3927

REPORT ON

GEOCHEMICAL AND MAGNETIC SURVEY

Mc GROUP : Mc 1-4 Mineral Claims

NINE LAKE GROUP: NINE LAKE 1-4, 6, 8, 10-12, 25-26, 28,

30, 32, 34-38, 41-46, 49-51, 61-68, 70,

74, 76 and 78 Mineral Claims

Fort Steele Mining Division

49°58.9' Lat. - 116°12.5' Long

WORK PERIOD : June 29 - August 22, 1972

OWNERS: Kerr Addision Mines Limited,

405-112 West Pender Street,

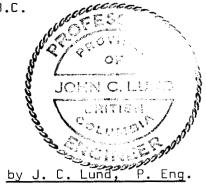
Vancouver 1, B.C.

Department of

Mines and Petroleum Resources

ASSESSMENT REPORT

NO 3927 MAP



2 October, 1972

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5	n n	ZINC
1.	n n	lead

INTRODUCTION

The Mc Nos. 1-4 Mineral Claims were staked on August 5, 1971 and their ownership transferred to Kerr Addison Mines Limited. The Nine Lake Nos. 1-4, 6, 8, 10-12, 25-26, 28, 30, 32, 34-38, 41-46, 49-51, 61-68, 70, 74, 76 and 78, were staked during August 23-29, 1971, and their ownership transferred to Kerr Addison Mines Limited.

The Mc and Nine Lake claim groups are adjacent to one another, located approximately 2.5 miles northwest of Greenland Creek mouth in the Fort Steele Mining Division.

Access to the property from Cranbrook, B.C. is via Hwy 95 north 27 miles to the pulpmill road cut-off, thence by helicopter over a distance of about 20 miles. An old logging road leads from the cut-off and follows Skookumchuck Creek upstream to Greenland Creek mouth, a total distance of approximately 30 miles. This road is now impassable due to recent washouts and landslides.

Kerr Addison Mines began investigation of the Mc Claims on August 5 and 6, 1971 then continued work during July 3-8, 1972. Preliminary geochemical soil sampling and trenching was done immediately after staking. Work completed in 1972 included 5,900 feet of survey grid lines followed by 5,900 feet each of magnetometer and soil sampling survey.

Exploration work on the Nine Lake claims was started immediately after staking, involving preliminary soil and rock geochemistry plus mapping during the period between August 23 - September 8, 1971. Work completed in 1972 included 30 line miles of survey grid lines followed by 30 line miles of soil geochemical survey during the period between June 29 - August 22, 1972.

Five sites were selected for operation bases and the camps were moved by helicopter. This plan was necessary for efficient coverage of the large area, and desirable to minimizeum.productive walking time.

SCHEDULE OF CLAIMS

Group Name	Claim Name	Tag No.	Date Staked	Record No.	Date Recorded
Мс	Mc # 1	254401	Aug 5/71	17271	Aug 19/71
	2	254402	Aug 5/71	17272	Aug 19/71
	3	254403	Aug 5/71	17273	Aug 19/71
	4	254404	Aug 5/71	17274	Aug 19/71
Nine Lake	Nine Lake	054450	A 05/74	47405	C- + 7/74
	# 1	254458	Aug 25/71	17405	Sept 7/71
	2	254457	Aug 25/71	17406	Sept 7/71
	3	254459	Aug 25/71	17407	Sept 7/71
	4	254460	Aug 25/71	17408	Sept 7/71
	6	254406	Aug 23/71	17410	Sept 7/71
	8	254408	Aug 23/71	17412	Sept 7/71
	10	254410	Aug 23/71	17414	Sept 7/71
	11	254411	Aug 23/71	17415	Sept 7/71
	12	254412	Aug 23/71	17416	Sept 7/71
	25	25443	Aug 25/71	17364	Sept 2/71
	26	25444	Aug 25/71	17365	Sept 2/71
	28	25446	Aug 27/71	17367	Sept 2/71
	30	25448	A ug 26/71	17369	Sept 2/71
	32	254450	Aug 26/71	17371	Sept 2/71
	34	254452	Aug 26/71	17373	Sept 2/71
·	35	254453	A ug 27/71	17374	Sept 2/71
	36	254454	Aug 27/71	17375	Sept 2/71
	37	254455	Aug 27/71	17376	Sept 2/71
	38	254456	Aug 27/71	17377	Sept 2/71
	41	254 461	Aug 25/71	17417	Sept 7/71
	42	254462	Aug 25/71	17418	Sept 7/71
	43	254463	Aug 25/71	17419	Sept 7/71
	44	254464	Aug 25/71	17420	Sept 7/71
	45	254465	Aug 25/71	17421	Sept 7/71
	46	254466	Aug 25/71	17422	Sept 7/71
	49	254469	Aug 26/71	17425	Sept 7/71

SCHEDULE OF CLAIMS

Group Name	Claim Name	Tag No.	Date Staked	Record No.	Date Recorded
Nine Lake	Nine Lake				
	#50	254470	Aug. 26/71	17426	Sept 7/71
	51	254471	Aug. 26/71	17427	Sept 7/71
	61	254477	Aug. 27/71	17433	Sept 7/71
	62	254478	Aug. 27/71	17434	Sept 7/71
	63	254479	Aug. 27/71	17435	Sept 7/71
	64	254480	Aug. 27/71	17436	Sept 7/71
	65	254481	Aug. 29/71	17437	Sept 7/71
	66	254482	Aug 29/71	17438	Sept 7/71
	67	254483	Aug. 28/71	17439	Sept 7/71
	68	254484	Aug. 28/71	17440	Sept. 7/71
	70	254488	Aug. 28/71	17442	Sept. 7/71
	74	254490	Aug. 29/71	17446	Sept. 7/71
	76	254492	Aug. 29/71	17448	Sept. 7/71
	78	254494	Aug. 29/71	17450	Sept. 7/71

DOMINION OF CANADA:

To Wit:

Province of British Columbia. In the Matter of Magnetic & Soil Geochemical Survey of Mc Nos. 1-4 Mineral Claims and Soil Geochemical Survey of Nine Lake Nos. 1-4, 6, 8, 10-12, 25-26, 28, 30, 32, 34-38, 41-46, 49-51, 61-68, 70, 74, 76 and 78 Mineral Claims.

ł. John C. Lund

405 - 1112 West Pender Street, Vancouver 1, B.C. of

in the Province of British Columbia, do solemnly declare that the following is a true and accurate statement of costs involved in the survey :

COST STATEMENTS

Mc GROUP					
<u>Name</u>	<u>Job</u>	Dates Worked	Total Days	<u>Total Pay</u>	
A.T. LaRose	Geophy. Op'tr	J uly 3, 8-9/72	3	\$ 84.00	
D. Wright	" Ass't	11 	3 3	\$ 51.00	
G: Gruenwald	Line Cutter	" July 3 & 8/72	3	\$ 42.00 \$ 88.00	
F. Chow	Project Eng.	July 3 & 0/12	_2	-	
			11	\$265.00	
Total Wages			= \$265.00		
Camp Operation	= 11 man-		= \$139.37		
Assaying	= 58 samp	•	= \$127.60		
Magnetometer Re	ntal = 2 days	@ \$ 8.60	= <u>\$ 17.20</u>		
	Total Cost	s for MC Group	= \$549 .1 7		
NINE LAKE GROUP					
A.T. LaRose	Line Cutter	June 29-30,	26	\$ 728.00	
		July 2, 11-16,			
		23-28, Aug.5-8,			
		11-12, & 14-17.	2.0	# 442 50	
D. Wright	11 11	As above	26	\$ 442.00 \$ 406.00	
G. Gruenwald	Line Cutter	June 29–30, July 2,7,11–18,	29	\$ 400.00	
	& Sampler	23-28, Aug. 5-8,			
		11 - 12, & 14-17.			
F. Chow	Proj.Eng.	June 29-30,	30	\$1320.00	
1 • CHOW	Line Cutter	July 2,4-7,9-21,			
	& Sampler	24-29,Aug.1-2,&4			
W. Gruenwald	Line Cutter	Aug.5-13, 15-22	17	\$ 476.00	
	& Sampler		128	\$3372.00	
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."

of Canasacula, in the Province of British Columbia, this 19

day of October

A Commissioner for taking Affidavits within British Columbia or A Notgry Public in and for the Province of British Columbia.

Sub-Mining Recorder

Continued on page 2 of 2 * NOTE:

Total Wages = \$3372.00

Camp Operation = 128 man-days @ \$12.67 = 1621.76

Assaying = 500 samples @ \$ 2.20 = 1100.00

Total Costs for Nine Lake Group = \$6093.76

APPORTIONMENT OF TOTAL COSTS TO CLAIMS INVOLVED

These costs are intended to cover assessment work for one year on the Mc Group (4 claims) and on the Nine Lake Group (40 claims).

SURVEY GRID LINES

Mc GROUP

A north-south base line 1200 feet long was established along the centre of the claim block. Cross-lines on 200-foot centres were laid out. The base line and the cross-lines were established by the use of a Brunton compass, chained and marked with coloured flagging at 100-foot intervals.

NINE LAKE GROUP

Five base lines were established for grid control. They are; three NW-SE base lines bearing S70°E following claim location lines and totalling 33,300 feet; one SE-NE base line bearing N50°E for a distance of 2,700 feet; and one base line bearing N20°E for 8,200 feet to tie in the first three base lines. Cross-lines on 400-foot centres were laid out. This grid layout was chosen so as to traverse the rock formation at near right angles.

The base line and the cross lines were established by the use of a Brunton compass, chained, blazed, and marked with coloured flagging at 100-foot intervals. Slashing of underbrush and limbing of overhanging branches were done where necessary. This gave good control of sample sites, with minimum expenditure and negligible change in the ecology. A base map with scale 1# = 400' was used in plotting the sample results.

MAGNETIC SURVEY

Mc GROUP

MAGNETOMETER SURVEY

A magnetic survey was performed on the Mc Group grid using a McPhar MF-1 Magnetometer, Model 321 with a sensitivity of 20 gammas per scale division. Approximately 5,600 feet of traversing was completed on lines 200 feet apart and a further 800 feet was surveyed on lines 100 feet apart. Readings were taken at 100-foot intervals, also at 50-foot and 25-foot stations where extra readings were desired. The readings obtained are variations in the intensity of the vertical magnetic field.

Diurnal variations and instrument drift were obtained by rereading established stations along the base lines.

INTERPRETATION

The Magnetic Survey outlines (see Map 3) two, strong (900 - 1600) magnetic anomalies located about 300 - 400 feet SE and NW of the Initial Posts of the claims. They exhibit narrow (100' wide) linear features (300 - 600 ft long) which strike in a north-south direction. Both anomalies appear to terminate abruptly along a NW-SE line (indicated by an assumed fault on the enclosed magnetic map), suggesting a 700-foot horizontal displacement of a single structural feature.

No evidence of a fault was found. The area is covered mainly by overburden with scattered outcrops of quartzite. Examination of outcrops over the magnetic anomalies did not show evidence of any magnetic minerals. The interpretation is that the magnetic anomalies are hidden bodies containing magnetite or pyrrhotite.

GEOCHEMICAL SOIL SURVEY (Mc GROUP AND NINE LAKES GROUP)

SOIL SAMPLE COLLECTION

The samples were taken at 200 foot intervals along the grid lines. Greater intervals were used where terrain dictated - such as talus slopes, rock outcrops and swampy ground.

The soil samples were taken from the top of the "B" (rusty) horizon. Exceptions to this occurred in swampy areas where the "B" horizon is non-existant or deeply buried. Profile sampling was conducted on selected locations to evaluate and compare the metal contents of each soil horizon.

The samples were collected by digging a small hole with a shovel and/or pick. By this means it was possible to see the top of the "B" horizon and observe the composition of the other zones. The soil samples were then taken with a small trowel or spoon and

and placed in high, wet-strength $3\frac{1}{2}$ " x $6\frac{1}{2}$ " Kraft paper bags, on which sample numbers had been marked. Samples were collected from depths ranging from 3" to 16", with the average atabout 6".

Notes were entered into a field book, recording the grid line location, the sample numbers, the depth to the top of the "B" horizon, the direction of drainage and the soil type.

SAMPLE PREPARATION IN THE FIELD

The samples were oven-dried at 100° - 150° or sun-dried on a clothes line. They were then shipped to and analysed by Vangeochem Lab Ltd. in North Vancouver, B.C.

<u>ANALYSIS</u>

Vangeochem Lab used the following analytical procedure to determine acid soluble Cu, Zn and Pb in geochemical samples.

1. Sample Preparation

- a) The samples we dried in a ventilated oven.
- b) The dried soil silt samples were sifted by using a shaking machine using a 80-mesh stainless steel sieve. The plus 80-mesh fraction was rejected and the minus 80-mesh fraction was transferred into a new bag for analysis later.

2. Methods of Digestion

- a) 0.5 gram of the minus 80-mesh samples were used. Samples were weighed out by using a top-loading balance.
- Samples were heated in a sand bath with nitric and perchloric acids (15% to 85% by volume of the concentrated acids respectively)
- c) The digested samples were diluted with demineralized water to a fixed volume and shaken.

3. Method of Analysis

Analyses were determined by using a Tecktron Atomic Absorption

Spectrophotometer Model AA4 or Model AA5 with their respective

hollow cathode lamps. The digested samples are aspirated directly

into an air and acetylene flame. The results, in parts per million,

were calculated by comparing a set of standards to calibrate the

atomic absorption unit.

The analyses were supervised or determined by Mr. Conway Chun or Mr. Laurie Nicol and their laboratory staff.

All the samples were analysed for total metal content in copper, zinc and lead; a group was analysed for tungsten and a selected number of samples were tested for arsenic. The assays expressed in parts per million are plotted on the geochemical plan, then a separate contour map was made to show the dispersion of each element. The results for copper, zinc and lead are shown on Map nos. 4A, 4B and 4C.

INTERPRETATION

Over most of the area a representative sample of the "B" horizon was obtained. It seems likely that soil geochemistry is a reliable technique for prospecting the property.

Areas which are considered to be background values are uncoloured on the maps (see Maps 4A, 4B and 4C; for copper, zinc and lead respectively). Weakly anomalous areas are coloured light blue. These levels are 201 - 300 ppm for copper, 301 - 400 ppm for zinc, and 101 - 200 ppm for lead. Moderately anomalous areas are coloured dark blue. These values are 301 - 400 ppm for copper, 401 - 500 ppm for zinc and 201 - 300 ppm for lead. Definitely anomalous values are coloured purple, orange and increasingly deeper tones of red.

The various geochemical anomalies were often found to be associated with minor occurrences of chalcopyrite, sphalerite, and/or galena in scattered quartz veinlets. The results of the soil survey indicate that substantial amounts of zinc and moderate amounts of copper and lead are dispersed in the soils wherever there is a small showing of mineralization.

Vancouver 1, B.C. October 2, 1972



QUALIFICATIONS OF THE GEOPHYSICAL OPERATOR

The geophysical work was performed by Mr. A. T. LaRose whose qualifications are as follows:-

Frobex Exploration Ltd

Two years as Field Supervisor for airborne radiometric surveys, follow-up ground prospecting and staking, and drill supervision.

<u>Area Mines Ltd</u>

Seven years as geophysical party leader for electromagnetic, magnetic and gravity surveys.

Kerr Addison Mines Ltd

Four and a half years as party leader on electromagnetic, magnetic, and I.P. surveys; drill supervision and geochemical sampling.

QUALIFICATIONS OF THE GEOCHEMICAL SAMPLERS

The geochemical sampling was done by Mr. Fred Chow and Mr. Werner Gruenwald whose qualifications are as follows:-

Qualifications of F. Chow

<u>Sunshine Lardeau Mines Ltd</u>

Two and a half years as resident engineer and geologist performing engineering, mapping, surveying, sampling, assaying, and exploration work.

Newkirk Mining Corporation

Two years as exploration geologist for property examination, mapping and sampling properties, diamond drilling programmes.

Bateman Bay Mining Co

One and a half years as resident engineer and geologist for underground development programme and surface exploration.

Faraday Uranium Mines Ltd

Four and a half years as underground geologist.

Kerr Addison Mines Ltd

Seven and a half years as project chief on mineral exploration involving geophysical and geochemical means of prospecting.

Qualifications of W. Gruenwald

Atlas Exploration Ltd

Four months as field assistant in mapping of geology and geochemical sampling.

Kerr Addison Mines Ltd

Four months as field assistant on I.P. magnetic and electromagnetic surveys, plus geological and geochemical surveys.

Four months as party leader on exploration programme conducting geological and geochemical surveys.

Three months as field assistant on property examinations.

B.Sc. Geology, U.B.C. 1972

SCHEDULE OF ACCOMPANYING MAPS

1.	Key Map	1" = 40 miles
2.	Claim Map	$1" = \frac{1}{2}$ mile
3.	Magnetic Survey Map - Mc Group	1" = 200 ft
4 A .	Geochemical Soil Survey Copper, Mc and Nine Lake Group	1" = 400 ft
4B.	Geochemical Soil Survey Zinc, Mc and Nine Lake Group	1" = 400 ft
4C.	Geochemical Soil Survey	1" = 400 ft

