2.0
297 - 299	AS ABOVE						2.0
299 - 301	SCHIST QTZ GRAPHITE CHLORITE &						1.0
	SERICITE MINOR FeS2						
301 - 302	SCHIST. QTZ SERICITE & CHLORITE						0.5
	SLIGHTLY GRAPHITIC SECTIONS						
302 - 305	AS ABOVE						1.0
305 - 308	AS ABOVE						1.0
308 - 310	RED QTZ WITH SCHIST - SERICITIC						[illegible]

DIAMOND DRILL RECORD

PROPERTY NORTHLAKE MINES HOLE No. 4

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. 4 - 18 Sheet No. 2 Lat. Total Depth

Section Dep. Logged By T. HERRO

Date Begun Bearing Claim

Date Finished Elev. Collar Core Size

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				CORE REC. FT
310 - 311	SCHIST. QTZ. SERICITE & CHLORITE DARK						0.5
	GREY TO BLACK						
311 - 316	AS ABOVE						1.0
316 - 318	AS ABOVE						2.0
318 - 320	AS ABOVE 1/4" QTZ INCL @ 320						2.0
320 - 323	SCHIST. QTZ (VERY SILICEOUS) SERICITE &						3.0
	CHLORITE TRACE QTZ 322 - 323						
323 - 325	SCHIST VERY SILICEOUS SERICITE &						2.0
	CHLORITE ALMOST GNEISSIC, SLIGHTLY						
	GRAPHITIC						
325 - 327	SCHIST QTZ SERICITE CHLORITE & SLIGHTLY						2.0
	GRAPHITIC. MINOR PYRITE THROUGHOUT						
327 - 328	AS ABOVE						1.0
328 - 329	AS ABOVE						1.0
329 - 334	AS ABOVE 1" QTZ INCL @ 330'						
334 - 336	SCHIST. QTZ CHLORITE & SERICITIC SLIGHTLY						2.0
	GRAPHITIC IN PARTS. MOST OF THE QTZ						
	IS STAINED SLIGHTLY GREEN BY						
	CHLORITE. SOME MINOR PYRITE THROUGHOUT						
336 - 338	AS ABOVE - FOLIATED @ 338						
338 - 340	AS ABOVE.						

DIAMOND DRILL RECORD

PROPERTY NORTHLAKE MINES HOLE No. 4

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. 4 - 18 Sheet No. 9 Lat. Total Depth

Section Dep. Logged By T. HERRO

Date Begun Bearing Claim

Date Finished Elev. Collar Core Size

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				CORE REC. FT
340 - 341	AS ABOVE.						1.0
341 - 343	AS ABOVE.						1.5
343 - 344	AS ABOVE						1.0
344 - 346	AS ABOVE						2.0
346 - 347.5	AS ABOVE						1.5
347.5 - 350	AS ABOVE						0.5
350 - 351	AS ABOVE						0.5
351 - 352	AS ABOVE						1.5
353 - 356	AS ABOVE						2.5
356 - 358	AS ABOVE						2.0
358 - 360.5	AS ABOVE						2.5
360.5 - 363	AS ABOVE						1.0
363 - 370	AS ABOVE						2.5
370 - 371	AS ABOVE						1.0
371 - 371.2	AS ABOVE						0.75
371.2 - 371.5	AS ABOVE - VERY GNEISSIC APPEARANCE						0.25
	FROM 371.5 TRANSITION 30°						
371.6 - 375	AS ABOVE.						3.5
375 - 378	AS ABOVE						1.0
	FROM 375 POSSIBLE FAULTED ZONE						
	THROUGH TO END OF THE HOLE						

DIAMOND DRILL RECORD

PROPERTY NORTHLAKE MINES HOLE No. 4

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. 4 - 18 Sheet No. Lat. Total Depth

Section Dep. Logged By T. HEARN

Date Begun Bearing Claim

Date Finished Elev. Collar Core Size

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				CORE REC FT
378 - 381	AS ABOVE						2.5
381 - 385	AS ABOVE						1.0
385 - 386	AS ABOVE 6" QTZ @ 386'						0.5
386 - 388	AS ABOVE						1.5
388 - 391	AS ABOVE						3.0
391 - 392	AS ABOVE						1.0
	END OF HOLE @ 392. VERY STRONG SAND						
	& WATER SEAM ENCOUNTERED; UNABLE TO						
	TURN RODS & UNABLE TO GET CORE TUBE						
	DOWN HOLE.						
CASING	25' - NX						
	50' - BX						
	217' - AX						
	CORE RECOVERY 59.7%						


CLAIM & GRID LOCATION MAP
NORTH LAKE MINES LTD.
MACDONALD CONSULTANTS LTD.
DRAWN
DATE
SCALE
1500 0 1500 3000 4500 6000
ft.
CHER I-24
NAN
MAR
GOD I-30
GIL
A.B.C.D.
LEO
CW
EL
HOO
PG
PS
PICK
GRASS
GRASS LAKES
HOOLE RIVER
North Fork
Area 1
Area 2
Area 3
Area 4
Area 5
Area 6
Area 7
Area 8 & 9
Area 10
Area 11
Area 12
Area 13
Area 14
Area 15
Area 16
Area 17
Area 18
Area 19
131°30'
61°30'

AREA NO. 2

AREA NO. 15

AREA NO. 1

N

Granite
~~Graphite Schist~~
Chloritic Schist
Biotite Schist
Dolomitic Schist
Micaceous Schist
Limonitic Schist
Quartzite Schist
Dolomite
Quartzite
Granite Gneiss
Ultrabasic

Geological Contact Observed
Geological Contact Assumed
Fault Observed
Fault Assumed
Bedding
Mineralization Observed

NORTHLAKE MINES LTD.

MacDonald Consultants Ltd.

11-425 Howe St. Vancouver, B.C.

GEOLOGICAL MAP

Scale:	1" = 1000'	PROJECT NO. 204
Drawn:		
Date:		

AREA NO. 3

N

Graphite Schist
Chloritic Schist
Biotite Schist
Dolomitic Schist
Micaceous Schist
Limonitic Schist
Quartzite Schist
Dolomite
Quartzite
Granite Gneiss
Ultrabasic
Geological Contact Observed
Geological Contact Assumed
Fault Observed
Fault Assumed
Bedding
Mineralization Observed

NORTHLAKE MINES LTD.

MacDonald Consultants Ltd.
11-425 Howe St. Vancouver, B.C.

GEOLOGICAL MAP

Scale:	1"= 1000'	PROJECT NO. 204
Drawn:		
Date:		

AREA NO. 5

N

- Graphite Schist
- Chloritic Schist
- Biotite Schist
- Dolomitic Schist
- Micaceous Schist
- Limonitic Schist
- Quartzite Schist
- Dolomite
- Quartzite
- Granite Gneiss
- Ultrabasic
- Geological Contact Observed
- Geological Contact Assumed
- Fault Observed
- Fault Assumed
- Bedding
- Mineralization Observed

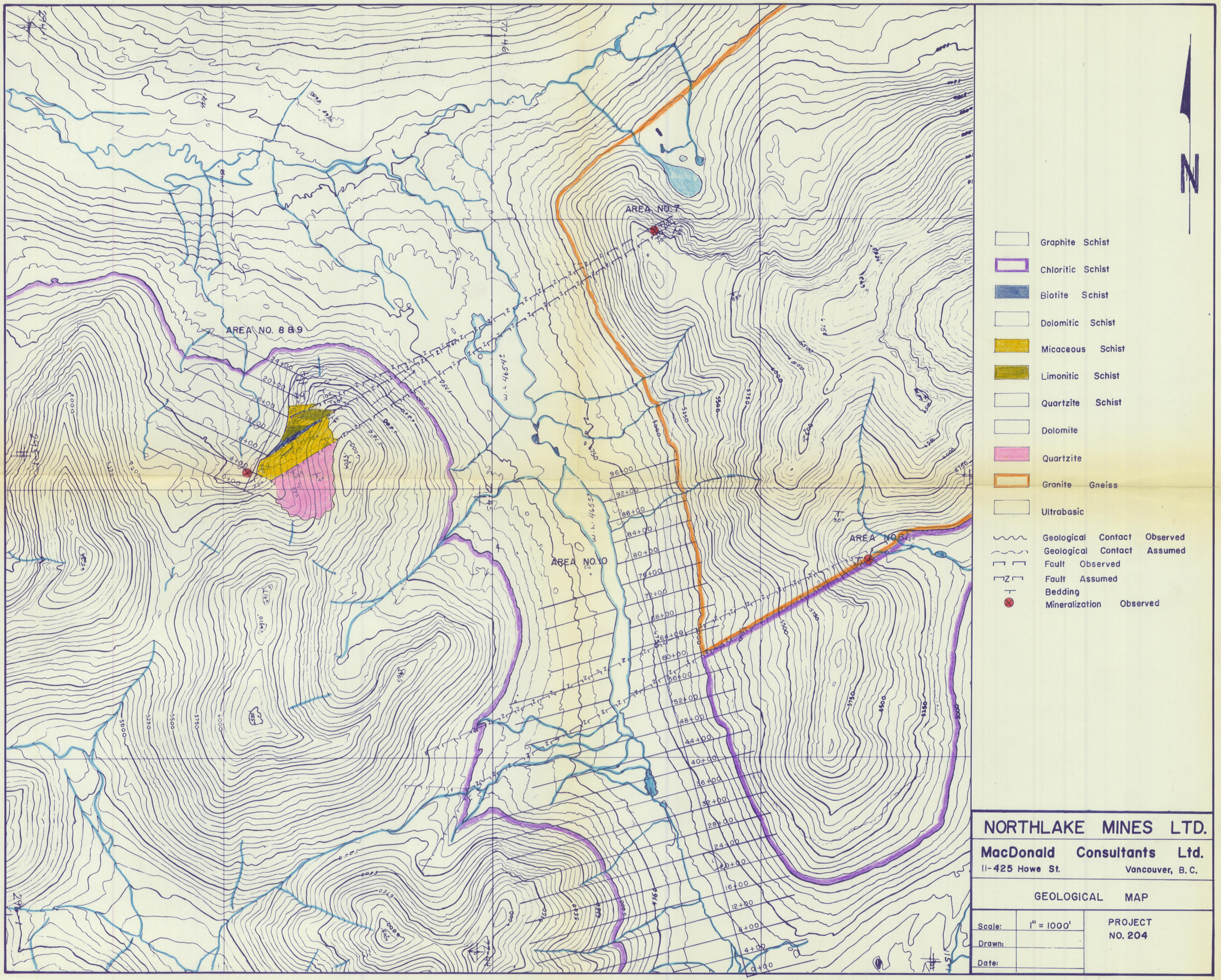
NORTHLAKE MINES LTD.

MacDonald Consultants Ltd.

11-425 Howe St. Vancouver, B.C.

GEOLOGICAL MAP

Scale:	1" = 1000'	PROJECT NO. 204
Drawn:		
Date:		


AREA NO. 7
AREA NO. 8 & 9
AREA NO. 10
AREA NO. 6
N
Graphite Schist
Chloritic Schist
Biotite Schist
Dolomitic Schist
Micaceous Schist
Limonitic Schist
Quartzite Schist
Dolomite
Quartzite
Granite Gneiss
Ultrabasic
Geological Contact Observed
Geological Contact Assumed
Fault Observed
Fault Assumed
Bedding
Mineralization Observed
NORTHLAKE MINES LTD.
MacDonald Consultants Ltd.
11-425 Howe St.
Vancouver, B.C.
GEOLOGICAL MAP
Scale: 1" = 1000'
Drawn:
Date:
PROJECT NO. 204

AREA NO. II

N

Graphite Schist
Chloritic Schist
Biotite Schist
Dolomitic Schist
Micaceous Schist
Limonitic Schist
Quartzite Schist
Dolomite
Quartzite
Gronite Gneiss
Ultrabasic
Geological Contact Observed
Geological Contact Assumed
Fault Observed
Fault Assumed
Bedding
Mineralization Observed

NORTHLAKE MINES LTD.

MacDonald Consultants Ltd.
11-425 Howe St. Vancouver, B.C.

GEOLOGICAL MAP

Scale:	1"= 1000'	PROJECT NO. 204
Drawn:		
Date:		

AREA NO. 12

AREA NO. 13

N

- Graphite Schist
- Chloritic Schist
- Biotite Schist
- Dolomitic Schist
- Micaceous Schist
- Limonitic Schist
- Quartzite Schist
- Dolomite
- Quartzite
- Granite Gneiss
- Ultrabasic
- Geological Contact Observed
- Geological Contact Assumed
- Fault Observed
- Fault Assumed
- Bedding
- Mineralization Observed

NORTHLAKE MINES LTD.

MacDonald Consultants Ltd.

11-425 Howe St. Vancouver, B.C.

GEOLOGICAL MAP

Scale:	1" = 1000'	PROJECT NO. 204
Drawn:		
Date:		

AREA NO. 4

AREA NO. 16

N

Graphite Schist
Chloritic Schist
Biotite Schist
Dolomitic Schist
Micaceous Schist
Limonitic Schist
Quartzite Schist
Dolomite
Quartzite
Granite Gneiss
Ultrabasic

Geological Contact Observed
Geological Contact Assumed
Fault Observed
Fault Assumed
Bedding
Mineralization Observed

NORTHLAKE MINES LTD.

MacDonald Consultants Ltd.
11 – 425 Howe St. Vancouver B.C.

GEOLOGICAL MAP

Scale:	1" = 1000'	PROJECT NO. 204
Drawn:		
Date:		

AREA NO.3

AREA NO. 14

32+00
28+00
24+00
20+00
16+00
12+00
8+00
4+00
0+00

N

- Graphite Schist
- Chloritic Schist
- Biotite Schist
- Dolomitic Schist
- Micaceous Schist
- Limonitic Schist
- Quartzite Schist
- Dolomite
- Quartzite
- Granite Gneiss
- Ultrabasic
- Geological Contact Observed
- Geological Contact Assumed
- Fault Observed
- Fault Assumed
- Bedding
- Mineralization Observed

NORTHLAKE MINES LTD.

MacDonald Consultants Ltd.

11 – 425 Howe St. Vancouver, B.C.

GEOLOGICAL MAP

Scale:	1" = 1000'
Drawn:	
Date:	

PROJECT NO. 204

AREA NO. 18

Mic. Chl. Sch.
Dolomite
Mic. Chl. Sch.
Graphite Sch.
Ultrabasic
Graphite Sch.
Mic. Chl. Sch.
Dolomite
Mic. Chl. Sch.

64+00
60+00
56+00
52+00
48+00
44+00
40+00
36+00
32+00
28+00
24+00
20+00
16+00
12+00
8+00
4+00
0+00

Graphite Schist
Chloritic Schist
Biotite Schist
Dolomitic Schist
Micaceous Schist
Limonitic Schist
Quartzite Schist
Dolomite
Quartzite
Granite Gneiss
Ultrabasic

Geological Contact Observed
Geological Contact Assumed
Fault Observed
Fault Assumed
Bedding
Mineralization Observed
Core Hole

NORTHLAKE MINES LTD.

MacDonald Consultants Ltd.
11 – 425 Howe St. Vancouver, B.C.

GEOLOGICAL MAP

Scale:	1" = 1000'
Drawn:	
Date:	

PROJECT NO. 204

AREA NO. 17

CLOUDS OBSTRUCTION

N

- Graphite Schist
- Chloritic Schist
- Biotite Schist
- Dolomitic Schist
- Micaceous Schist
- Limonitic Schist
- Quartzite Schist
- Dolomite
- Quartzite
- Granite Gneiss
- Ultrabasic
- Geological Contact Observed
- Geological Contact Assumed
- Fault Observed
- Fault Assumed
- Bedding
- Mineralization Observed

NORTHLAKE MINES LTD.

MacDonald Consultants Ltd.

11 - 425 Howe St. Vancouver, B.C.

GEOLOGICAL MAP

Scale:	1" = 1000'
Drawn:	
Date:	

PROJECT NO. 204

AREA NO. 19

Graphite Schist
Chloritic Schist
Biotite Schist
Dolomitic Schist
Micaceous Schist
Limonitic Schist
Quartzite Schist
Dolomite
Quartzite
Granite Gneiss
Ultrabasic

Geological Contact Observed
Geological Contact Assumed
Fault Observed
Fault Assumed
Bedding
Mineralization Observed

Cloud Shadow Broken Contours

NORTHLAKE MINES LTD.

MacDonald Consultants Ltd.
11-425 Howe St. Vancouver, B.C.

GEOLOGICAL MAP

Scale:	1"= 1000'
Drawn:	
Date:	

PROJECT NO. 204

MacDONALD CONSULTANTS LTD.
VANCOUVER B.C.

NORTHLAKE MINES LTD.

PLAN OF MINERAL CLAIMS & PAN/SILT SAMPLES

LEAD PLOT

CONTOUR INTERVALS IN PARTS PER MILLION (PPM)

	26	- 50
	51	- 100
	101	- 200
	201	- 400
	401	- 800
	801	- 1600
	1601	- 3200
	3201	- 6400
	6401	- 12,800
	over	12,800

•102/36 Lead plot in parts per million (ppm)

1/2 1/4 0 1/2 1 1 1/2 2

SCALE: 1 inch = 1/2 mile

R.T. HEARD

DECEMBER, 1966

MacDONALD CONSULTANTS LTD.
VANCOUVER B.C.

NORTHLAKE MINES LTD.

PLAN OF MINERAL CLAIMS & PAN/SILT SAMPLES

ZINC PLOT

CONTOUR INTERVALS IN PARTS PER MILLION (PPM)

(blank)	26 - 50
(blank)	51 - 100
(yellow)	101 - 200
(orange)	201 - 400
(green)	401 - 800
(red)	801 - 1600
(blue)	1601 - 3200
(blank)	3201 - 6400
(blank)	6401 - 12,800
(blank)	over 12,800

•102/36 Zinc plot in parts per million (ppm)

1/2 1/4 0 1/2 1 1 1/2 2

SCALE: 1 inch = 1/2 mile

R.T. HEARD

DECEMBER, 1966

MacDONALD CONSULTANTS LTD.
VANCOUVER B.C.

NORTHLAKE MINES LTD.

PLAN OF MINERAL CLAIMS & PAN/SILT SAMPLES

COPPER PLOT

CONTOUR INTERVALS IN PARTS PER MILLION (PPM)

26 - 50	
51 - 100	
101 - 200	
201 - 400	
401 - 800	
801 - 1600	
1601 - 3200	
3201 - 6400	
6401 - 12,800	
over 12,800	

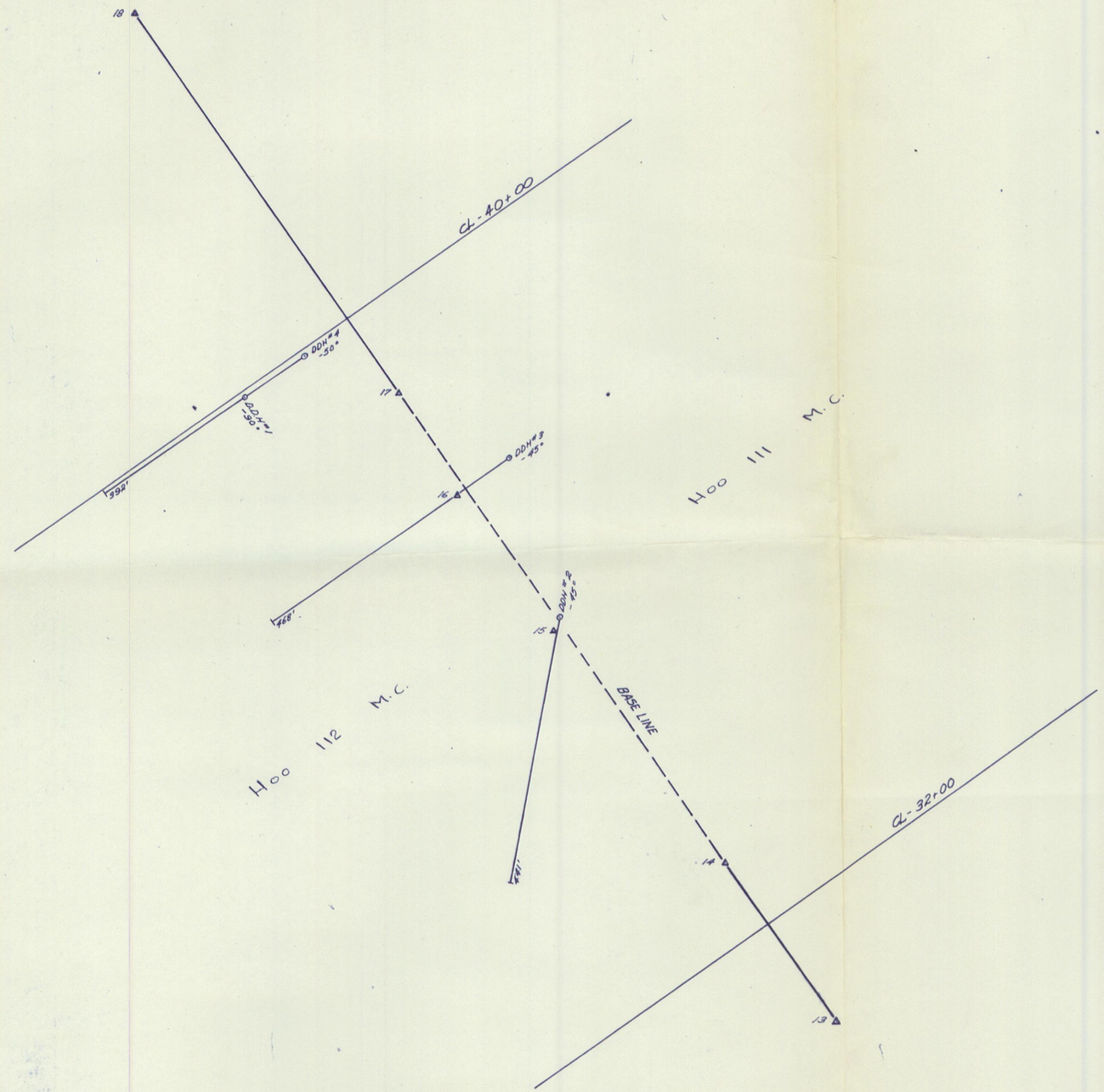
•102/36 Copper plot in parts per million (ppm)

1/2 1/4 0 1/2 1 1 1/2 2

SCALE: 1 inch = 1/2 mile

R.T. HEARD

DECEMBER, 1966



LAYOUT OF DIAMOND DRILL HOLES ON AREA # 18 HOOLE RIVER

SCALE : 1" = 100'
OCT. 26/66

NORTHLAKE MINES Ltd.		
MacDonald Consultants Ltd.		
SCALE	1"=100'	
DRAWN		
DATE		
NO.		

AREA = 18

HOOLE RIVER

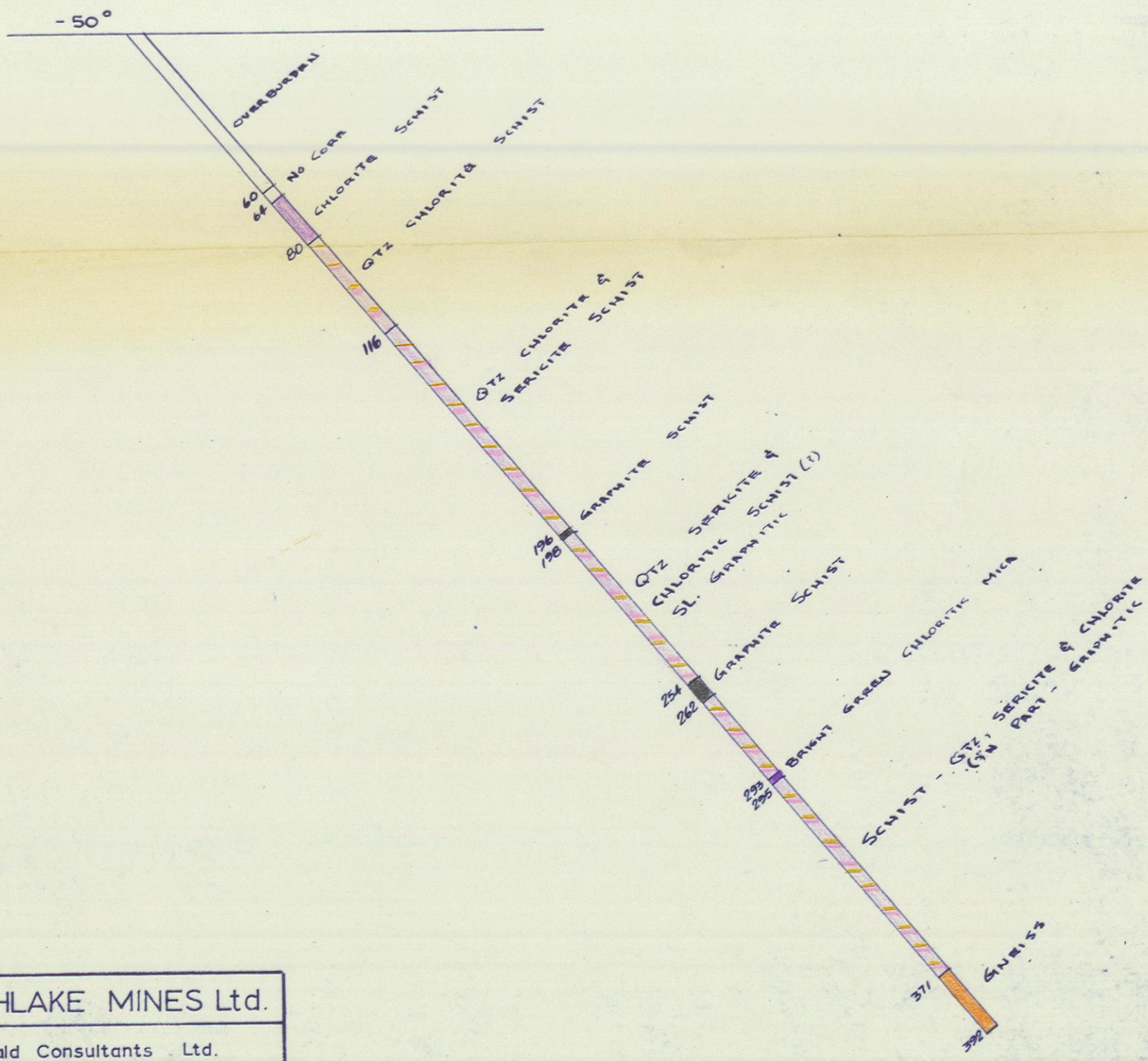
HOLE 4-18

OCT. 14 - 26TH, 1966

59.7 % RECOVERY

Scale 1" = 40'

LOCATION L 40 W
60 + 05



NORTHLAKE MINES Ltd.		
MacDonald Consultants Ltd.		
SCALE	1"=40'	
DRAWN		
DATE		
NO.		

MACDONALD CONSULTANTS LTD.
VANCOUVER B.C.

NORTHLAKE MINES LTD.

G CLAIM GROUP

SOIL SAMPLING ASSAY PLOT

CONTOUR INTERVALS IN PARTS PER MILLION (PPM)

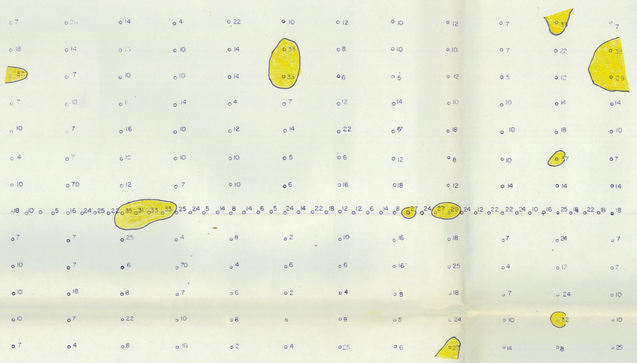
	0	-	100
	101	-	200
	201	-	400
	401	-	800
	801	-	1600
	1601	-	3200
	3201	-	6400
	6401	-	12,800
	12,801	-	25,600
	over	25,601	

-64 -48 -8
-96 -40 -64 Zinc plot in parts per million (ppm)

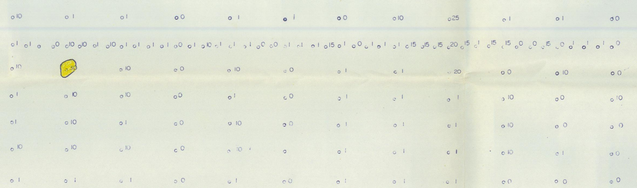
+	Photo Center	— — —	Trail
	Spot Height	— · —	Cut Line
□	Buildings		Roads
	Bluff		Bulldozer Trench
	Swamp	<::::>	Hand Trench
	Stream	□	Workings
	Slide Rock or Frost Heave	⊢	Adit

400 200 0 400 800 1200 1600
SCALE - 1 inch = 400 feet

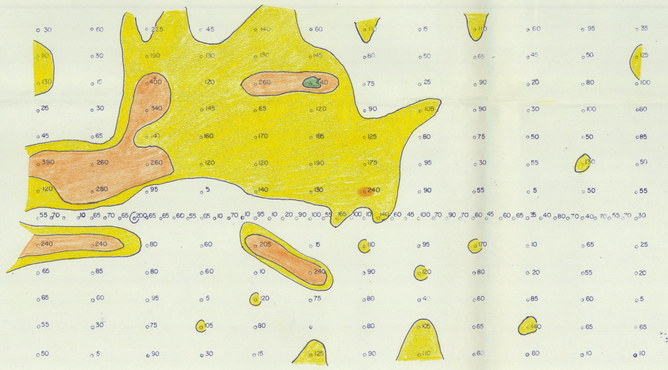
AREA 12



COPPER PLOT

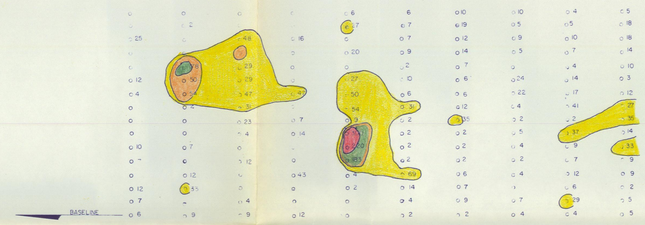


LEAD PLOT

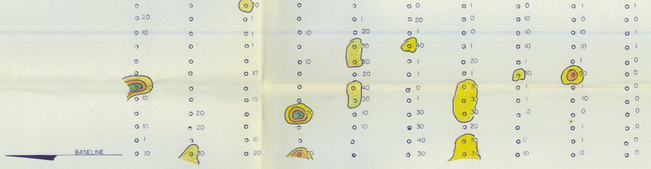


ZINC PLOT

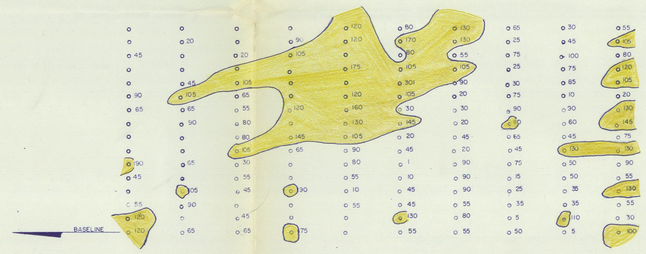
AREA 2



COPPER PLOT



LEAD PLOT



ZINC PLOT

MACDONALD CONSULTANTS LTD.
VANCOUVER B.C.

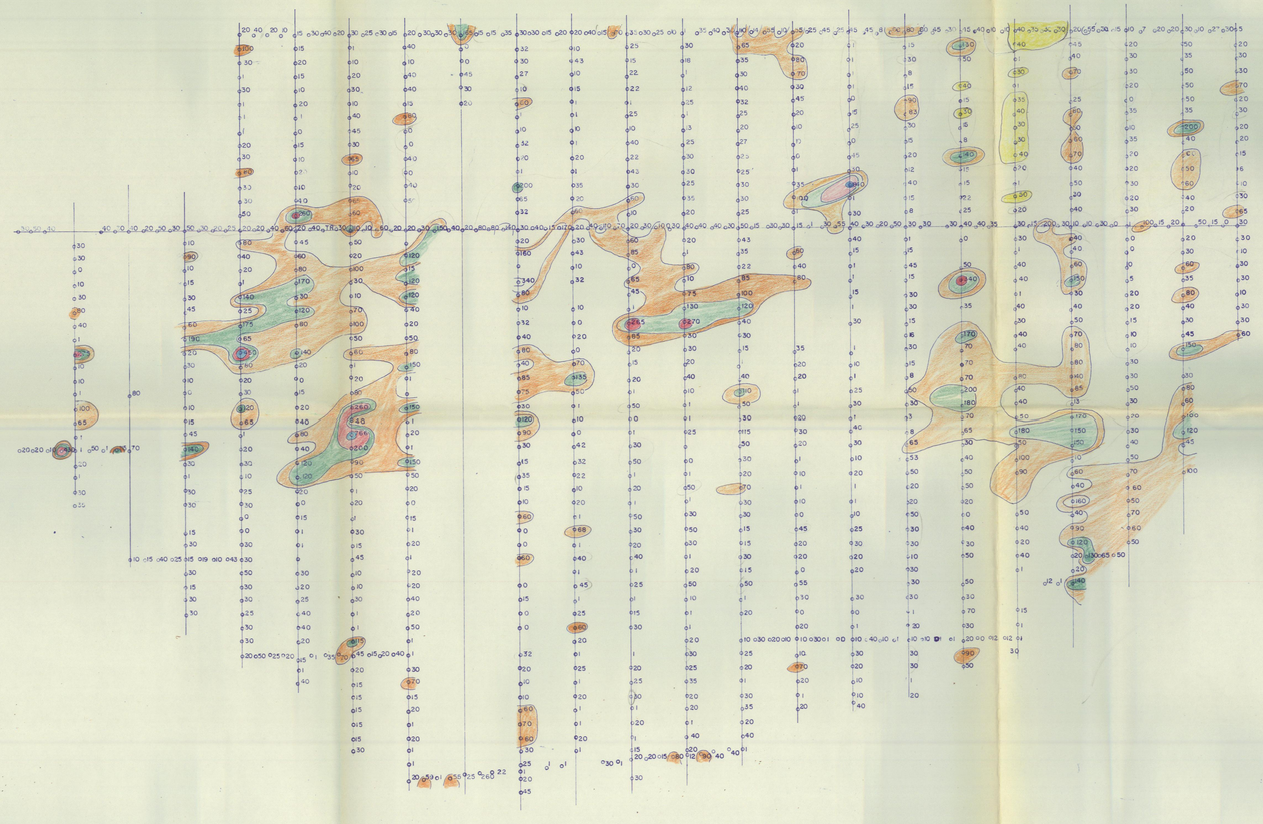
NORTHLAKE MINES LTD.

G CLAIM GROUP

AREA NO. 5

SOIL SAMPLING

LEAD PLOT



CONTOUR INTERVALS IN PARTS PER MILLION (PPM)

26	50
51	100
101	200
201	400
401	800
801	1600
1601	3200
3201	6400
6401	12,800
over 12,801	

Lead plot in parts per million (ppm)

Anomaly Reference Number

Photo Center	Trail
Spot Height	Cut Line
Buildings	Roads
Bluff	Bulldozer Trench
Swamp	Hand Trench
Stream	Workings
Slide Rock or Frost Heave	Adit

400 200 0 400 800 1200 1600

SCALE 1 inch = 400 feet

MACDONALD CONSULTANTS LTD.
VANCOUVER B.C.

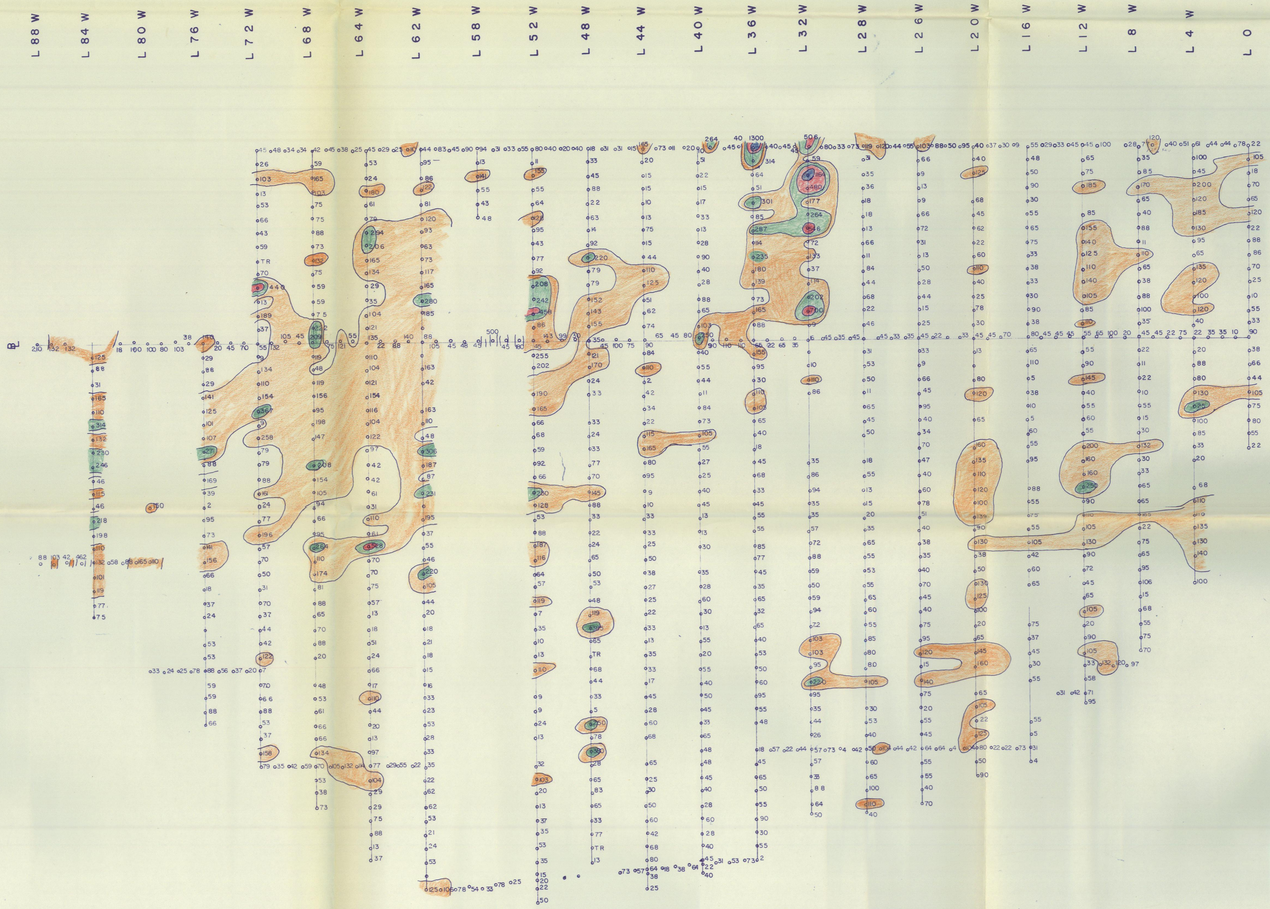
NORTHLAKE MINES LTD.

G CLAIM GROUP

AREA NO. 5

SOIL SAMPLING

ZINC PLOT



CONTOUR INTERVALS IN PARTS PER MILLION (PPM)

	0	-	100
	101	-	200
	201	-	400
	401	-	800
	801	-	1600
	1601	-	3200
	3201	-	6400
	6401	-	12,800
	12,801	-	25,600
	over 25,601		

Zinc plot in parts per million (ppm)

Photo Center	Trail
Spot Height	Cut Line
Buildings	Roads
Bluff	Bulldozer Trench
Swamp	Hand Trench
Stream	Workings
Slide Rock or Frost Heave	Adit

400 200 0 400 800 1200 1600

SCALE 1 inch = 400 feet

MACDONALD CONSULTANTS LTD.
VANCOUVER B.C.

NORTHLAKE MINES LTD.

G CLAIM GROUP

AREA NO. 5

SOIL SAMPLING

COPPER PLOT

CONTOUR INTERVALS IN PARTS PER MILLION (PPM)

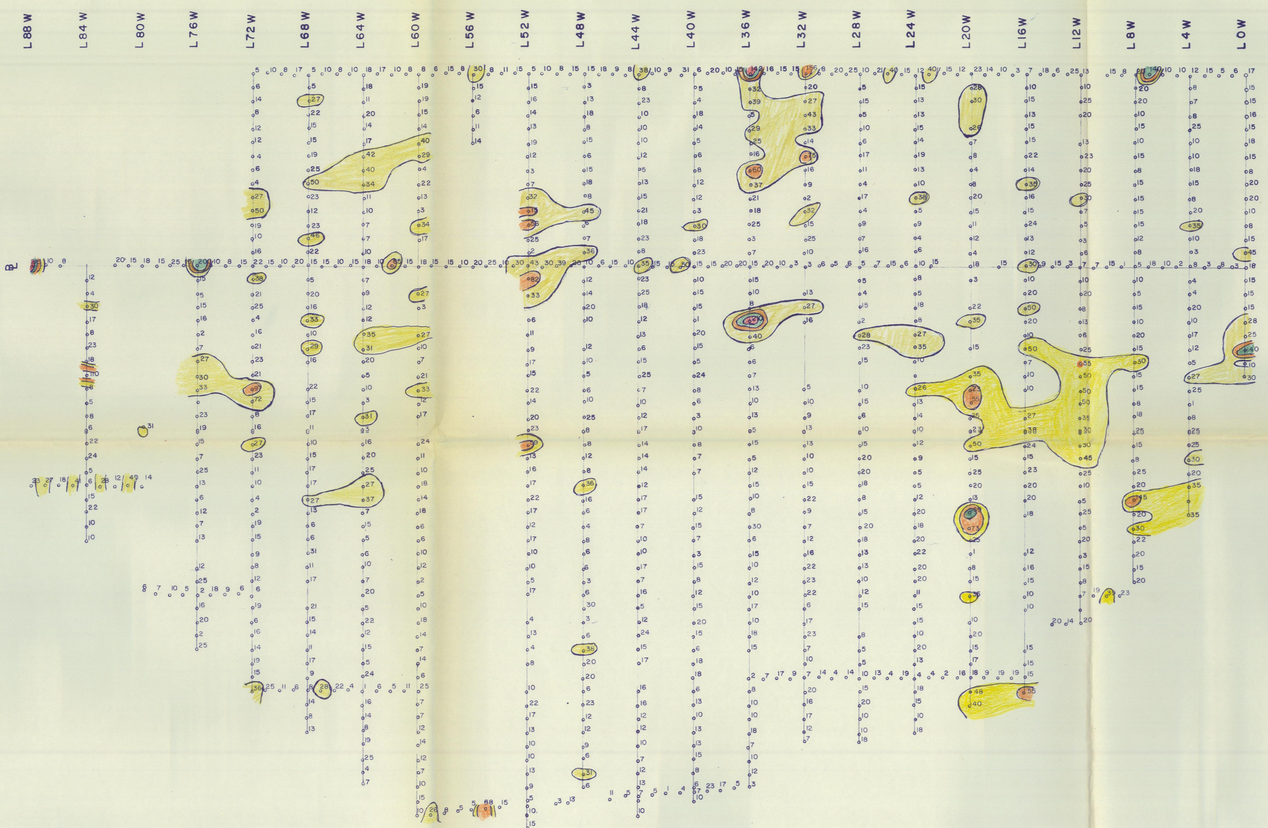
	26	-	50
	51	-	100
	101	-	200
	201	-	400
	401	-	800
	801	-	1600
	1601	-	3200
	3201	-	6400
	6401	-	12,800
	over		12,801

Copper plot in parts per million (ppm)

	Photo Center		Trail
	Spot Height		Cut Line
	Buildings		Roads
	Bluff		Bulldozer Trench
	Swamp		Hand Trench
	Stream		Workings
	Slide Rock or Frost Heave		Adit

400 200 0 400 800 1200 1600

SCALE 1 inch = 400 feet



MACDONALD CONSULTANTS LTD.
VANCOUVER B.C.

NORTHLAKE MINES LTD.

G CLAIM GROUP
AREA NO. 10
SOIL SAMPLING
LEAD PLOT

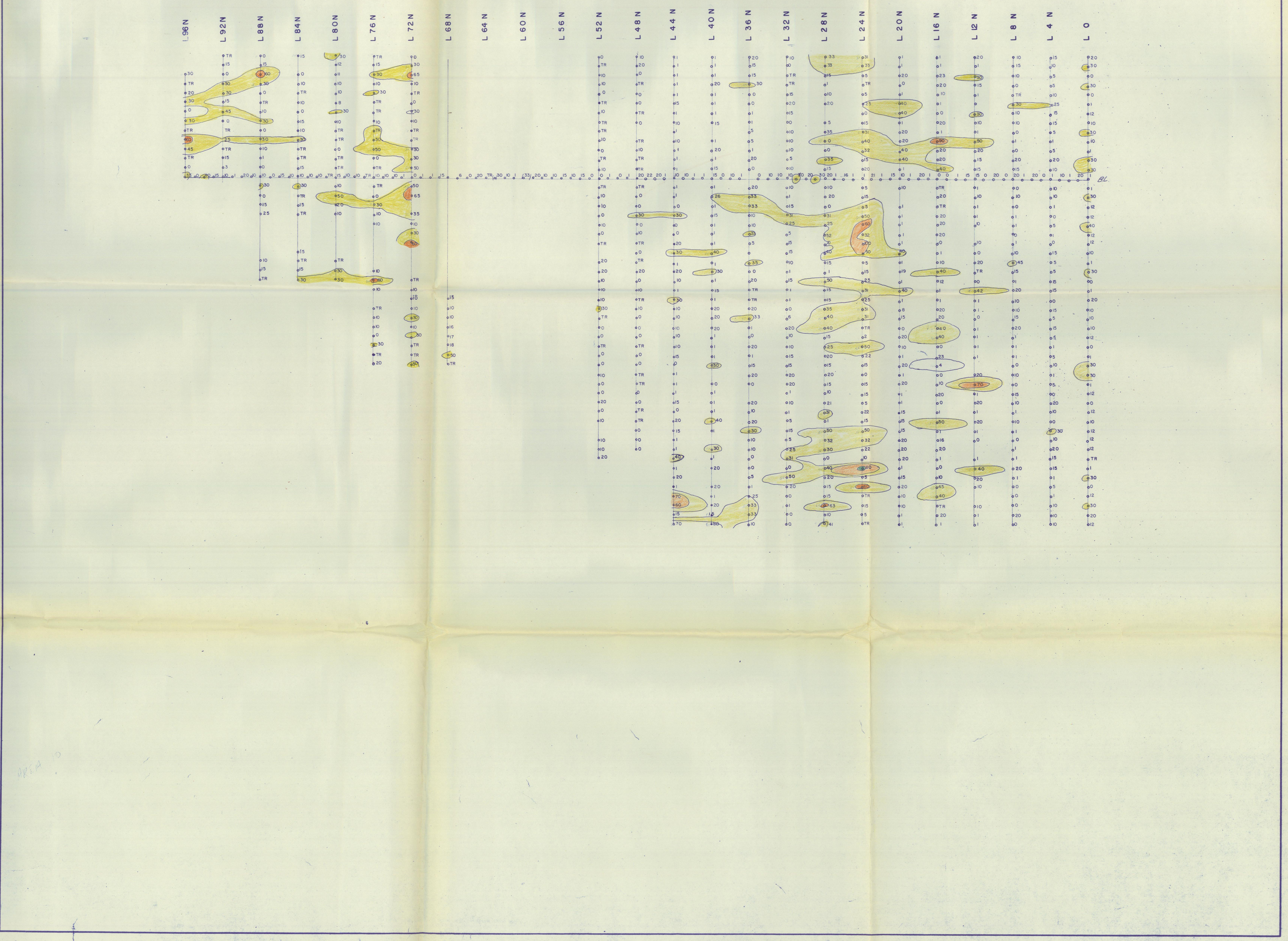
CONTOUR INTERVALS IN PARTS PER MILLION (PPM)

26	-	50
51	-	100
101	-	200
201	-	400
401	-	800
801	-	1600
1601	-	3200
3201	-	6400
6401	-	12,800
over 12,801		

Lead plot in parts per million (ppm)
Anomaly Reference Number

Photo Center	Trail
Spot Height	Cut Line
Buildings	Roads
Bluff	Bulldozer Trench
Swamp	Hand Trench
Stream	Workings
Slide Rock or Frost Heave	Adit

400 200 0 400 800 1200 1600
SCALE 1 inch = 400 feet



MACDONALD CONSULTANTS LTD.
VANCOUVER B.C.

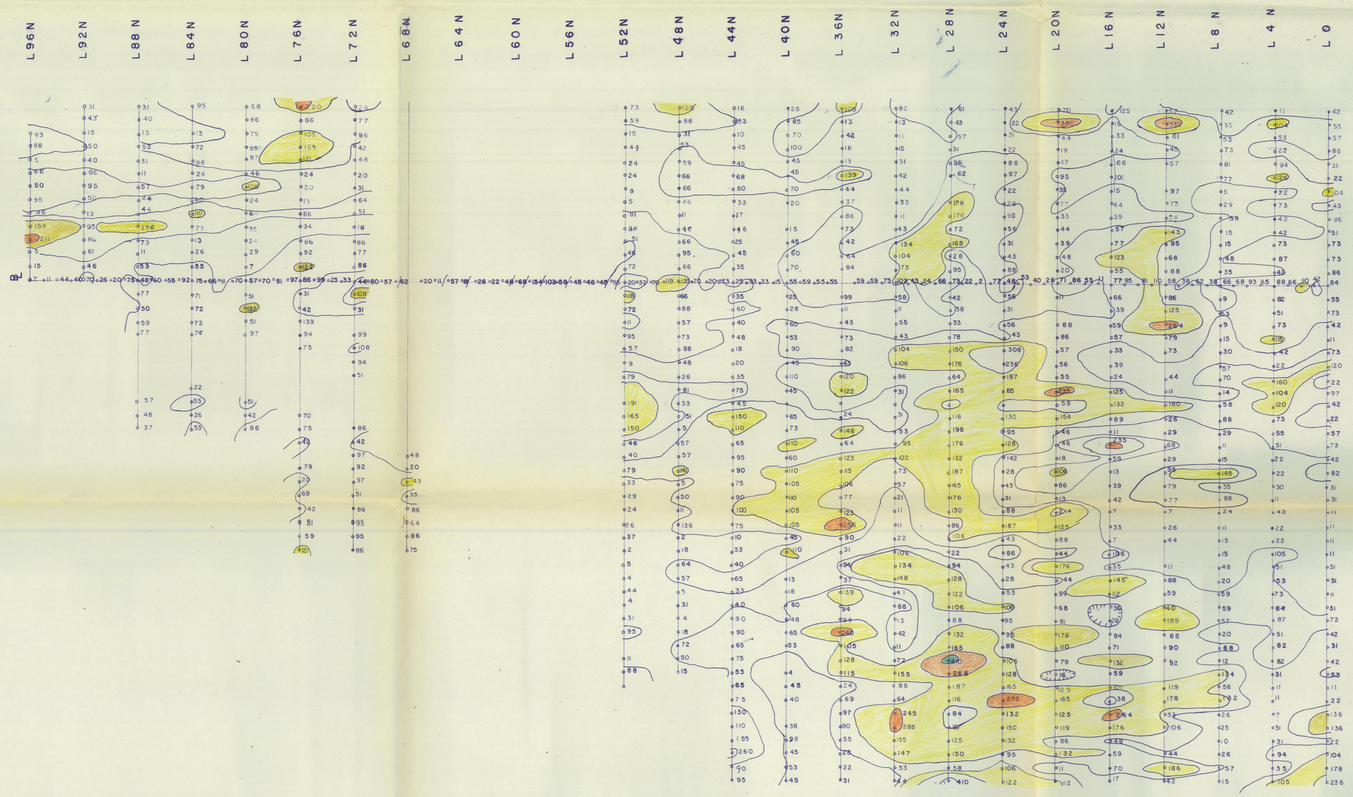
NORTHLAKE MINES LTD.

G CLAIM GROUP

AREA NO. 10

SOIL SAMPLING

ZINC PLOT



CONTOUR INTERVALS IN PARTS PER MILLION (PPM)

	0	-	100
	101	-	200
	201	-	400
	401	-	800
	801	-	1600
	1601	-	3200
	3201	-	6400
	6401	-	12,800
	12,801	-	25,600
	over 25,601		

44 46 48 — Zinc plot in parts per million (ppm)

Photo Center	Trail
Spot Height	Cut Line
Buildings	Roads
Bluff	Bulldozer Trench
Swamp	Hand Trench
Stream	Workings
Slide Rock or Frost Heave	Adit

400 200 0 400 800 1200 1600

SCALE 1 inch = 400 feet

7-10

MACDONALD CONSULTANTS LTD.
VANCOUVER B.C.

NORTHLAKE MINES LTD.

G CLAIM GROUP

AREA NO. 10

SOIL SAMPLING

COPPER PLOT

CONTOUR INTERVALS IN PARTS PER MILLION (PPM)

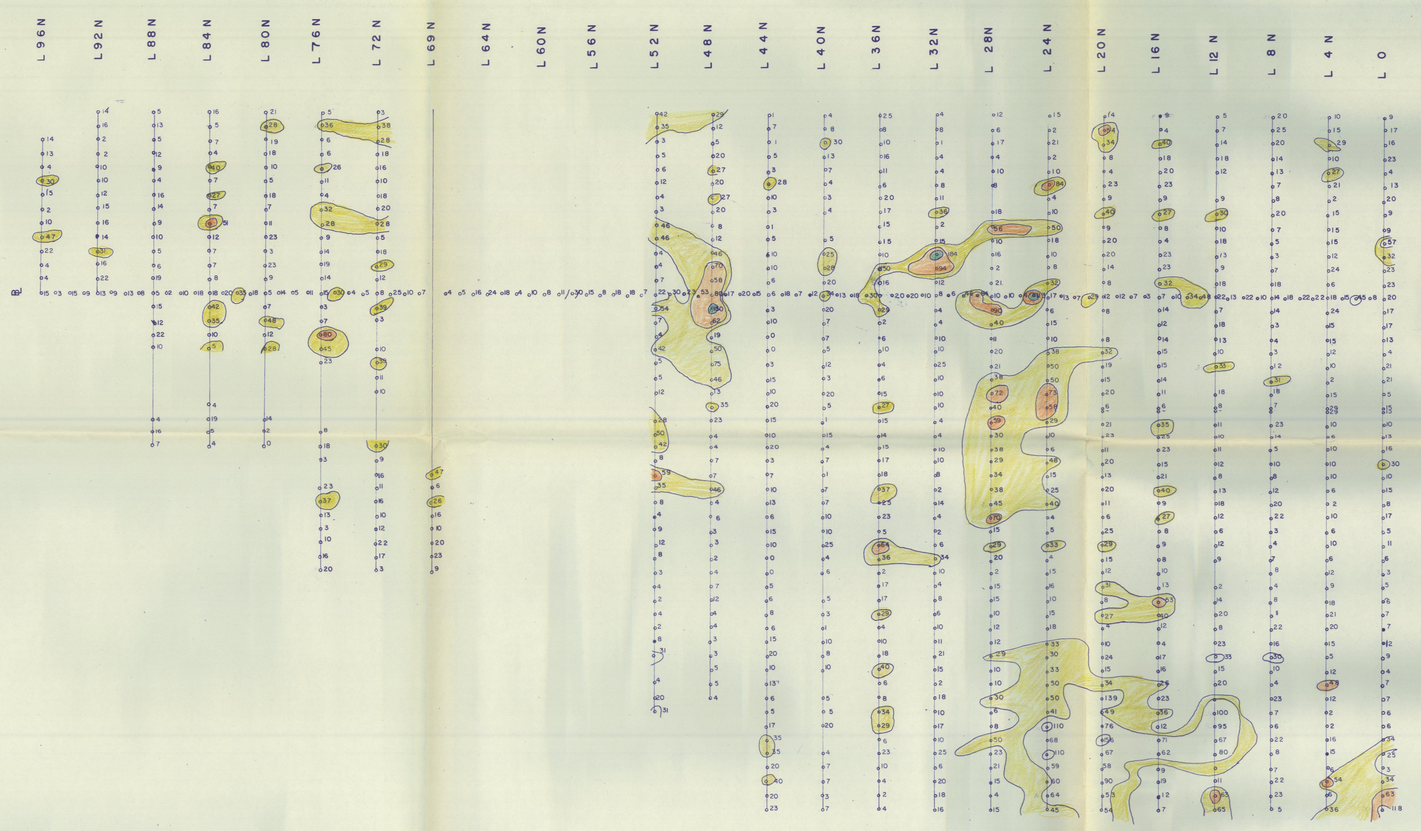
	26	-	50
	51	-	100
	101	-	200
	201	-	400
	401	-	800
	801	-	1600
	1601	-	3200
	3201	-	5400
	6401	-	12,800
	over 12,801		

116 40 32
40 16 48 Copper plot in parts per million (ppm)

+ 267	Photo Center	— — —	Trail
3770	Spot Height	— · —	Cut Line
□	Buildings		Roads
	Bluff		Bulldozer Trench
	Swamp		Hand Trench
	Stream	□	Workings
	Slide Rock or Frost Heave	⊢	Adit

400 200 0 400 800 1200 1600

SCALE: 1 inch = 400 feet



MACDONALD CONSULTANTS LTD.
VANCOUVER B.C.

NORTHLAKE MINES LTD.

LEO CLAIM GROUP

SOIL SAMPLING
LEAD PLOT

CONTOUR INTERVALS IN PARTS PER MILLION (PPM)

	26 -	50
	51 -	100
	101 -	200
	201 -	400
	401 -	800
	801 -	1600
	1601 -	3200
	3201 -	6400
	6401 -	12,800
	over 12,801	

Lead plot in parts per million (ppm)

Anomaly Reference Number

Photo Center
Spot Height
Buildings
Bluff
Swamp
Stream
Slide Rock or Frost Heave
Trail
Cut Line
Roads
Bulldozer Trench
Hand Trench
Workings
Adit

400 200 0 400 800 1200 1600

SCALE 1 inch = 400 feet

NORTHLAKE RIVIERA CLAIM BOUNDARY

MACDONALD CONSULTANTS LTD.
VANCOUVER B.C.

NORTHLAKE MINES LTD.

LEO CLAIM GROUP

SOIL SAMPLING
ZINC PLOT

CONTOUR INTERVALS IN PARTS PER MILLION (PPM)

	0	-	100
	101	-	200
	201	-	400
	401	-	800
	801	-	1600
	1601	-	3200
	3201	-	6400
	6401	-	12,800
	12,801	-	25,600
	over 25,601		

Zinc plot in parts per million (ppm)

Photo Center	Trail
Spot Height	Cut Line
Buildings	Roads
Bluff	Bulldozer Trench
Swamp	Hand Trench
Stream	Workings
Slide Rock or Frost Heave	Adit

400 200 0 400 800 1200 1600
SCALE 1 inch = 400 feet

NORTHLAKE RIVIERA CLAIM BOUNDARY

L48W L44W L40W L36W L32W L28W L24W L20W L16W L12W L8W L4W BL

L4S L8S L12S L16S L20S L24S L28S

L4E L8E L12E L16E L20E L24E L28E L32E L36E

7-11

MACDONALD CONSULTANTS LTD.
VANCOUVER B.C.

NORTHLAKE MINES LTD.

LEO CLAIM GROUP

SOIL SAMPLING
COPPER PLOT

CONTOUR INTERVALS IN PARTS PER MILLION (PPM)

	26	-	50
	51	-	100
	101	-	200
	201	-	400
	401	-	800
	801	-	1600
	1601	-	3200
	3201	-	6400
	6401	-	12,800
	over 12,801		

Copper plot in parts per million (ppm)

Photo Center	Trail
Spot Height	Cut Line
Buildings	Roads
Bluff	Bulldozer Trench
Swamp	Hand Trench
Stream	Workings
Slide Rock or Frost Heave	Adit

400 200 0 400 800 1200 1600

SCALE 1 inch = 400 feet

NORTHLAKE CLAIM BOUNDARY
NORTHLAKE RIVIERA

L 48W L 44W L 40W L 36W L 32W L 28W L 24W L 20W L 16W L 12W L 8 W L 4 W

L 4S L 8S L 12S L 16S L 20S L 24S L 28S

L8E L16E L24E L32E

MACDONALD CONSULTANTS LTD.
VANCOUVER B.C.

NORTHLAKE MINES LTD.

G CLAIM GROUP

(UNLESS INDICATED OTHERWISE)

SOIL SAMPLING
LEAD PLOT

CONTOUR INTERVALS IN PARTS PER MILLION (PPM)

	26	50
	51	100
	101	200
	201	400
	401	800
	801	1600
	1601	3200
	3201	6400
	6401	12,800
	over	12,801

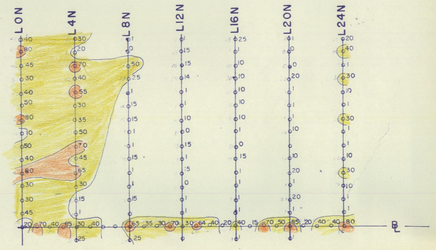
Lead plot in parts per million (ppm)

Anomaly Reference Number

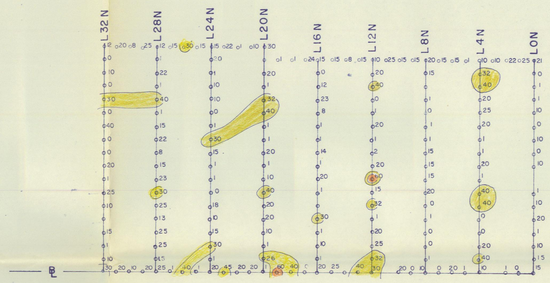
Photo Center	Trail
Spot Height	Cut Line
Buildings	Roads
Bluff	Bulldozer Trench
Swamp	Hand Trench
Stream	Workings
Slide Rock or Frost Heave	Adit

400 200 0 400 800 1200 1600

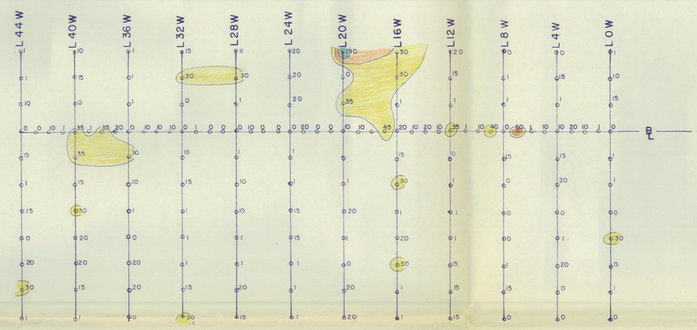
SCALE 1 inch 400 feet



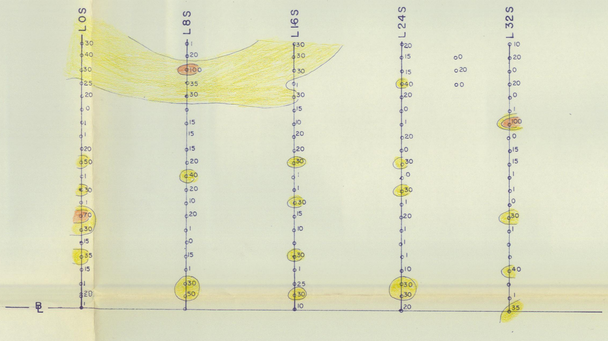
AREA "889"



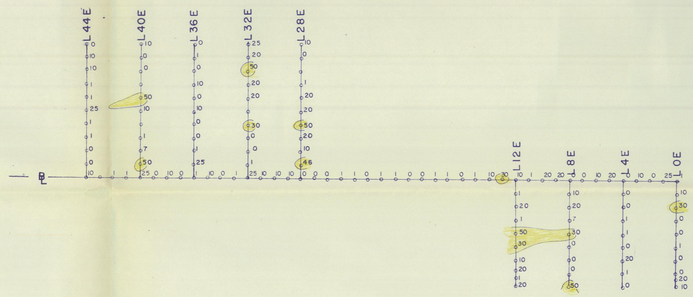
AREA 14



AREA 13 (C.W. Claim Group)



AREA 15



AREA 16 (P.G. Claim Group)

7-8,9,13&15,16

MACDONALD CONSULTANTS LTD.
VANCOUVER B.C.

NORTHLAKE MINES LTD.

G CLAIM GROUP

(UNLESS INDICATED OTHERWISE)

SOIL SAMPLING
ZINC PLOT

CONTOUR INTERVALS IN PARTS PER MILLION (PPM)

	0	-	100
	101	-	200
	201	-	400
	401	-	800
	801	-	1600
	1601	-	3200
	3201	-	6400
	6401	-	12,800
	12,801	-	25,600
	over		25,601

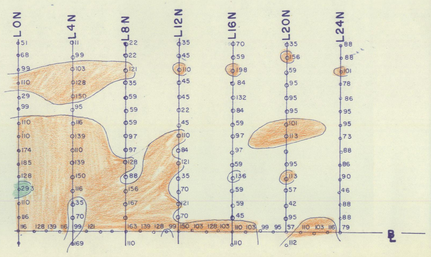
Zinc plot in parts per million (ppm)

+	Photo Center		Trail
	Spot Height		Cut Line
	Buildings		Roads
	Bluff		Bulldozer Trench
	Swamp		Hand Trench
	Stream		Workings
	Slide Rock or Frost Heave		Adit

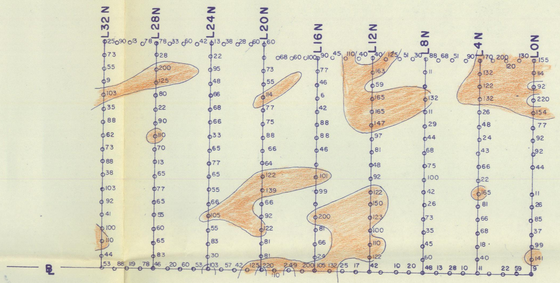
400 200 0 400 800 1200 1600

SCALE 1 inch = 400 feet

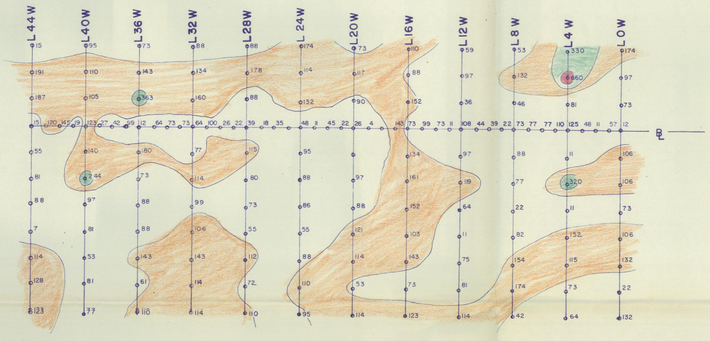
7- 8, 9, 13, 14, 15, 16



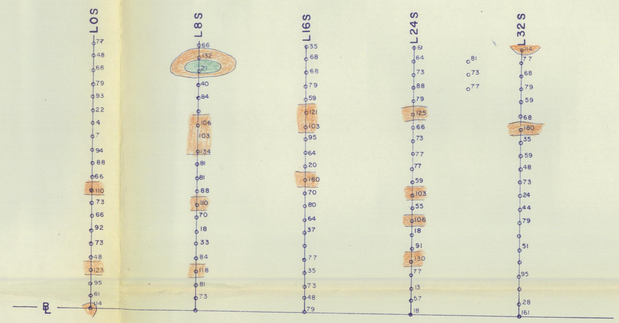
AREA "8&9"



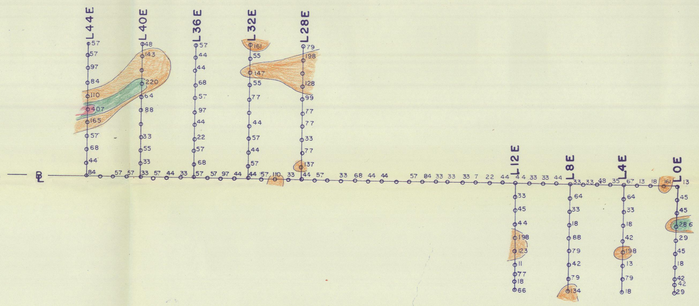
AREA 14



AREA 13 (C.W. Claim Group)



AREA 15



AREA 16 (P.G. Claim Group)

MACDONALD CONSULTANTS LTD.
VANCOUVER B.C.

NORTHLAKE MINES LTD.

G CLAIM GROUP

(UNLESS INDICATED OTHERWISE)

SOIL SAMPLING
COPPER PLOT

CONTOUR INTERVALS IN PARTS PER MILLION (PPM)

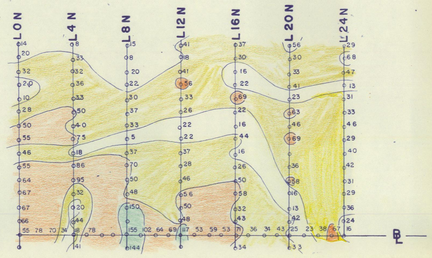
	26	-	50
	51	-	100
	101	-	200
	201	-	400
	401	-	800
	801	-	1600
	1601	-	3200
	3201	-	6400
	6401	-	12,800
	over		12,801

40 32 / 48 44 Copper plot in parts per million (ppm)

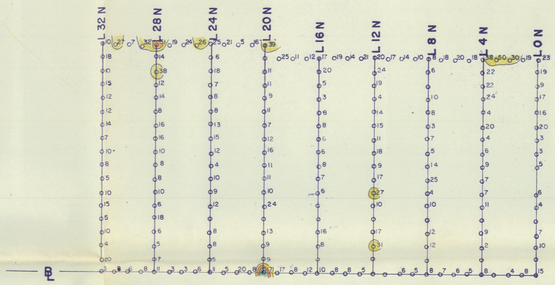
+ 267	Photo Center		Trail
3750	Spot Height		Cut Line
	Buildings		Roads
	Bluff		Bulldozer Trench
	Swamp		Hand Trench
	Stream		Workings
	Slide Rock or Frost Heave		Adit

400 200 0 400 800 1200 1600

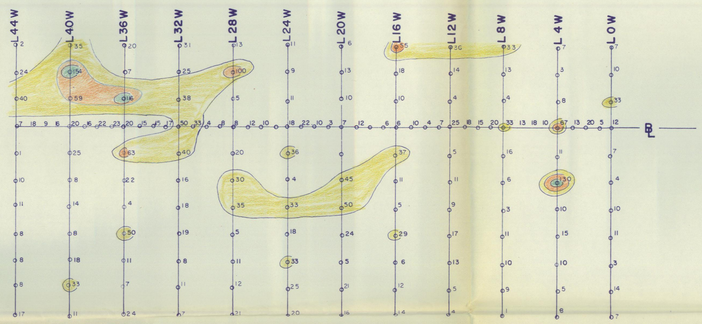
SCALE 1 inch = 400 feet



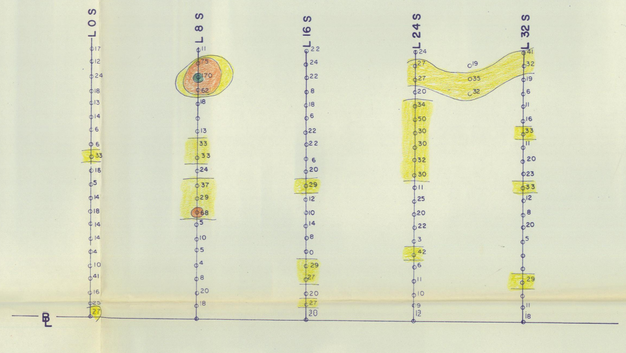
AREA "8 & 9"



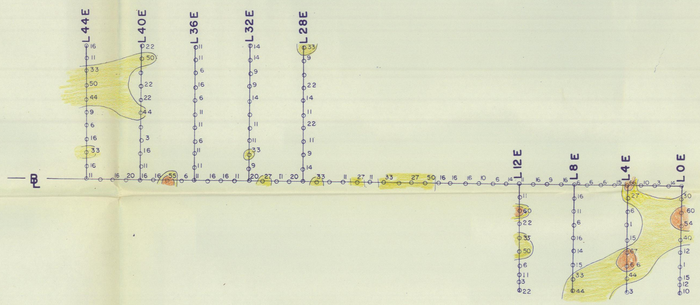
AREA 14



AREA 13 (C.W. Claim Group)



AREA 15



AREA 16 (P.G. Claim Group)

7- 8, 9, 13, 14, 15, 16

MACDONALD CONSULTANTS LTD.
VANCOUVER B.C.

NORTHLAKE MINES LTD.

H CLAIM GROUP

AREA NO. 19

SOIL SAMPLING

LEAD PLOT

CONTOUR INTERVALS IN PARTS PER MILLION (PPM)

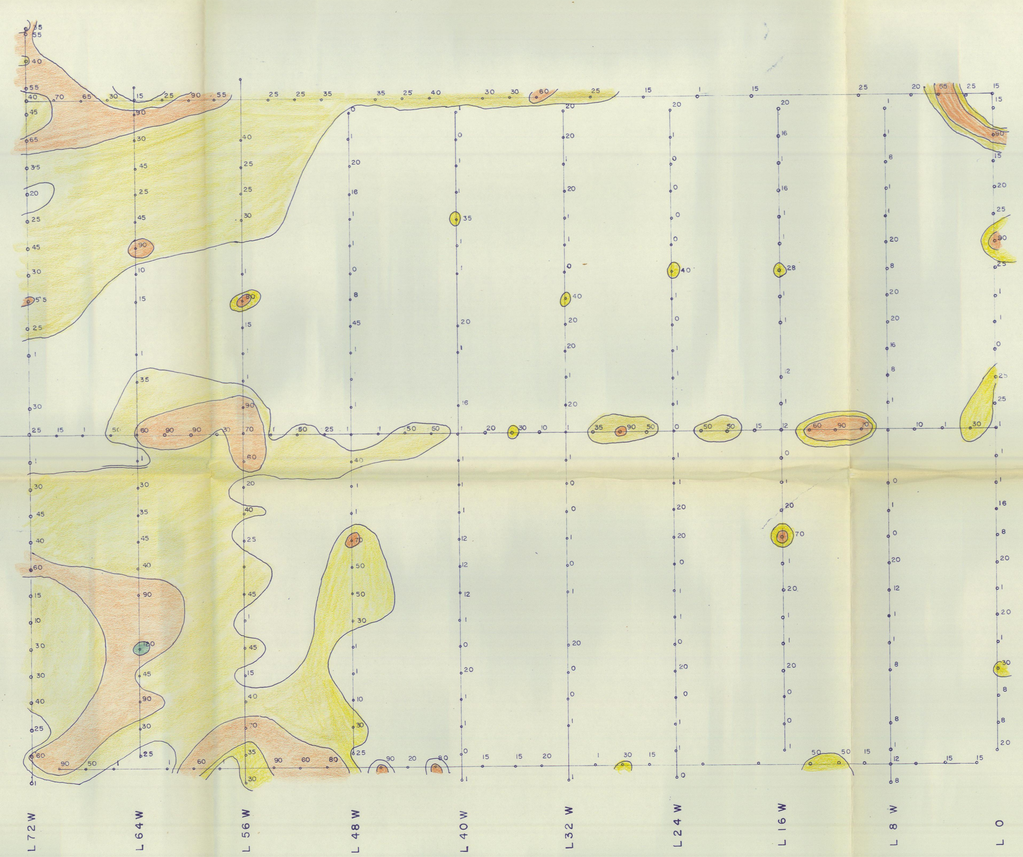
	26 - 50	
	51 - 100	
	101 - 200	
	201 - 400	
	401 - 800	
	801 - 1600	
	1601 - 3200	
	3201 - 6400	
	6401 - 12,800	
	over 12,801	

Lead plot in parts per million (ppm)

(5) Anomaly Reference Number

Photo Cover
Spot Height
Buildings
Bluff
Swamp
Stream
Slide Rock or Frost Heave
Trail
Cut Line
Roads
Bulldozer Trench
Hand Trench
Workings
Adit

400 200 0 400 800 1200 1600
SCALE 1 inch 400 feet



MACDONALD CONSULTANTS LTD.
VANCOUVER B.C.

NORTHLAKE MINES LTD.

H CLAIM GROUP

AREA NO. 19

SOIL SAMPLING

ZINC PLOT

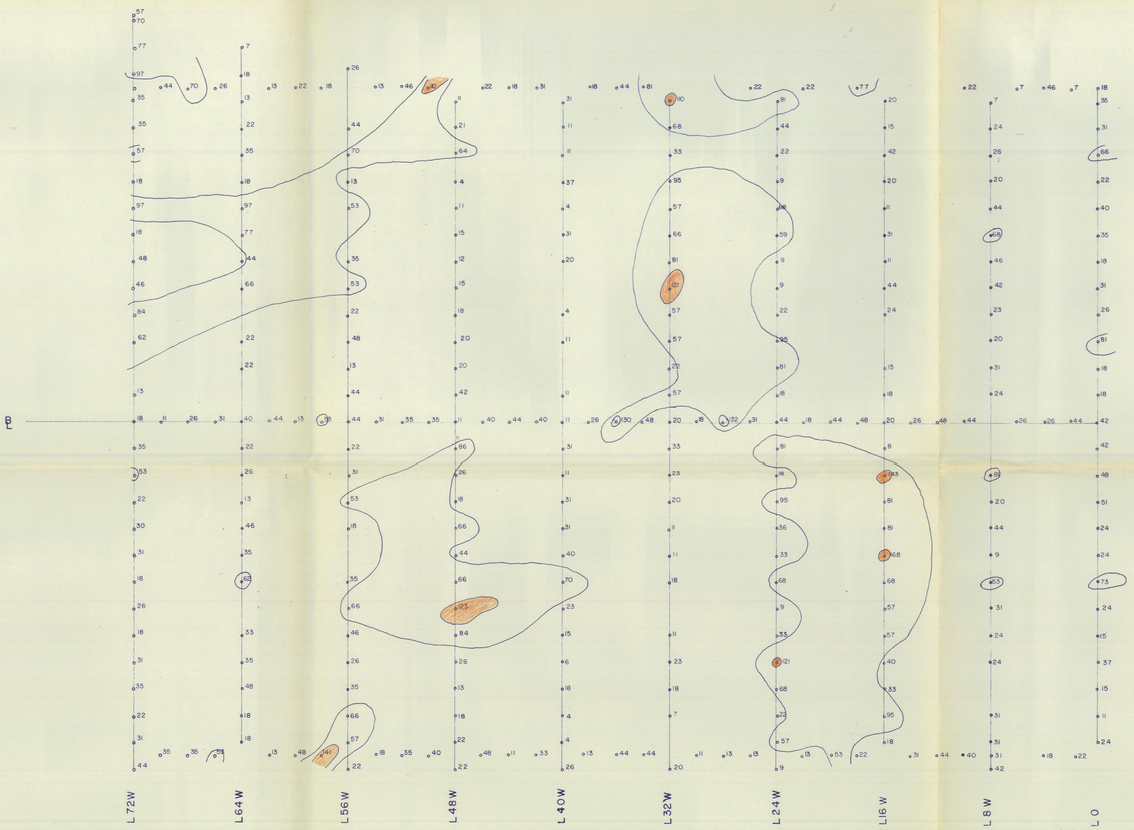
CONTOUR INTERVALS IN PARTS PER MILLION (PPM)

	0	-	100
	101	-	200
	201	-	400
	401	-	800
	801	-	1600
	1601	-	3200
	3201	-	6400
	6401	-	12,800
	12,801	-	25,600
	over 25,601		

44 48 0
36 40 44 Zinc plot in parts per million (ppm)

	Photo Center		Trail
	Spot Height		Cut Line
	Buildings		Roads
	Bluff		Bulldozer Trench
	Swamp		Hand Trench
	Stream		Workings
	Slide Rock or Frost Heave		Adit

400 200 0 400 800 1200 1600
SCALE 1 inch = 400 feet



MACDONALD CONSULTANTS LTD.
VANCOUVER B.C.

NORTHLAKE MINES LTD.

H CLAIM GROUP

AREA NO. 19

SOIL SAMPLING

COPPER PLOT

CONTOUR INTERVALS IN PARTS PER MILLION (PPM)

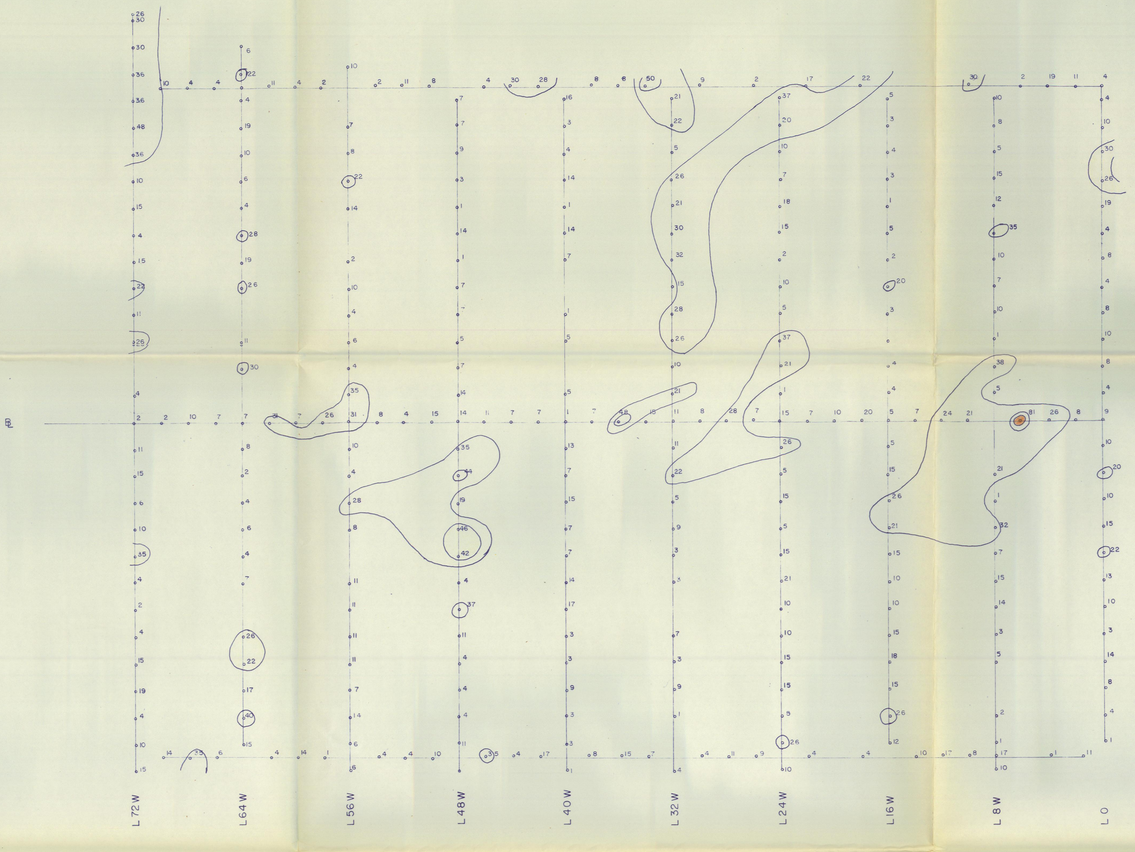
26	-	50
51	-	100
101	-	200
201	-	400
401	-	800
801	-	1600
1601	-	3200
3201	-	6400
6401	-	12,800
over		12,801

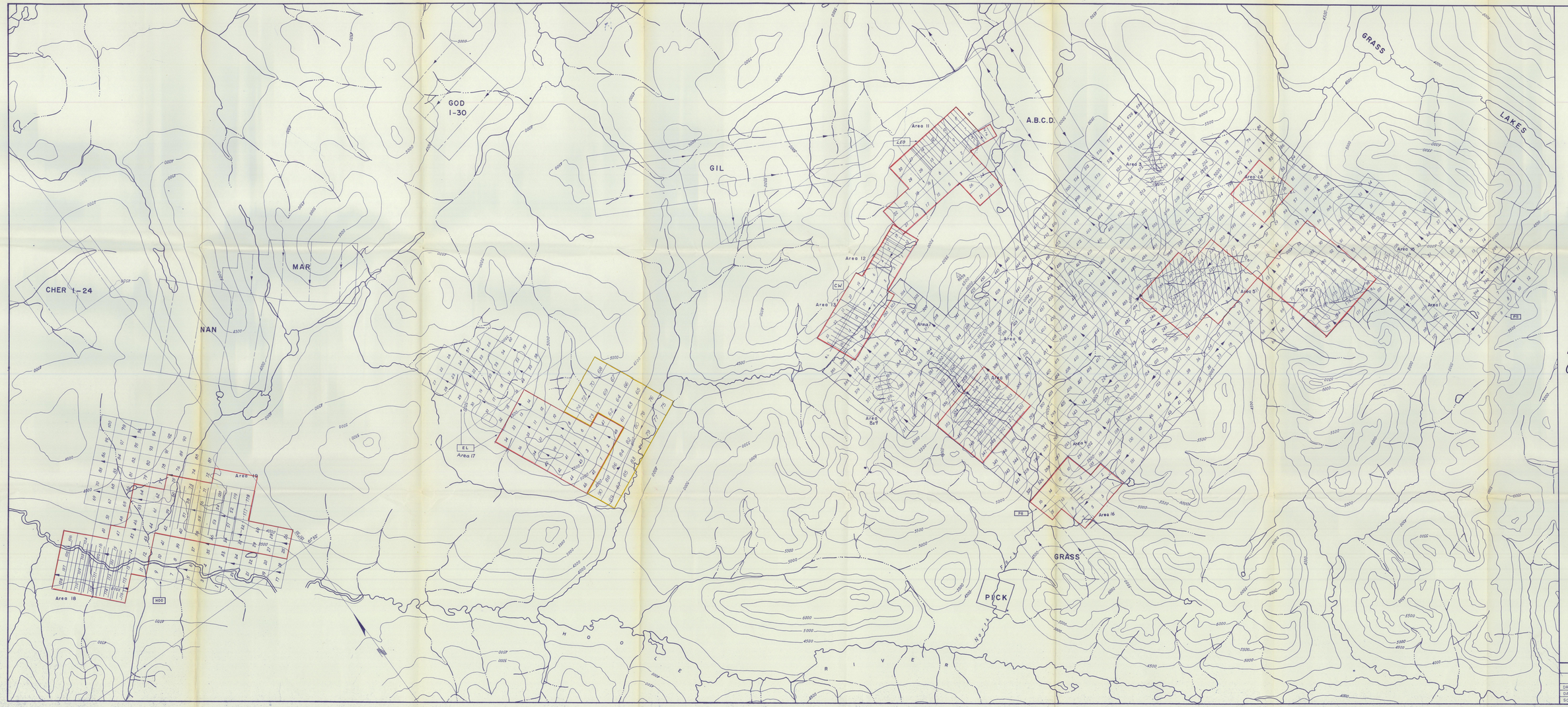
40 x 48 Copper plot in parts per million (ppm)

Photo Center		Trail	
Spot Height		Cut Line	
Buildings		Roads	
Bluff		Bulldozer Trench	
Swamp		Hand Trench	
Stream		Workings	
Slide Rock or Frost Heave		Adit	

400 200 0 400 800 1200 1600

SCALE 1 inch = 400 feet





SUMMARY & DISPOSITION OF CLAIMS

CLAIMS:

- TO RETAIN
- TO DROP
- TO STAKE

ft 1500 0 1500 3000 4500 6000

NORTH LAKE MINES LTD.

MACDONALD CONSULTANTS LTD.

DRAWN	
DATE	
SCALE	