



![](_page_2_Figure_0.jpeg)

![](_page_2_Picture_1.jpeg)

![](_page_3_Figure_0.jpeg)

![](_page_3_Picture_1.jpeg)

![](_page_4_Figure_0.jpeg)

\*\*\*\*

![](_page_4_Figure_1.jpeg)

.

DATA BY M. R. H.		N.T.S. 94 - E	PL. NO.: 8
DRAWN BY:M.R.H.	DATE:12/8/72	SCALE	
TRACED BY:	DATE	" =	100'
REVISIONS		FILE NO	

![](_page_4_Picture_5.jpeg)

÷ = .

# NCO EXPLORATIONS, (WESTERN) LIMITED

# REPORT

# ON

## ROCK GEOCHEMICAL SURVEY

LAWYERS NO. 4 GROUP (Lawyers Mineral Claims 55-58, 60, 63-66, 93-97, 99, 131-140, 151-160, 177, 178 Fr, 179 Fr)

Situated 25 miles northwest of Thutade Lake, Omineca Mining Division, British Columbia

57°18'N:

127°12'W

94 E | 6E July 16 to July 18, 1972 Department of Mines and Petroleum Resources ASSESSMENT REPORT NO. 38.37 By: M. R. Hegge K. A. Grace, P.Eng.

August 31, 1972

Mining Recorder's Office RECORDED SEP 8 1972 AT..... SMITHERS, B.C.

# TABLE OF CONTENTS

•	Page
INTRODUCTION	1
LOCATION AND ACCESS	2
ROCK GEOCHEMICAL SURVEY Rock Survey Field Work Sample Site Control Rock Sample Collection Packaging	3 3 3 4
Sample Preparation Analysis Interpretation	4 4 5
STATEMENT OF COSTS INCURRED	7
DISTRIBUTION OF WORK	8

# LIST OF ILLUSTRATIONS

# Location Map		1:250,000
T)Plate No. 1	Rock Sample Sites	1'' = 100'
₩3Plate No. 2	Copper in Rock	**
#4-Plate No. 3	Molybdenum in Rock	27
#5Plate No. 4	Zinc in Rock	н
#GPlate No. 5	Lead in Rock	97
Ħ7Plate No. 6	Cobalt in Rock	tt -
$\pm $ Plate No. 7	Silver in Rock	51
$\pm \tilde{Q}$ Plate No. 8	Gold in Rock	**
#  () Plate No. 9	Nickel in Rock	11

![](_page_7_Figure_0.jpeg)

## INTRODUCTION

The mineral property discussed in this report is situated about 20 miles northwest of Thutade Lake, British Columbia. The exploration work on these claims consisted of a rock geochemical survey.

The planning, interpretation, and writing of this report for the survey work was conducted by M.R. Hegge, B.Sc., P.Geol.(Alta). Sampling personnel are listed under 'Statement of Costs Incurred'. The work was done under the supervision of K.A. Grace, P.Eng.

#### LOCATION AND ACCESS

The property is situated at Latitude 57°18'N, Longitude 127°12'W, about 180 miles due north of Smithers. This is about 25 miles northwest of Thutade Lake. The survey area is about 5500' to 5700' above sea level. The area is all above tree-line, and outcrop is prominent.

Access to the property is by fixed-wing aircraft from Smithers to Black Lake, a distance of about 165 miles, and by helicopter from there. Local travel on the Lawyers property is fairly easy. A helicopter was used to set out sampling crews in order to minimize travel time from camp which is a four-hour round trip on foot from the survey area.

#### ROCK GEOCHEMICAL SURVEY

### Rock Survey Field Work

## Sample Site Control

A control grid was established by chain and compass survey. Laths and surveyor's flagging were used to mark the stations as the survey area is above tree-line. This gave good control of sample sites, with minimum expenditures.

Sample lines were run at 100-foot intervals in a north-south direction. A base map with a scale of 1" = 100' was compiled for use in plotting the sample results.

#### Rock Sample Collection

The samples were taken at 100-foot intervals along the grid lines or from outcrops within a 25-foot radius of the proposed sample centre if no outcrop existed at that point. Bedrock samples were obtained where possible but, in some areas, frost-heaved material was sampled if it was considered to not have undergone any lateral movement.

Sample chips about 1" to 2" were taken with a standard prospector's hammer. About 2-3 pounds of these chips were collected from each sample site. The sample site and number were then plotted on a field map and a note made if the sample had been obtained other than by the standard procedure.

# Packaging

The samples were placed in 6" x 10" cloth sample bags constructed especially for rock samples. The sample number was written on both sides of the bag and then sealed by string.

## Sample Preparation

The samples were shipped to our laboratory in North Vancouver. Particular care was taken to avoid contamination in the preparation of these samples as the analyses were to be done in parts per million. The sample was primary crushed to 1/4" mesh; secondary crushed to minus 10 mesh; dried; and then pulverized to minus 100 mesh. The pulverizer was flushed with "clean" rock after each sample. The average analysis of this cleaning work is as follows:

> 7 ppm Cu 0 ppm Mo 30 ppm Zn 4 ppm Pb 0.3 ppm Ag 0.00 ppm Au 10 ppm Co 10 ppm Ni

#### Analysis

The samples were analysed in the North Vancouver laboratory of Kennco Explorations, (Western) Limited under the supervision of H. Goddard, Laboratory Manager. Total extraction from a weighed sample is achieved by digestion with nitric acid and 70% perchloric acid. Determination of the Cu, Mo, Zn, Pb, Ag, Co, Ni content is made by aspiration in a Techtron AA5 Atomic Absorption Spectrophotometer. To determine the Au content, a weighed sample is digested in aqua regia, filtered, and the gold removed by solvent-solvent extraction in an organic solvent, MIBK (methyl-isobutyl-ketone). This is aspirated in the Techtron AA5.

## Interpretation

The purpose of the rock geochemical survey was to examine the trace metal content of the various rock units in the area that appeared most promising for normally invisible Au, Ag, and other metal mineralization; with this information, background values could be established in addition to delineating trenching or diamond drill hole targets. The results are plotted on Plate No.'s 2 to 9, and have been contoured to extrapolate information between sample sites.

Silver values in rock appear to coincide well with fracture zones which trend 000°, 040°, and 325°; mineralization is strongest where these structures coincide or are individually strong - for example, at 56+00E, 39+00S and 56+00E, 32+00S. At the latter site, the silver-anomalous zone is open to the north; a similar but weaker situation exists at 65+00E, 41+00S, where the anomaly is open to the southeast.

Gold correlates well with silver values but exhibits less continuity. The low background values for gold, coupled

with greater analytical error at these levels, render silver a more useful geochemical guide for possible gold-bearing, lithologic zones.

The copper mineralization which might be considered as anomalous is centered at 56+00E, 39+00S where it is associated with strong zinc and lead values. Ag:Pb ratios are less in this zone, however, than seen elsewhere on the grid and this may be indicative of a different stage of silver mineralization. The higher silver values are more peripheral to 56+00E, 39+00S and, in these zones, molybdenum appears to be another valuable indicator of rocks favourable for silver and gold mineralization. Nickel and cobalt results are below values of any significance.

Results of the geochemical survey, in addition to providing a knowledge of metal associations in the area, indicate that further work should be conducted to the north and southeast of the grid where anomalous zones of Ag-in-rock are still open to extension. These zones should be rock sampled at 100' centres with subsequent cat-trenching or diamond drilling conducted in areas of favourable results.

In the central part of the grid, it is recommended that diamond drilling be conducted in areas of high Ag-in-rock values in order to test the indicated favourable structures at depth. Holes should be drilled at ~50° and oriented at 090° as most of the structures are vertically dipping. Suggested targets are:

> 1. 56+00E, 32+00S 2. 55+00E, 38+00S 3. 60+00E, 39+00S

Collars should be located to intersect the favourable structures at a 50' vertical depth.

Vancouver, B.C. August 31, 1972

M. R. Hegge race, P.Eng.

# STATEMENT OF COSTS INCURRED

Lawyers Group No. 4

# Survey Details:

Time: 2 days - July 16 & 18, 1972 Samplers: J. Paine, I. Hayes No. of Samples on 100' Centres: 89

# Survey Costs:

<u>Wages:</u> 4 man-days x \$21/day		\$ 84.00
Room & Board: 4 man-days x \$16.50/day		66.00
Helicopter Time Per Day: (5 mile round trip x 2 t 2 x 1/3 hr/day x (\$130/hr + \$48/hr for fuel [	rips/day) [\$3/gal at camp])	118.00
Analyses: 89 samples for Cu,Mo,Zn,Pb,Co,Ni,Ag,Au x \$4.50/sample		400.50
Supervision & Interpretation: (Geologist) 1 man-day x \$56.50/day (includes support)		56.50
Drafting & Typing:		50.00
	TOTAL	<u>\$657.00</u>

OR:  $\frac{$657.00}{89} = $7.38/sample$ 

Mayer

# DISTRIBUTION OF WORK

# Lawyers Group No.4

.

<u>Claim_No</u>	Record No.	Record Date	Years Work Applied
58	91773	Sept.10	1
60	91775	Sept.10	1
177	101565	Aug. 6	1
178 Fr	101564	Aug. 6	1
179 Fr	103149	Sept. 3	1
** 180 Fr	- applied on affidavit	t but should have been	claim No. 62
62	91777	Sept.10	1

.

.

.

ŧ

![](_page_16_Figure_0.jpeg)

![](_page_17_Figure_0.jpeg)

	111111	J (cr+s)	101+10		10.10		1	
								PT + 60 A
							N	33+01.4
.owyers M C	No 63			•				
								14 + 60 4.
10 O*	· *		1	/				
0 <sup>10</sup>	6ª							10.102.2
10			Lowers M.C. No. F			EGEND		
"0	a''.				6. 24	No. Series		10 1 20 1
(ma)	40 40 j	16	*			Animitica -		
	*0 0*	$\Delta^{rt}$	.⊖.*					
	"4	021	0.04		Min	Departments and Petro ASSESSMEN	nent of oleum Resources IT REPORT	
Lowye	rs M.C. No. 66	116	0.4		No.s	5101		41.001.1
a#			¢.*		KENNC	Contraction of the second seco	No. 4 Grou	<b>I) LIMITED</b>
те Ф. (91	ollowping Rack Gancham ng , 25 miles northwest o 72	isal Servey Hoppin's 1 Thursde Later, De	1 4 4 0-144 F ENG WARTE MINING DISCOURS.	on Lowyers An 4 R C (Dates Aug 3)	Geo	Copper Copper	Rock Sam; r in Rock	oling
		/	-		DRAWN BY TRACED S' REVISIONS	M.R.H. DATE/2/ DATE:	1/72 SCALE:	001

. .

![](_page_17_Picture_2.jpeg)

![](_page_18_Figure_0.jpeg)

![](_page_19_Figure_0.jpeg)