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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.

TABLE OF CONTENTS

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 an 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 schistThe 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.

(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

CORANEX LIMITED
1521 PEMBERTON AVE.
NORTH VANCOUVER, B.C.

APPENDIX A

ANALYTICAL METHODS USED IN GEOCHEMICAL ANALYSIS FOR SOIL AND SILT SAMPLES

SAMPLES PREPARATION

(1) Geochemical silt or soil samples are collected in the high wet-strength 3½" 6½" Kraft paper bags.

(2) Samples are dried in a ventilated infer-red heating lamps oven.

(3) The dried samples are sifted by using a 80 mesh stainless steel sieve. The plus 80 meshfractions are rejected., and the minus 80 mesh fractions are transfered into a new bag for analysis later.

ANALYTICAL METHOD USED IN GEOCHEMICAL ANALYSIS FOR ACID SOLUBLE LEAD IN SOIL AND SILT SAMPLES

METHOD

(1) Digestion

(a) 1.00 gram of the -80 mesh samples.

(b) Samples are heated in a sand bath with nitric and hydrochloric acids.

(c) The digested samples are diluted with water to a fixed volume.

(2) Lead Analysis

(a) ATechtron Model 4 Atomic Absorption Spectrophotometer with a lead hollow cathod lamp is used for determination of lead.

(b) The lead results in parts per million are calculated by comparing a set of lead standards to calibrated the Atomic Absorption unit.

REFERENCES:

(a) J. W. Robinson: Atomic Absorption Spectroscopy

(b) The Manual of Analytical Method for Atomic Absorption Spectrophotometer - Perkin-Elmer Corp.

(c) Atomic Absorption Newsletters - Perkin-Elmer Corp.

(d) Sydney Abbey: Analysis of Rock & Minerals by Atomic Absorption Spectroscopy. Geological Survey of Canada Paper 67-37

(e) N. H. Furman: Standard Methods of Chemical Analysis. 6th Ed.

ANALYTICAL METHOD USED IN GEOCHEMICAL ANALYSIS FOR ACID SOLUBLE COPPER IN SOIL AND SILT SAMPLES

METHOD

(1) Digestion

(a) 1.00 gram of the -80 mesh samples.

(b) Samples are heated in a sand eith nitric and perchloric acids, later with hydrochloric acid.

(c) The digested samples are diluted with water to a fixed volume.

(2) Copper Analysis

(a) A Techtron Model 4 Atomic Absorption Spectrophotometer with a copper hollow cathod lamp is used for determination of copper.

(b) The copper results in parts per millon are calculated by comparing a set of copper standards to calibrated the Atomic Absorption unit.

REFERENCES:

(a) J. W. Robinson: Atomic Absorption Spectroscopy

(b) N. H. Furman: Standards Methods of Chemical Analysis. 6th Ed.

(c) Sydney Abbey: Analysis of Rock & Minerals by Atomic Absorption Spectroscopy. Geological Survey of Canada Paper 67-37

(d) The Manual Of Analytical Methods for Atomic Absorption Spectrophotometer Perkin- Elmer Corp.

(e) Atomic Absorption Newsletters. Perkin-Elmer Corp.

ANALYTICAL METHOD USED IN GEOCHEMICAL ANALYSIS OF ACID SOLUBLE ZINC IN SOIL AND SILT SAMPLES

METHOD

(1) Digestion

(a) 1.00 gram of the -80 mesh samples.

(b) Samples are heated in a sand bath with nitric and perchloric acids later with hydrochloric acid.

(c) The digested samples are diluted with water to a fixed volume.

(2) Zinc Analysis

(a) A Techtron Model4 Atomic Absorption Spectrophotometer with a zinc hollow cathod lamp is used for determination of zinc.

(b) The Zinc results in parts per million are calculated by comparing a set of the zinc standards to calibrated the Atomic Absorption unit.

REFERENCES

(a) J. W. Robinson: Atomic Absorption Spectroscopy.

(b) N. H. Furman: Standards Methods of Chemical Analysis 6th Ed.

(c) Sydney Abbey: Analysis of Rock & Minerals by Atomic Absorption Spectroscopy. Geological Survey pf Canada Paper 67-37

(d) The Manual of Analytical Methods for Atomic Absorption Spectrophotometer - Perkin-Elmer Corp.

(e) Atomic Absorption Newsletters. Perkin-Elmer Corp.

APPENDIX B

Personnel employed in performing geological and geochemical work on the HOO, EL, LEO and Z mineral claims in the period March 15 to September 30, 1967.

R. G. Gifford	- 715 - 850 West Hastings St., Vancouver 1, B.C.
H. S. Aikins	- 715 - 850 West Hastings St., Vancouver, 1, B.C.
N. Lockwood	- 715 - 850 West Hastings St., Vancouver, 1, B.C.
S. Milne	- Vancouver, B.C.
T. Martin	- c/o Parsons Construction, Whitehorse, Y.T.

) STATUTORY DECLARATION RELATING TO EXPENDITURES
CANADA) ON GEOLOGICAL AND GEOCHEMICAL SURVEYS, DIAMOND
) DRILLING, LINE CUTTING, AND ROAD CONSTRUCTION
YUKON TERRITORY) ON CERTAIN MINERAL CLAIMS LOCATED IN THE
) WATSON LAKE MINING DIVISION

I, ROBERT GORDON GIFFORD, Professional Engineer of the City of Rossland , in the Province of British Columbia, DO SOLEMNLY DECLARE:

1. That I am the person who prepared a geological and geochemical report as a result of surveys carried out on certain mineral claims by Northlake Mines Ltd.

2. That copies of the said report are being filed with the Mining Recorder at Watson Lake, Y. T.

3. That attached hereto and marked with a letter "A" upon which I have signed my name at the time of declaring hereof, is a statement of expenditures incurred in connection with the geological and geochemical survey of the said claims.

AND I MAKE this solemn declaration conscientiously believing it to be true and knowing it is the same force and effect as if made under oath and by virtue of the Canada Evidence Act.

DECLARED before me at the)
City of Vancouver, in the)
Province of British Columbia)
this 23 day of January)
, A.D. 1968)

R G Gifford

A Notary Public in and for the
Province of British Columbia

1967 EXPLORATION EXPENDITURES
Hoo, EL, Leo, and Z MINERAL CLAIMS
WATSON LAKE M.D.

Distribution of Costs per Northlake Mines Ltd. Statement of Expenditures as at November 30, 1967

SUPPORT EXPENSES			
Transportation:	Aircraft Rental		$ 8,338.50
	Equipment Rental		15,757.56
Camp Operation			19,390.23
		TOTAL	$43,486.29
GEOLOGICAL/GEOCHEMICAL EXPENSES			
	Consultants Fees		$21,884.32
	Geological		12,421.72
	Geochemical		3,522.29
			$37,828.33
Pro-rated Support Cost @47%			20,400.00
		TOTAL	$58,228.33
ROAD BUILDING EXPENSES			
	Road Building		$17,876.69
Pro-rated Support Cost @13%			5,650.00
		TOTAL	$23,526.69
LINE CUTTING EXPENSES			
	Line Cutting		$ 2,316.26
Pro-rated Support Cost @6%			2,610.00
		TOTAL	$ 4,926.26
DRILLING EXPENSES			
	Diamond Drilling (1,064')		$15,017.59
Pro-rated Support Cost @13%			5,650.00
		TOTAL	$20,667.59 (i.e. $20/ft.)

R. G. Gifford, P. Eng.

This is Exhibit "A" to the Statutory Declaration of R. G. Gifford, declared before me this 23 day of January A.D. 1968.

A Commissioner for taking Affidavits

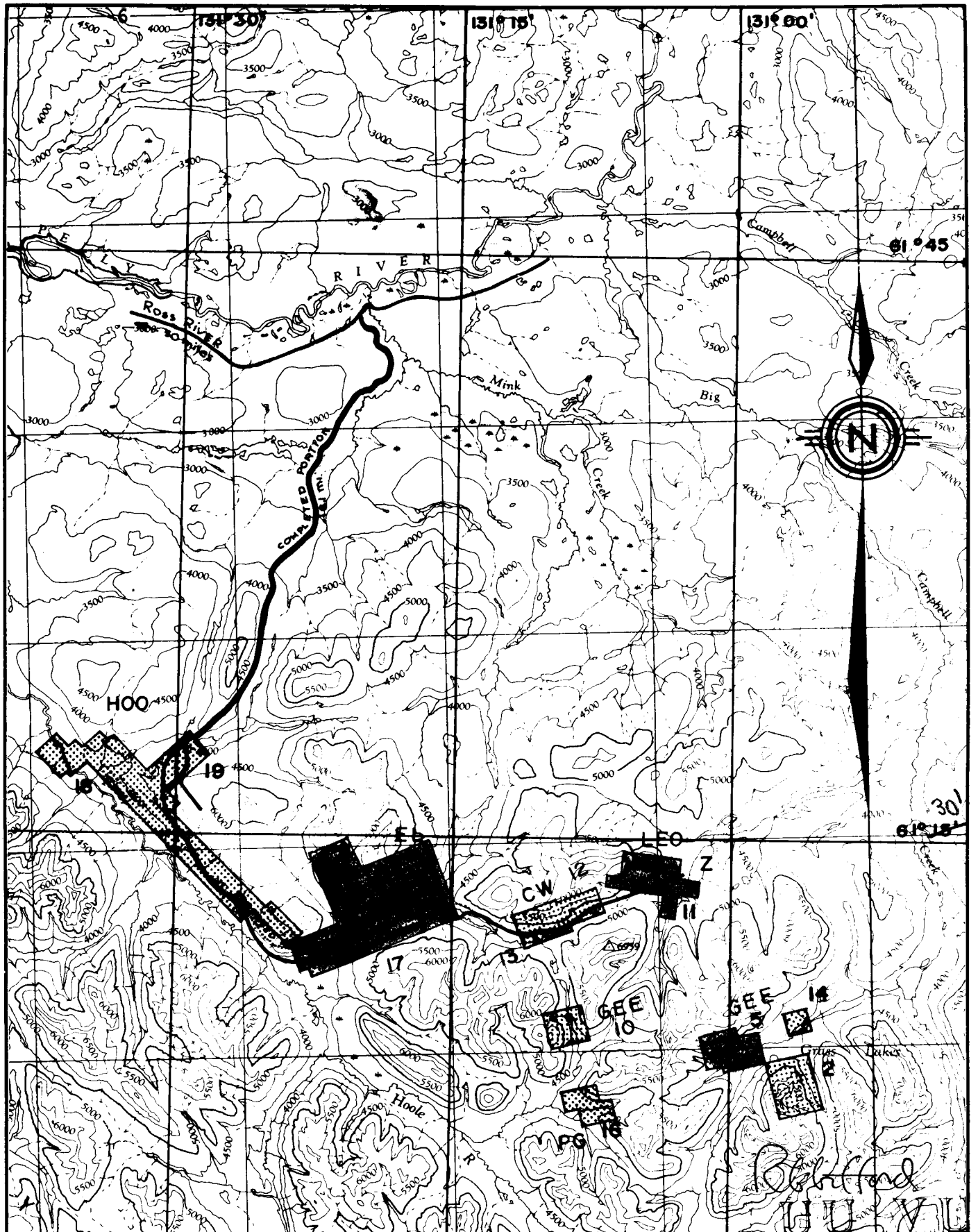
A Notary Public in and for the
Province of British Columbia

NORTHLAKE MINES LIMITED

STATEMENT OF EXPLORATION AND DEVELOPMENT EXPENDITURES
AS AT NOVEMBER 30, 1967

	November 1967	January 1 to October 31	Total 1967
Management Fees & Expenses		3,108.26	3,108.26
Consultants Fees & Expenses	1,421.32	20,463.00	21,884.32
Engineering, Geological Salaries & Expenses	408.93	12,012.79	12,421.72
Aircraft Rental		8,338.50	8,338.50
Diamond Drilling		15,017.59	15,017.59
Surveying, Geophysical & Geochemical		3,522.29	3,522.29
Camp Operating & Transportation	34.00	19,356.23	19,390.23
Line cuttingq		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 & Trenching		6,346.23	6,346.23
Equipment Rental		15,757.56	15,757.56
Administration & general	489.41	6,447.52	6,936.93
Legal & audit		8,151.12	8,151.12
	2,353.66	149,386.63	151,740.29
Less: Road Refund	-	8,000.00	8,000.00
Sundry Revenue	705.44	1,710.57	2,416.01
	1,648.22	139,676.06	141,324.28
Balance at December 31, 1966			272,166.81
Balance at November 30, 1967			413,491.09

December 12, 1967



LEGEND

10 .... Area number

FIG. 1

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

Minor chalcopyrite

LINEAR

LINEAR

ZONE 17-1

ZONE 17-2

EL 47
EL 48

EL 62
EL 61

EL 82
EL 81

EL 80
EL 79

EL 78
EL 77

0+00 E

24+00 E

48+00 E

72+00 E

Base Line 0+00
N 61° E

N-1
N-2
N-3
N-4

CAMP

HELIPORT

ROAD TO MINK CREEK

ROAD TO LEO

EL CREEK

ANOMALY CREEK

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.

R G Griffiths

NORTHLAKE MINES LTD

EL GROUP — AREA 17

GEOLOGY

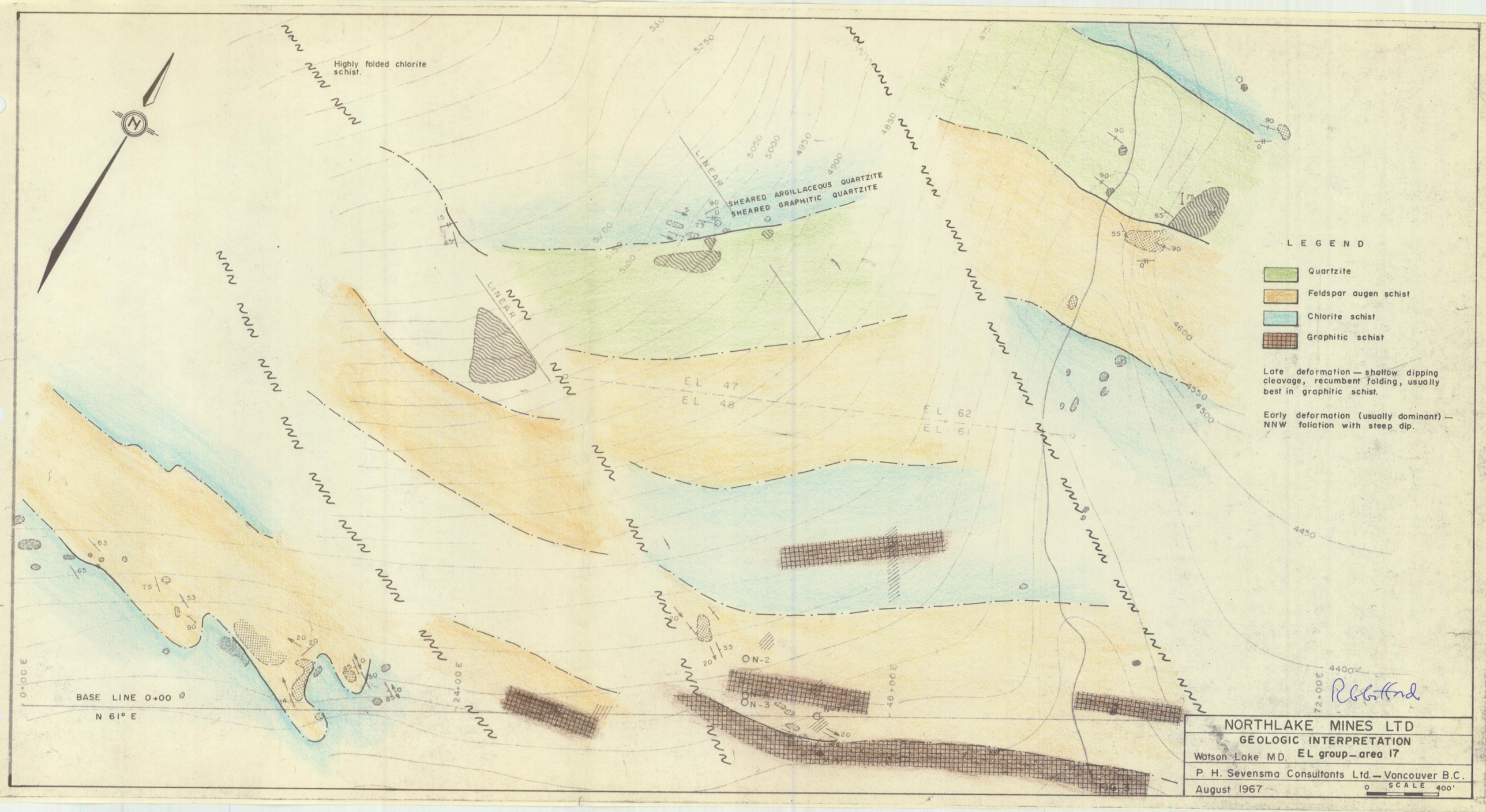
Watson Lake M.D.

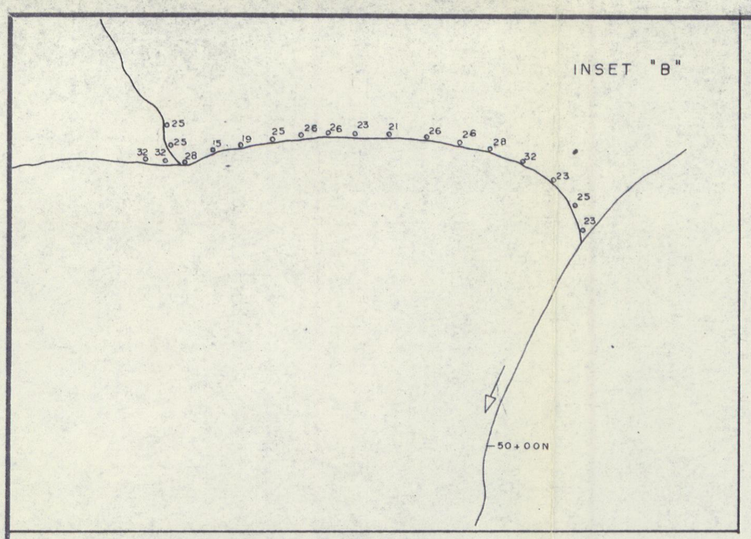
P. H. Sevensma Consultants Ltd — Vancouver B.C.

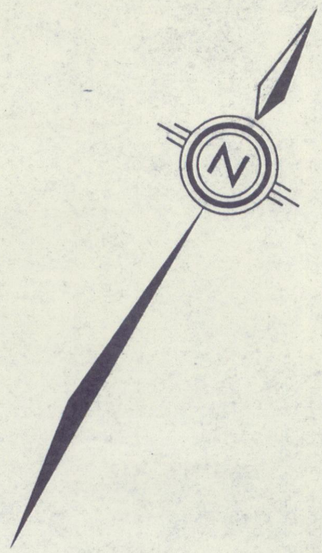
September 1967

SCALE 0 400'

FIG 2


Highly folded chlorite schist.
LINEAR
SHEARED ARGILLACEOUS QUARTZITE
SHEARED GRAPHITIC QUARTZITE
LINEAR
EL 47
EL 48
EL 62
EL 61
ON-2
ON-3
BASE LINE 0+00
N 61° E
0+00E
24+00E
48+00E
72+00E
4400
4450
4500
4550
4600
4800
4850
4900
4950
5000
5050
5100
5150
5200
5250
5300
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. — Voncouver B.C.
August 1967
0 SCALE 400'
FIG 3





SEE INSET "B"

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

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+00 E 20+00E 24+00E 28+00E 32+00E 36+00E 40+00E 44+00E

Base Line 0+00 N 61 E

ZONE 17—1

ZONE 17—2

ROAD

CAMP

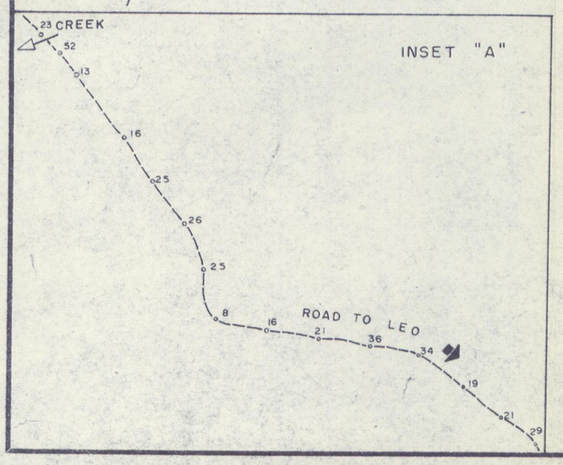
EL CREEK

ANOMALY CREEK

6529 6530 6539

SEE INSET "A"

ROAD TO LEO



LEGEND

- 15 Soil — 1967
- O 25 Silt — 1967
- O 385 Silt — 1966
- 6330 → 1966 — Flag No. observed
- ✳ Rock

Analysis by Atomic Absorbtion.

Values in p.p.m.

FIG. 4

NORTHLAKE MINES LTD.

EL GROUP — AREA 17

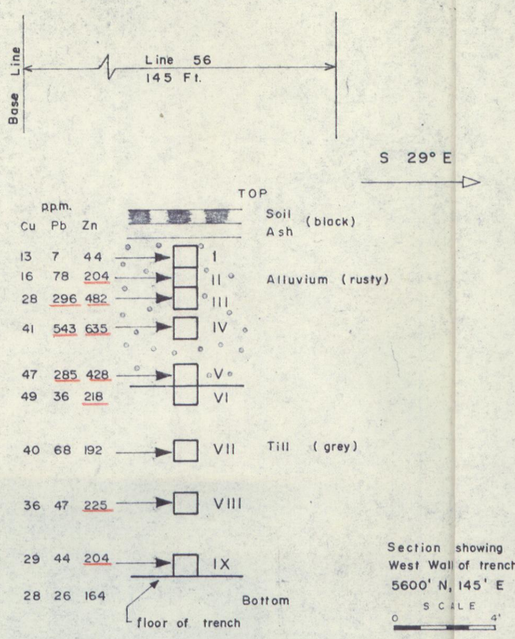
GEOCHEMISTRY — COPPER

Watson Lake M.D.

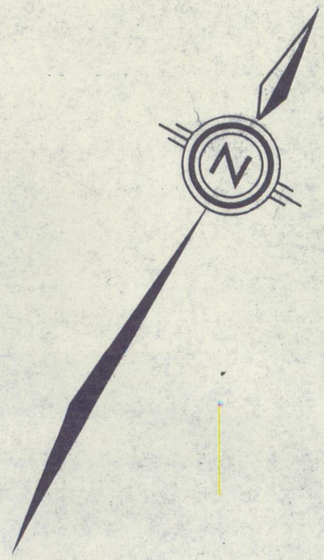
P. H. Sevensma Consultants Ltd. — Vancouver B.C.

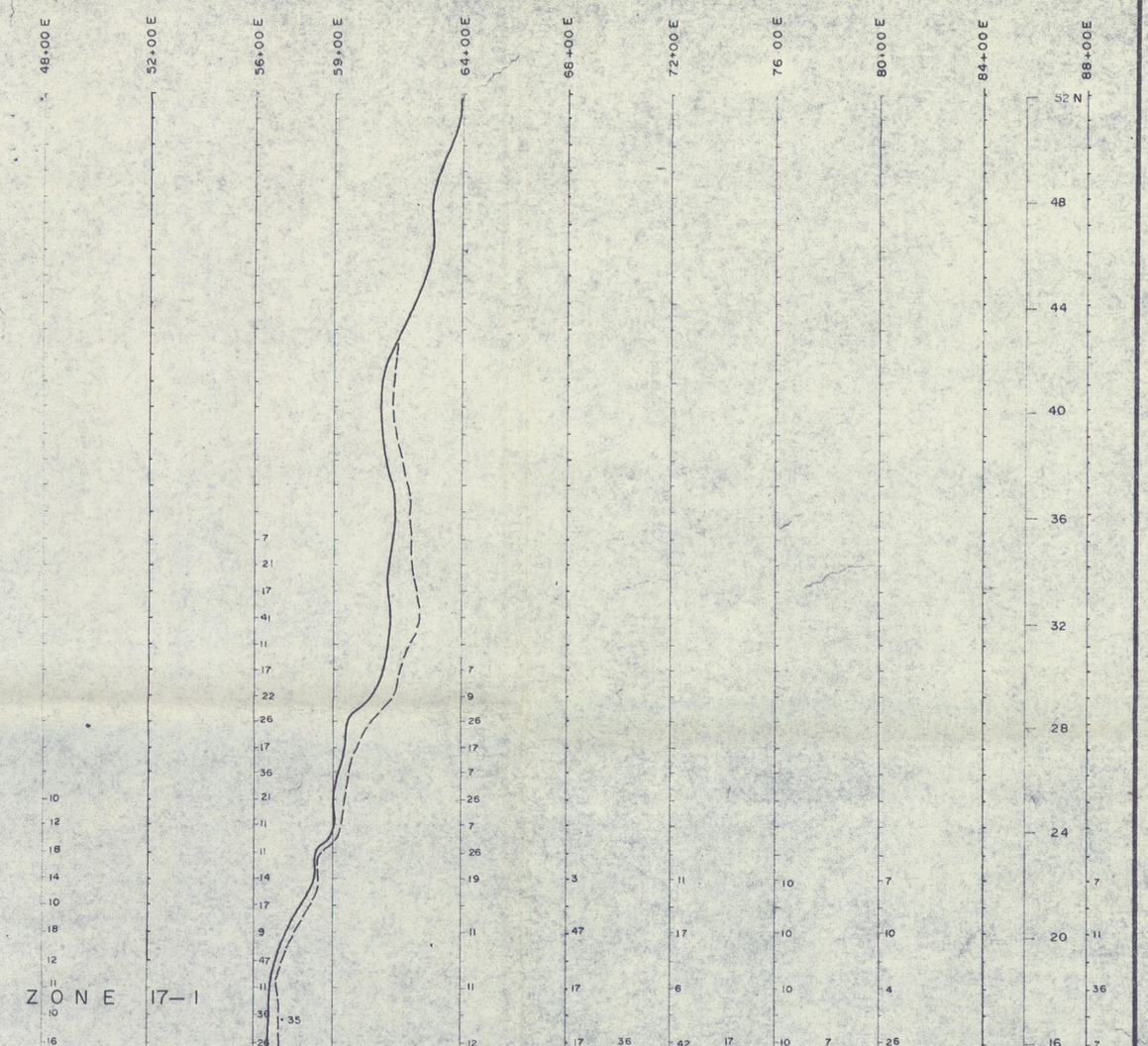
July 1967 — N.T.S. - 105 - G

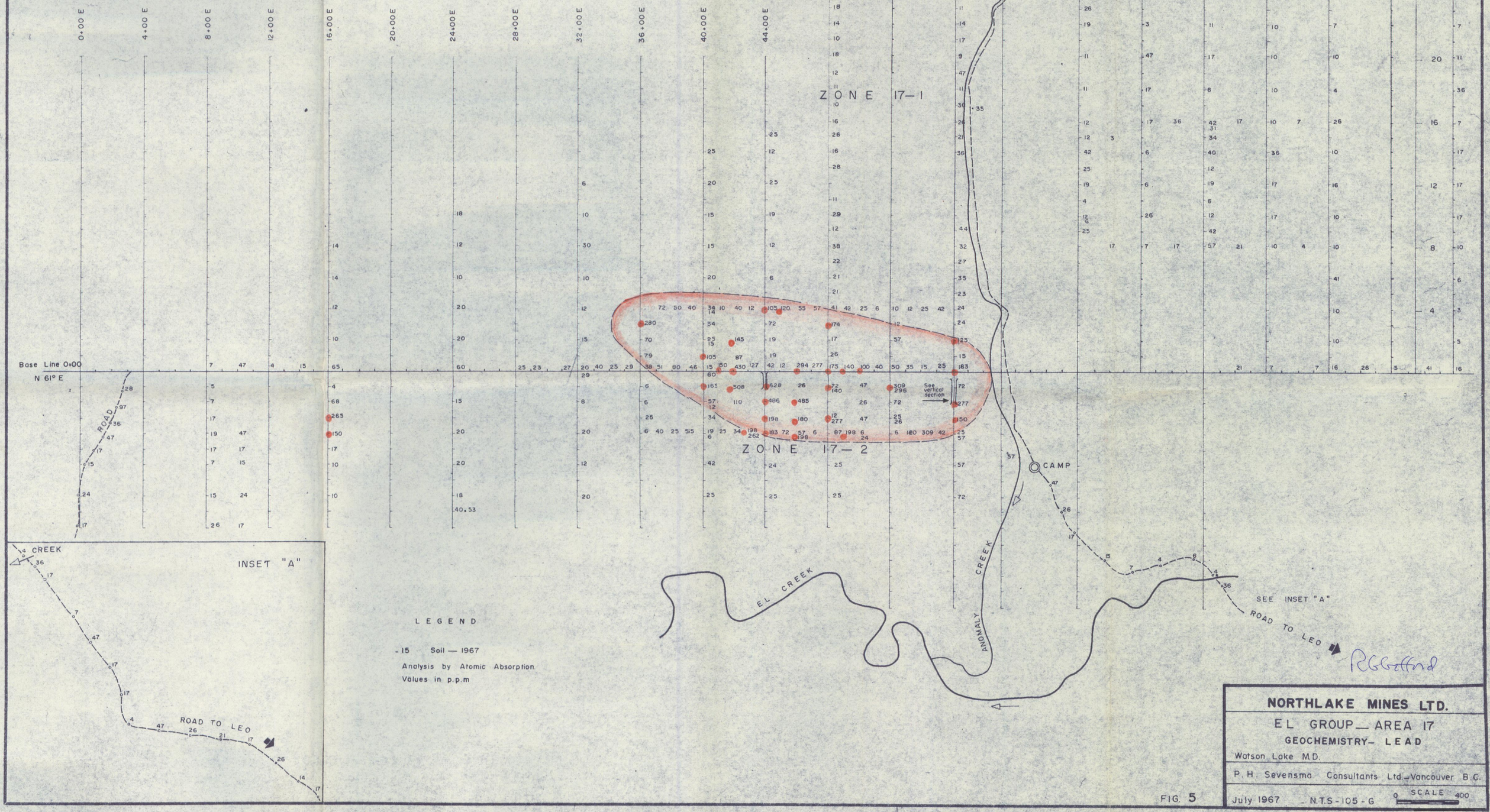
SCALE 0 400



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

FIG. 5

R G Gifford

NORTHLAKE MINES LTD.

EL GROUP — AREA 17

GEOCHEMISTRY— LEAD

Watson Lake M.D.

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

July 1967 N.T.S.-105-G SCALE 0 400

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+00 E 44+00E

48+00 E 52+00 E 56+00 E 59+00 E 64+00 E 68+00E 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

Base Line 0+00 N 61° E

ROAD

ZONE 17 — 1

ZONE 17 — 2

CAMP

EL CREEK

ANOMALY CREEK

SEE INSET "A"

ROAD TO LEO

INSET "A"

78 CREEK

ROAD TO LEO

LEGEND

– 15 Soil — 1967

Analysis by Atomic Absorption

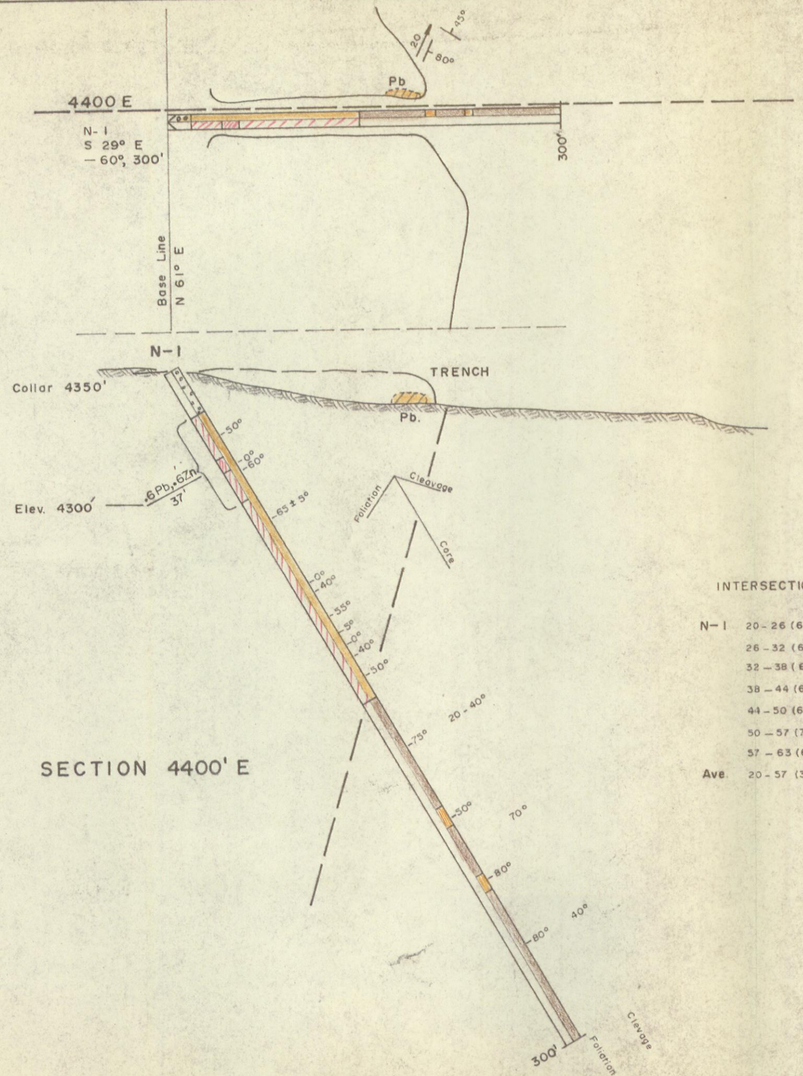
Values in p.p.m.

R.G. Gafford

NORTHLAKE MINES LTD.	
EL GROUP — AREA 17	
GEOCHEMISTRY — ZINC	
Watson Lake M.D.	
P. H. Sevensma Consultants Ltd. – Vancouver B.C.	
July 1967	N.T.S. - 105 - G

SCALE 0 400

FIG. 6



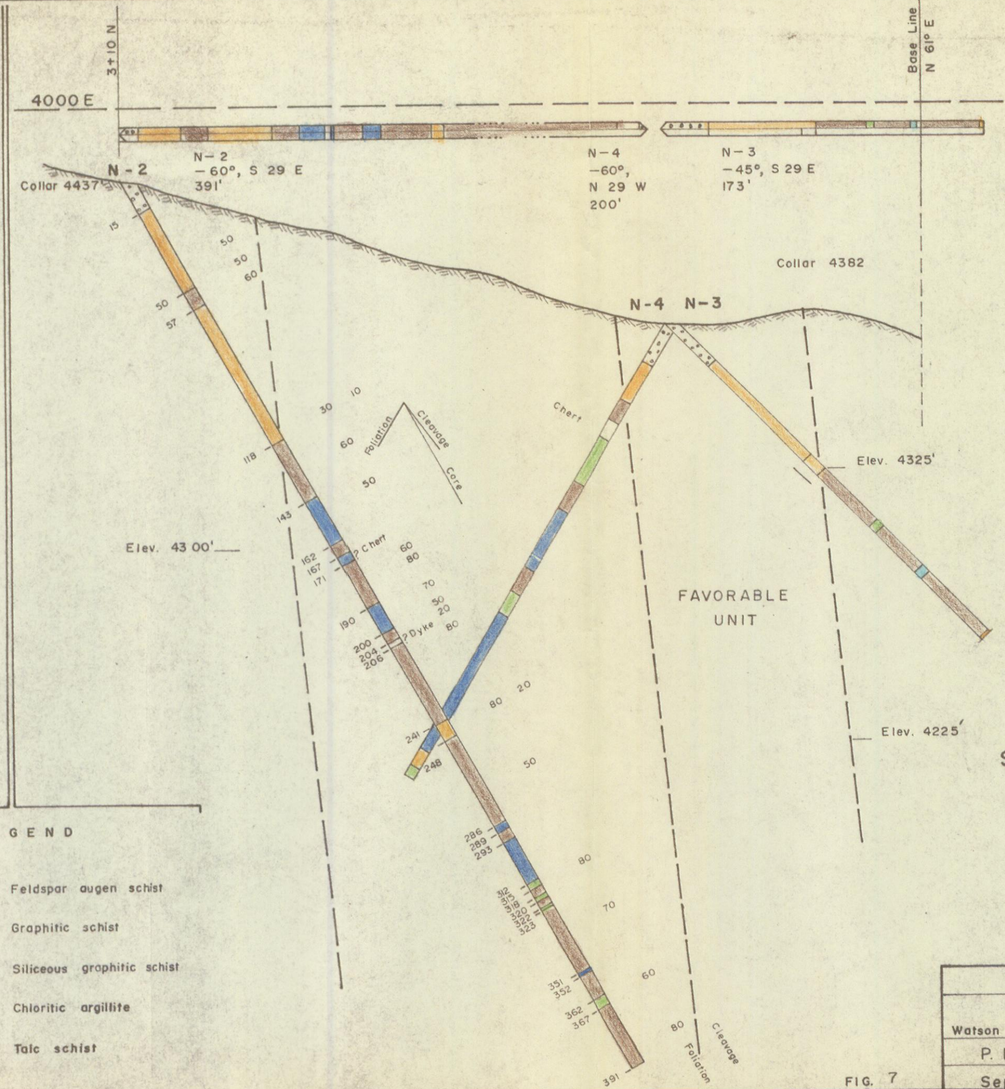
SECTION 4400' E

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



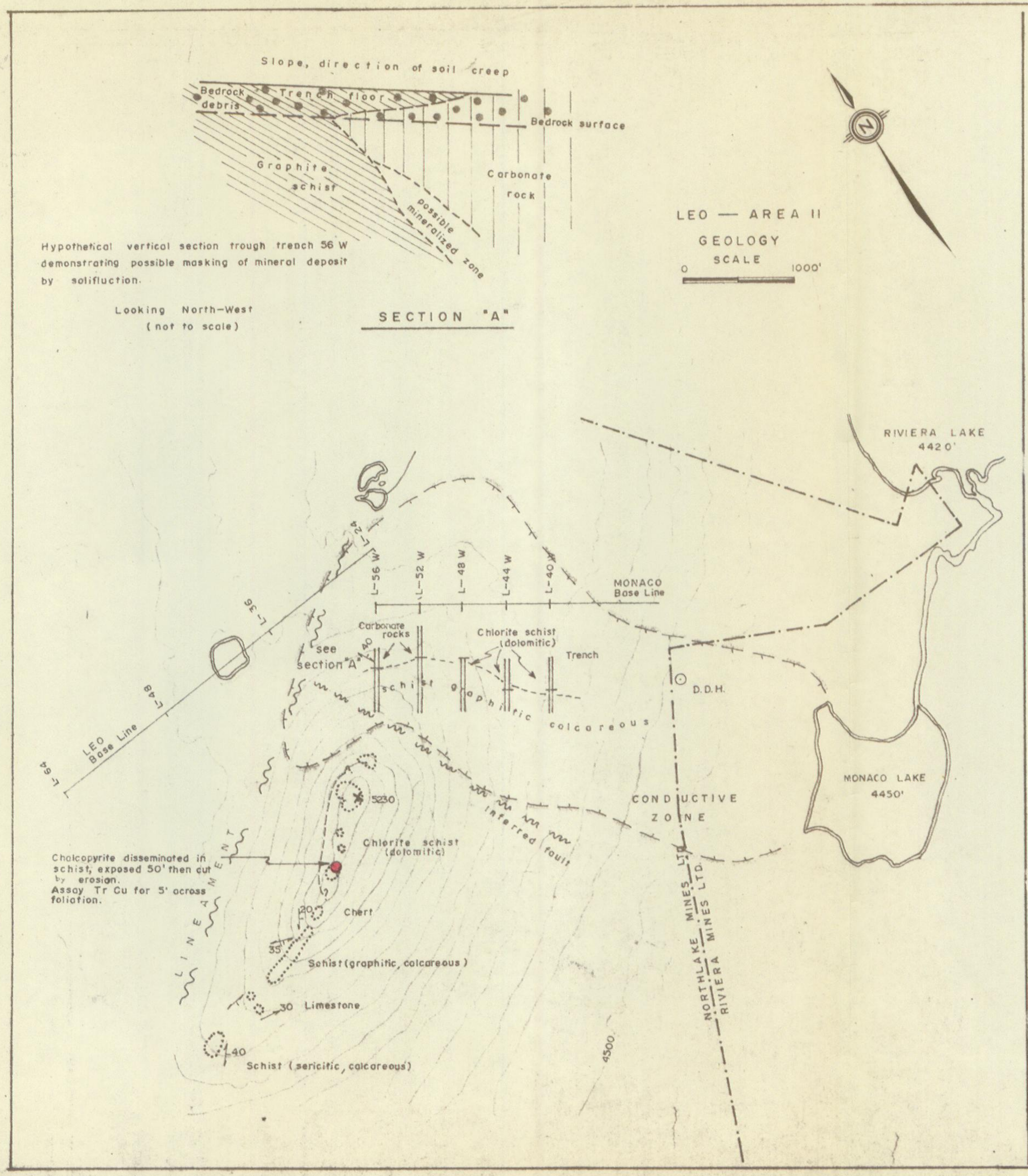
SECTION 4000' E

INTERSECTIONS

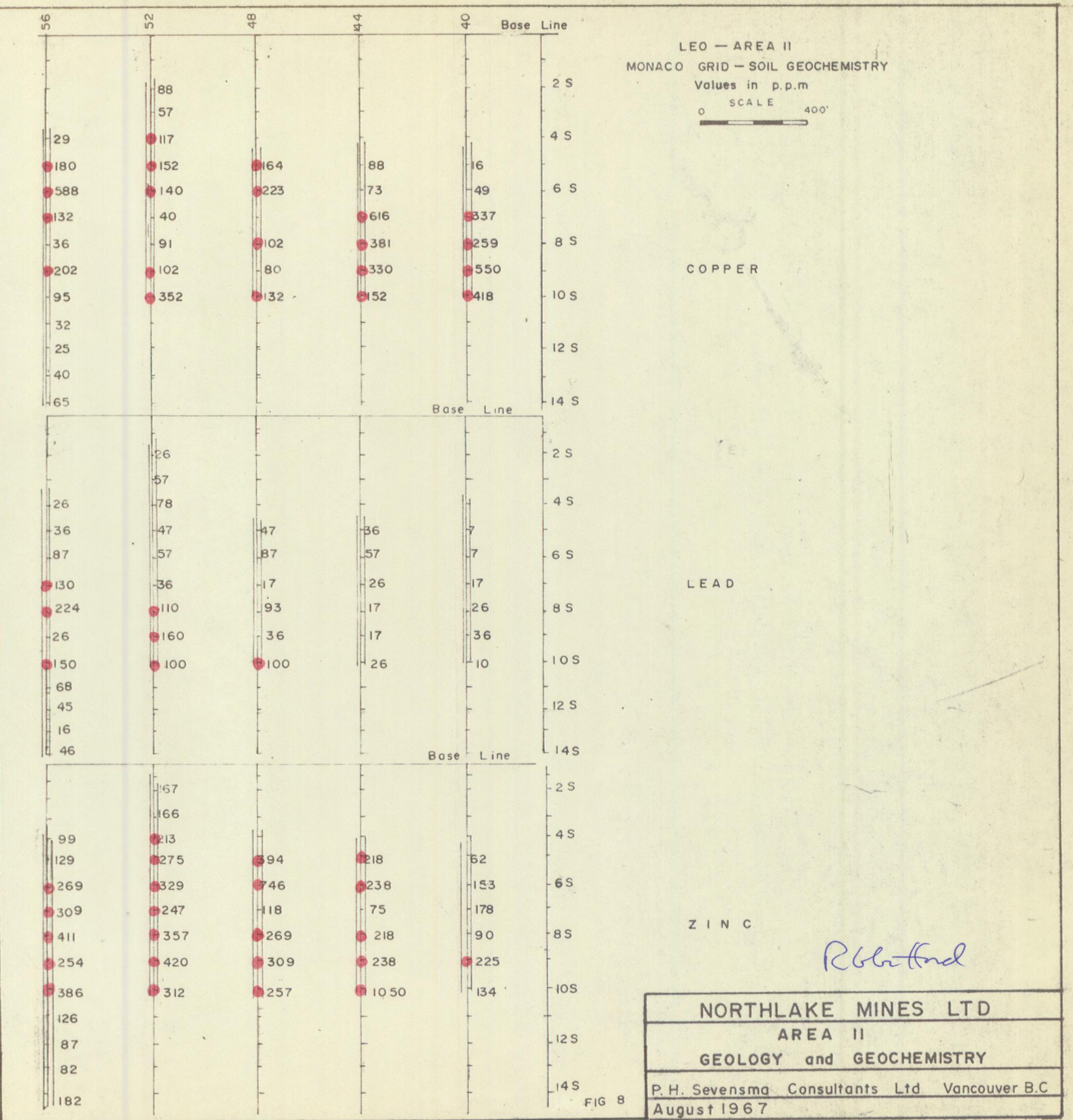
		Ag	Pb	Zn
N-2	Nil			
N-3	75-82' (7')	0.16	0.30	0.2
N-4	Nil			

FIG. 7

NORTHLAKE MINES LTD.
EL GROUP — AREA 17
Drill Holes N-1 to N-4
Watson Lake M.D.
P. H. Sevensma Consultants Ltd.—Vancouver B.C.
September 1967
Scale 40'



Slope, direction of soil creep
Bedrock debris
Trench floor
Bedrock surface
Graphite schist
Carbonate rock
possible mineralized zone
Hypothetical vertical section trough trench 56 W demonstrating possible masking of mineral deposit by solifluction.
Looking North-West (not to scale)
SECTION "A"
LEO — AREA II
GEOLOGY
SCALE
0
1000'
RIVIERA LAKE 4420'
MONACO Base Line
L-56 W
L-52 W
L-48 W
L-44 W
L-40 W
Carbonate rocks
Chlorite schist (dolomitic)
Trench
see section A
schist graphitic calcareous
D.D.H.
LEO Base Line
CONDUCTIVE ZONE
inferred fault
MONACO LAKE 4450'
5230
Chlorite schist (dolomitic)
Chalcopyrite disseminated in schist, exposed 50' then cut by erosion. Assay Tr Cu for 5' across foliation.
Chert
Schist (graphitic, calcareous)
Limestone
Schist (sericitic, calcareous)
LINEAMENT
NORTHLAKE MINES LTD.
RIVIERA MINES LTD.
4500



LEO — AREA II
MONACO GRID — SOIL GEOCHEMISTRY
Values in p.p.m
SCALE
0
400'
Base Line
56
52
48
44
40
COPPER
LEAD
ZINC
2 S
4 S
6 S
8 S
10 S
12 S
14 S
29 180 588 132 36 202 95 32 25 40 65
88 57 117 152 140 40 91 102 352
164 223 102 80 132
88 73 616 381 330 152
16 49 337 259 550 418
26 36 87 130 224 26 150 68 45 16 46
26 57 78 47 57 36 110 160 100
47 87 17 93 36 100
36 57 26 17 17 26
7 7 17 26 36 10
99 129 269 309 411 254 386 126 87 82 182
167 166 213 275 329 247 357 420 312
594 746 118 269 309 257
218 238 75 218 238 1050
62 153 178 90 225 134

FIG 8

NORTHLAKE MINES LTD

AREA II

GEOLOGY and GEOCHEMISTRY

P. H. Sevensma Consultants Ltd Vancouver B.C

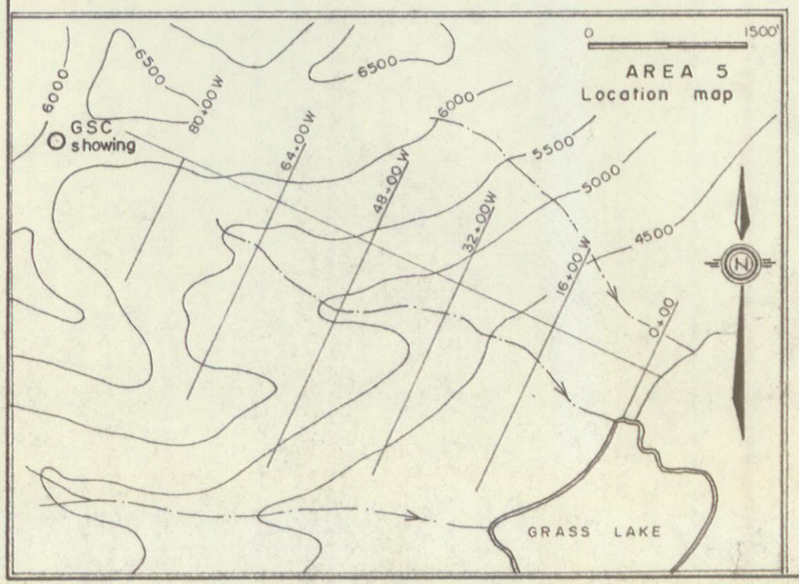
August 1967

GSC showing
sulfide vein (8")
Grab sample 0.005 – Au, 0.06-Ag

88+00 W
84+00 W
80+00 W
76+00 W
72+00 W
68+00 W
64+00 W
60+00 W
56+00 W
52+00 W
48+00 W

Base Line 115°

AREA 5
Location map



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'