014059

EXPLORATION PROGRAM

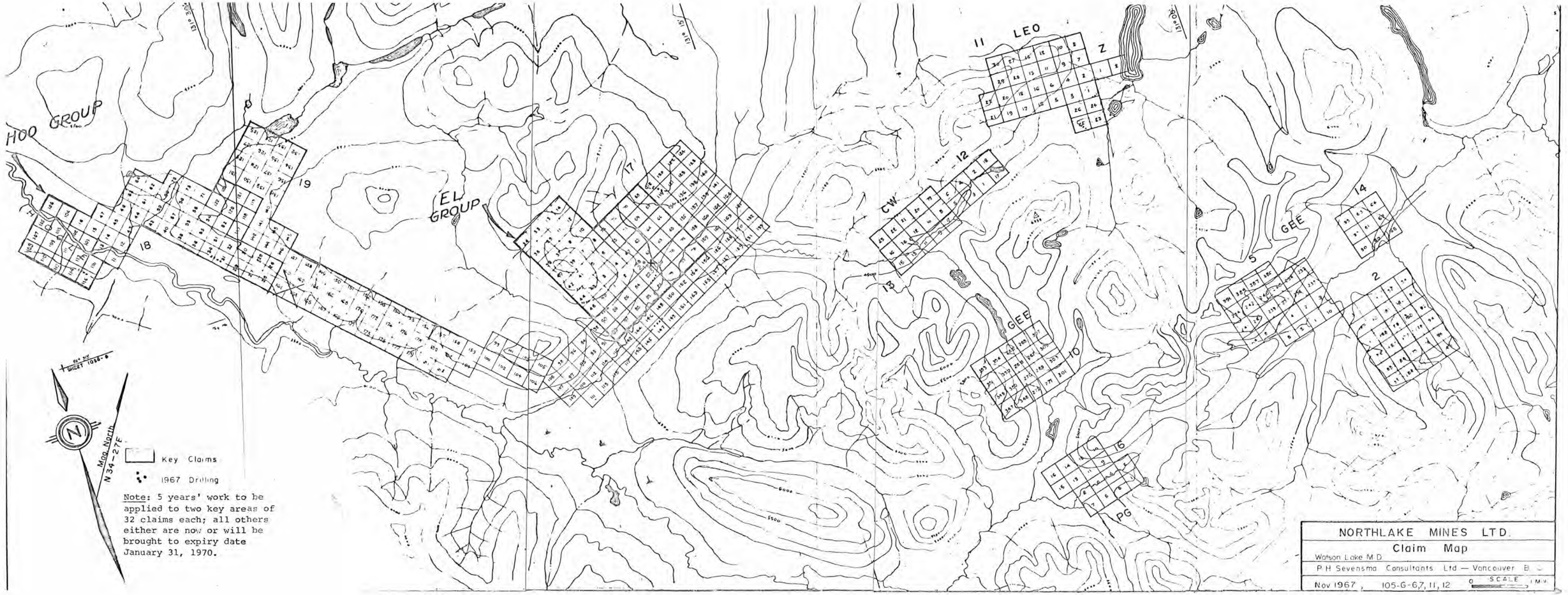
1966 and 1967

NORTHLAKE MINES LIMITED

WATSON LAKE, M.D.

YUKON

BY: J.M. Cormie, P.Eng.
December 1st, 1967


HOO GROUP
EL GROUP
LEO
GEE
PG
CW
Mag North
N 34° 27E
Key Claims
1967 Drilling
Note: 5 years' work to be applied to two key areas of 32 claims each; all others either are now or will be brought to expiry date January 31, 1970.
NORTHLAKE MINES LTD.
Claim Map
Watson Lake M.D.
P.H. Sevensma Consultants Ltd — Vancouver B.C.
Nov 1967, 105-G-6,7,11,12
SCALE 1 MILE

I N D E X

INTRODUCTION

This report is a summary of work on the Northlake claims in the Grassy Lakes area, Watson Lake M.D., Y.T., since their acquisition in early 1966 to the present.

P.H. Sevensma Consultants Limited, Vancouver, were in charge until May, 1967. After airborne surveys were completed in the spring of 1966, ground follow-up work was contracted to Macdonald Consultants Limited, Vancouver, who remained in charge in the field until completion of the 1966 program.

Consolidated Canadian Faraday Limited assumed management in May, 1967, although Dr. Sevensma was retained as consultant until the end of August, and considerable use was made of his organization, including the services of Mr. R.G. Gifford, geologist, as property manager from about the start of drilling. The writer was in general charge for Faraday, and spent considerable time in the area during the summer.

Since the writer was not associated with Northlake prior to May, 1967, the following account has been taken from the work of others, particularly Dr. Sevensma and Macdonald Consultants. No attempt has been made to describe the details or reproduce the various maps that were made before the Faraday period and anyone wishing more information is referred to their reports. Most of the 1967 program has been so well described and illustrated by Mr. Gifford that it seemed better to include his report in full than to rewrite the same material in other words.

EXPLORATION PROGRAM
1966 and 1967
NORTHLAKE MINES LIMITED
WATSON LAKE, M.D.
YUKON

LOCATION AND ACCESS

The claims are situated approximately 50 miles southwest of the community of Ross River, and about 175 air miles northeast of Whitehorse; latitude 61-30 N, longitude 131-15 W.

The El group in the centre of the area is 18 air miles due south of the Mink Creek crossing on the Ross River - Watson Lake highway, or about 30 miles by bombardier trail. Helicopters are the most convenient means of access, but certain lakes in the area can be used by float or ski-equipped planes.

TOPOGRAPHY

The dominant topographic feature of the area is the Tintina valley, a northwest-southeast trench, occupied in this area by the Hoole River, 0 to 10 miles southwest of the Northlake claim groups.

The area is marked by low mountains and broad valleys, with elevations varying from 3,300 to 7,000 feet above sea level. Much of it is above timber line, which here is at 4,500 - 5,000 feet, while below that there is a thick growth of spruce and buckbrush.

Drainage is into the Pelly River by way of the Hoole.

Rock outcrop is plentiful above timber line, but usually scarce below it, and the central parts of the valleys are probably heavily overburdened.

HISTORY OF THE AREA

There is evidence of old placer workings, probably dating from the turn of the century, and no doubt all the creeks were tested in those days.

The district first received serious attention in 1954 following the lead-zinc discovery at Vangorda Creek, 80 miles northwest; and the first, known, large-scale exploration was undertaken in that year by Pelly River Explorations Ltd. under the direction of K.G. Sanders and R. Zielinski. A number of minor discoveries were made, three of which were staked and two optioned to Transcontinental Resources; but they were allowed to lapse after ground magnetometer surveying.

In 1955, Newmont Mining Corporation prospected the area immediately north of that covered by Pelly River Explorations in 1954. They reported sulphide float in the vicinity of the present Hoo claims, and staked a short-fibre asbestos showing near the present El group.

The G.S.C. mapped the Finlayson Lake sheet in 1958 and 1959 on a scale of 1" = 4 miles and published their work as map 8-1960. In 1961 they had an airborne magnetometer survey done over the same area and published it at the same scale in 1963 as map 7006-G.

From 1955 to the early sixties, various mineral discoveries were made during mapping and prospecting, but nothing important.

In January, 1966, the known showings in the area were staked by Sanders and Zielinski for the Grassy Lakes Syndicate of Vancouver, B.C. There were 560 claims originally, and all were acquired by Northlake Mines Limited (N.P.L.), Suite 220, 890 West Pender Street, Vancouver 1, B.C.

There has been other staking and exploratory work carried out recently by Riviera Mines Limited, Kerr Addison Mines Limited and Atlas Exploration Limited.

PROPERTY

Initial Claims, March 30, 1966	560
Staked March 30, 1966-Jan. 30, 1967	294
	854
Abandoned	574
	280
Staked, March, 1967	88
Staked, July, 1967	48
	416

These claims are arranged in nine groups, two of which (Hoo and El) have been joined by this year's staking.

Area No.	Claim Name	Claim No.	No. Claims	Expiry Date	Sheet No.
2	Gee	13,14	30	Jan.31, 1970	105G-7
		50,52,54		Jan.31, 1970	
		71,72		Jan.31, 1970	
		90,92,94		Jan.31, 1970	
		96,98		Jan.31, 1970	
		173-190		Jan.31, 1970	
5	Gee	1-6	26	Jan.31, 1970	105G-7
		8-10		Jan.31, 1970	
		114		Jan.31, 1970	
		233-244		Jan.31, 1970	
		385,387,389,391		Jan.31, 1970	
10	Gee	265-272	20	Jan.31, 1970	105G-6
		301,303,305			
		307		Jan.31, 1970	
		347-354		Jan.31, 1970	
11	Leo	1-30	32	Jan.31, 1970	105G-6
	Z	1 & 2		Jan.31, 1970	
12&13	CW	1-23	23	Jan.31, 1970	105G-6
14	Gee	30,58	9	Jan.31, 1970	105G-7
		60,64		Jan.31, 1970	
		195,197		Jan.31, 1970	
16	PG	1-16	16	Jan.31, 1970	105G-6
17	El	1-14	135	Jan.31, 1970	105G-6
		33-48		Jan.31, 1970	
		61-90		Jan.13, 1968	
		91-117		Mar.29, 1968	
		118-165		Jul.27, 1968	
18&19	Hoo	11-16	125	Jan.31, 1970	105G-6
		25-32		Jan.31, 1970	105G-12
		34,36,38,40		Jan.31, 1970	
		42,47		Jan.31, 1970	
		51-64		Jan.31, 1970	
		71,73,75		Jan.31, 1970	
		101-123		Jan.31, 1970	
		124-184		Mar.29, 1968	
TOTAL			416		

REGIONAL GEOLOGY

The Northlake area is in the Anvil Range - Finlayson Lake belt of quartz mica schists and micaceous quartzites, bounded on the southwest by the Tintina Fault and traceable for at least 150 miles northwest-southeast in a belt up to 20 miles wide. This is the same formation in which the orebodies of the Vangorda Creek area, 75 miles northwest, have been found. Besides the quartz mica schists there are chloritic and graphitic members, and much granitic gneiss. Intrusives are well represented by numerous small bodies of granodiorite and similar types, and by several small ultrabasic masses. The schists are thought to be Mississippian in age and the granitic intrusives Cretaceous.

The region is structurally as well as topographically dominated by the Tintina Fault, its location marked in this area by the prominent valley of the Hoole River. The fault has not been seen here, but shearing in drill core from near the Hoole River may be associated with it. Northlake claims vary in relation to the fault from zero to 10 miles away (Hoo and Leo claims respectively).

MINERALIZATION

Mineralization in place was found in nine locations and float in several others. None of it proved of any importance, and the two areas now considered to be the most

interesting were indicated by geophysical means alone, though subsequently mineralization was found under overburden in one case, and by geological mapping in the other. Of the original nine areas, six were dropped and nos. 2, 5 and 10 retained because of geophysical encouragement.

Mineral in place consisted of quartz veins with minor sulphides in five areas; three gossans, noticeable but poorly mineralized; and three small sulphide replacements. In no case were the size and/or values significant.

Float was reported from eight locations, either alone or near one of the showings in place, but the assays were all negligible.

AIRBORNE GEOPHYSICS

The exploration program was started early in April, 1966, by flying the vicinity of nine small showings, all at high altitude, with a reconnaissance-type, electromagnetic, helicopter-borne device, the Geo Cal method. Dr. Sevensma has written descriptions of this and the other airborne method used, so only a brief account will be included here. The Geo Cal method is based on the fact that a helicopter equipped with metal rotors generates a primary electromagnetic field, which in turn will induce a secondary field near a conductor; and that the latter can be analyzed by a search coil held by an operator in

the helicopter. A favourable response can be followed up on the ground by the same receiver using a power-pack transmitter.

The showings investigated were all on the Gee claims where the terrain is rugged and high, over 5,000 feet, with little or no overburden. It was hoped that if any of these showings were the surface indications of larger bodies at shallow depth some expression of the latter might be obtained by this method. It did not, however, reveal any outstanding conductors near any of the known showings, thereby ruling out the presence of near-surface, large sulphide bodies in their vicinity; but a number of cross-overs were recorded elsewhere, in areas subsequently numbered 1, 2, 3, 5, 6, 7, 8, 9 and 15.

In May the program continued with a helicopter-borne, electromagnetic-magnetic survey over the less rugged parts of the claims, that is, in general, in the valleys, by the Lockwood Survey Corporation.

The Lockwood Method combines electromagnetic and magnetic surveys, using a 30-foot bird holding both transmitter and receiver coils, suspended from a 70-foot cable. Line spacing is usually 600-1,500 feet. It was confined to the lower elevations because of the limited carrying capacity of the Bell 47 G-3 helicopter used. Flight line spacing was 660 feet on the Gee group. Tapes were examined in the field and preliminary

data reduction of interesting areas was done by Exploration Geophysics (Yukon) Limited, Whitehorse.

The Lockwood survey located a number of electromagnetic anomalies in the vicinity of ultrabasic intrusives, specifically Areas 11, 17, 18 and 19 (Leo, El and Hoo groups respectively), of which the zones in Area 11 are very strong. Only a few lines were flown across the El claims (Area 17) due to strong relief and poor weather conditions. But since the higher elevations are mostly bare, and since much is known of the location of the ultrabasics from government mapping and aeromagnetic surveys, flying was confined to the contact areas of the intrusives with the surrounding schists, using an interval of 1,320 feet. Complete data reduction was obtained from Lockwood. Interesting conductors of limited extent were located, and subsequent field investigation indicated that several of these were worth following up.

Medium conductors were found in Area 10 in the northwest part of the Gee group; weak but localized conductors on the P.G. claims, Area 16, at the southwest corner of the Gee group; in the valley bottom, 1½ miles northeast of Grass Lake (Area 14); and in Areas 10, 12 and 13, the latter two in the C.W. group.

No conductors were found in the lower part of Area 5, which is upslope from the galena float found there, or in Area 15 over a long, conducting zone located by the Geo Cal method. Area 5 could only be partially flown due to rugged terrain and it was felt that the airborne survey did not contribute materially to its assessment.

The combination of the Geo Cal and Lockwood methods directed attention to certain favourable areas, some later confirmed by ground reconnaissance, and eliminated much of the holdings from further consideration relative to near-surface potential. An element of doubt persists about the central parts of the valleys where depth of overburden may prevent detection by either air or ground methods, but Dr. Sevensma does not think that this condition applies to more than 20% of the valley bottoms. Nor can it be claimed that any of these methods are necessarily going to detect low-grade mineralization, which may be far below the economic limit, but still be a very important guide to richer concentrations; or sulphide bodies buried under a rock capping sufficient to mask any surface response. It is probable, however, that by carefully following up all leads, there is at least a good chance of finding anything of major importance.

GROUND PROGRAM - 1966

After the airborne surveys were completed, a ground follow-up program was begun in June, managed by Macdonald Consultants Limited, Vancouver, under the direction of Dr. P.H. Sevensma, P.Eng. The claims were divided into 19 areas, each including an airborne anomaly or a showing.

Grids were cut where the indications were favourable enough to warrant detailed ground investigation, and, when finished, geophysical and soil sampling crews were sent in. All grids were sampled at regular intervals; five were surveyed by Ronka, where the overburden did not appear to be too deep, and two by the Turam method. A small gravity survey was done on Area 11.

Grids were cut on twelve of the nineteen areas for a total of 127.3 miles:

Area	2	-	4.2 miles
	5	-	23.4 miles
	8 & 9	-	2.3 miles
	10	-	37.6 miles
	11	-	12.5 miles
	12	-	8.2 miles
	13	-	7.5 miles
	14	-	4.0 miles
	15	-	2.5 miles
	16	-	3.0 miles
	18	-	14.0 miles
	19	-	8.1 miles
			127.3 miles

Areas 1, 3, 4, 6 and 7 were abandoned without grids, after examination and/or mapping, and sampling, and the claims covering them have since been allowed to lapse. With the possible exception of Area 4, they are likely due to faults or conductive schists, also probably true of 8, 9 and 15.

The following tabulation shows the distribution of the various methods used, including the airborne:

Showings	Areas 1-9, incl.	9 areas
Geo Cal	Areas 1-3,5-9,15	9 areas
Lockwood	Areas 3,5, 10-19	12 areas
Ronka	Areas 5,10,11,14,19	5 areas
Turam	Areas 10,18	2 areas
Gravity	Area 11	1 area
Mapping (1000'-1")	All but 10,14,16	16 areas
Soil Samples	Areas 2,5,8-12, 14-17, 19	12 areas
Streamsilts	All but 8,9,11,18	15 areas

Soil Sampling This method was confined to the vicinity of conductive zones, either with or without ground geophysics.

A total of 4,615 samples were taken from the 12 areas, on line spacings of 400' and 800', and at intervals of 100 feet and 200 feet.

The samples were analyzed for copper, lead and zinc at Bio Metals Corporation Limited (N.P.L.), 204 - 1515 Pemberton Avenue, North Vancouver, B.C.

The results were generally inconclusive. The only interesting anomaly found in 1966 occurs in the Leo group, Area 11, where there were highs of 409 ppm. Cu, 100 ppm. Pb and 660 ppm. Zn, in what was later proved to be an area of graphitic and chloritic schists and carbonate rock, and also probably considerable faulting. There are no known ultrabasics in the immediate vicinity, though from mineralogical evidence it is suspected that such may occur nearby or at shallow depth. A few feet of massive pyrite-pyrrhotite mineralization was found in a drill hole on a neighbouring property.

Several isolated copper highs were found in Area 19.

Lead values are prevalent in Area 5, but this is to be expected since galena occurs in quartz veins there, and can be panned where a creek runs into the lake.

Dr. Sevensma thinks the copper values are associated with ultrabasic intrusions.

Streamsilt Sampling In conjunction with soil sampling, all streams in the area were sampled and/or panned at approximately 800-foot spacings. 653 pan/silt samples were taken,

247 of them from Areas 16, 17, 18 and 19, particularly Area 17. They were all sent to Bio Metals in Vancouver to be analyzed for copper, lead and zinc.

Streamsilt sampling seemed to reflect a pattern of increased copper and occasionally lead and zinc in the vicinity of ultrabasic intrusives.

Lead, and to a lesser degree copper, showed an increase in areas draining granodiorite intrusives.

The most outstanding geochemical results of any kind were those obtained from streams draining the El claims, where in one of them streamsilt values were found as high as 7,652 ppm. copper. This stream encircled the southeast part of the El claim group, and 30 more claims were staked there for protection. At the same time, the original 30 claims staked on top of the mountain on an old asbestos showing were recommended for dropping.

Ground Geophysics Huntec Limited of Toronto was contracted to carry out ground electromagnetic surveys. They completed a horizontal loop survey using a Ronka III unit on Area 5, and Turam induction loop electromagnetic surveys on Areas 10 and 18. Their operator then left and a Northlake employee trained by him continued the Ronka surveys on Areas 10, 11, 14 and 19, and on the lower part of 15.

Dr. Paterson of Huntec wrote a report on the methods used and the results obtained in the three areas surveyd by them. He did not consider the conductor on Area 5 worth more work unless supported by other evidence. Several weak to medium conductors were located by Turam in Area 10, one of which was confirmed by the horizontal loop survey Of these, Conductor #1 is worthy of consideration. A number of strong and quite favourable conductors were found in Area 18, which were recommended for drilling.

Trenching A drill and explosives were used on showing 2-2 in claims Gee 173 and 174. A total of 95 cubic yards of rock and frozen material were excavated in nine trenches, but because of the permafrost bedrock was not reached. One sample of nearly massive pyrrhotite float was assayed spectrographically, but with negative results.

Diamond Drilling Airborne geophysics indicated a strong anomaly on the northwestern part of Area 18 on the Hoole River, confirmed by a Turam survey on a 400-foot grid pattern. Forty-seven streamsilt samples were taken in this area with negative results, but due to heavy overburden, no soil samples.

Four diamond drill holes were completed totalling 1,596 feet, but nothing of interest was found, and it is probable that the conductor is due to some geological condition.

Results - 1966 The combination of air and ground geophysics, soil and stream sampling allowed two-thirds of the ground staked to be abandoned with some degree of confidence. Accordingly, it was recommended that 574 of the 854 claims then held be dropped, though the number was later increased again to 416 by other staking.

The 1966 program focussed attention on two areas of exceptional interest. Airborne surveys and geological reconnaissance, followed by streamsilt sampling, led to the discovery of an outstanding copper anomaly in Area 17, which was confirmed by check assays, but was not resampled until the following year. In Area 11, airborne surveying, followed by soil sampling and a Ronka survey, pinpointed a significant copper-lead-zinc anomaly. Besides these two targets there were seven others that seemed to be worth more attention - nos. 2, 5, 10, 14, 16, 12, 13, 18 and 19. Nos. 12 and 13 may be included with no. 11 to make six priorities arranged below in the order then envisaged.

Priority 1

El Group - Area 17 The very high copper stream-silt anomaly was associated with zinc of normal background and nil lead. The anomaly was apparently repeated by weak copper in another creek, 1½ miles west; and since a line drawn between the two is about parallel to the regional structure as defined by aeromagnetics, the possibility of stratabound sulphides is suggested. These results were reinforced by a well-defined airborne electromagnetic conductor near the highest copper readings. Attention was first drawn to this area by a rusty patch on the mountain which led to the decision to take stream-silt samples in the nearby creek, but which has since been proved to be unrelated to any sulphide mineralization.

Priority 2

Leo Group - Area 11 A strong airborne anomaly was later pinpointed by a Ronka survey and then by soil samples, which showed peaks of 409 ppm. Cu, 100 ppm. Pb and 660 ppm. Zn in an environment similar to that on the El group. A hole drilled on nearby ground had intersected a few feet of pyrite-pyrrhotite in an argillite bed.

Priority 3

Hoo Group - Areas 18 and 19 ..... These targets are in the general contact area of schists and ultrabasics as in the case of El and Leo. One conductor remained to be tested in Area 18 and several in Area 19.

Priority 4

Gee Group - Area 5 Soil sampling returned spotty lead and zinc highs and some above-background copper in an area of known galena-bearing quartz veins. A Ronka survey indicated only a very weak conductor. The hope here is that the present lead indications represent a halo around a more important deposit, possibly to the southeast where the overburden thickens in the valley bottom.

Priority 5

Gee Group - Areas 10, 14, 16 The favourable indications are all conducting zones supported in the case of 10 and 16 by spotty geochemical highs. No. 14 occurs in an area of apparently deep overburden.

Priority 6

Gee Group - Area 2 Later abandoned.

1967 PROGRAM

When work was resumed in March, 1967, 88 claims were staked in a long, narrow group joining Hoo and El, in the general area of an assumed contact between ultrabasic intrusives and schist.

In March and April a tote road was completed from Mink Creek on the Ross River - Watson Lake highway to the Hoo group, then on to the El and part way from the El to the Leo. When completed to the Leo claims after breakup, the total amounted to 42 miles, but only suitable for a tracked vehicle. In addition, 2-3 miles of bombardier trail were made in three locations near the El camp; east and west of, and along El creek (in the vicinity of the high-copper streamsilt).

Bulldozer trenching was started in the creek bed and continued in June, after breakup, but bedrock could not be reached even at that time due to ice and frozen ground.

A base line, 2 miles long, was bulldozed west of Anomaly Creek and picket lines every 800 feet. Two trenches were dug with a bulldozer west of the creek, one of which did not get down to bedrock.

Five trenches were dug by bulldozer across the anomalous zone on the Leo group.

All this work is shown on Gifford's maps following.

A grid system was cut on the E1 group east and west of Anomaly Creek in April with lines every 400 feet apart, including the bulldozer cuttings at 800-foot intervals.

Soil Sampling Soil sampling started in April and continued after breakup into July as part of a program to find the source of the copper values in the creek. The results were very disappointing, nothing near the creek on either side or anywhere else in the surveyed area suggesting a copper anomaly; but high lead and zinc values were found unexpectedly west of the creek with maximum values of 628 ppm. lead and 1,240 zinc.

The best lead values occur on line 44, just south of the base line and as the results were received early in July while the bulldozer was still available, it was decided to trench this line. Bedrock was reached with no difficulty, in contrast to the trench on line 56 where there was none in the bottom of the trench at nine feet. Fine-grained replacement lead was found almost immediately, directly under the highest lead value. A picked sample of this material assayed 12% lead with no appreciable silver or zinc.

Other soil samples were then taken farther west and to fill in gaps in previous work, which resulted in the outlining of an area of anomalous lead and zinc values.

Later in the summer, additional soil samples were taken on the Leo group, which gave a copper high of 616, lead 224 and zinc 1,050, thereby confirming the earlier results.

Diamond Drilling It had been decided to bring in a drill to test the copper anomaly in the creek before the lead mineralization was found, but when that occurred, the lead was drilled first. Four holes were completed which proved the existence of an interesting, though very low-grade, zone of lead-zinc mineralization.

While drilling was in progress, the results of more silt samples taken from the creek arrived, according to which there was no such thing as a copper anomaly there. These results, together with poor soil samples on the banks, and the examination of the fairly numerous outcrops in the vicinity which showed no trace of copper, seemed to be enough to eliminate the anomaly. The only copper found anywhere in the area was a minor occurrence of chalcopyrite in a dioritic rock located a considerable distance upstream.

The lead-zinc zone was real enough, but far from economic, and it was felt that another hole or two would not likely change the picture, and that, therefore, the expense was not then worthwhile. The favourable formation looked as if it could be extensive and worth a large-scale drilling program, preceeded, as Gifford recommends, by gravity and ground magnetic surveys, which the company was not prepared to undertake at that time. Also, after the disappointing results in the creek, it was felt that more information should be obtained from the Leo area before plunging into a drill program there; so for these reasons the drilling was stopped and the equipment sent back to Whitehorse.

Mapping, etc. Geological mapping was undertaken by Mr. Gifford in Area 17, from which much has been learned of the geology and structure of the area, and which, supplemented by drilling, has gone far towards providing an understandable setting for the lead-zinc mineralization. He then moved over to the Leo and No. 5 areas to study them in more detail, the results of all his work being embodied in his report following.

Claims When the lead discovery was made on the El group, it was felt that more protection was needed to the east and 48 more claims were staked there, bringing the total to 416.

All claims belonging to Northlake were tagged this summer.

CONCLUSIONS AND RECOMMENDATIONS

Nothing of interest was found associated with the original showings, but there is minor lead in Area 5 and some mineralization and float on Area 2. There is also some geophysical encouragement on these groups and they should all be kept for the time being - that is Areas 2, 5, 10, 14 and 16.

The most promising target found in 1966 was the streamsilt anomaly in Area 17, but it was virtually eliminated this year by resampling.

The program has produced one positive target and one interesting possibility - the lead-zinc mineralization in Area 17 and the geochemical results in Area 11, respectively. The former is definitely a favourable zone in which to look for lead-zinc replacements and is worth more work. Area 11 is interesting because of the soil sampling values and because it may occur in a geological environment similar to that of Area 17. This environment could include also all of the Hoo claims and the C.W. group, all of which should be kept for the present.

Mr. Gifford recommends ground magnetics and gravity surveying as the next step on Areas 11 and 17, and the writer

has no hesitation in agreeing with him.

Apart from such local work around the two main targets, recognition should also be taken of the possibility that the mineralized formation on the E1 group could be extensive and traceable for great distances in either direction, even to Area 11 and the Hoo group. Therefore, the writer feels that consideration should be given to a program of reconnaissance mapping and soil sampling over an area, that, while narrow, might be extended for 20 miles, or between Areas 11, 18 and 19.

Respectfully submitted,

J.M. Cormie, P.Eng.

NORTHLAKE MINES LTD. (N.P.L.)

STATEMENT OF EXPLORATION AND DEVELOPMENT EXPENSES
FROM DATE OF INCORPORATION ON JANUARY 24, 1966 TO DECEMBER 31, 1966

Management fees and expenses	$ 25,399.66
Consultants' fees and expenses	25,862.97
Aircraft	49,074.49
Diamond drilling	23,615.51
Surveying, geophysical and geochemical	63,351.44
Camp operating and transportation	33,587.72
Line cutting	13,942.19
Claim staking	16,678.75
Equipment rental	3.700.72
Administration and general	9,326.08
Legal and audit	7,453.00
Sundry	2,324.97
	274,317.50
Less interest received	2,150.69
Amount at December 31, 1966	$272,166.81

NORTHLAKE MINES LIMITED

STATEMENT OF EXPLORATION AND DEVELOPMENT EXPENDITURES
AS AT OCTOBER 31, 1967

	October 1967	January 1 to September 30	Total 1967
Management Fees & Expenses		3,108.26	3,108.26
Consultants Fees and Expenses	127.49	20,335.51	20,463.00
Engineering, Geological Salaries & Expenses	43.31	11,969.48	12,012.79
Aircraft Rental		8,338.50	8,338.50
Diamond Drilling		15,017.59	15,017.59
Surveying, Geophysical and Geochemical		3,522.29	3,522.29
Camp Operating & Transportation		19,356.23	19,356.23
Line Cutting		2,316.26	2,316.26
Road Building		17,876.69	17,876.69
Claim Staking		6,950.09	6,950.09
Assessment Work		3,722.50	3,722.50
Prospecting and Trenching		6,346.23	6,346.23
Equipment Rental	128,01	15,629.55	15,757.56
Administration and General	664.34	5,783.18	6,447.52
Legal and Audit	10.00 CR	8,161.12	8,151.12
	953.15	148,433.48	149,386.63
Less: Road refund		8,000.00	8,000.00
Sundry revenue	336.78	1,373.79	1,710.57
	616.37	139,059.69	139,676.06
Balance at December 31, 1966			272,166.81
Balance at October 31, 1967			411,842.87

NORTHLAKE MINES LIMITED

Watson Lake M.D., Y.T. 105-G-6

SUMMARY REPORT AND RECOMMENDATIONS

September 30, 1967

by

R.G. Gifford, P. Eng.

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ILLUSTRATIONS

REFERENCES

(1) P. H. Sevensma, Consultant; Summary Report dated April 4, 1967.

(2) Northlake Mines Ltd.; Drill Hole Logs N-1 to N-4, 1967.

(3) G.S.C. Map 8-1960, Finlayson Lake.

(4) G.S.C. Paper 67-40; pp. 12,37

NORTHLAKE MINES LIMITED

Watson Lake M.D., Y.T.
105-G-6

SUMMARY REPORT AND RECOMMENDATIONS
September 30, 1967

1. INTRODUCTION:

During 1967 Northlake Mines Ltd assessed the principal zones of interest found by previous exploration in the Grassy Lakes region. In particular, work focussed on locating the source of strongly anomalous copper values located in Area 17.

This report presents a summary of results, together with recommendations for future work.

2. PROPERTY

Present holdings of Northlake Mines total 416 claims.(Fig.1)

Area	Claims	Total	Expiry Date
2,5,10,14	Gee	85	January 31, 1970
11	Leo & Z	32	January 31, 1970
12,13	CW	23	January 31, 1970
16	PG	16	January 31, 1970
17	EL	135	Jan.13/68,Mar.29/68, Jan.31/70 July 26/68
18,19	Hoo	125	Mar.29/68, Jan.31/70
	Total claims	416	

3. LOCATION AND ACCESS:

The property lies 50 miles southeast of Ross River in the Watson Lake M.D. near latitude 61° 30' North, longitude 131°15' West.

Access is gained by tracked vehicle over a newly constructed tote road, commencing at Mink Creek on the Ross River-Watson Lake highway; or by float aircraft to several lakes adjacent to some of the groups.

4. PROGRAM

Work in 1967 included geological mapping, EM-16 survey, and geochemical surveys, together with tote road construction, linecutting, trenching, drilling, and claim tagging.

In Area 17 geochemical samples totalled 482 soils and 24 silts, trenching totalled 7,000 cubic yards, linecutting totalled 18 miles, and drilling totalled 1,064 feet in four holes.

In Area 11 geochemical samples totalled 43 soils, and trenching totalled 2,760 cubic yards.

Tote road construction gave access to most holdings, and totalled 42 miles.

All claims in good standing, totalling 416 were tagged with designated metal markers as required by the Yukon Quartz Mining Act.

5. DRILLING

All drilling was in Area 17 on claims EL 48, EL 80, & EL 82. The program tested a portion of Zone 17-2 Pb-Zn anomaly with complete sectioning of the favorable unit on Line 4000'E, and partial sectioning of the unit on Line 4400'E. (Fig. 7)

D.D.N-1 gave the best intersection. It encountered galena and local sphalerite to a depth of 147 feet, which graded 0.6% Pb 0.6% Zn to 57' depth and trace Pb for the remainder to 147' depth.

D.D.N-2 and D.D.N-4 encountered no ore minerals.

D.D.N-3 interesected 7 feet of weak PB-Zn mineralization.

Program

Hole No.	Section	Length	Dip	Location.	Bearing	Elev.
N-1	4400 E	300'	-60°	4395'E 00 N	S 29°E	4350'
N-2	4000 E	391'	-60°	3990'E 310'N	S 29°E	4437'
N-3	4000 E	173'	-45°	3990'E 100'N	S 29°E	4382'
N-4	4000 E	200'	-60°	3990'E 105'N	N 29°W	4382'

Significant Intersections

Hole No.	Footage	Est.True Width	oz/T Ag	%Pb	%Zn	%Cu
N-1	0-20'	(overburden)				
	20-26'	4'	0.32	0.74	0.36	
	26-32'	4'	0.08	0.36	0.19	
	32-38'	4'	0.06	0.48	0.19	
	38-44'	4'	0.28	0.82	2.49	*Tr
	44-50'	4'	0.18	0.42	0.24	
	50-57'	5'	0.14	0.95	0.29	
Ave.	20-57'	28'	0.2	0.6	0.6	
N-3	75-82'	6'	0.16	0.30	0.24	

Assays are by Coast Eldridge, Vancouver, except* assay by G. Spalding, Whitehorse. The original Pb assays for N-1 were considered incompatible with visual estimates, and the samples were re-assayed. Re-assay gave Ag & Zn results comparable to the earlier assay, and Pb results were consistent with estimates. Only the re-assay values are shown.

6. GEOLOGY

(1) EL, Area 17

The EL grid features two geochemical anomalies, and is underlain by schistose rocks of uncertain age. Principal rock types include chlorite, graphite, and feldspar augen schists, and micaceous quartzite.(fig. 2)

The relation between rock units is obscured by complex structure and a limited, often slumped outcrop. Fabric is usually dominated by a strong foliation having west-northwest strike and steep varied dip. Foliation locally subparallels bedding, and in general subparallels the Tintina Fault five miles southwest.

Superimposed over the dominant fabric is a shallow dipping cleavage and recumbent isoclinal crumpling. Both are best developed in graphite schist, and sometimes mask the earlier foliation. The later fabric likely relates to major recumbent folding.

Rock near Anomaly Creek is broken by fractures having northwest strike, irregular surface, and wide spacing. These fractures likely have influenced the development of a linear ascribed to the creek.

At three localities, disruption or sharp deformation of the formations is inferred. (Fig. 3) The assumed structures trend northwest and meet conditions imposed by foliation attitudes and formation contacts. One such structure may have localized mineralization at Zone 17-2.

(2) Leo, Area 11

Principal rock types underlying the Leo grid include limestone, graphite schist, and chlorite schist. Subordinate chloritic argillite and chert are present, and carbonate is common to most of the rock units. (Fig. 8)

Locally the trenches expose graphite schist in contact with rusty weathering micaceous carbonate rock. The presence of mariposite in the latter suggests it may border on ultramafic mass.

On Hill 5230 both bedding and foliation trend northeast and dip 30 degrees southeast, limestone beds are strongly crumpled, and axis' of small folds plunge approximately 30 degrees in east-southeast direction. In contrast at the trenches both bedding and foliation strike approximately north-northwest and dip 40 degrees northeast. A northwest-striking fault or fold is inferred between the two areas.

7. MINERALIZATION

(1) EL, Area 17, Zone 17-1

Copper mineralization is exposed on Anomaly Creek upstream from the original Cu silt anomaly. The occurence shows chalcopyrite sparsely disseminated within metadiorite, and rare chalcopyrite is seen in boulders of the same material along the creek bed. Neither feature seems sufficient to account for the magnitude and extent of the Cu anomaly.

(2) EL, Area 17, Zone 17-2

Notable lead-zinc mineralization occurs associated with a distinctive, schistose quartz-feldspar rock termed feldspar-augen schist. The rock is characterized by coarse feldspar augens, and is mineralized by galena in seams that parallel the foliation. Most of the bedding appears to be parallel with this foliation. Minor pyrite and sphalerite accompany the galena.

Mineralization appears confined to a particular subunit about 100 feet in thickness with N 80°E strike and steep undulating dip, and bounded on either side by graphite schist. The mineralized outcrop is closely overlain by a Pb-Zn geochemical anomaly of moderate strength containing values up to 628 p.p.m. Pb and 1932 p.p.m. Zn.

Partial testing of the anomaly intersected 1.2% combined Pb-Zn across 28 feet estimated true width. Total sulfide in this section is estimated to be 2% combined pyrite-galena-sphalerite.

(3) Leo, Area 11

Chalcopyrite occurs disseminated in chlorite schist on Hill 5230. The schist features pods of dolomite, and assay gave trace Cu across 5 feet of foliation. The mineralized material is exposed for 50 feet along the ridge line and then is cut out by erosion.

Quartz vein debris is common in the vicinity of the trenches, and on occasion contains sparse amounts of galena and chalcopyrite.

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(4) Gee, Area 5

Numerous quartz veins were found within the area during a brief examination. They crosscut the foliation of a granitic gneiss host, and have a northeast strike with shallow northwest dip (Fig. 9) Observed veins are 6 to 12 inches in width and widely separated. A few contain local masses of galena for a few feet of their length.

8. GEOCHEMISTRY

(1) EL, Area 17, Zone 17-1

Silt sampling in 1966 delimited a section of Anomaly Creek containing strongly anomalous copper values in the stream silts. Re-assay of the original 1966 samples confirmed their anomalous character.

Subsequent soil sampling in the vicinity did not succeed in locating any copper anomaly (Fig. 4) Silt re-sampling did not reproduce the original anomaly. Note that the silt re-sampling was subject to possible contamination since work was near base camp, and was undertaken about two months after considerable trenching of the creek bed.

(2) EL, Area 17, Zone 17-2

Soil sampling has outlined an east-trending Pb-Zn geochemical anomaly 2,500 feet in length and 600 to 800 feet in width (Fig. 5,6). Its western sector was tested by drilling and trenching, and resulted in the discovery of lead and zinc sulfides in place.

The anomaly is situated on the lower, gently-sloped portion of a hillside. Generally the overburden is a few tens of feet in thickness, and is mainly clayey silt overlain by a thin soil and ash layer. Thick valley fill borders the anomalous zone to the south and east.

A trench at the eastern end of the anomaly provides a partial geochemical profile of the thick surficial material. Anomalous Pb -Zn values up to 543 p.p.m. and 635 p.p.m. Zn were obtained in both the top 1' of soil and ash and the adjoining 6' of alluvium, whereas values in the underlying till were normal with values reaching 68 p.p.m. Pb and 225 p.p.m.Zn.

(3) Leo Area 11

Follow-up sampling confirmed the Cu-Pb-Zn anomaly of 1966. Values in the recent survey reached 616 p.p.m. Cu, 224 p.p.m. Pb, and 1050 p.p.m. Zn and are about 1½ times higher than earlier results. The difference is attributed to samples being taken from material in the trench floor in 1967, and from undisturbed ground in 1966.

Trenching across the anomaly down to underlying bedrock debris did not disclose any significant mineralization.

9. CONCLUSIONS AND RECOMMENDATIONS

(1) EL, Area 17, Zone 17-2

It is interesting to note the recent publication of geochemical data on the Anvil deposits 90 miles to the northwest. This describes results obtained over major sulfide bodies under conditions roughly similar to the Northlake property. The Faro No. 1 and No. 3 zones gave moderately anomalous values in Pb-Zn, and essentially background values in Cu. The description also notes the Faro No. 1 body gave a weak magnetic and electromagnetic expression, and its subcrop is covered by 40 to 60 feet of overburden.

The following comparative table illustrates the magnitude of values obtained over the Anvil and Northlake geochemical anomalies.

COMPARATIVE TABLE SHOWING METAL CONTENT (ppm)

Faro No. 1 Line 80 W				Faro No. 3 Line 36 W			
Sta	Cu	Pb	Zn	Sta	Cu	Pb	Zn
21 N	36	15	110	15 N	32	25	170
19 N	16	35	170	13 N	56	50	180
17 N	20	140	340	11 N	44	90	170
15 N	20	140	260	9 N	44	140	180
14 N	28	230	460	8 N	72	700	240
13 N	20	140	260	7 N	48	200	460
11 N	24	40	170	5 N	48	220	270
9 N	8	20	140	3 N	40	180	290
8 N	32	55	240	2 N	68	220	600
7 N	40	100	240	1 N	120	45	3400
6 N	36	45	180	1 S	20	30	170

EL Line 44 E				Leo Line 56 W			
Sta	Cu	Pb	Zn*	Sta	Cu	Pb	Zn**
8 N	28	12	86	4 S	29	26	99
6 N	54	6	63	5 S	180	36	129
4 N	27	105	273	6 S	588	87	269
2 N	33	19	536	7 S	337	130	309
B.L.	10	42	95	8 S	259	224	411
1 S	12	628	95	9 S	550	26	254
2 S	11	486	225	10 S	418	150	386
3 S	14	198	338	11 S	32	68	126
4 S	12	183	161	12 S	25	45	87
6 S	10	24	170	13 S	40	16	82
8 S	10	25	105	14 S	65	46	182

__ indicates highest value in traverse

* Zn peak of 1932 ppm occurs at Line 46 E, 2 S
** Zn peak of 1050 ppm occurs at Line 44 W, 10 S

The E1 geochemical anomaly is a prime target and justifies further exploration due to its extent, magnitude, and association with known sulfide in a particular host. More discriminitive geophysical work at this stage would provide useful guidance to a drill program. Specifically, a gravity survey in conjunction with a ground magnetic survey should be considered.

(2) Leo, Area 11

The coincidence of strong copper geochemical values, complex structural deformation and strong conductive zone combine to make the Leo an attractive exploration bet that merits additional evaluation.

Trenching across the anomalous area cut into bedrock debris, but due to permafrost apparently not into bedrock surface. The work did not disclose any significant mineralization but conceivably such features could be masked by solifluction. (Fig. 8)

Again, a gravity survey should be considered as the next step to a drilling program aimed at determining the source of the geochemical anomaly.

(3) EL, Area 17, Zone 17-1

Results of follow-up geochemical work indicate the copper anomaly is not valid. It appears the original samples were in some way either contaminated or switched after collection.

Further exploration of the anomaly is not warranted.

(4) General

Several possibilities as described by P. H. Sevensma, Consultant in earlier reports remain untested. In particular Area 5, Areas 18 & 19, and Areas 10,14, & 16 deserve future attention.

Respectfully submitted,

R.G. Gifford, P. Eng.

September 30, 1967

CERTIFICATE

I, Robert G. Gifford, of Vancouver, B. C., do hereby certify that:

1. I am a graduate of the University of British Columbia where I obtained my Bachelor of Applied Science, Geology in 1962.

2. I am a Geological Engineer in the employ of P. H. Sevensma Consultants Ltd. Vancouver, B. C., and a registered member in good standing of the Association of Professional Engineers of British Columbia.

3. From May 1958 to until July 1967 I have been engaged continuously in mining and exploration geology in the employ of Cominco Ltd.

4. I have personally supervised the exploration progress on the claims which are the subject of this report since July 15, 1967.

5. I have not received, nor do I expect to receive or acquire, directly or indirectly, any interest in any of the properties or securities of Northlake Mines Limited.

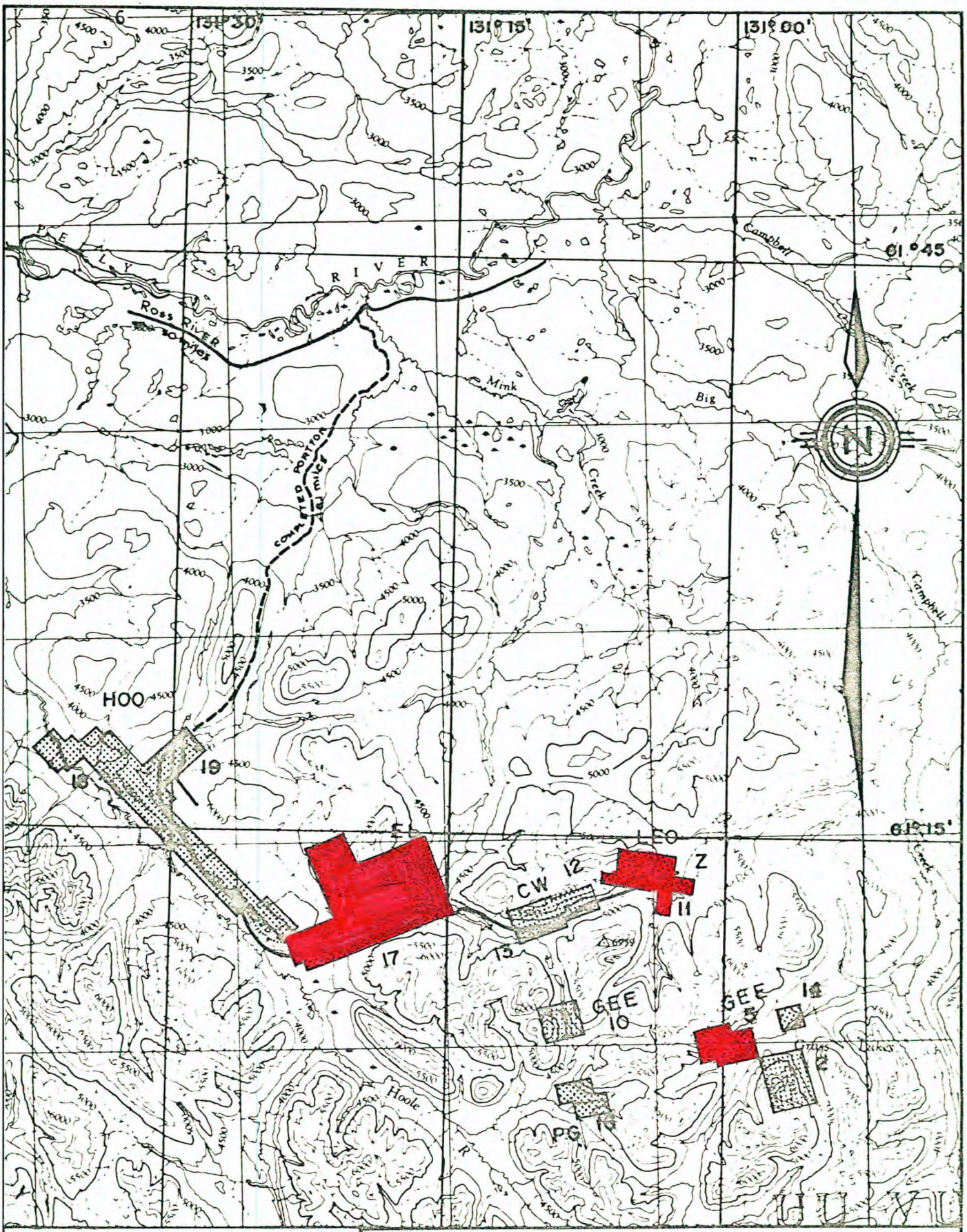
Respectfully submitted,

R G Gifford

R. G. Gifford, P. Eng.

September 30, 1967

R G Gifford



LEGEND

10 .... Area number

NORTHLAKE MINES LTD.

FINLAYSON LAKE 105—G

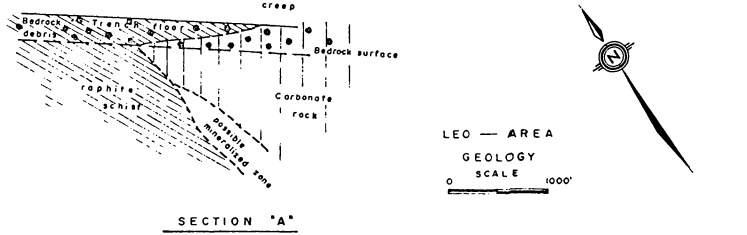
CLAIMS RETAINED IN GOOD STANDING

P.H. Sevensma Consultants Ltd. — Vancouver, B.C.

Sept. 1967 Scale: 0 1 2 3 4 miles

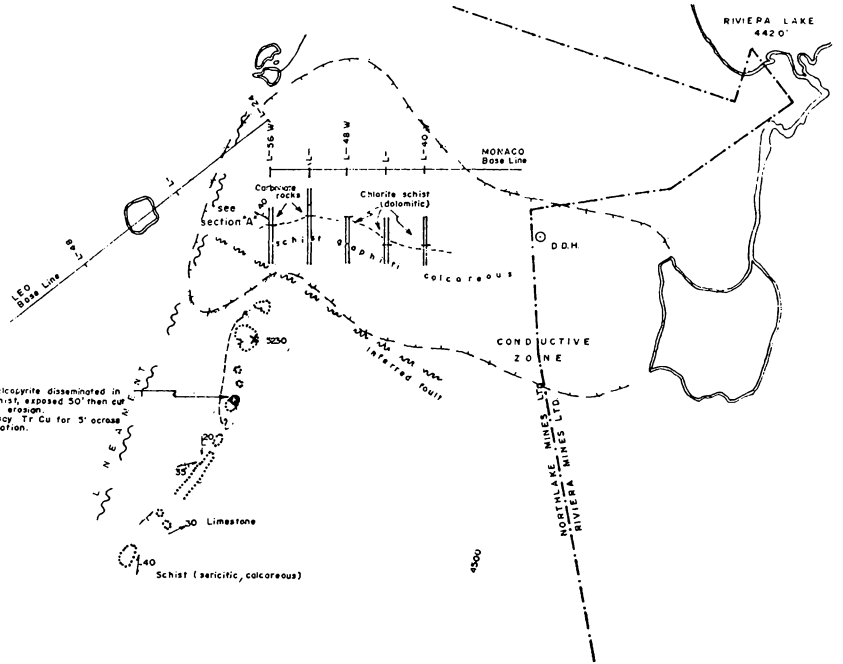
FIG. 1

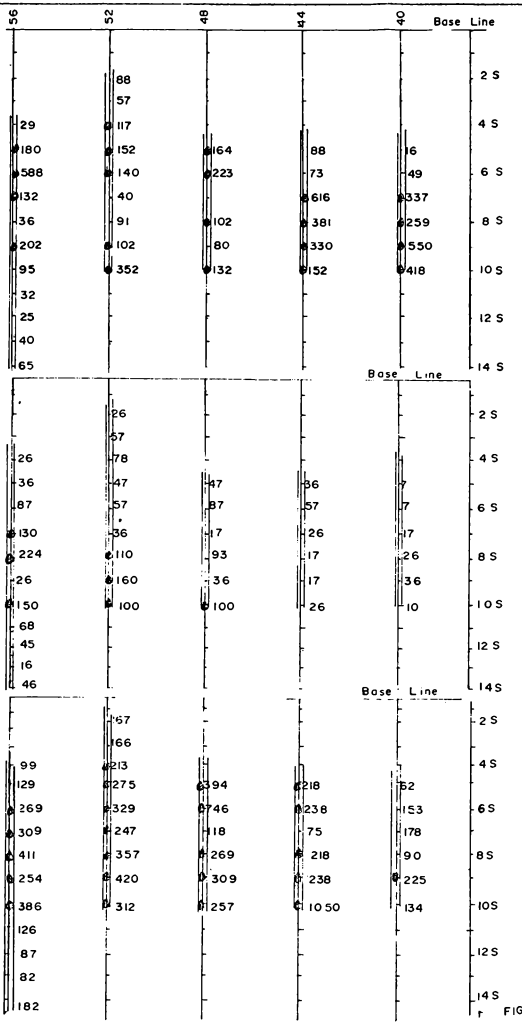
88+00 W
84+00 W
80+00W
76+00 W
72+00W
68+00 W
64+00W
60+00 W
56+00W
52+00W
48+00 W
Base Line 115+
40
GSC showing
sulfide vein (8")
Grab sample 0.005 – Au, 0.06-Ag
N
AREA 5
Location map
0 1500'
GSC showing
6000
6500
6500
80+00W
64+00W
48+00W
32+00W
16+00W
0+00
6000
5500
5000
4500
GRASS LAKE
LEGEND
Granitic Gneiss
Biotite Quartz Schist
Quartz Vein – minor galena.
Quartz Vein – barren.
FIG. 9
NORTHLAKE MINES LTD.
GEE GROUP — AREA 5
Watson Lake M.D.
P. H. Sevensma Consultants Ltd. — Vancouver B. C.
September 1967
SCALE 0 400'



SECTION "A"

LEO — AREA
GEOLOGY
SCALE
0 1000'





LEO — AREA II
MONACO GRID — SOIL GEOCHEMISTRY
Values in p.p.m
SCALE
0 400'

FIG 8

NORTHLAKE MINES LTD
AREA II
GEOLOGY and GEOCHEMISTRY
P.H. Sevensma Consultants Ltd Vancouver B.C.
August 1967

DIAMOND DRILL RECORD

PROPERTY Yukon Territory. HOLE No. 1-18.

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. 1-18 Sheet No. 1 Lat. L 40 W Total Depth 295'
Section Hoole River. Dep. 2+50 S Logged By D.M Lon.
Date Begun Sept. 4, 1966. Bearing Vertical Claim
Date Finished Sept. 13, 1966. Elev. Collar 3350. 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 - 193	Tr. Chalcopyrite 191.6 - 193						1.4'

DIAMOND DRILL RECORD

PROPERTY Yukon Territory

HOLE No. 1-18

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. 1-18 Sheet No. 2
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 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 - 281	Pyrite " " "						1.0'

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. Bay.
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						
filtered	Graphite Schist.						
43'	Nx Casing.						
97'	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 15, 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. Hield & D.M. Cox
Claim 1100 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 FeS2						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
108 - 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 ..... Lat. .....

Section ..... Dep. .....

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

Date Finished ..... Elev. Collar .....

Total Depth .....

Logged By D. M. Cox To 200'

Claim T. Hebbs To 441

Core Size AX

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
186 - 189	QTZ BIOTITIC SCHIST MINOR PYRITE						2.0
189 - 190	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						4.0
200 - 202	QTZ BIOTITIC SCHIST. FOLIATED. MINOR FeS2						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
	A 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 1" 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. HENRY

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. 1" 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						1.0
265 - 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.

Dote Begun ..... Bearing ..... Claim .....

Dote Finished ..... Elev. Collor ..... 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 ½" @ 279						
280 - 297	GRAPHITE SCHIST CONTAINING CHLORITE						7.0
	& QTZ . 2 QTZ @ 282 & 1" @ 283						
297 - 298.6	QTZ BIOTITIC SCHIST						1.6
298.6 - 299	PARTLY BROKEN UP QTZ BIOTITIC						0.5
	SCHIST . PRED. QTZ						
299 - 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 Lot. ..... Total Depth. .....

Section. ..... Dep. ..... Logged By. T. H. B.

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

Date Finished. ..... Elev. Collar. ..... 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						
397 - 401	QTZ CHLORITIC SCHIST ALMOST GNEISSIC @ 398						4.0
401 - 405	CALC. CHLORITE & QTZ.						5.0
405 - 411	CALC. CHLORITE & QTZ IN STRINGERS & 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 ..... Lot. ..... Total Depth. .....

Section. ..... Dep. ..... Logged By. T. Hess

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

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

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
All - 421 (cont)	SECTIONS HAVE A PORPHYRITIC APPEARANCE						
	WITH BLUE QTZ EYES TO ⅛".						
	REACTS WITH ACID THROUGHOUT.						
421 - 433	AS ABOVE ONLY SLIGHTLY MORE CALCAREOUS						12.0
	GNEISSIC.						
433 - 441	HIGHLY BROKEN QTZ CHLORITE SERICITE						3.0
	SCHIST WITH GNEISSIC APPEARANCE. CALCAREOUS						
	6" QTZ SECTION @ 433 CONTAINING CHLORITE						
	WITH MINOR PYRITE.						
	439.5' 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. 38' N of ℄
Bearing 195° MAG
Elev. Collar ± 3350

Total Depth 468 FT.
Logged By R.T. HEARD
Claim 1150 107
Core Size AX

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				CORE REC. FT.
0 - 53	OVERBURDEN						
53 - 54	QTZ GRAPHITE SCHIST MINOR PYRITE.						1.2
54 - 63.5	" " " " "						1.0
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						2.5
80 - 81	" " " "						1.0
81 - 88	" " " " "						0.5
88 - 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 - 107	" " "						1.0
107 - 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						
127 - 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" VEIN @ 140'						
141 - 145	AS ABOVE						2.5
145 - 150.5	" "						3.0
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.						
	RED. CHLORITE 170 - 171						
174 - 178	SLIGHTLY SILICIFIED QTZ.						3.3
178 - 185	GRAPHITE AND BIOTITIC SCHIST WITH						7.0
185 - 187	VERY MINOR PYRITE THROUGHOUT						2.0
187 - 189	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 Lot. 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 BIOTITE & CHLORITE 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 Lot. 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 GNEISS						
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
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. F.
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.						
	Tuffs 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

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.
403 - 411.5	SLIGHTLY FOLIATED QTZ. GRANITE & BIOTITE						7.5
	SCHIST. MINOR PYRITE THROUGHOUT.						
	STRONGLY GRANITIC @ 406.						
411.5 - 418.5	AS ABOVE. STRONGLY GRANITIC @ 418						4.5
418.5 - 420	" "						1.5
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. GRANITE & BIOTITE SCHIST.						
439 - 440.5	QTZ. GRANITE & BIOTITE SCHIST.						1.0
440.5 - 441	" " " "						0.5
441 - 442	" " " "						0.5
442 - 443.5	HIGHLY SIL. QTZ GRANITE & 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. Collor Core Size

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				CORE REC. FT.
447 - 450	QTZ. BIOTITE & GRAPHITE SCHIST. FINE						3.0
	GRAD BIOTITE.						0.
450 - 451	AS ABOVE. SLIGHLY MORE SILICEOUS						0.5
	5% MASSIVE FINE GRAIN PYRITE.						
451 - 451	CONTACT IN HERE BETWEEN THE QTZ						1.0
	BIOTITE & GRAPHITE SCHIST AND A LIGHT GREEN						
	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 ft 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 RECOVERY
0 - 64	OVERBURDEN						
64 - 80	LIGHT TO DARK GREEN TO BLACK SERPENTINE						
	SCHIST MINOR FINE GRAIN FeS2.						
	2" QTZ FRAGMENT @ 80' IT IS DIFFICULT						
	TO TELL MUCH ABOUT THIS SECTION AS IT						
	IS COMPOSED OF FRAGMENTS HELD						
	TOGETHER BY MUD (FOOTAGE)						
80 86	PASTE MUD CORE CONTAINS FRAGMENTS						2.0
	SOME QUARTZ FRAGMENTS.						
86 - 89	MUD QTZ CHLORITE SCHIST SOME GRAPHITE						3.0
	MINOR FeS2 FAULT GOUGE @ 88½'						
89 - 92	QTZ BIOTITE & CHLORITE SCHIST						2.5
	MINOR FeS2 BLACK						
92 - 95	QTZ CHLORITE MINOR SLIGHTLY FOLIATED						3.0
	BEDDING @ APPROX 65°						
95 98	AS ABOVE SLIGHTLY MORE SILICIFIED						3.0
	SOME PYRITE						
98 - 100	VERY BADLY BROKEN QTZ CHLORITE SCHIST						2.0
100 - 102	AS ABOVE MINOR FeS2						1.0
102 - 105	95% 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 – 12 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 GREEN TO						6.5
	BLACK. MINOR FeS2						
111 – 115	As ABOVE.						1.0
115 – 116	PRED. QTZ. SERICITE & CHLORITE						1.0
	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						0.5
129 – 132	As ABOVE						2.5
132 – 134	As ABOVE						2.0
134 – 136	DARK GREEN TO BLACK QTZ. CHLORITE						2.2
	SCHIST SERICITIC						
136 – 138	As ABOVE. FINE GRAIN PYRITE IN						1.5
	QTZ STRINGERS.						
138 – 140.5	QTZ CHLORITE SERICITE SCHIST MINOR						1.0
	CARBONATE. PYRITE IN QTZ.						
140.5 – 144	PRED. QTZ WITH CHLORITE & SERICITE						0.5
	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. Collor Core Size

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				CORE REC. %
145 - 147	QTZ SERICITE & CHLORITE SCHIST						0.3
147 - 150	MINERAL RECOVERED IN QTZ WITH GREEN						0.3
	CHLORITE STAINED SECTIONS						
150 - 154	DARK 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 TRACE CHALCO						1.0
	VISIBLE GOLD NOTED IN SAL						
166 176	QTZ & DARK GREEN CHLORITE 4" SAL @ 176'						1.0
176 181	QTZ CHLORITE SCHIST TRACE CHALCO TO BASE.						0.5
181 - 187	AS ABOVE						1.0
187 - 194	AS ABOVE MINOR FAS.						1.7
194 - 196	AS ABOVE						1.0
196 - 198	AS ABOVE						1.0
198 - 199	AS ABOVE						0.2
199 - 199.5	DARK GREEN TO BLACK CHLORITE & QTZ						0.2
	FOLIATED APPEARANCE @ 199.5						
199.5 199.2	LIGHT GREY MASSIVE SILICIFIED QTZ						1.0
	CHLORITE & SERICITE						
199.5 - 200	AS ABOVE						0.5

DIAMOND DRILL RECORD

PROPERTY NORTHLAKE MINES HOLE No. 4

DIP TEST		
°	Angle	
Footage	Reading	Corrected

Hole No. 4 - 19 Sheet No. 4 Lat. Total Depth

Section Dep. Logged By T. ALLARD

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	PINK GTZ. BIOTITE CHLORITE & CHLORITE						0.5
	SCHIST						
199 - 200	DARK GREY PINK GTZ. SERICITE BIOTITE						0.5
	SCHIST (?) LINE 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	DARK GREEN GTZ. CHLORITE & CHLORITE						0.5
	SCHIST ALMOST A PEBBLE IN APPEARANCE						
	& QTZ. @ 214						
210 - 214	AS ABOVE.						1.5
214 - 217	GTZ. CHLORITE & SERICITE SCHIST SPOTS						2.5
	PORPHYRITIC OF FELD. MINOR IN SO. TRAVERSE						
217 - 219	GTZ. CHLORITE & SERICITE						1.4
219 - 220	" " " BIOTITE ONLY.						0.5
	QTZ. INCLUSIONS.						
220 - 222	GTZ. CHLORITE & SERICITE						1.0
	THE HOLE WAS CEMENTED HERE WHEN						
	DRILLING LOST THE CORE & 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.
(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
	SCHIST @ 219. MOTTLED IN APPEARANCE						
	LOW QTZ TO 1/4" CALCITE SPOT AT 223'						
224 – 228	SCHIST – QTZ. SERICITE & CHLORITE MINOR						4.0
	PINK GRANITE PORT. @ 226 & 228						
228 –	[illegible]						3.0
	PINK GRANITE PORT & MISSING @ 230 IN						
	3/4 QTZ INCL.						
231 235	SCHIST QTZ. CHLORITE & SERICITE						3.0
	MINOR 1.5%						
235 237	SCHIST – QTZ CHLORITE & SERICITE						1.5
	APHANITIC @ 237 WITH PYRITE & MINOR						
	HEMATITE						
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						.0

DIAMOND DRILL RECORD

PROPERTY NORTHLAKE MINES. HOLE No. 4

DIP TEST		
°	Angle	
Footage	Reading	Corrected

Hole No. 4 - 18 Sheet No. 6 Lat. Total Depth

Section Dep. Logged By T. HEARD

Date Begun Bearing Claim

Date Finished Elev. Collor Core Size

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				Core Rec'd
244 - 249-5	SLIGHTLY MORE SILICEOUS SCHIST						4 5
	GRAPHITE SEAMS & STRINGERS. 6" QTZ.						
	SECTION 246. AT 249.5 BEDDING IS						
	APPROX. 30° TO CORE AXIS						
249.5 251	VERY SILICEOUS GRAPHITIC SCHIST &						1 2
	HEMATITIC QUARTZ MINOR PYRITE						
251 254	AS ABOVE						2 0
254 256	25 % AS ABOVE THEN						
	FOLDED TO 90° BROWN SILICEOUS SCHIST						
	MINOR AMT. 2% PYRITE IN SECTIONS						
256 256	AS ABOVE						1 0
256 256 5	AS ABOVE						1 5
256 5 260	AS ABOVE						1.5
260 - 262	AS ABOVE						1 5
	FROM 262 - INCLUSIONS IN SCHIST FADES						
	OUT - NOT QUITE AS MUCH QTZ.						
262 266	DARK GREY TO BLACK SOFT & BRECCIATED QTZ						4.0
	& CHLORITE. MINOR CRUMBLY PYRITE						
	INCLUSIONS.						
266 - 270	AS ABOVE						4 0
270 272	AS ABOVE						

DIAMOND DRILL RECORD

PROPERTY NORTHLAKE MINES HOLE No. 4

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 4 - 18 Sheet No. 7 Lot. 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
272 - 275	As Above						3.0
275 - 277	As Above						2.0
277 281.5	Schist ! Qtz. Chlorite & Sericite. Some						4.5
	Siliceous Graphitic Sections Minor Py Sx.						
	Tuff Lens ?						
281.5 284.5	As Above						3.0
284.5 - 286.5	As Above						2.0
286.5 288	As Above						1.5
288 290	As Above						2.0
290 - 294.5	As Above 292 295 Contains 1% Py						4.5
	Lenses of Chlorite Rich Schist & Qtz						
	Chlorite (Massive) !						
294.5 297	As Above						2.5
297 - 299	As Above						2.0
299 301	Schist Qtz Chlorite Graphite &						1.0
	Sericite Minor Py Sx.						
301 302	Schist Qtz. Chlorite						0.5
	Siliceous Graphitic Sections						
302 - 303	As Above						1.0
303 304.5	As Above						1.5
304.5 310	Fault Qtz with Schist - Breccia						

DIAMOND DRILL RECORD

PROPERTY NORTHLAKE MINES HOLE No. 4

DIP TEST		
°	Angle	
Footage	Reading	Corrected

Hole No. 4 - 12 Sheet No. 2 Lat. Totol 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'D
310 - 311	SERPENT. QTZ. SERICITE & CHLORITE DARK						0.5
	GREEN TO BLACK						
311 - 316	AS ABOVE						1.0
316 - 318	AS ABOVE						2.0
318 - 320	AS ABOVE 1" QTZ INCL @ 320						2.0
320 - 323	SERPENT. QTZ. & LOW MINERAL SERICITE &						3.0
	CHLORITE TRACE COAL 322 323						
323 - 325	SAME AS ABOVE						2.0
	CHLORITE, MINOR QTZ & SERICITE						
	GRADATIONAL						
325 - 327	SERPENT QTZ SERICITE & CHLORITE						2.0
	GRADATIONAL, MINOR PYRITE THROUGHOUT						
327 - 328	AS ABOVE						1.0
328 - 329	AS ABOVE						1.0
329 - 334	AS ABOVE 1" QTZ VEIN @ 330'						
334 - 336	SERPENT. QTZ. CHLORITE & SERICITE MEDIUM						2.0
	GRADING IN PARTS MOST OF THE QTZ						
	IS SHEARED BROKEN AND IN						
	LENSES SOME MINOR PYR. & TRACE						
336 - 338	AS ABOVE - FRACTURED @ 2.0						
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. Reed

Date Begun Bearing Claim

Date Finished Elev. Collar Core Size

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				Core Rec'd
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 - 348	As Above						1.5
348 - 349	As Above						.5
349 - 350	As Above						0.5
350 - 351	As Above						1.
351 - 352	As Above						1.
352 - 353	As Above						1.0
353 - 354	As Above						1.5
354 - 363	As Above						1.0
363 - 370	As Above						2.5
370 - 371	As Above						1.0
371 - 371.5	As Above						1.5
371.5 - 372	As Above - Very Small Amount of Arsenic						0.5
	From 371.5 Towards 30°						
371.6 - 375	As Above.						3
375 - 378	As Above						1.
	From 375 Possible Fracture 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. Leonard

Date Begun Bearing Claim

Date Finished Elev. Collar Core Size

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				Core Rec'd
378 381	As Above.						4.5
381 Feet	As Above						1.0
385 - 386	As Above 6" Qtz. @ 386'						1.0
386 - 388	As Above						1.8
388 391	As Above						3.0
391 -92	As Above.						1.0
	End of Hole @ 392 ft by Diamond Boart						
	7 Holes Semi Unsuccessful Unable To						
	Turn Rods & unable to get Core Tube						
	Down Hole.						
Casing	25' - NX						
	50' - BX						
	217' AX						
	Core Recovery 59.7%						

NORTHLAKE MINES LIMITED

Watson Lake M.D. 105-6-5

Drill Hole Logs N-1 to N-4, 1967

Four holes totalling 1,034 length were drilled on the EL grid on claims 46,80, 6 82 Arsenault Diamond Drilling Ltd. between July 16 and August 10, 1967.

D.D. N-1 gave the best intersection, averaging 0.2 oz/T Ag 0.6% Pb 0.6% Zn for 37 feet.

D.D. N-3 intersected [illegible] material assaying 0.15 oz/T Ag 0.30% Pb 0.24% Zn.

D.D. N-2 and N-4 did [illegible] intersect mineralization.

Program

Hole No.	Section	Length	Dip	Location	Bearing	Elev.
N-1	4400 E			4395'±.00 N	S 29°E	4350'
N-2	4000	391'	-60°	3990'S 310'N	29E	4437'
N-3	4000 E	173'		3990' 100'N	S 29E	4382'
N-4	4000	200'		3990'± 105'N	N 29°W	4382'

Significant Intersections

Hole No.	Footage	Est. True Width	oz/T Ag	% Zn	% Cu
N-1	0-20'	(overburden)			
	20-28'	4'	0.32	7%	0.36
	26-32'	4'	0.03		0.19
	32-38'	4'	0.0[illegible]		
	38-44'	4'	0.3%		2.49
	44-50'	4'	0.15		0.24
	50-57'	5'	0.14		
Ave.	20-37'	23'	0.2		0.6
N-3	75-82'	6'	0.16		0.24

Assays are by Coast Eldridge, Vancouver, except * assay by G. Spalding, Whitehorse. The original Pb assays for K-1 were considered incompatible with visual estimates, and the samples were re-assayed. Re-assay gave Ag & Zn comparable to the earlier assay, and Pb results were consistent with estimates. Only the re-assay values are shown.

Respectfully submitted,

R G Gifford

R. G. Clifford

September 30, 1967.

DIAMOND DRILL RECORD

PROPERTY NORTHLAKE MINES LTD. HOLE No. N-1

DIP TEST		
	Angle	
Footage	Reading	Corrected
collar	-60°	

Hole No. N-1 Sheet No. 1 Lat. 0+00 N (Base line) Total Depth 300'
Section 4400 E Dep. 4395 E Logged By R. Gifford
Date Begun July 16, 1967 Bearing S. 29 E Claim EL 60, Area 17
Date Finished July 20, 1967 Elev. Collar 4350 Core Size AQ (1")
Drilled by Arcomault D.D. Ltd.

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	oz/T Ag	%Pb	%Zn	%Cu
	SUMMARY OF INTERSECTIONS:						
	33-57 (37') 0.2 oz. 0.5 Pb 0.6 Zn						
0 - 20'	[illegible]						
- 147'	[illegible]						
	[illegible]						
	[illegible]						
	quartz, 20-50% sericite (chlorite); foliation 50-75°						
	[illegible]: weak galena with chalcopyrite sphalerite						
	in discontinuous stringers to half inch bands parallel						
	to foliation; associated minor pyrite, pyrrhotite & silica						
	20-33' weak sh; estimate tot. sulfide 0.5%	2251	20-25'	0.32	0.74	0.36	
	33-44' better sh, fair Qtz; estimate tot. sulfide 3%	2252	25-32'	0.88	0.26	0.10	
	44-57' weak sh, minor Qtz; estimate tot. sulfide 0.5%	2253	32-38'	0.06	0.49	0.19	Tr
	57-147 feable sh, sampling not warranted; estimate	2254	38-44'	0.26	0.03	2.49	Tr
	total sulfide 0.1%	2255	44-50'	0.12	0.42	0.24	
		2256	50-57'	0.14	0.95	0.29	
		2257	57-63'	0.06	0.33	0.05	
	[illegible] assays by Bondar Clegg, Vancouver. [illegible] copper [illegible]						

DIAMOND DRILL RECORD

PROPERTY NORTHLAND MINES LTD. HOLE No. N-1

DIP TEST		
	Angle	
Footage	Reading	Corrected
collar	-60°	

Hole No. N-1 Sheet No. 2 Lat. 0+00 N Total Depth 300'

Section 4+00 W Dep. 43 + 55 N Logged By R. Gifford

Date Begun July 16, 1967 Bearing S 29 E Claim NL 80, Area 17

Date Finished July 20, 1967 Elev. Collar 4350 Core Size AQ (1")

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
147 - 197'	CHLORITIC SCHIST: black with grey mottling, banal 5'						
	limey minor pyrite. Foliation variable, approx. 70°,						
	[illegible]						
	[illegible]						
17 - 147'	[illegible] (147-197' just less						
	fold past a lay 10-1 Kalk ar (q calc) 0-50%						
	mariolite, 1-2% pyrite(pyrrhotite). Foliation obscure;						
	lower contact 50°						
205 - 227'	CHLORITIC SCHIST: similar to unit 147-197'; argillaceous						
	fragments(light grey), weakly calcareous, minor pyrite						
	strong cleavage 70° variously crossing & paralleling						
	bedding; bedding highly crumpled. 6" quartz(calcite)						
	vein 70° @222' parallels cleavage.						
227 - 234'	FELDSPAR AUGEN SCHIST: similar to unit 197-205' but						
	slightly greater feldspar; roughly 30-50% feldspar (quartz)						
	50-70% sericite, minor pyrite(pyrrhotite). Foliation						
	80°						
234 - 300'	CHLORITIC SCHIST: similar to unit 205-227'; limey 280-300'						
	with 10-30% dark grey limestone bands 1/8" -2" thick;						
	minor pyrite (pyrrhotite) Frequent quartz (calcite)						
	veins 1" - 6" thick 267-300						

DIAMOND DRILL RECORD

PROPERTY NORTHLAND MINES LTD HOLE No. N-1

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. N-1 Sheet No. 3 Lat. Total Depth

Section Dep. Logged By

Date Begun Bearing Claim

Date Finished Elev. Collar Core Size

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
	Casing encountered [illegible] at [illegible]						
	NO DIP TEST.						
	CORE RECOVERY						
	20-24' 50%						
	100-114' 90%						
	213-221' 20%						
	224-227' 15%						
	257-264' 90%						
	292-297' 70%						
	297-300' 50%						

DIAMOND DRILL RECORD

PROPERTY ...NOVELAND MINES LTD.... HOLE No. N-2

DIP TEST		
	Angle	
Footage	Reading	Corrected
collar	-60°	

Hole No. N-2 Sheet No. 1 Lat. 310 N Total Depth 391'

Section 4000 E Dep. 3990 E Logged By H. Lockwood

Date Begun July 24, 1967 Bearing S 29 W Claim Al 43, Area 17

Date Finished August 1, 1967 Elev. Collar 4437 Core Size BQ (1")

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
	[illegible]						
[illegible]	[illegible]						
[illegible]	[illegible]						
	[illegible]						
	[illegible]; quartz @ [illegible], foliation [illegible];						
	quartz vein [illegible]. Core recovery 70%						
30-57'	GRANITIC [illegible]: medium to dark grey, highly foliated;						
	[illegible] quartz. Foliation 40°. Core recovery 90%						
57-118'	[illegible] SCHIST: similar to unit 15-30';						
	boudin structures, argillite fragments; minor pyrite &						
	carbone; occasional quartz veinlet parallel to foliation;						
	Foliation 20-40°. Core recovery 5% @ 57-67'						
118-241'	GRANITIC SCHIST: similar to unit 30-57'; occasional						
	quartz veinlets, some of which parallel to foliation;						
	siliceous @ 160-162', 191-200' light grey chert @ 167-171';						
	carbonate @ 118-123'; minor quartz veins; minor pyrite;						
	foliation 50-70° Core recovery 60% @ 125-132';						
	caving @ 120'; lost water @ 199'						
[illegible]	[illegible] SCHIST: similar to unit 15-30'; minor						
	chlorite, graphite; foliation 60°						

DIAMOND DRILL RECORD

PROPERTY [illegible] HOLE No. K-2

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. K-2 Sheet No. 2 Lot. Total Depth.

Section. Dep. Logged By.

Date Begun. Bearing Claim

Date Finished. Elev. Collar. Core Size

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
[illegible]	[illegible]						

DIAMOND DRILL RECORD

PROPERTY [illegible] HOLE No. 1-3

DIP TEST		
	Angle	
Footage	Reading	Corrected
collar	-45°	

Hole No. 1-3 Sheet No. 1 Lat. 100 N

Section 4000 E Dep. 3000 E

Date Begun August 3, 1967 Bearing S 20 E

Date Finished August 7, 1967 Elev. Collar 6392'

Total Depth 173'

Logged By K. Lockwood

Claim L. 82, Area 17

Core Size AQ (1")

Drilled by Arctomin B. C. Ltd.

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
	[illegible]						
	[illegible]						
	[illegible]						
	[illegible]						
	[illegible]						
	[illegible]						
[illegible]'	[illegible] rock pebble in diorite [illegible]	[illegible]	[illegible]'	[illegible]	[illegible]	[illegible]	
	[illegible] parallel to foliation; veinlets						
	[illegible] Core recovery 20% 42-43.0'. 80% 43.0-45'	All except	by Coast Mountain Vancouver				
	80% @ 46-51'						
92-111'	GRANITIC SOLID: grey to black; crumpled; foliation						
	80-90°; minor quartz veinlets; core recovery 30% @ 107-111'						
111-114'	CHLORITIC ARGILLITE: light green; silica 40-60%						
	chlorite 40%, talc 10%; strong foliation 40-50°						
114-139'	GRANITIC SOLID: similar to unit 92-111'; argillite						
	fragments; foliation 40-50°; core recovery 80% 114-						
	130', 0.2 @ 130-139'.						
139-173'	[illegible]						
	core [illegible] 130-173'						

DIAMOND DRILL RECORD

PROPERTY Northlake Mines Ltd.

HOLE No. N-3

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. N-3 Sheet No. 2

Section

Date Begun

Date Finished

Lat.

Dep.

Bearing

Elev. Collar

Total Depth

Logged By

Claim

Core Size

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
[illegible]	[illegible]; Collar						
	[illegible] 153.172'						

DIAMOND DRILL RECORD

PROPERTY NORTHLAND MINES LTD. HOLE No. N-4

DIP TEST		
	Angle	
Footage	Reading	Corrected
collar	-60°	

Hole No. N-4 Sheet No. 1 Lat. 105 N Total Depth 203'

Section 4050 Dep. 3590 E Logged By H. Lockwood

Date Begun August 8, 1967 Bearing N 29 W Claim L.L. 62, Area 17

Date Finished August 10, 1967 Elev. Collar 4352' Core Size AX (1")

Drilled by Wagault D.D.Ltd.

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
	NO MEASUREMENTS						
	[illegible]						
	[illegible]						
[illegible] - 42'	[illegible]						
	[illegible]						
42 - 52'	[illegible]; fractures 10-20°						
	core recovery 75%						
52 - 70'	CHLORITIC ANCILLITE: dark green; 60% chlorite, 40%						
	silica; foliation 60-70°; core recovery 75%						
70 - 97'	GRANITIC SCHIST: siliceous 82-97'; foliation 70-80°;						
	core recovery 75% @ 82-97'						
97 - 100'	CHLORITIC ANCILLITE: medium green; highly pyritic						
	@ 97'; foliation 70-80°; core recovery 70%						
100 - 119'	GRANITIC SCHIST: siliceous 100-103'; foliation 60-70°						
	core recovery 80% @ 100-103'						
119 - 125'	CHLORITIC ANCILLITE: medium green; chloritic material						
	60%, quartz 40%; pyritic in seebions; foliation 60-70°						
	core recovery 60%						

DIAMOND DRILL RECORD

PROPERTY [illegible] MINES LTD.

HOLE No. N-4

DIP TEST		
	Angle	
Footage	Reading	Corrected
collar	-60°	

Hole No. N-4 Sheet No. 2

Section

Date Begun

Date Finished

Lot 105 N

Dep.

Bearing

Elev. Collar

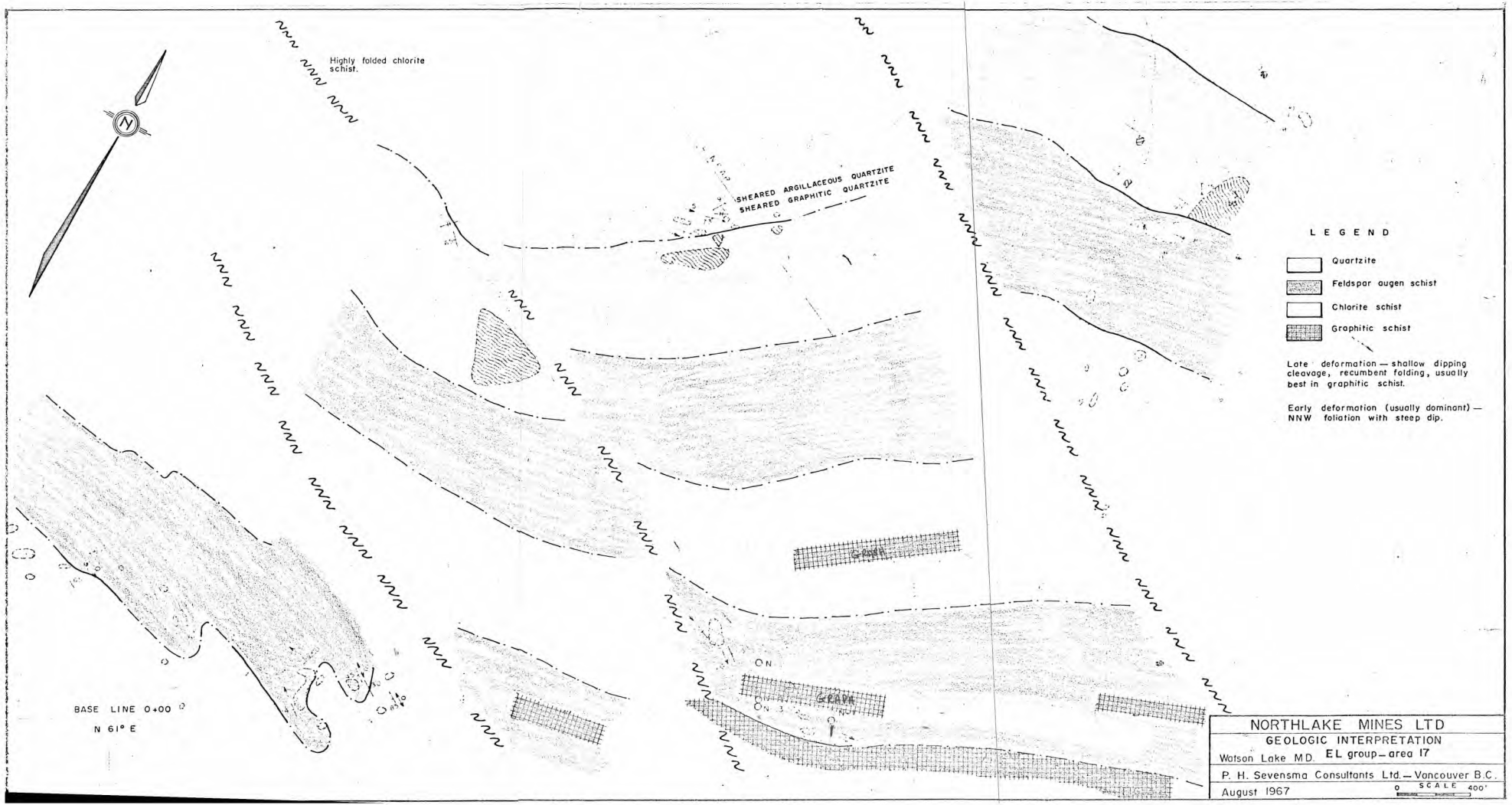
Total Depth 200'

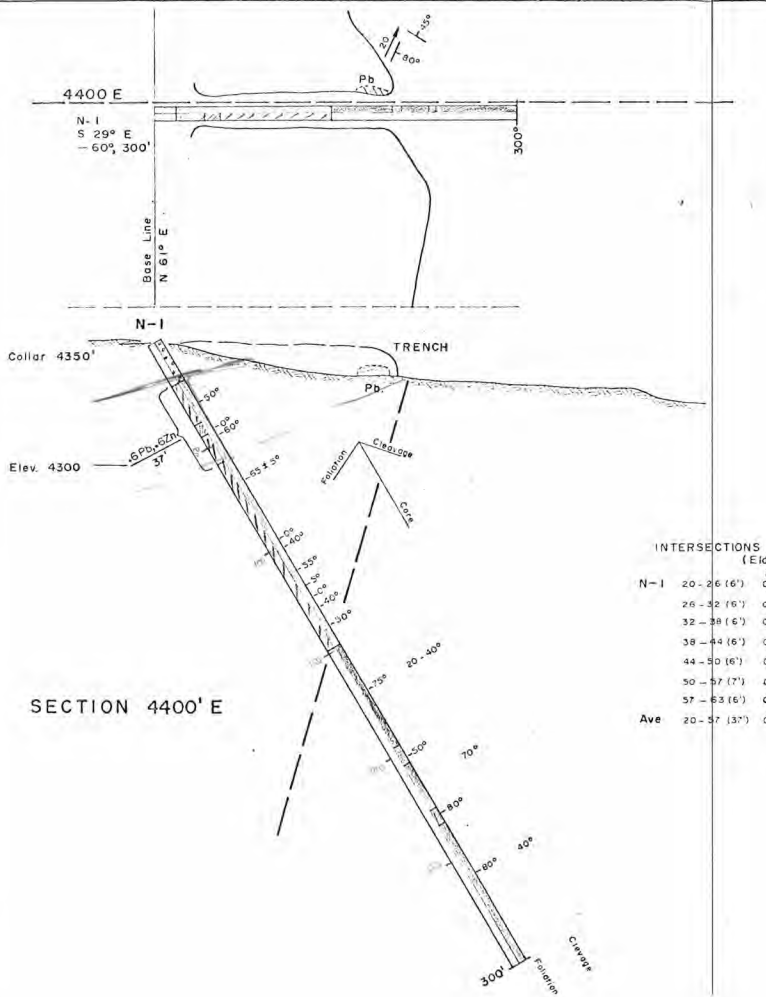
Logged By

Claim

Core Size

DEPTH	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
[illegible]	[illegible]						
	[illegible] 60°						
[illegible]	[illegible]						
	[illegible]						
[illegible]	[illegible] 70°						
	[illegible]						


Highly folded chlorite schist.
SHEARED ARGILLACEOUS QUARTZITE
SHEARED GRAPHITIC QUARTZITE
BASE LINE 0+00
N 61° E
LEGEND
Quartzite
Feldspar augen schist
Chlorite schist
Graphitic schist
Late deformation — shallow dipping cleavage, recumbent folding, usually best in graphitic schist.
Early deformation (usually dominant) — NNW foliation with steep dip.
NORTHLAKE MINES LTD
GEOLOGIC INTERPRETATION
Watson Lake M.D. EL group — area 17
P. H. Sevensma Consultants Ltd. — Vancouver B.C.
August 1967
SCALE 400'



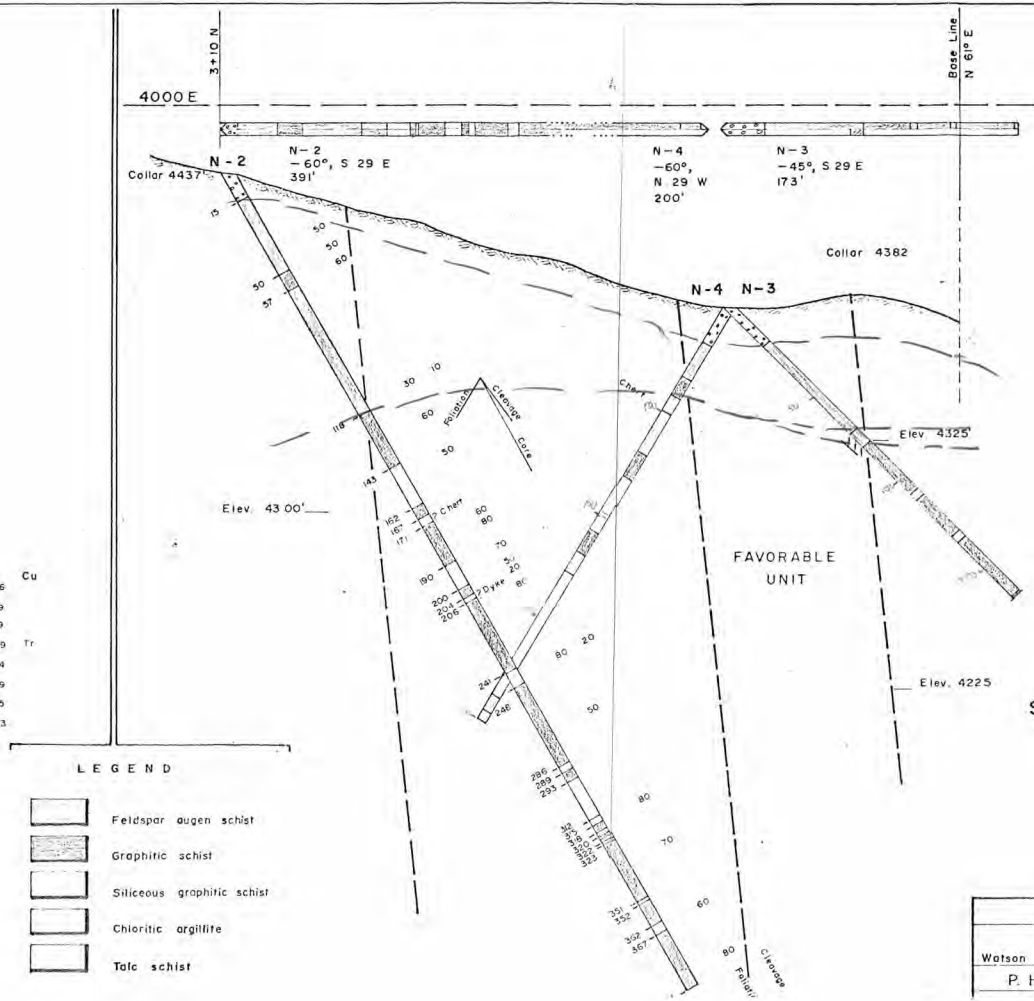
SECTION 4400' E

INTERSECTIONS (Eldridge Assay)

		Ag	Pb	Zn	Cu
N-1	20 - 26 (6')	0.32	0.74	0.36	
	26 - 32 (6')	0.8	0.36	0.19	
	32 - 38 (6')	0.6	0.48	0.19	
	38 - 44 (6')	0.28	0.82	2.49	Tr
	44 - 50 (6')	0.18	0.42	0.24	
	50 - 57 (7')	0.14	0.95	0.29	
	57 - 63 (6')	0.06	0.38	0.05	
Ave	20 - 57 (37')	0.18	0.63	0.63	

LEGEND

- Feldspar augen schist
- Graphitic schist
- Siliceous graphitic schist
- Chloritic argillite
- Talc schist

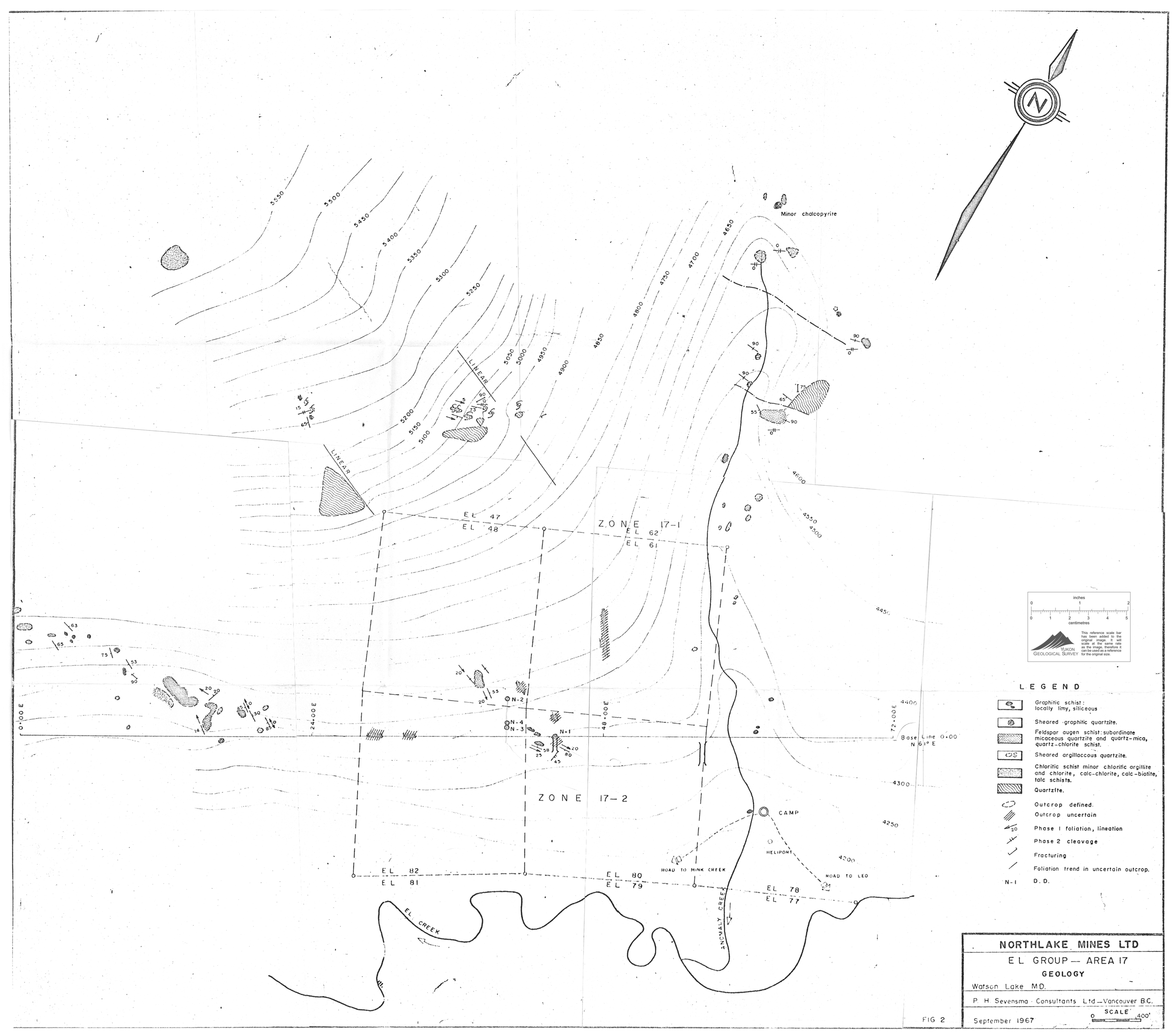


SECTION 4000' E

INTERSECTIONS

		Ag	Pb	Zn
N-2	Nil			
N-3	75-82' (7')	0.16	0.30	0.2
N-4	Nil			

NORTHLAKE MINES LTD.
EL GROUP — AREA 17
Watson Lake M.D. Drill Holes N-1 to N-4
P. H. Sevensma Consultants Ltd.—Vancouver B.C.
Scale



LEGEND

- Graphitic schist: locally limy, siliceous
- Sheared graphitic quartzite.
- Feldspar augen schist: subordinate micaceous quartzite and quartz-mica, quartz-chlorite schist.
- Sheared argillaccous quartzite.
- Chloritic schist minor chloritic argillite and chlorite, calc-chlorite, calc-biotite, talc schists.
- Quartzite.
- Outcrop defined.
- Outcrop uncertain
- Phase 1 foliation, lineation
- Phase 2 cleavage
- Fracturing
- Foliation trend in uncertain outcrop.
- N-1 D. D.

NORTHLAKE MINES LTD

E L GROUP — AREA 17

GEOLOGY

Watson Lake M.D.

P. H. Sevensma · Consultants Ltd — Vancouver B.C.

September 1967

SCALE 0 400'

FIG 2

INSET "B"

25 25 32 32 28 15 19 25 26 26 23 21 26 26 28 32 23 25 23

50+00N

SEE INSET "B"

48+00 E | 52+00 E | 56+00 E | 59+00 E | 64+00 E | 68+00 E | 72+00 E | 76+00 E | 80+00 E | 84+00 E | 88+00 E

52 N | 48 | 44 | 40 | 36 | 32 | 28 | 24 | 20 | 16 | 12 | 8 | 4

0+00 E | 4+00 E | 8+00 E | 12+00 E | 16+00E | 20+00E | 24+00E | 28+00E | 32+00E | 36+00E | 40+00E | 44+00E

ZONE 17—1

ZONE 17—2

Base Line 0+00 N 61 E

ROAD

CREEK

EL CREEK

ANOMALY

CAMP

SEE INSET "A"

ROAD TO LEO

INSET "A"

23 CREEK

52 13 16 25 26 25 8 16 21 36 34 19 21 29

ROAD TO LEO

LEGEND

- 15 Soil — 1967
- 25 Silt — 1967
- 385 Silt — 1966
- 6530 → 1966—Flag No. observed.
- ✳ Rock

Analysis by Atomic Absorbtion.

Values in p.p.m.

inches 0 1 0 1 2 centimetres

This reference scale bar has been added to the original image. It will scale in the same ratio as the original. It can be used as a reference for the original size.

NORTHLAKE MINES LTD.

EL GROUP — AREA 17

GEOCHEMISTRY— COPPER

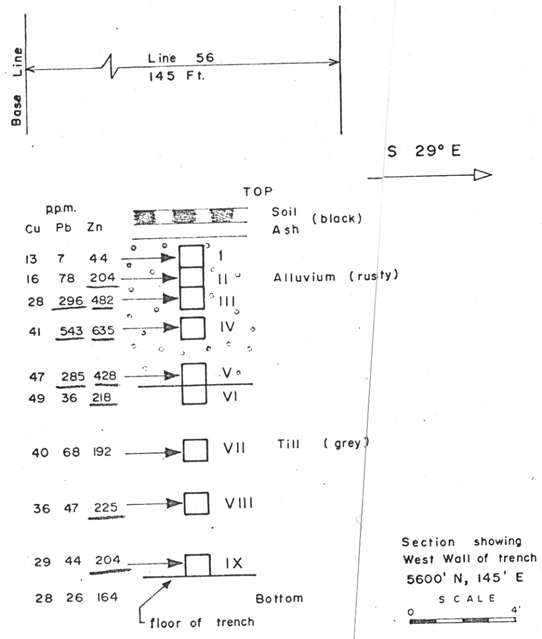
Watson Lake M.D.

P. H. Sevensma Consultants Ltd — Vancouver B.C.

July 1967 — N.T.S. - 105 - G

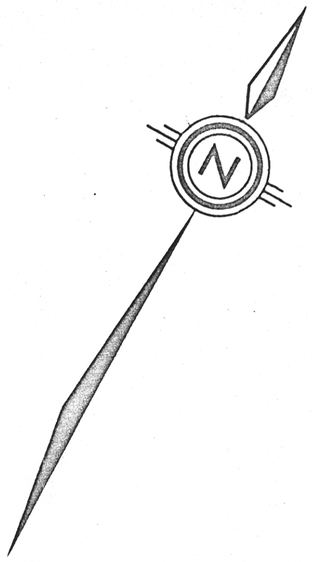
SCALE 0 400

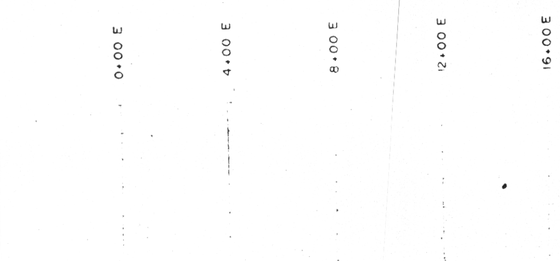
FIG 4



Section showing
West Wall of trench
5600' N, 145' E

SCALE
0 4'





LEGEND

15 Soil — 1967

Analysis by Atomic Absorption.
Values in p.p.m

ZONE 17—1

ZONE 17—2

See vertical section

CAMP

E.L. CREEK

ANOMALY CREEK

SEE INSET "A"

ROAD TO LEO

inches
centimetres
This reference scale bar has been added to the original image. It will scale at the same ratio as the original drawing. It can be used as a reference for the original size.

NORTHLAKE MINES LTD.

E L GROUP — AREA 17

GEOCHEMISTRY— L E A'D

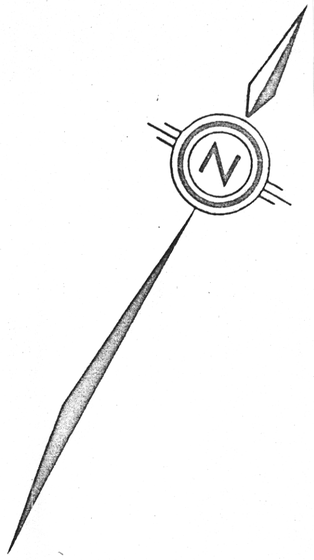
Watson Lake M.D.

P. H. Sevensma Consultants Ltd.—Vancouver B.C.

July 1967 — N.T.S.-105-G

SCALE 0 400

FIG. 5



ZONE 17 — 1

ZONE 17 — 2

Base Line 0+00 N 61° E

INSET "A"

LEGEND

– 15 Soil — 1967

Analysis by Atomic Absorption

Values in p.p.m.

NORTHLAKE MINES LTD.

EL GROUP — AREA 17

GEOCHEMISTRY — ZINC

Watson Lake M.D.

P. H. Sevensma Consultants Ltd. – Vancouver B.C.

July 1967 NTS - 105 - G

SCALE 400

FIG. 6