



GEOLOGY AND GEOCHEMISTRY REPORT

DALE CLAIMS

DALE No: 1-14 YA37368-YA37381



NTS 116A/9, 116A/16

64°45'N, 136°02'W

MAYO MINING DISTRICT, YUKON TERRITORY

OWNER: MATTAGAMI LAKE EXPLORATION LIMITED

AUTHOR: PAUL METCALFE

DATE: OCTOBER 1980

090770

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of

\$ 5252.77

[Handwritten Signature]

Resident Geologist or
Resident Mining Engineer

Considered as representation work under
Section 53 (4) Yukon Quartz Mining Act.

[Handwritten Signature]
B. E. BAXTER
Supervising Mining Recorder

[Handwritten Signature]
Commissioner of Yukon Territory

077000

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CHAPTER ONE: INTRODUCTION

1-1: Location and Access

The DALE 1-14 claims are located on the boundary between claim sheets 116A/9 and 116A/16, latitude 64°45'N, longitude 136°02'W, in the Mayo Mining District (Figure 1). A trail from Keno Hill leads to within 60km of the property.

1-2: History

The DALE 1-14 claims cover galena and chalcopyrite mineralization discovered during follow-up of a G.S.C. Mo-Zn anomaly (G.S.C. Open File 519). The claims were staked on July 31st, 1978 and recorded, in Mayo, on August 8th, 1978 (Figure 2).

Geological mapping, geochemical sampling and prospecting were carried out by a four-man geological crew during the summer of 1979. The certificate of work for that year was filed late and under penalty; accordingly the claims were ruled to be in good standing for only one year (Biczok, 1980).

In July of 1980 a five-man geological crew spent a total of six mandays on the eastern edge of the claim block and the area immediately adjacent. Work included geological mapping of the eastern edge of the claim block and studies of the lithological units present, in an attempt to relate these to the observed mineralization. The following personnel were involved:

P. Metcalfe - Party Chief
P. Lhotka - Senior Assistant
T. Donnelly - Junior Assistant
A. Lane - Junior Assistant
C. Ried - Junior Assistant

Figure 1

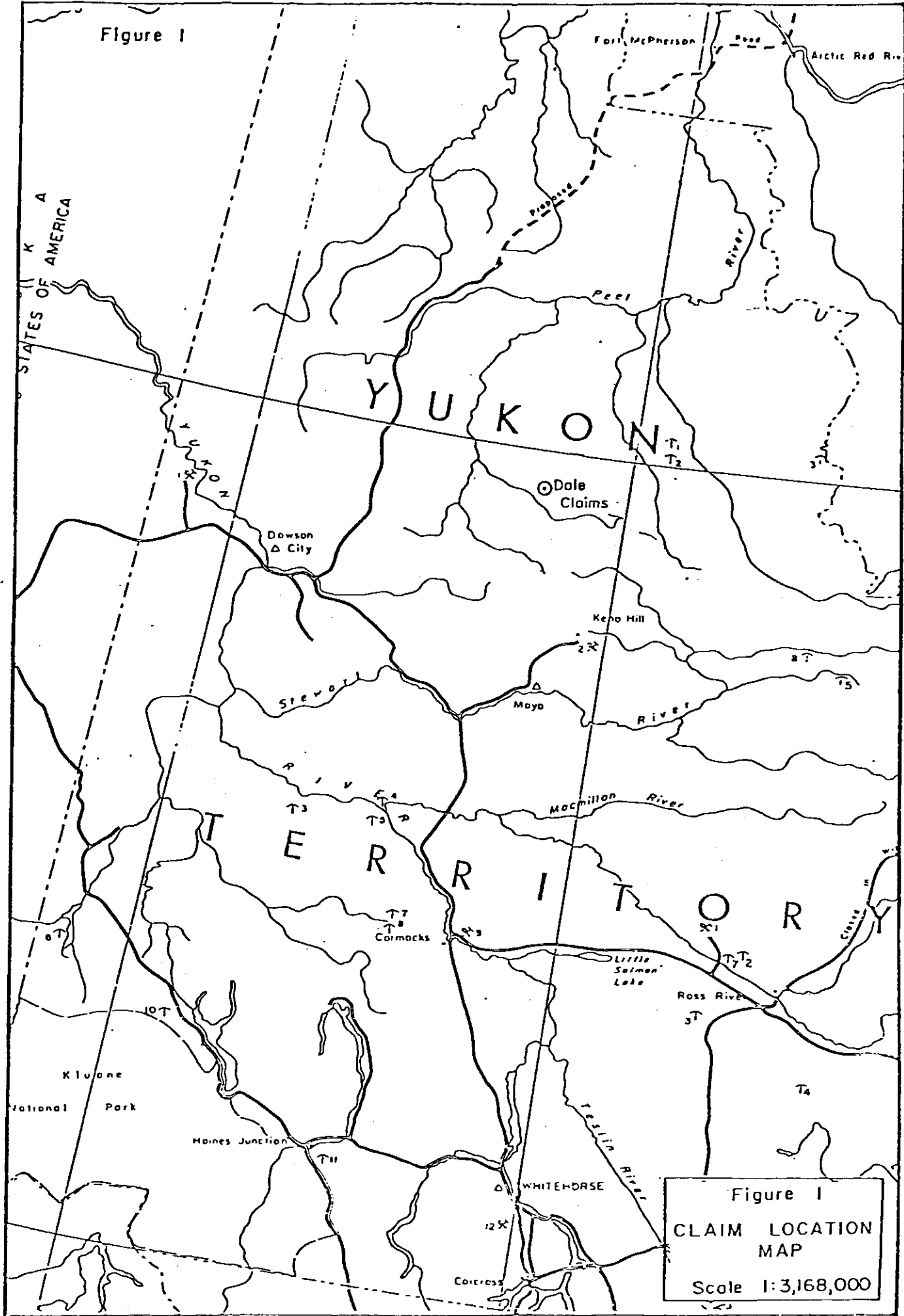


Figure 1
CLAIM LOCATION
MAP
Scale 1:3,168,000

1-3: Logistics

The crew and their equipment were transported to the property from Km 79 on the Dempster Highway, using a Bell 206C helicopter contracted from Shirley Helicopters Ltd. in Edmonton. The distance from the highway to the property is approximately 110km. Camp was established at the head of Lake Fleming, to the east of the DALE claims (Figure 3).

1-4: Physiography and Surficial Geology

The eastern DALE claims are typical of the physiography described by Biczok (1980). Elevation varies from 1,300m to 2,000m. The steep aretes developed in the Helikian terrain contrast sharply with the gentler slopes of the Paleozoic carbonates to the north.

The area was glaciated in the Late Wisconsin (Biczok, 1980); glacial striae show a northward movement of an alpine glacier along the Lake Fleming valley and Lake Fleming itself has formed behind a terminal moraine. Two rock glaciers are preserved in the forked valley above Lake Fleming, on either side of Mt. Widmeyer. Trough ends, lateral and terminal moraines, cirques, hanging valleys and tarns are numerous and well-developed in the Helikian terrain.

1-5: Flora and Fauna

The average elevation of the DALE claims and the steepness of the slopes precluded the development of all but sparse arctic grasses and wildflowers. This sparsity of vegetation contributes to slope instability. In the valley bottoms glacial features have, in places, caused poor drainage and consequent development of swampy areas where stunted alder and

buckbrush may be observed.

Lake Fleming was found, unexpectedly, to contain appreciable numbers of lake trout. The margins of the lake are inhabited by numerous marmots and ground squirrels. Two caribou were observed up-valley from Lake Fleming, in the vicinity of Mt. Widmeyer. No large carnivores were seen.

CHAPTER TWO: GEOLOGY

2-1: Introduction

The area was mapped, in 1961, by L.H. Green and J.A. Roddick of the Geological Survey of Canada as part of the G.S.C.'s Operation Ogilvie and the geology is described in the G.S.C. Memoir 364 (Green, 1972). More recent mapping of the area covered by Memoir 364 commenced during the summer of 1980; no publications are, as yet, available (R. Thompson, personal communication).

The geology of the DALE claims was described by Biczok (1980). The claims cover a faulted contact between cleaved metasediments, tentatively assigned to the Helikian, and unconformably overlying carbonates, possibly of Lower Paleozoic age. More detailed mapping has been carried out on the eastern edge of the DALE claims, which is topographically separated from the rest of the DALE area by a high ridge. The disposition of the lithologies is presented in Fig. 3; a Table of Formations, modified after Biczok (1980), is presented in Table 1.

2-2: Description of Units

Unit 1

To the south of Lake Fleming (Fig. 3) the entire succession of cleaved phyllites described by Biczok (1980) may be observed. The only top indicators observed in the immediate vicinity, west of Mt. Widmeyer, suggest that tops lie to the south. Drag folds observed within the unit suggest folding however, and there is no good evidence for designation of an oldest unit.

Member 1a consists of dark grey, thinly bedded, phyllitic shales.

TABLE 1: TABLE OF FORMATIONS

Age	Formation	Correlative Units of		
		Green and Roddick	Norris	Units on Fig. 3
Quaternary	Glacial Deposits	26	Qmm	-
	UNCONFORMITY			
?Upper Mesozoic	Amphibolitic gabbro	20a	-	4
?	Buff weathering chlorite- and hornblende-bearing porphyritic dacite	-	-	-
	UNCONFORMITY			
Lower Paleozoic	Grey and white crystalline limestone with minor dolomite and rare interbedded maroon shales	8	E?Db	8
	UNCONFORMITY			
Helikian	2c Grey dolomite not observed	2	H ₁	2
	2b Orange and buff weathering dolomite			
	2a Black shale not observed			
	UNCONFORMITY			
	1e Buff to grey siliceous phyllite siltstone, minor dolomite		IS	1
	1d Black shaley phyllite interbedded with sandy siltstone		uZm	
	1c Green siliceous argillite			
	1b Black shaley phyllite, argillite, siltstone		H ₀	
	1a Thinly bedded dark grey- black phyllite siltstone			

Cross-bedding and load casts were observed in this member indicating a top direction and dip towards the south. North of this, a black argillaceous member, 1b, includes thin, 5-8cm, beds of white siltstone.

Immediately south of Lake Fleming, member 1c of Biczok (1980), a pale green siliceous argillite, crops out with a sharp contact against member 1d, a distinctive black shale member with abundant graphite. The northern contact of member 1d is obscured by faulting but is interbedded with the brown siliceous argillite, of member 1e. The outcrop of the latter member is restricted by faulting.

Biczok's Unit 1 may be equated with Unit 1 of Green and Roddick (1972) and with the unnamed phyllitic argillites and quartzites (H₀) of Norris (1975). No author has, as yet, described the age constraints of this unit adequately, nor has any formal stratigraphic description been made.

Unit 2

Member 2a of Biczok's Unit 2 (Biczok, 1980) was not observed in detail; it outcrops only on the top of the ridge west of Lake Fleming and may represent an in-faulted relict of Unit 1. Member 2c, as suggested by Biczok, is probably part of the Lower Paleozoic sequence (Unit 8, Green, 1972; E?Db, Norris, 1975) and has been assigned thereto in the Table of Formations.

The bulk of Unit 2 consists of orange and buff-weathering limestones and dolomites, strongly cleaved. In the vicinity of Lake Fleming, these strike approximately east-west and dip steeply to the south. They are faulted to the north and south against Lower Paleozoic carbonates and Helikan phyllites, respectively. The member may be equated with Unit 2 of Green (1972) and Unit H₁ of Norris (1975).

Unit 3

Another unit may be added to those described by Biczok (1980).

Lower Paleozoic carbonates, with interbedded maroon shales, crop out to the north of Lake Fleming and are in fault contact with the sheared carbonates of Unit 2 to the west of Lake Fleming. It appears that these carbonates, where not faulted, unconformably overlie the Unit 2 rocks, and dip northwards, away from the Helikian terrain. The carbonates may be correlated with Unit 8 of Green (1972) and Unit E?Db of Norris (1975).

Igneous Intrusions

Dacite Dykes

The phyllites of Unit 1 are intruded, near Mt. Widmeyer, by an east-west trending swarm of buff weathering dykes, weakly sheared and extensively altered. The rock is porphyritic, incorporating 20% relict phenocrysts, up to 10mm in length, altered to chlorite. The groundmass consists of fine grained, equigranular quartz and feldspar; no detailed modal analysis is available. Relict vugs are infilled with calcite and goethite. No age constraints could be established for the dykes save that their weak shearing suggests that they are related to the late stage faulting. The dykes are associated with small, fracture-filling, siderite quartz veins.

Gabbro (Unit 4)

A dark green, amphibolitic gabbro sill intrudes the orange weathering carbonates of Unit 2 to the west of Lake Fleming. The apparent thickness of the sill is 25m; the sill dips to the north and is faulted off at its north end.

The gabbro is a medium grained, equigranular amphibolite, containing

chlorite, actinolite and albite. No detailed petrographic analysis is available. Veinlets of quartz-calcite, approximately 2cm wide, pervade the rock.

The gabbro may be correclated with Unit 20a of Green (1972). The sill, although only weakly sheared in its interior, exhibits stronger shearing near the margins and was probably emplaced during the period of late faulting in the area.

2-3: Structural Geology

The members of the Proterozoic, Hadrynian sequence are all highly sheared, the shear foliation striking 100° , with a vertical attitude. Local variations in cleavage strike are thought to reflect variations in the local trend of the fault system, which formed coevally with cleavage. The fault separates the Proterozoic strata from the Lower Paleozoic carbonates north of the fault (Biczok, 1980). Bedding in the Proterozoic strata may be distinguished in places and in one location, west of Mt. Widmeyer, load casts and cross-bedding in the phyllites indicated that tops lay to the south.

The Lower Paleozoic terrain has moderate dips to the north and is unshered. It may be inferred that two periods of deformation occurred, the first after deposition of the Helikian strata, the second postdating the Lower Paleozoic.

In addition to the numerous small faults transecting the Helikian terrain, a large fault system runs east-west through Lake Fleming. The fault system at this point appears to have trifurcated (Fig. 3) but the major VLF-RADEM conductor is the most southerly of these three dislocations;

the other faults may be interpreted as minor en echelon disturbances.

The faults in the Helikian terrain are infilled by siderite quartz veins; the largest of these is located on Fig.3. The vein, as it passes eastward, thins noticeably and branches into numerous smaller veins; further to the east it is not observed.

CHAPTER THREE: GEOCHEMISTRY

3-1: Water (Figure 3)

No water samples exhibited detectable values (Table 3). Consequently, the method has no application in this terrain for this type of exploration.

3-2: Sediments (Figure 3)

Stream sediments were collected in wet strength paper sample bags, air dried in camp and then shipped to Noranda Exploration Laboratories in Vancouver. They were then sieved to -80 mesh and analyzed as described in Appendix 1.

The results (Table 2) show that most samples exceed what might be considered a normal threshold for copper in stream sediments (probably about 120 ppm). In particular the drainage to Lake Fleming (Sample S-114) is high. There appears to be a rapid drop-off of Cu from Unit 1d to 1c but an increase in Pb (100 ppm in Sample S-115). Sample S-113 shows the only other interesting element in the area with 1.8 ppm Ag.

3-3: Rock (Figure 3)

Some analyses of interesting rocks are shown. However, these are grab samples and so are not representative of large rock volumes.

Unit 1a contains Cu and Ag mineralization as shown by samples R-558 and R-121. Unit 1b shows lower values in R-570. The remainder of the interesting samples are R-127 and R-564, both of which occur in Unit 4.

All these samples, showing 0.18% to 4.3% Cu and 0.4 ppm to 32 ppm Ag represent limited, and thin, veins of doubtful economic importance.

TABLE 2: Geochemical Results 1980, DALE Claims, Sediments (in ppm)

Sample No.	Cu	Pb	Zn	Ag	Mo	U	Ni
S-113	240	10	64	1.8	L2	2.4	36
114	680	16	90	0.8	L2	0.3	54
115	120	100	140	0.8	2	3.5	38
116	96	46	120	0.6	L2	2.4	36
555	130	20	60	0.6	L2	5.6	38
556	86	16	70	0.2	L2		
557	140	14	60	0.4	L2		
558	36	12	36	0.2	L2		
559	130	32	56	0.2	L2		

TABLE 3: Geochemical Results 1980, DALE Claims, Water Samples (in ppb)

Sample No.	Cu	Pb	Zn	U	F	pH
W-113	L10	L10	L10	L0.1	L10	6.71
115	L10	L10	L10	L0.1	L10	6.62
116	L10	L10	L10	L0.1	L10	6.55
555	L10	L10	L10	L0.1	L10	6.18

TABLE 4: Geochemical Results 1980, DALE Claims, Rock Samples (in ppm)

Sample No.	Cu	Pb	Zn	Ag	Mo	U	Ni	Co	Au	As	W
R-118a	310	68	48	0.8	L2	0.2	50	64			
118b	170	26	40	0.2	L2	0.2	52	64			
121	7,300	8	80	2.6	L2	L0.1	92	56			
122	70	6	76	0.8	L2	L0.1	260	72			
123a	1,600	2	50	2.0	L2	L0.1	46	42			
123b	11,000	2	72	32.0	L2	L0.1	64	50	210		
123c	17,000	140	16	0.4	L2	L0.1	330	600			
125	250	30	110	1.0	L2	L0.1	68	70		62	
126	40	2	110	0.4	L2	L0.1	110	64			
127	17,000	140	16	16.0	L2	1.6					
557	370	2	48	0.4	L2	L0.1	28	46			
558	33,000	10	84	11.0	L2	6.7	220	84	80		
560	630	2	100	0.6	L2	2.9	150	80			
562	4,600	4	10	1.2	L2	2.7	28	54			
563	2,400	2	48	3.8	L2	L0.1	45	78			
564	43,000	6	76	8.4	L2	L0.1	200	210	60		
565	80	2	50	0.2	L2	L0.1	68	50			
569	540	2	64	0.2							
570	1,780	8	66	0.4							5

CHAPTER FOUR: CONCLUSIONS

1. The geological units mapped on the DALE claims have been found to continue for some 30km east where they are displaced by a NW trending fault.
2. Stream sediments have shown interesting Cu, Pb and Ag values continuing to the east.
3. Weak chalcopyrite veining is present in units 1a, 1b and 4.

CERTIFICATE

I, John Biczok, of Edmonton, Province of Alberta, do hereby certify that:

1. I am a geologist residing at #5, 10556 - 80 Avenue, Edmonton, Province of Alberta.
2. I am a graduate of Lakehead University, Ontario with a H. B.Sc. (1976) in geology and am presently completing an M.Sc. at the University of Manitoba, Winnipeg.
3. I have been practising my profession since 1973 and am at present Exploration Geologist with Mattagami Lake Exploration Limited in Edmonton.
4. I was party chief for the crew that conducted the work in this report and the report is correct to the best of my knowledge and ability.

Dated: January 9th 1981
John Biczok
John Biczok, H. B.Sc.

I, Paul Metcalfe, of the City of Winnipeg, Province of Manitoba,
do hereby certify that:

1. I am a geologist resident at 330 - 99 Dalhousie Drive, Winnipeg,
Manitoba, R3T 3M2.
2. I am a graduate of Durham University with a B.Sc. Honours (1977)
in geology, and am presently studying for an M.Sc. degree in
geology at the University of Manitoba.
3. I have been practising my profession since 1978.
4. I was responsible for the fieldwork described in this report.

Dated:

January 9th, 1981

P. Metcalfe
P. Metcalfe, B.Sc. (Dunelm)

APPENDIX ONE

Statement of Costs

STATEMENT OF COSTS, 2 DAYS AT DALE PROPERTY

CREW COST	P. METCALFE	\$1500 per month	
	P. LHOTKA	\$1330 per month	
	A. LANE	\$ 920 per month	
	T. DONNELLY	\$ 980 per month	
	C. REID	\$ 880 per month	
		<u>\$5610 per month</u>	
	x 2/30 x 127/100		\$474.98
	(127% includes bush bonus)		

HELICOPTER COST			
	July 5th	6.9 hours	
	July 12th	5.8 hours	
	x(\$345 + \$1.40 oil)		\$4399.28

ANALYSES

19	Rock Preparation	\$1.25	23.75	
32	Cu	\$1.25	40.00	
32	Pb	\$0.60	19.20	
32	Zn	\$0.60	19.20	
32	Ag	\$0.60	19.20	
26	Mo	\$0.60	15.60	
22	U	\$2.50	55.00	
22	Ni	\$0.60	13.20	
17	Co	\$0.60	10.20	
3	Au	\$2.50	7.50	
1	As	\$2.50	2.50	
1	W	\$2.50	2.50	
4	F	\$2.50	10.00	
4	pH	\$1.00	4.00	\$ 241.85

VEHICLE RENT

1 Passenger Van	2 x (\$765/30)	\$51.00	
1 Panel Van	2 x (\$575/30)	\$38.33	
1 Magna Van	2 x (\$710/30)	\$47.33	\$ 136.66

\$5252.77

APPENDIX TWO
Geochemical Analysis Method

Noranda Exploration Company Limited
(no personal liability)
P.O. Box 2380,
Vancouver, B.C.
V6B 3T5

Noranda

1050 Davie Street
Phone (604) 684-9246
Telex 04-51331

Effective June 1980

VANCOUVER GEOCHEMICAL LABORATORY

Schedule of Services and Fees

Elemental Analyses of Sediments, Soils and Rocks.

Perchloric - Nitric decomposition by A.A.

Element		Detection Limit	Price
Cadmium	Cd	0.2 PPM	1st. Element - \$1.25 each additional \$0.60. Soils and Sediments analyses on minus 80 mesh portion - no preparation charges. Rock Geochem preparation \$1.25. Background correction applied when necessary.
Chromium	Cr	2	
Cobalt	Co	1	
Copper	Cu	1	
Iron	Fe	2	
Lead	Pb	1	
Manganese	Mn	2	
Molybdenum	Mo	1	
Nickel	Ni	1	
Silver	Ag	0.1	
Vanadium	V	10	
Zinc	Zn	1	

Elements requiring individual decomposition and specific techniques.

Antimony	Sb	1 PPM	Each Element \$2.50
Arsenic	As	1	
Bismuth	Bi	1	
Fluorine	F	10	
Gold	Au	0.01 (10PPB)	
Mercury	Hg	0.005 (5PPB)	
Selenium	Se	1	
Tellurium	Te	0.1	
Tin	Sn	1	
Tungsten	W	2	
Uranium	U	0.1	

It should be noted that geochemical techniques are used for trace analysis. For samples with visibly high concentrations (X) of elements, assaying should be requested.

- 2 -

Total dissolution with hydrofluoric - perchloric - nitric acid.

Barium	Ba	Trace or	1st. element \$2.50
Calcium	Ca	percent level	each additional \$0.60
Magnesium	Mg		
Potassium	K		
Rubidium	Rb		
Sodium	Na		
Strontium	Sr		

Whole rock analysis with lithium metaborate fusion.

SiO₂, Al₂O₃, Fe₂O₃, CaO, MgO, K₂O, Na₂O, MnO, Cr₂O₃, SrO, & P₂O₅:
1st. element - \$5.00, each additional element \$1.50

Miscellaneous Services

Assaying services are available:

Ag, Au, Co, Cu, Mo, Ni, Pb, Zn	\$5.00 per element
Conductivity (waters) umho. cm ⁻¹	\$1.00 per sample
<u>Hydro-chemical analysis:</u>	
Direct aspiration	\$0.60 per element
Solvent Extraction (APDC)	\$1.25 per element
Field indicator for Zinc	\$10.00 per litre
Loss on Ignition 550°C ca. 4 h.	\$2.00 per sample
pH	\$1.00 per sample

Partial extractions, ie. 0.5M HCl, EDTA, Sulphide selective and others are available on request.

All other analyses not listed, eg. semi-quantitative spectrographic, plasma emission and neutron activation analysis can be done locally at commercial laboratories.

Methodology of the Geochemical Laboratory

Physical methods of sample treatment.

Rock and core samples involve crushing and pulverizing with a rotary plate or a ring and puck pulverizer, whichever is appropriate. Subsequently, the -200 mesh sample is rolled to insure uniformity.

For sediment and soil samples, these are dried at ca. 80°C for 24 to 48 hours.

The samples are then sieved to -80 mesh with nylon screen; the +80 mesh (reject) material is discarded.

The panned - heavy mineral samples are analyzed as received without further sample preparation, except where the material is too coarse; this material is passed through a -40 mesh screen.

Perchloric - nitric acid decomposition (HClO₄-HNO₃)

The analysis of soil, sediment and rock geochem to determine the lighter transition elements, is carried out by decomposition with a perchloric plus nitric acid mixture. The procedure for preparing geological samples for trace analysis by atomic absorption is as follows:

Weigh 0.400g of sample and digest with 4ml perchloric acid (70%) plus nitric acid (4+1) for 4 hours at reflux temperature.

After digestion, each sample is diluted to 10ml with water. This solution is used for the determination of Cd, Cr, Co, Cu, Fe, Pb, Mn, Mo, Ni, Ag, V and Zn with a Varian AA - 475 complete with background correction.

Complete dissolution of such elements as Cr, Fe, Mn and V is not always achieved, and may be of little significance for geochemical exploration purposes.

A brief description of elements requiring specific techniques

Determination of mercury and the elements that form volatile hydrides i.e. As, Bi, Sb, Se and Te are carried out with a hydride vapour generation accessory (Varian M-65). The hydride is formed by sodium borohydride reaction with an acidified solution of the sample. This enables measurement of trace quantities by atomic absorption.

Fluorine: 0.25g sample is sintered with sodium carbonate-potassium nitrate flux and dissolved in water. The fluoride content is compared to standards on a specific ion electrode meter. (U.S. G.S. Paper 700-C)

Gold: 10.0g sample is digested with aqua regia. Gold is extracted into HIBK from the aqueous HCl solution. Atomic absorption is used to determine gold, and a sensitivity of 10ppb is attained. (At. Absorpt. News. 6, 126, 1979)

Tin: 0.5g sample is heated with ammonium iodide; tin present as cassiterite is converted into stannic iodide, which sublimes. The sublimate is dissolved in 1M HCl. A pink tin complex is formed with gallin. This allows colorimetric comparison with standards to determine tin to as low as 2ppm. (R.E. Stanton 1962).

Tungsten: 1.0g sample is sintered with carbonate flux and is leached with water. The leachate is treated with KSCN. This forms a yellow tungsten thio-cyanate which is extracted into tri-n-butyl phosphate. This permits colorimetric comparison with a standard series to ca. 4ppm (F.H. Ward 1963)

Uranium: Sample digestion will depend on the extraction requested, however, if not specified, an aliquot is taken from the perchloric-nitric decomposition. The aliquot is taken diluted with water and buffer, and the luminescence of the uranyl ion is quantitatively measured on the UA-3 (Scintrex). Sensitivity of 0.1ppm in geological samples is easily obtained.

Hydrofluoric - perchloric - nitric decomposition (HF/HClO₄-HNO₃)

The analysis of silicate rock for major elements, i.e. alkaline and earth alkaline metals, is performed by decomposition with hydrofluoric - perchloric - nitric acid, with subsequent removal of the fluoride ion. Total dissolution of the major constituents is accomplished and this method is suitable for determination of Na, K, Mg, Ca, Mn, Fe, Rb, Sr, and Ba. Silicon is not determined since it volatilizes during dissolution.

This method is not intended to replace the elaborate fusion techniques (eg. LiBO₂ fusion) for major oxide analysis, and should be used as a supplementary method for geochemical exploration where quick results are necessary. (Anal. Chim. Acta 32, 1, 1963)

Whole rock analysis employing lithiumborate fusion.

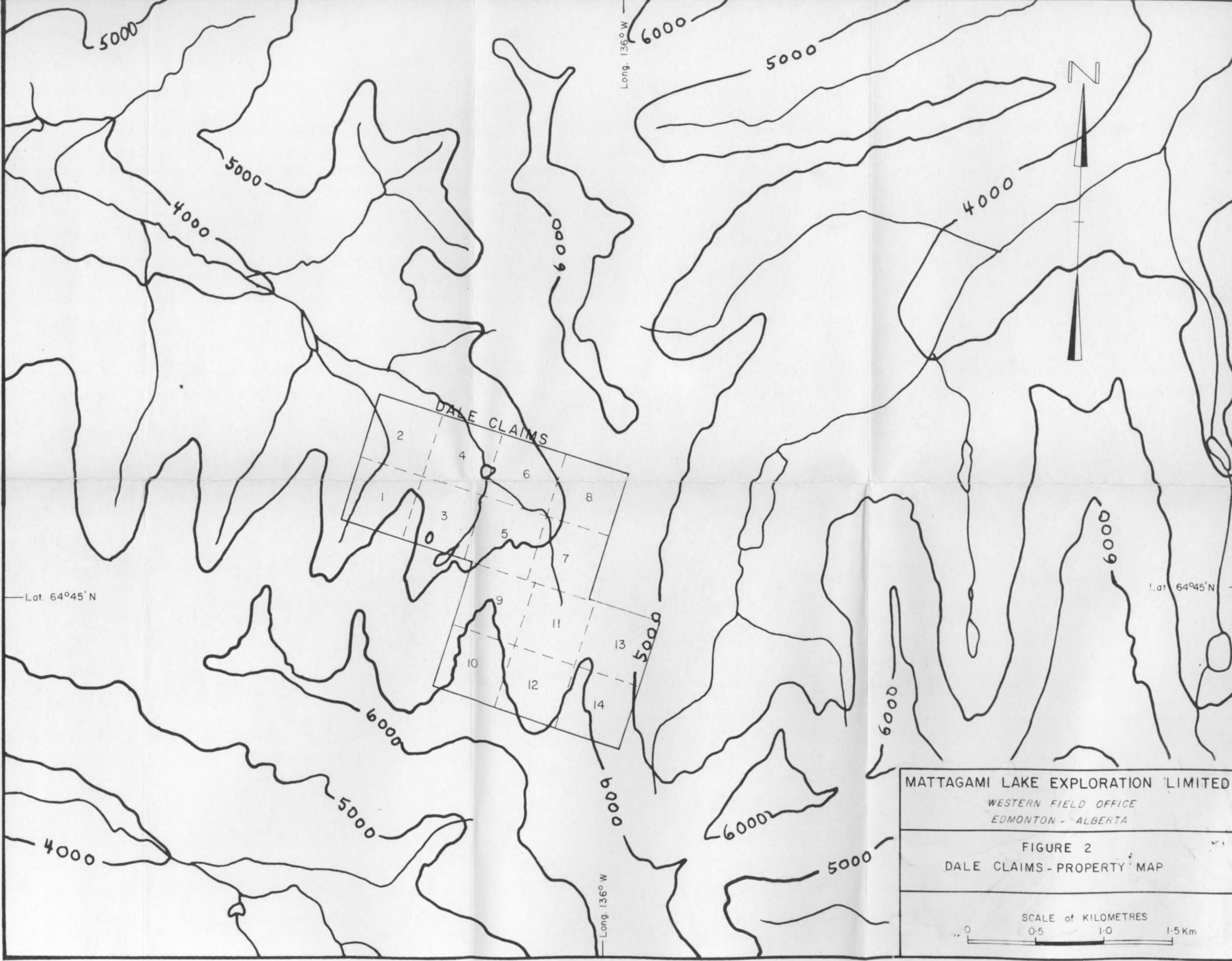
A atomic absorption procedure is used for the analysis of rock to determine Si, Al, Fe, Mg, Ca, K, Na, Mn, Cr, Sr, and Ti. The method employs a lithium metaborate (LiBO₂) fusion and dissolution in diluted nitric acid. This is recommended for whole rock analysis of rocks and core of widely ranging major element composition. (Atomic Absorpt. News. 2, 25, 1969).

The lab intends to implement the Bernas Type teflon - lined bomb for decomposition of ores and minerals at a later date.

The lab will continue the policy that after operating costs of the lab have been covered, any surplus will be rebated on a pro-rated basis.

There is considerable difference of opinion regarding what geochemical methods to use in exploration. Since there is no universally suitable method for any geochem analysis which is mainly due to varying sample material, in order to maintain quality control and consistent data, it is important to request the same decomposition and analytical methods, when various labs are contracted.

For further information please contact the Noranda Vancouver Laboratory at the following number: (604) 684-9246 E.J. van Leeuwen



MATTAGAMI LAKE EXPLORATION LIMITED

WESTERN FIELD OFFICE
EDMONTON - ALBERTA

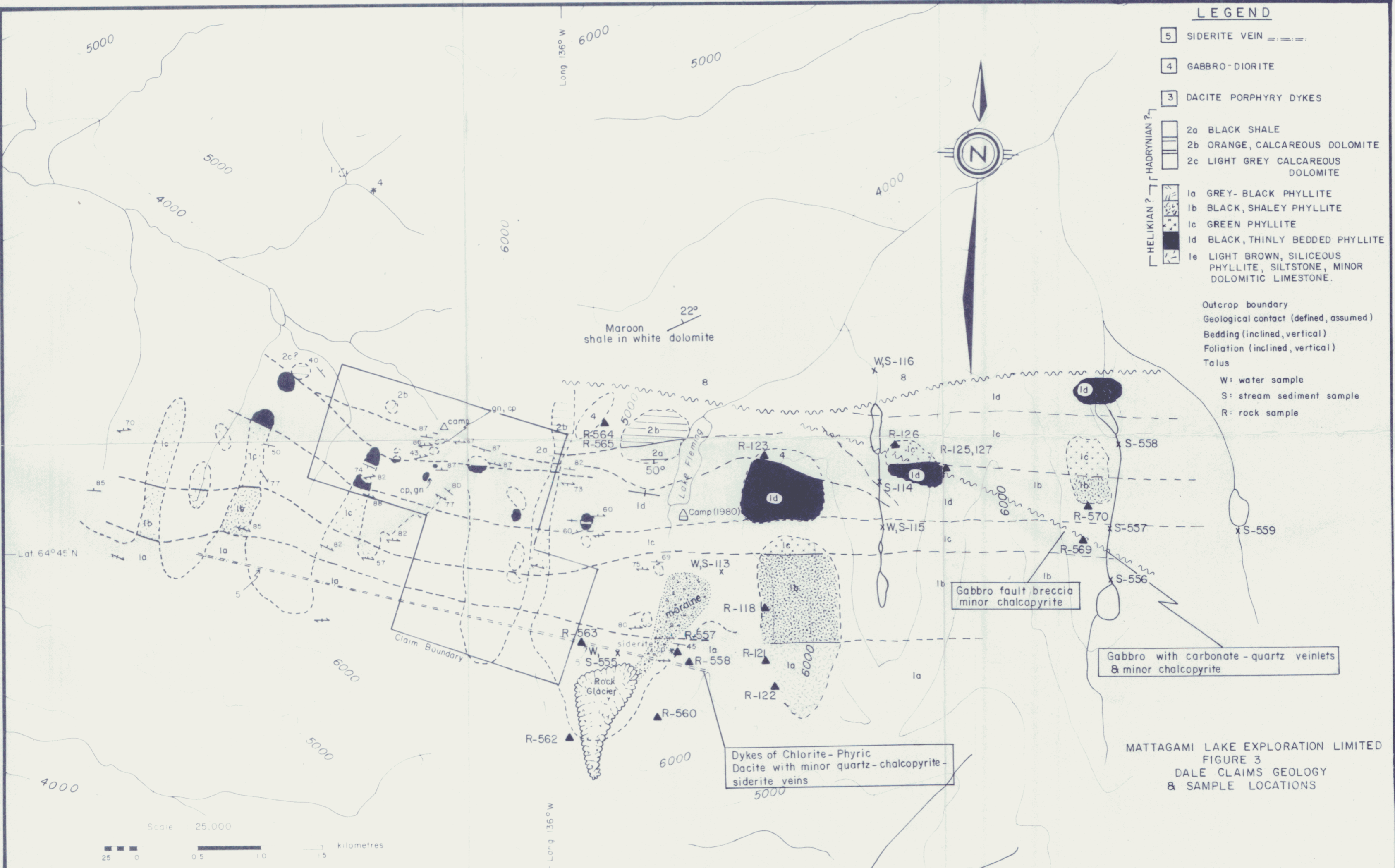
FIGURE 2
DALE CLAIMS - PROPERTY MAP

SCALE of KILOMETRES
0 0.5 1.0 1.5 Km

LEGEND

- 5 SIDERITE VEIN
- 4 GABBRO-DIORITE
- 3 DACITE PORPHYRY DYKES
- 2a BLACK SHALE
- 2b ORANGE, CALCAREOUS DOLOMITE
- 2c LIGHT GREY CALCAREOUS DOLOMITE
- 1a GREY-BLACK PHYLLITE
- 1b BLACK, SHALEY PHYLLITE
- 1c GREEN PHYLLITE
- 1d BLACK, THINLY BEDDED PHYLLITE
- 1e LIGHT BROWN, SILICEOUS PHYLLITE, SILTSTONE, MINOR DOLOMITIC LIMESTONE.

- Outcrop boundary
- Geological contact (defined, assumed)
- Bedding (inclined, vertical)
- Foliation (inclined, vertical)
- Talus
- W: water sample
- S: stream sediment sample
- R: rock sample



MATTAGAMI LAKE EXPLORATION LIMITED
 FIGURE 3
 DALE CLAIMS GEOLOGY
 & SAMPLE LOCATIONS

