

#00036

GEOLOGICAL - GEOCHEMICAL EVALUATION REPORT

ON THE

NAD CLAIM GROUP

(NAD 41-62 inclusive)

MAYO MINING DISTRICT
Yukon Territory

N.T.S. 106-C-7/8

(64°23'N, 132°30'W)

June 27 - July 14, 1974

FOR

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

Royal Centre, P.O. Box 11117
1055 West Georgia Street
Vancouver, B.C.

BY

C. M. Hamilton, P.Eng.
Geologist

CORDILLERAN ENGINEERING LIMITED
1418 - 355 Burrard Street
Vancouver, B.C. V6C 2G8

OCTOBER, 1974

*N.M.E.A.P.
Received
Jan 14, 1975.*



TABLE OF CONTENTS

	PAGE
INTRODUCTION	1
GEOLOGY	5
GEOCHEMISTRY	8
EVALUATION	12

APPENDICES

<u>APPENDIX "A"</u>	References	
<u>APPENDIX "B"</u>	Personnel	
<u>APPENDIX "C"</u>	Claim Records	
<u>APPENDIX "D"</u>	Writer's Certificate	
<u>APPENDIX "E"</u>	Geochemical Lab Report	
<u>APPENDIX "F"</u>	Affidavit of Expenditures	
<u>APPENDIX "G"</u>	<u>Plates</u>	
<u>Plate 1</u>	- Claim Map	1"=1000'
<u>Plate 2</u>	- Geological Map	1"=1000'
<u>Plate 3</u>	- Zinc Content of Soils	1"=400'
<u>Plate 4</u>	- Lead Content of Soils	1"=400'

LIST OF FIGURES

<u>Figure 1</u>	Location Map	3
<u>Figure 2</u>	Photo: Nad Claim Group	4
<u>Figure 3</u>	Generalized Stratigraphic Section	7
<u>Figure 4</u>	Lead: Frequency Distribution .	10
<u>Figure 5</u>	Zinc: Frequency Distribution .	11

I N T R O D U C T I O N

This report describes the results of geological and geochemical investigations of 22 mineral claims located near the confluence of Goz and Duo Creeks in the Mayo Mining District, Yukon Territory ($64^{\circ}23'N$, $132^{\circ}30'W$). The project was carried out during the period June 27 - July 14, 1974, by Cordilleran Engineering Limited at the request of Sicintine Mines Ltd. (N.P.L.).

The overall aim of the project was to evaluate the mineral potential of the claim group by geological mapping, prospecting, and geochemical sampling. The claims are situated adjacent to Barrier Reef Resources "Goz Creek Property" where extensive lead-zinc mineralization occurs in a massive dolostone host unit.

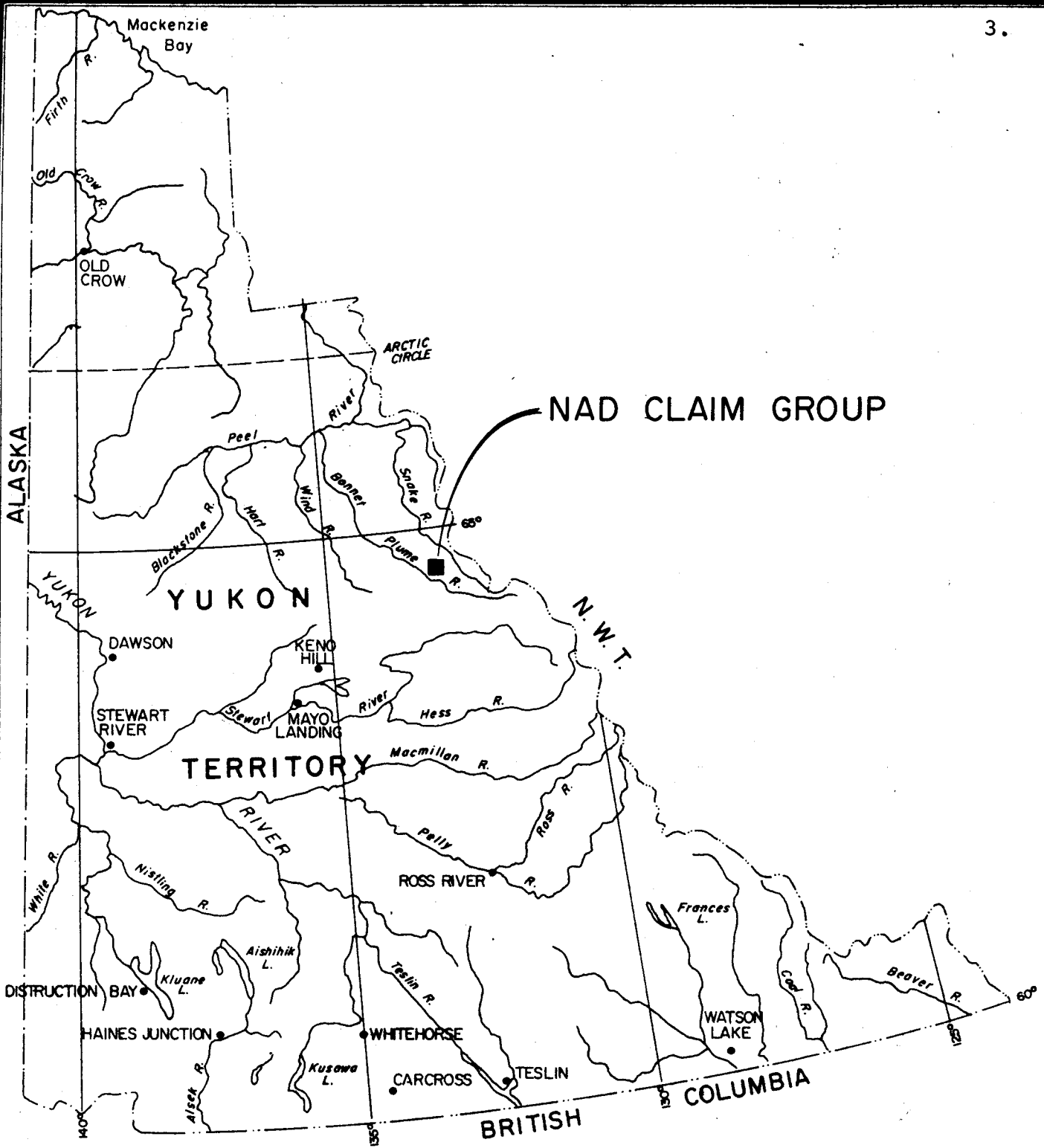
The area is accessible by helicopter from Mayo,

INTRODUCTION (cont'd)

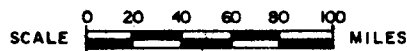
Y.T. (125 miles) or by float plane to the "Porter Puddle" and thence by helicopter (8 miles) to the property. A base camp was established on Goz Creek to the north of the property and occupied during the field work. Trans North Turbo Air, Ltd., Whitehorse, provided float plane support, maintained radio communications, and expedited supplies from Mayo. Helicopter support was provided by Northern Mountain Helicopters, Prince George, B.C.

The Nad claim group consists of 22 claims (Nad 41-62 inclusive) which were recorded on August 21, 1973. A complete list of claims and corresponding record numbers is contained in the appendix of this report.

The work described in this report has been submitted to the Mayo Mining Recorder to meet assessment requirements and, if acceptable, the claims will be in good standing until December 31, 1977.



LOCATION MAP SICINTINE MINES LTD. NPL



BY

CORDILLERAN ENGINEERING LTD.
1418 - 355 BARRARD STREET
VANCOUVER 1, B.C.
NOV. 1973

FIGURE 1



FIGURE 2: Nad claim group, looking west
along Duo Creek.

G E O L O G Y

The Nad claim group includes approximately 1.78 square miles of terrain which is underlain by a sequence of Lower Cambrian sedimentary rocks. The claims are located in a wide heavily forested valley with elevations ranging from 3,250 (Duo Creek) to 3,450 feet. Outcrops are either absent or very poorly exposed except along stream cuts.

The Nadaleen River Map-Area (NTS 106-C) has been studied and mapped by S. L. Blusson and preliminary geological maps (G.S.C. Open File 206) are available. An earlier geological reconnaissance map of the Northern Selwyn Mountains was also made by J. O. Wheeler (G.S.C. Paper 53-7) in 1953. These references provided a rough stratigraphic and structural basis of the present field work.

A geological map of the property was made using

GEOLOGY (cont'd)

a 1"=1000' scale airphoto print. This information was subsequently compiled (Plate 2) on a 1"=1000' scale topographic enlargement of the 1:50,000 series government maps (106-C-7/8).

The local stratigraphy includes five distinct mappable units which are illustrated by Figure 2. These units are part of the Lower Cambrian section and are believed to be a facies equivalent of the Sekwi Formation.

UNIT G

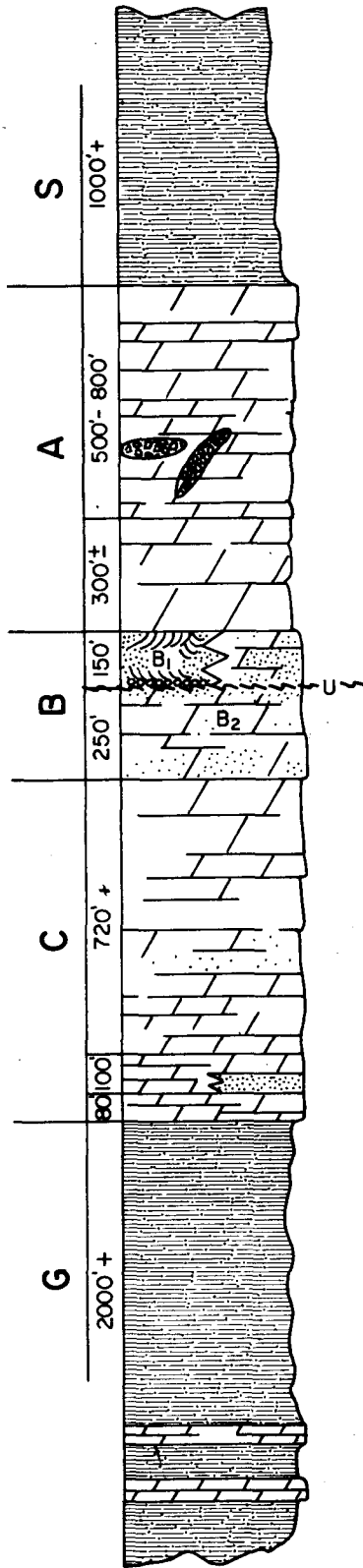
The Nad claims are entirely underlain by rocks comprising Unit G (see Figure 2). This unit consists of light brown and medium to dark gray, thin-bedded to laminated phyllitic shale and phyllite with some gray to maroon siltstone and sandstone. The unit also includes a few minor interbeds of dark gray, thin-bedded dolostone.

Unit G is mostly non-resistant and forms negative topographic features such as the valley of Goz Creek. The phyllites exhibit well developed cleavage, especially within areas of intense deformation near major faults. No stratigraphic sections were measured, but Unit G is estimated to be between 2,000 to 4,000 feet in thickness.

GENERALIZED STRATIGRAPHIC SECTION

GOZ CREEK AREA, YUKON TERRITORY

LOWER CAMBRIAN



QUARTZITE - SHALE: dark gray and brown, very thin-bedded to laminated, silty shale and quartzite. Non-resistant.

DOLOSTONE: buff weathering, variable textured, medium to light gray and mottled gray, very thick-bedded to massive, fine to coarse crystalline, locally pisolitic dolostone with some porous vuggy beds, minor chert. Sphalerite and minor galena occur locally as matrix with silicified breccia, vug filling, disseminations, and fracture filling.

DOLOSTONE: buff weathering, medium to light gray and pinkish gray, thick-bedded, fine to microcrystalline micritic dolostone.

SANDSTONE (B₁): light gray to brownish gray, thin-bedded, fine to coarse grained crossbedded quartz sandstone, quartzite, with minor shale. Conglomerate at base with cobbles up to 2" dia.

SANDY DOLOSTONE (B₂): gray weathering, thick-bedded, arenaceous dolostone, locally pisolitic at top. Facies equivalent (in part) of B₁.

DOLOSTONE: light gray, thick bedded, fine crystalline, locally pisolitic dolostone with minor arenaceous lenses toward base.

DOLOSTONE: light gray weathering, thick-bedded, microcrystalline dolostone with local lenses of quartz sandstone.

DOLOSTONE: medium to dark gray, thin to thick bedded, fine to microcrystalline, banded dolostone.

SHALE: light brown and medium to dark gray, thin-bedded to laminated phyllitic shale and phyllite with some maroon siltstone and sandstone. Minor interbeds of dark gray, thin-bedded dolostone and limestone.

SCALE: 1 INCH = 500 FEET

G E O C H E M I S T R Y

A geochemical soil sampling programme was carried out to evaluate the property. This method was chosen as a primary aid since the area is forest covered and other methods of exploration, such as prospecting and geological mapping would have limited application.

A grid sampling pattern was devised and 17,200 feet of picket lines were cut for control. A total of 183 soil samples were collected at 200 foot intervals along north-south lines spaced 800 feet apart. Where possible, samples were taken from the "B" horizon at a depth of about 6 inches. Field notes were made to record sample type, colour, organic content, drainage, etc. The samples were placed in paper sample bags and submitted to Bondar-Clegg Ltd., Whitehorse, Y.T. for sample preparation and analysis.

GEOCHEMISTRY (cont'd)

The samples were dried, sieved to -80 mesh, and analyzed for lead and zinc using standard atomic absorption methods. The sample locations and results are shown on plates 3 and 4.

A frequency distribution plot (Figures 4 and 5) was prepared to aid in the interpretation of the analytical results and allow visual estimation of the background, threshold, and anomalous values for lead and zinc.

The zinc results range from 16 to 250 ppm with background averaging about 87 ppm. Four samples are anomalous, i.e., above 165 ppm, and four samples are possibly anomalous (130 to 164 ppm). The lead results show a normal distribution (16 to 72 ppm) and all values occur well within the range of standard deviation. No lead anomalies are recognized.

Five rock-chip samples were collected at several localities and analyzed for lead and zinc. The results, which range from 88 to 130 ppm zinc and 42 to 96 ppm lead, show a similar distribution to that obtained for the soil samples. The complete results and sample descriptions are contained in the appendix to this report.

LEAD

FREQUENCY DISTRIBUTION
SICINTINE MINES LTD. (NPL)
NAD CLAIM GROUP

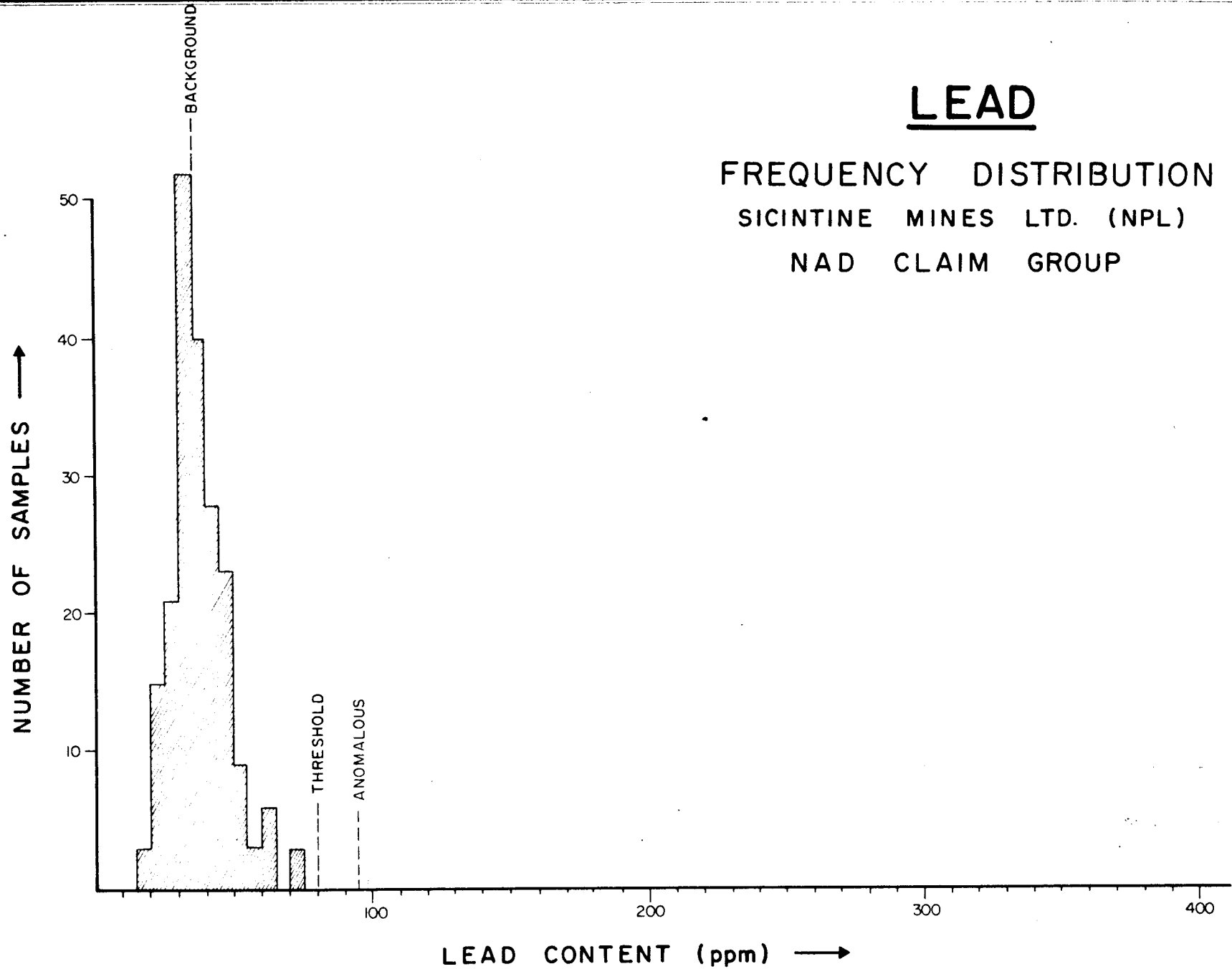


FIGURE 4

ZINC

FREQUENCY DISTRIBUTION
SICINTINE MINES LTD. (NPL)
NAD CLAIM GROUP

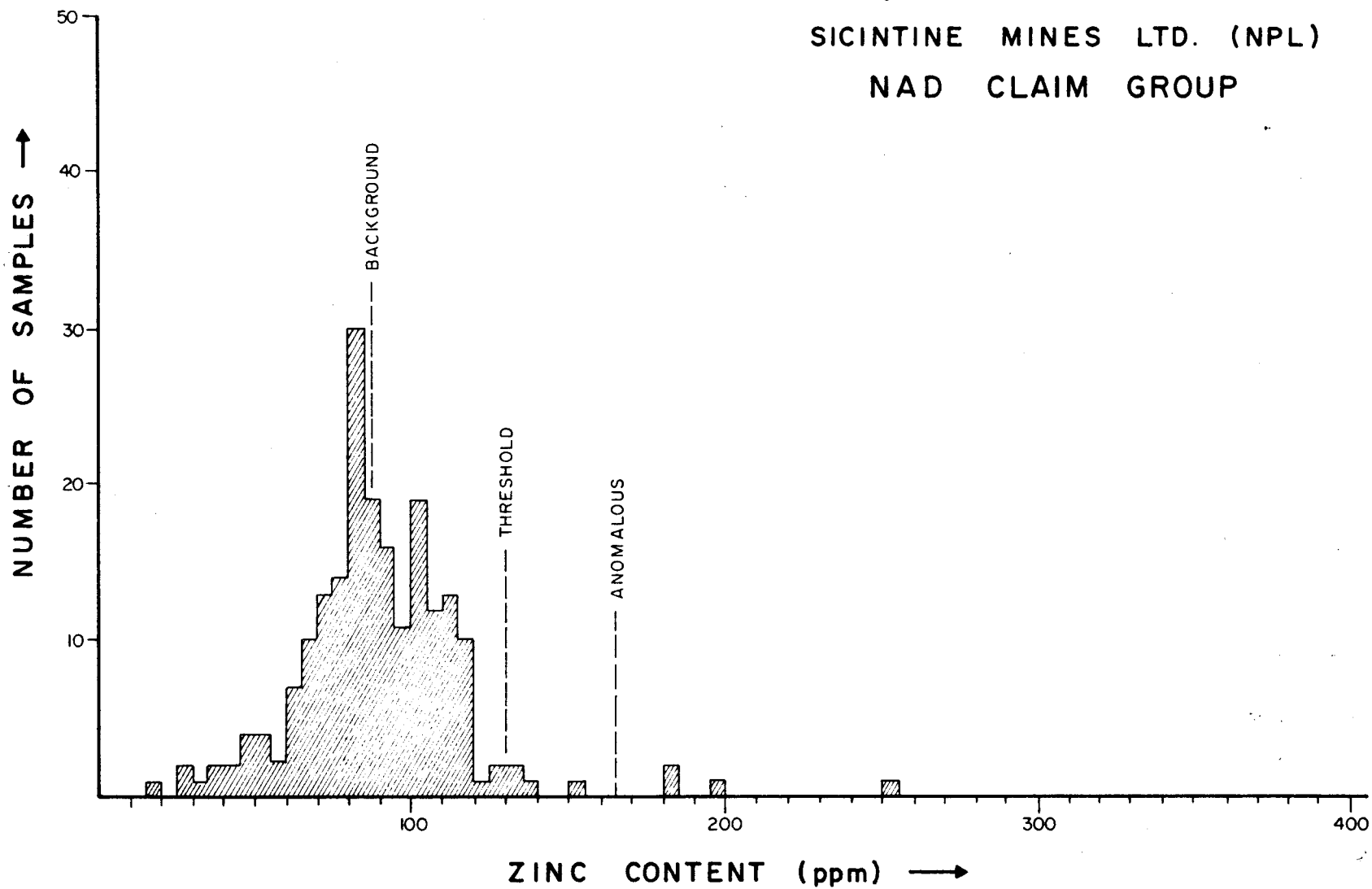


FIGURE 5

EVALUATION

The Nad claim group is situated adjacent to Barrier Reef Resources "Goz Creek Property" where extensive lead-zinc mineralization occurs in a massive dolostone host unit. The Nad claims are entirely underlain by shale and phyllite (Unit G) which occurs stratigraphically beneath the favourable host units.

Carbonate units favourable for the formation of lead-zinc deposits are absent on the Nad claims due to deep erosion. Repetition of these favourable units at depth beneath a thrust is a remote possibility, but exploration would not be feasible.

Four anomalous soil samples were collected along the north baseline of the grid. All of these samples were taken from a poorly drained, swampy flood plane along the south bank of Duo Creek. The samples show a high organic

EVALUATION (cont'd)

clay content and the anomalies are probably due to adsorption of zinc cations by clay particles under reducing conditions which are characteristic of the swampy areas. In addition, the flood plain is downstream from several known zinc occurrences on the Barrier Reef Property and this could be a source of the zinc.

Four possibly anomalous samples are recognized. The distribution pattern of these samples is quite erratic and does not indicate any consistent concentration of zinc.

In conclusion, the geological - geochemical results indicate that the Nad claims have very little potential for stratabound lead-zinc deposits. Additional work on the property is not recommended at this time.

Respectfully submitted

CORDILLERAN ENGINEERING LIMITED



A handwritten signature in black ink that reads "C. Michael Hamilton".

C. M. Hamilton, P.Eng.
Geologist

October, 1974

REFERENCESBLUSSON, S.L.:

- 1974: Preliminary geological map,
Nadaleen River Map-Area,
N.T.S. 106-C
G.S.C. Open File #206.

WHEELER, J.O.:

- 1954: "A Geological Reconnaissance of the
Northern Selwyn Mountains Region,
Yukon and Northwest Territories."
G.S.C. Paper 53-7, 42 p.

PERSONNEL

C. M. Hamilton
1150 Jervis Street
Apartment 2004
Vancouver, B.C.

- Geologist

E. F. Skoda
1805 Rosser Ave.
Apartment 1910
Burnaby, B.C.

- Mining Technician

D. Guichon
1523 Grand Blvd.
North Vancouver,
British Columbia

- Assistant

CLAIM RECORD

<u>NAME</u>	<u>RECORD NUMBER</u>	<u>EXPIRY DATE</u>
Nad 41	Y 69870	December 31, 1977.
Nad 42	Y 69871	December 31, 1977.
Nad 43	Y 69872	December 31, 1977.
Nad 44	Y 69873	December 31, 1977.
Nad 45	Y 69874	December 31, 1977.
Nad 46	Y 69875	December 31, 1977.
Nad 47	Y 69876	December 31, 1977.
Nad 48	Y 69877	December 31, 1977.
Nad 49	Y 69878	December 31, 1977.
Nad 50	Y 69879	December 31, 1977.
Nad 51	Y 69880	December 31, 1977.
Nad 52	Y 69881	December 31, 1977.
Nad 53	Y 69882	December 31, 1977.
Nad 54	Y 69883	December 31, 1977.
Nad 55	Y 69884	December 31, 1977.
Nad 56	Y 69885	December 31, 1977.
Nad 57	Y 69886	December 31, 1977.
Nad 58	Y 69887	December 31, 1977.
Nad 59	Y 69888	December 31, 1977.
Nad 60	Y 69889	December 31, 1977.
Nad 61	Y 69890	December 31, 1977.
Nad 62	Y 69891	December 31, 1977.

CORDILLERAN ENGINEERING LIMITED

MINERAL EXPLORATION
MANAGEMENT AND
ENGINEERING CONSULTANTS

1418-355 BURRARD STREET
VANCOUVER, B.C.
V6C 2P8
TELEPHONE (604) 681-8381

WRITER'S CERTIFICATE

I, C. Michael Hamilton of Vancouver, British Columbia hereby certify that:

1. I am a geologist residing at 1150 Jervis Street (#2004) and employed by Cordilleran Engineering Limited of 1418-355 Burrard Street, Vancouver, B.C. V6C 2G8.
2. I received a Professional Degree (Geological Engineering) from the Colorado School of Mines, Golden, Colorado, (1969), and completed one year of graduate studies (1970).
3. I am a certified member of the Association of Professional Engineers of the Province of British Columbia.
4. I am the author of this report which is based on field work conducted during June and July, 1974 on behalf of Sicintine Mines Ltd. (N.P.L.).
5. I have no beneficial interest in Sicintine Mines Ltd. (NPL) nor do I expect to receive any.



CORDILLERAN ENGINEERING LIMITED

A handwritten signature in black ink that reads "C. Michael Hamilton".

C. M. Hamilton, P.Eng.
Geologist

October, 1974



BONDAR-CLEGG & CO. COMPANY LTD.

1500 PEMBERTON AVE., NORTH VANCOUVER, B.C. PHONE: 985-0681 TELEX: 04-54554

Geochemical Lab Report

251974

Extraction Hot Aqua Regia Report No. 44-60
 Method Atomic Absorption From Cordilleran Engineering Ltd.
 Fraction Used Soils - 80 Mesh Date July 23, SIC-NAD 19 74
Rocks - 100 Mesh

SAMPLE NO.	Pb ppm	Zn ppm			SAMPLE NO.	Pb ppm	Zn ppm		
L0+00	48	250			L8W-18S	31	76		
2S	20	56			20S	36	84		
4S	36	92			22S	28	69		
6S	40	84			24S	32	48		
8S	33	90			26S	16	44		
10S	25	104			28S	22	76		
12S	36	104			30S	20	84		
14S	45	119			32S	21	68		
16S	19	126			34S	28	75		
18S	32	84			36S	28	76		
20S	36	72			38S	24	39		
22S	36	112			40S	23	66		
24S	32	104			42S	36	96		
26S	32	88			44S	27	46		
28S	35	88			L16W-0S	45	180		
30S	36	72			2S	32	70		
32S	15	28			4S	56	80		
34S	48	34			6S	32	92		
36S	26	44			8S	29	80		
38S	36	56			10S	28	80		
40S	32	48			12S	32	76		
42S	40	68			14S	32	72		
L8W-0S	52	196			16S	36	84		
2S	32	65			18S	32	72		
4S	32	115			20S	32	82		
6S	28	108			22S	24	82		
8S	32	92			24S	28	64		
10S	44	95			26S	29	80		
12S	20	70			28S	32	78		
14S	24	80			30S	22	84		
16S	31	80			32S	32	90		

FILE COPY DO NOT REMOVE

[Handwritten Signature]

ORIGINAL

Geochemical Lab Report

Report No. 44-60

Page No. 2

SAMPLE NO.	Pb ppm	Zn ppm			SAMPLE NO.	Pb ppm	Zn ppm		
L16W34S	52	114			L32W-16S	38	108		
36S	32	87			18S	36	84		
38S	23	16			20S	45	84		
40S	28	84			22S	34	108		
42S	38	100			24S	27	80		
44S	38	96			26S	32	62		
L24W-0S	48	63			28S	30	110		
2S	32	112			30S	34	116		
4S	32	84			32S	36	114		
6S	29	89			34S	34	112		
8S	36	98			36S	40	96		
10S	32	112			38S	46	100		
12S	32	100			40S	48	89		
14S	40	90			42S	48	86		
16S	39	100			44S	72	154		
18S	40	88			46S	72	60		
22S	39	92			L8E-4S	48	108		
24S	33	76			6S	28	76		
26S	39	84			8S	32	108		
28S	32	90			10S	38	116		
30S	39	116			12S	30	72		
32S	36	100			14S	50	92		
34S	42	116			16S	40	76		
36S	34	104			18S	28	68		
38S	34	118			20S	28	100		
40S	39	96			22S	40	104		
42S	64	110			24S	40	100		
44S	52	108			26S	48	86		
L32W-0S	33	180			28S	55	84		
2S	48	128			30S	40	84		
4S	36	116			32S	38	90		
6S	34	116			34S	42	94		
8S	32	132			36S	33	60		
10S	36	96			38S	34	48		
12S	40	92			40S	72	72		
14S	36	107			L16E-4S	60	116		

Geochemical Lab Report

Report No. 44-60

Page No. 3

SAMPLE NO.	Pb ppm	Zn ppm			SAMPLE NO.	Pb ppm	Zn ppm		
L16E-6S	24	68			L32E-2S	37	88		
8S	32	108			4S	29	52		
10S	32	112			6S	40	130		
12S	32	112			8S	38	82		
14S	49	100			10S	36	74		
16S	36	103			12S	32	70		
18S	28	112			14S	32	100		
20S	43	82			16S	40	106		
22S	46	102			18S	40	100		
24S	36	88			20S	40	94		
26S	52	86			22S	48	92		
28S	45	80			24S	36	76		
30S	44	74			26S	44	86		
32S	60	86			28S	42	72		
34S	50	96			30S	38	54		
36S	46	98			32S	50	65		
38S	60	112			34S	60	88		
L24E-2S	60	138			L40E-0S	42	106		
4S	32	64			2S	57	120		
6S	22	60			4S	41	108		
8S	48	105			6S	32	80		
10S	28	76			8S	24	36		
12S	44	104			10S	20	50		
14S	36	112			12S	40	85		
16S	36	100			14S	44	88		
18S	35	97			18S	32	79		
20S	33	84			20S	40	80		
22S	46	68			22S	33	90		
24S	33	68			24S	25	28		
26S	36	96			26S	52	70		
28S	45	88			28S	37	76		
30S	42	75			30S	34	53		
32S	45	88			32S	50	84		
34S	48	90							
36S	48	80							
L32E-0S	36	87							

CANADA)
) In the matter of a geological and geochemical
) report on behalf of Sicintine Mines Ltd. (NPL)
)
 TO WIT:)

I, John W. Stollery, agent for Cordilleran Engineering Limited
of city of Vancouver, province of British Columbia.

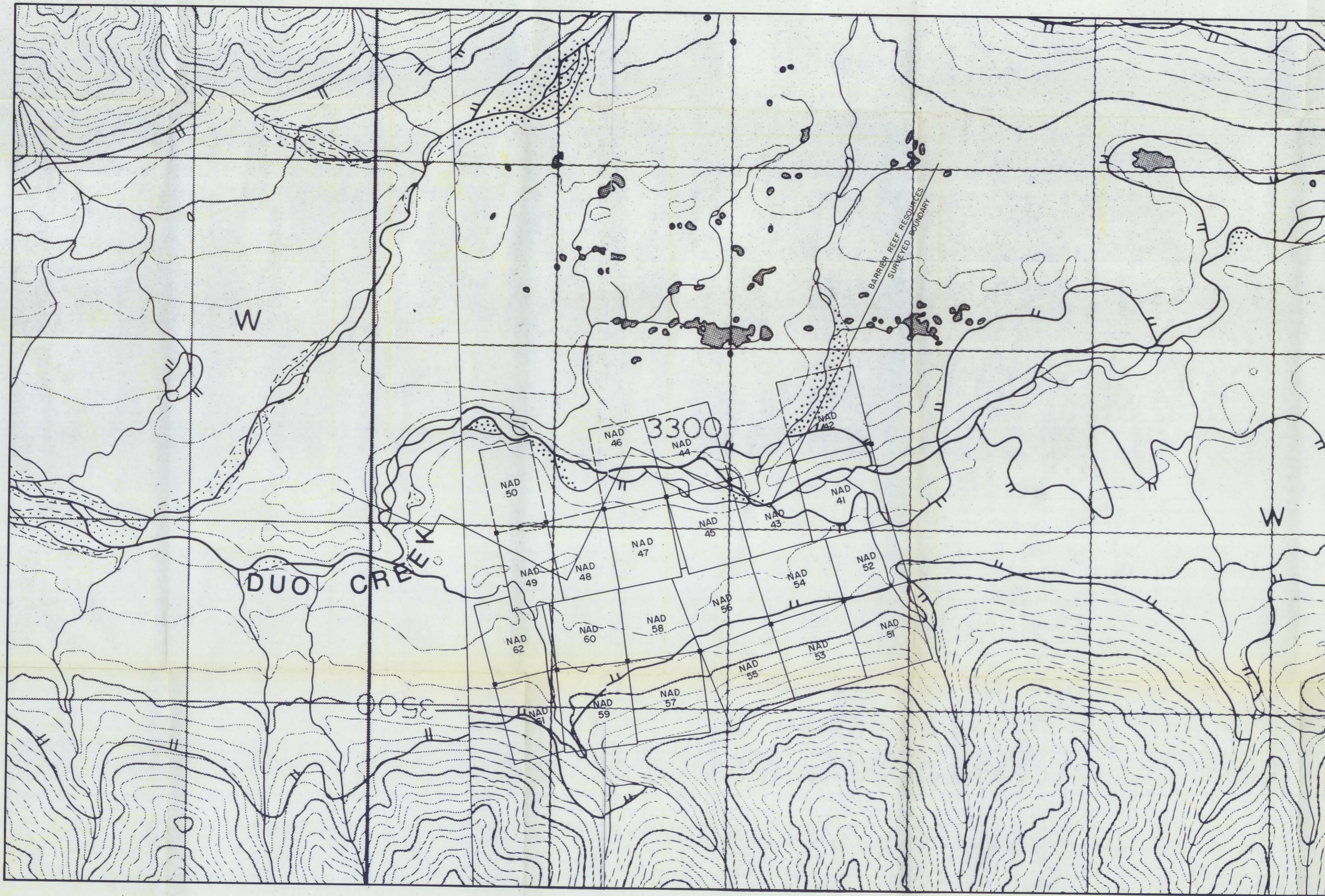
do solemnly declare, - that geological mapping, prospecting and
 geochemical sampling were conducted on the Nad 41-62 mineral claims,
 Mayo Mining District, Y.T., during the period June 27 - July 14, 1974
 at a cost of:

Consulting Fees	.....	\$3,850.55
Salaries	.....	1,148.24
Fixed-Wing	.....	682.58
Helicopter	.....	3,203.55
Geochemical Analysis	.....	368.50
Travel	.....	139.18
Office supplies, telephone, Freight and drafting	.....	658.14
Camp supplies and food	.....	<u>1,153.67</u>
	TOTAL	<u>\$11,204.41</u>

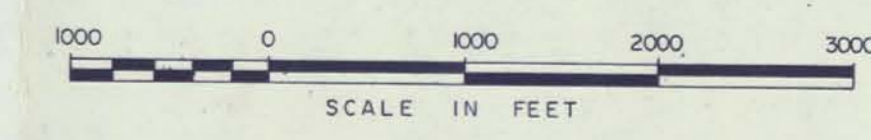
And I make this solemn declaration conscientiously believing it
 to be true and knowing that it is of the same force and effect as if
 made under oath and by virtue of The Canada Evidence Act.

Declared before me at Vancouver)
 Province of)
 in the British Columbia this)
16th day of December 1974)

A Commissioner for Oaths for Yukon
 Territory OR Notary Public for

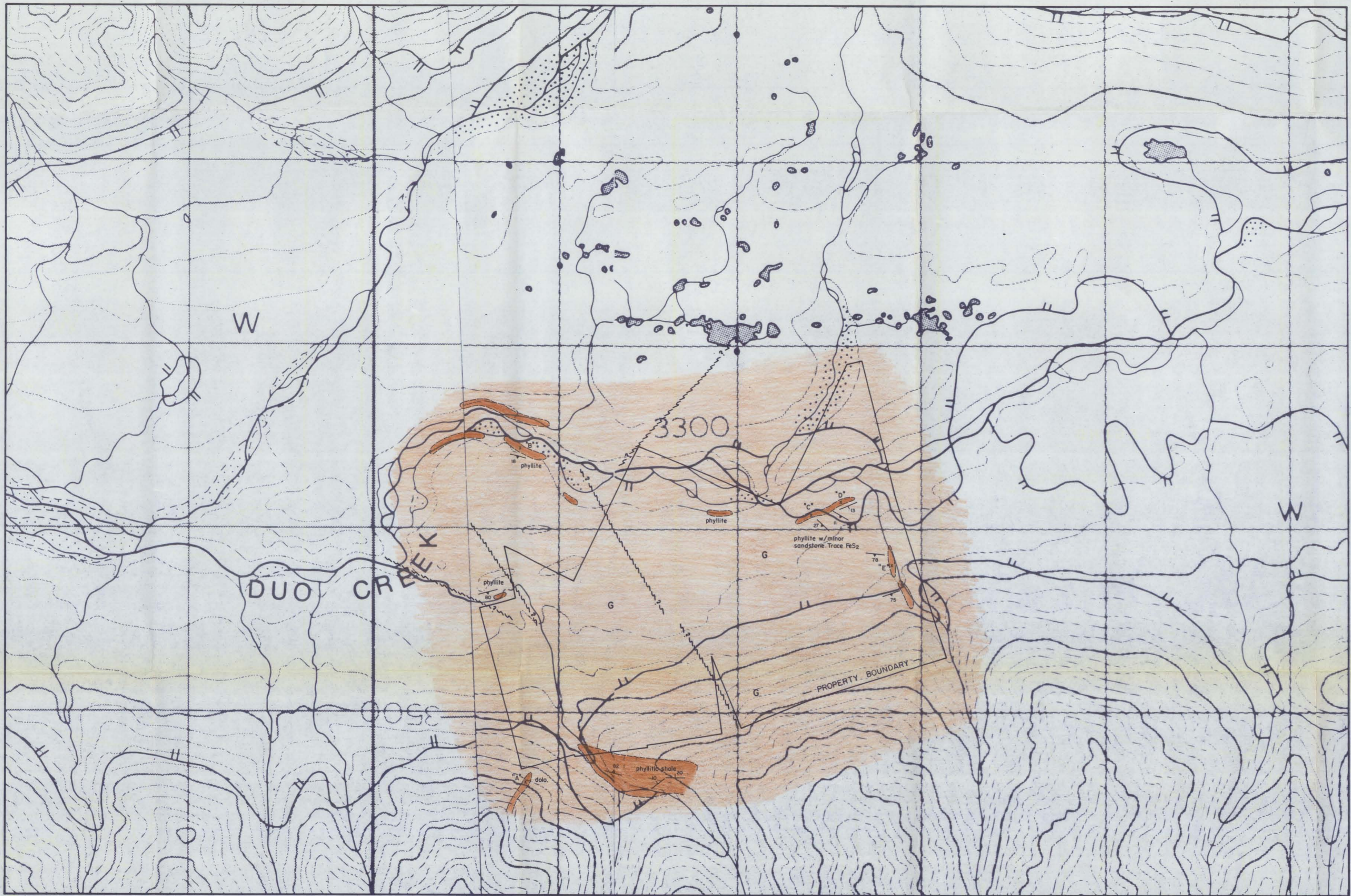


SICINTINE MINES LTD. (NPL)
CLAIM MAP
 NAD CLAIM GROUP
 NADALEEN RIVER AREA (N.T.S. 106C)
 MAYO MINING DISTRICT, YUKON TERRITORY

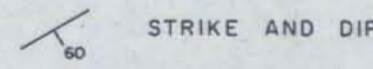
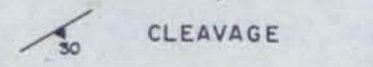
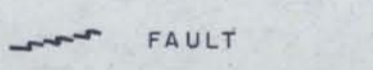


BY
 CORDILLERAN ENGINEERING LTD.
 1418 - 355 BARRARD STREET
 VANCOUVER, B.C.
 OCT. 1974





LEGEND

- SHALE - light brown and medium to dark gray, thin-bedded to laminated phyllitic shale and phyllite with some maroon siltstone and sandstone. Minor dolostone interbeds.
- OUTCROP
-  STRIKE AND DIP
-  CLEAVAGE
-  FAULT
- x "A" ROCK SAMPLE LOCATION - see Appendix for geochemical analyses.

SICINTINE MINES LTD. (NPL)
GEOLOGICAL MAP
 NAD CLAIM GROUP
 NADALEEN RIVER AREA (N.T.S. 106 C)
 MAYO MINING DISTRICT, YUKON TERRITORY

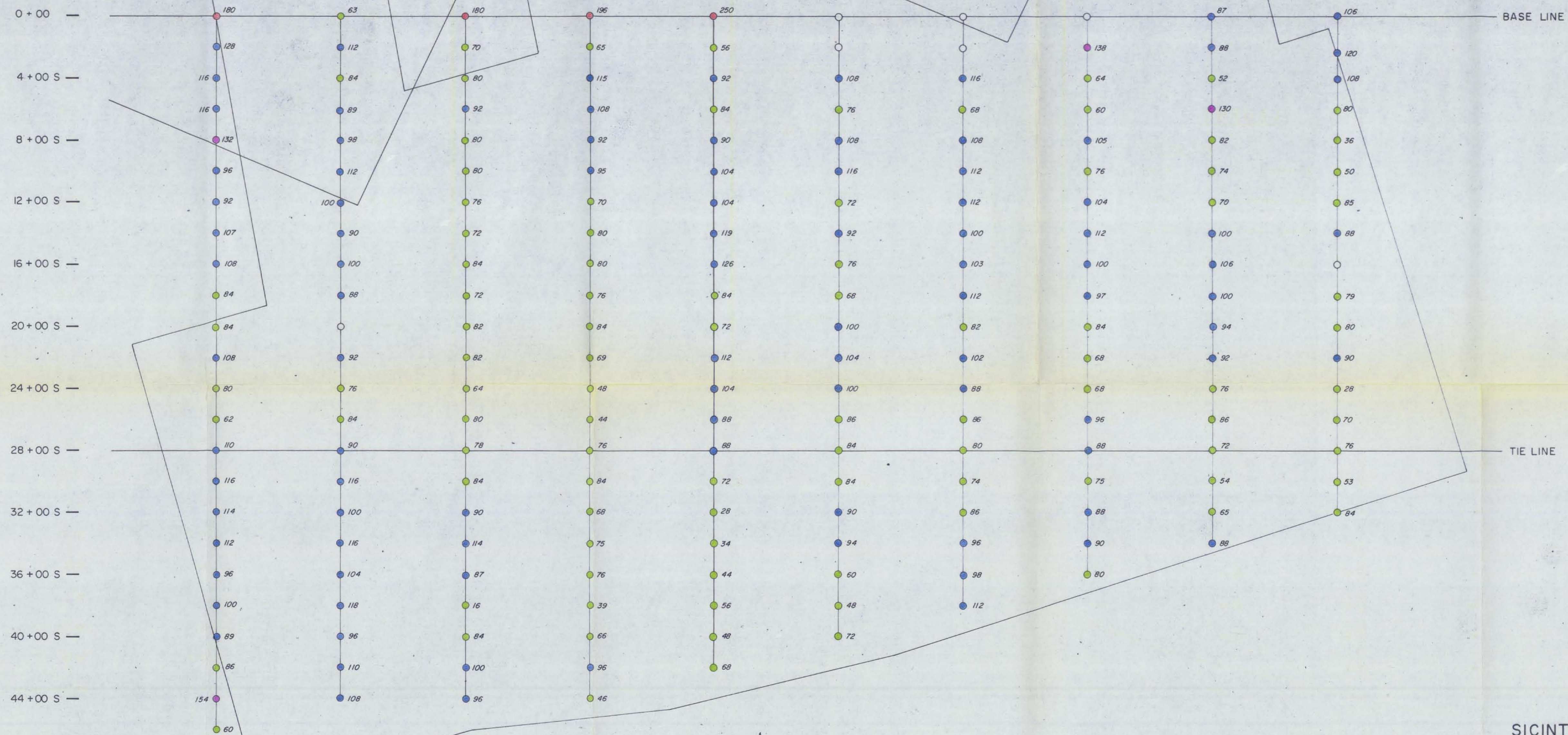


BY
 CORDILLERAN ENGINEERING LTD.
 1418 - 355 BARRARD STREET
 VANCOUVER, B.C.
 OCT. 1974





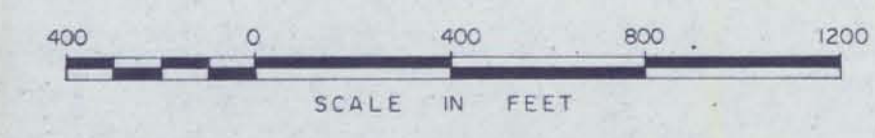
BARRIER REEF RESOURCES - SURVEYED BOUNDARY



LEGEND

ZINC CONTENT	
● (Green)	BACKGROUND 0 TO 86 ppm
● (Blue)	ABOVE BACKGROUND 87 TO 129 ppm
● (Purple)	POSSIBLE ANOMALY 130 TO 164 ppm
● (Red)	ANOMALY 165 + ppm

SICINTINE MINES LTD. (NPL)
ZINC CONTENT OF SOILS
 NAD CLAIM GROUP
 NADALEEN RIVER AREA (N.T.S. 106C)
 MAYO MINING DISTRICT, YUKON TERRITORY

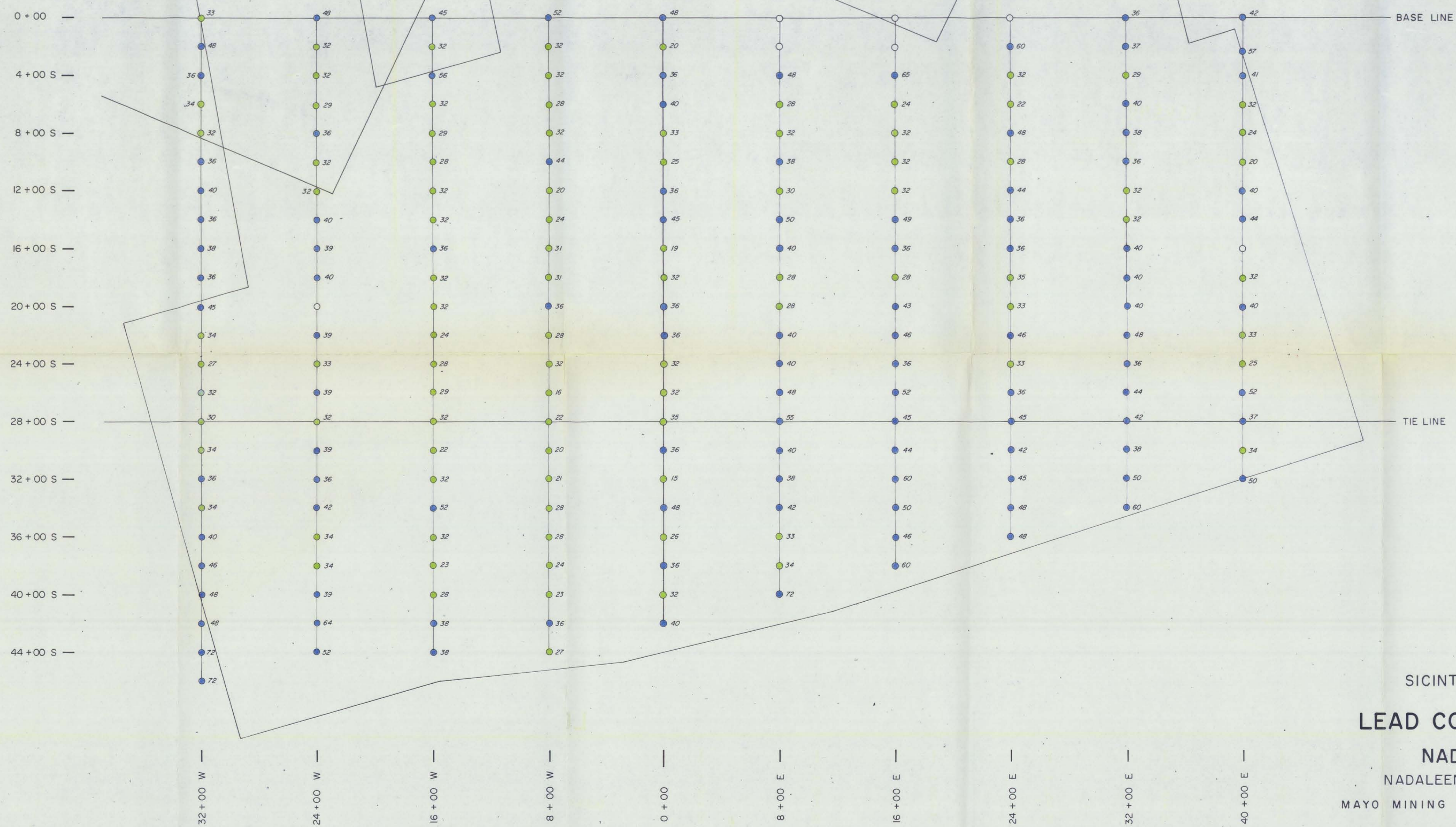


BY
 CORDILLERAN ENGINEERING LTD.
 1418 - 355 BARRARD STREET
 VANCOUVER, B.C.
 OCT. 1974





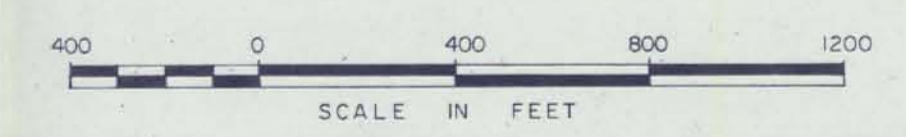
BARRIER REEF RESOURCES - SURVEYED BOUNDARY



LEGEND

LEAD CONTENT	
● (Green)	BACKGROUND 0 TO 35 ppm
● (Blue)	ABOVE BACKGROUND 36 TO 79 ppm
● (Purple)	POSSIBLE ANOMALY 80 TO 94 ppm
● (Red)	ANOMALY 95 + ppm

SICINTINE MINES LTD. (NPL)
LEAD CONTENT OF SOILS
 NAD CLAIM GROUP
 NADALEEN RIVER AREA (N.T.S. 106C)
 MAYO MINING DISTRICT, YUKON TERRITORY



BY
 CORDILLERAN ENGINEERING LTD.
 1418 - 355 BARRARD STREET
 VANCOUVER, B.C.
 OCT. 1974

