

11-255 Box 13

REPORT ON GEOCHEMICAL
SAMPLING OF THE
MARE GROUP

T. BRULAND REPORT 100-083-83



FALCONBRIDGE

Memorandum

Date: November 8, 1983
To: C.M.H. Jennings
Copies to: T. Bruland
From: J.B. Gammon
Subject: Report No. 100-083-83 Mare Claims 1983

Please find attached Tor Bruland's account of a sampling programme on the Mare Claims this summer. Enough work was carried out to fulfill the assessment requirements. A couple of float samples returned interesting values, but the CanSup data was not duplicated. It is planned to use mountaineering geologists to sample the property systematically during 1984.

REPORT ON
GEOCHEMICAL SAMPLING
OF
MARE GROUP

LIARD MINING DIVISION
LONGITUDE 129 ° 57' W
LATITUDE 59° 32' N
NTS 104 P/12 W

TOR BRULAND
OCTOBER 1983

REPORT 100-083-83

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INTRODUCTION

During late August and early September, a geochemical program was done with the purpose of duplicating Canadian Superior Exploration Ltd. results from 1981 and outlining the mineralized zones. The mineralized area shows up in several gossans in the cliffs on the property. Two of the gossans were sampled, 135 samples were taken and assayed for Au and Ag. Of the remaining gossans, two can be sampled fairly easily, while the gossans in the southwest slope will have to be sampled by mountaineers. Due to early snow and low clouds, below 2000 m., the easily accessible gossans were not sampled during this program. The location of Canadian Superior's high Au values were sampled. Their highest values, however, were from angular float.

During this program, none of the high values that Canadian Superior got were repeated, but a couple of interesting Au and Ag values were encountered and the remaining area should be sampled before a final evaluation of the property is done.

LOCATION AND ACCESSIBILITY

The Mare Group is located 32 km north of Cassiar between Blue River and Black Friday Lake (Figure 1 and Figure 2) The property is located in alpine country in the Cassiar Mountains. The LCP for Mare 1 to Mare 4, is located at 1770 m, with the main outcrops in the cliffs of the cirque having an elevation between 1850 m and 2200 m.

The only access to the property is by helicopter from Watson Lake, Yukon Territory, a distance of 90 km.

CLAIM INFORMATION

The Mare Group mineral claims consist of the following blocks:

<u>NAME</u>	<u>RECORD NO.</u>	<u>UNITS</u>	<u>HECTARS</u>	<u>EXPIRY DATE</u>
Mare 1	2085	20	500	Sept. 28/85
Mare 2	2086	8	200	Sept. 28/85
Mare 3	2087	6	150	Sept. 28/85
Mare 4	2088	15	375	Sept. 28/85

Figure 1

Location map for the
Mare group
Scale 1:7,600,000

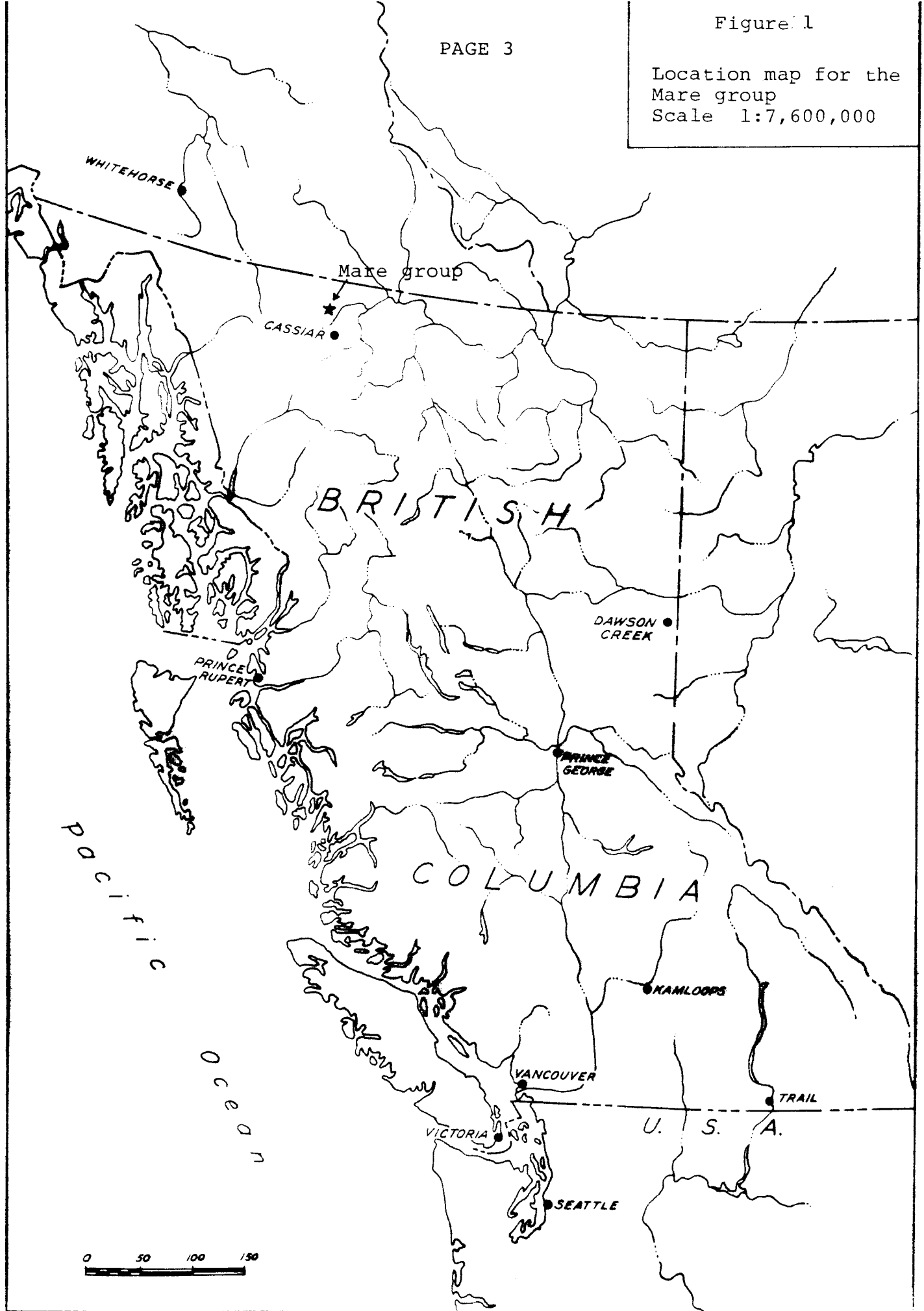
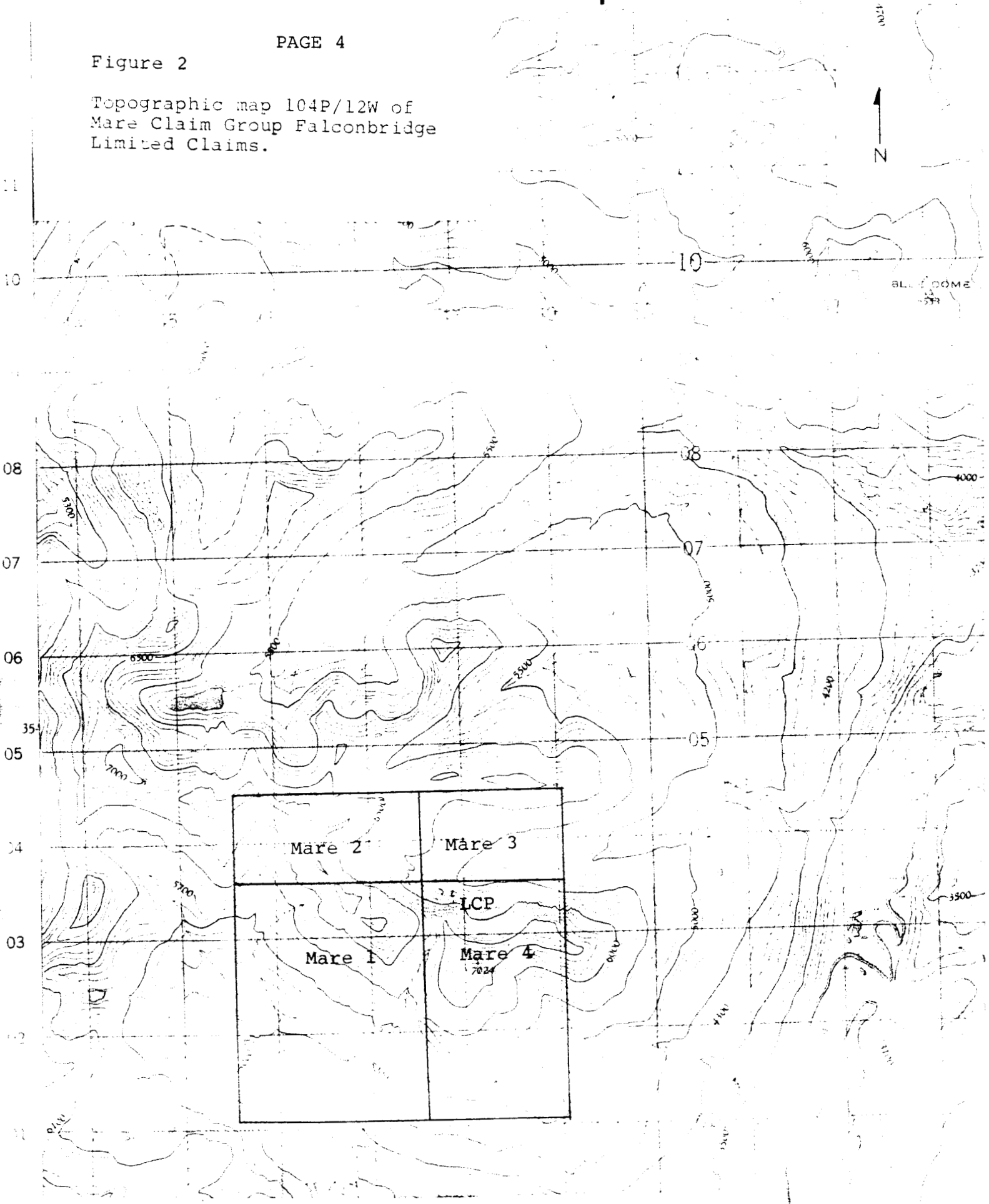


Figure 2

Topographic map 104P/12W of
Mare Claim Group Falconbridge
Limited Claims.



Scale 1:50,000 Échelle

Miles 1

0

3 Miles

The Mare Group covers a total of 1225 hectars.

HISTORY

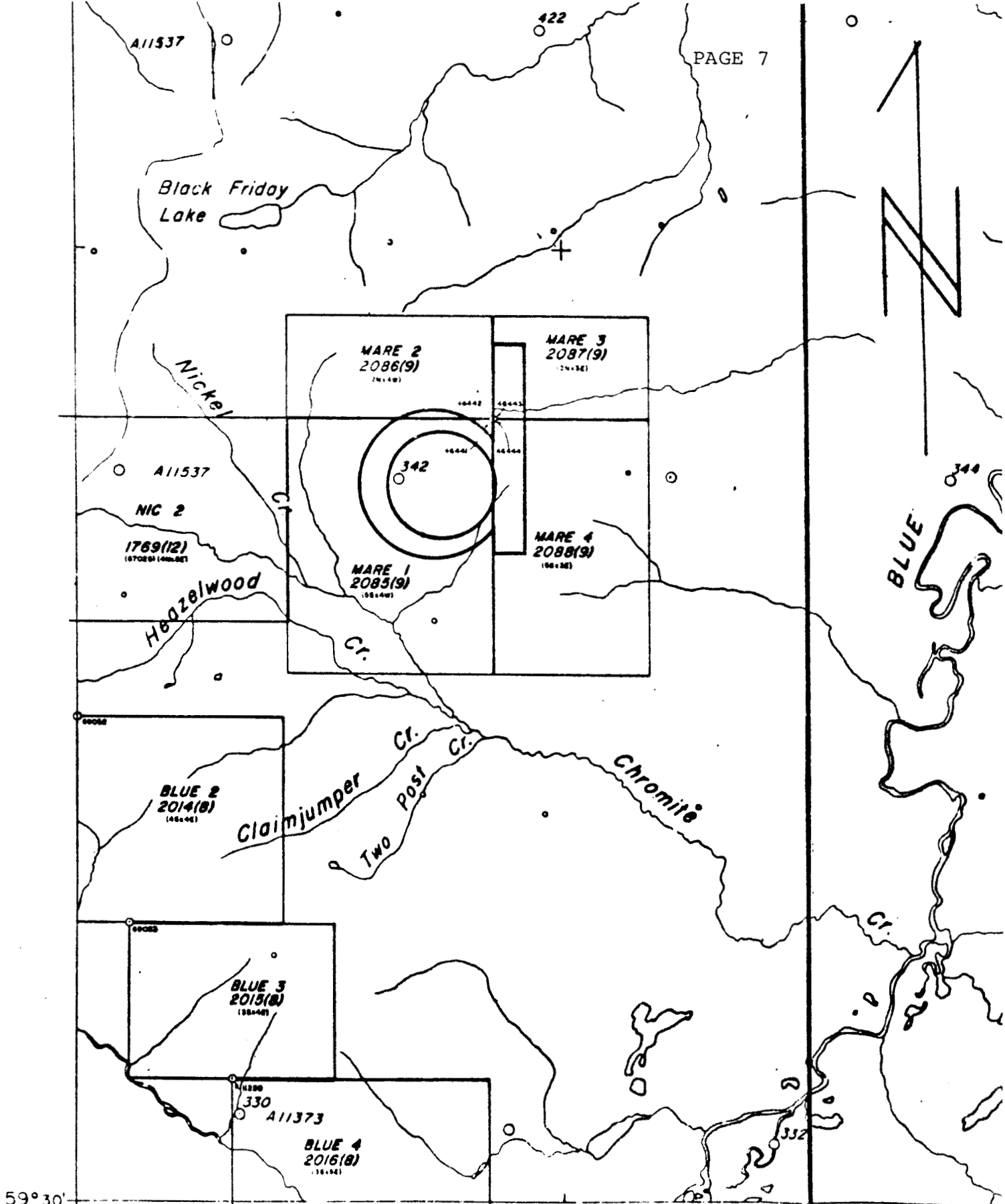
The Mare Group was staked by Canadian Superior in September 1981 after a regional exploration program in the area located high gold values, in float, in the cirque. Falconbridge Ltd. acquired the property from Canadian Superior in September 1982. No work was done on the property that year and assessment was paid by cash in lieu.

The Mare Group is located about 5 km north of the Puritch Nickel property, a Falconbridge Nickel Mines project in the early 50's. The area to the southwest is covered by valid claims. (Figure 3 and Figure 4).

OBJECTIVE OF THE CURRENT PROGRAM

During Canadian Superior's regional program in the Cassiar area in 1981, high gold values were located in the cirque covered by the Mare Group. The highest gold values were from angular float of siliceous rock in the cirque.

The purpose of the current program was to repeat the high gold values and to outline mineralized zones on the property. Due to the topography of the property with limited access to part of the outcrops, traverses were made down the cliff wherever possible. (Figure 5 and Plate 1 to Plate 5) The program had to be cancelled before all of the accessible areas were covered due to snowfall and low clouds (below 2000 m) which made access to the cliffs impossible.



59°30'
 130°00' LIARD MINING DIVISION
 Mining Division Boundary
 Indian Reservation
 Mineral and Placer Reserve
 Ecological Reserve
 P. 3

Figure 4
 Claim map 104P/12W of the
 Mare Group Falconbridge
 Limited Claims.

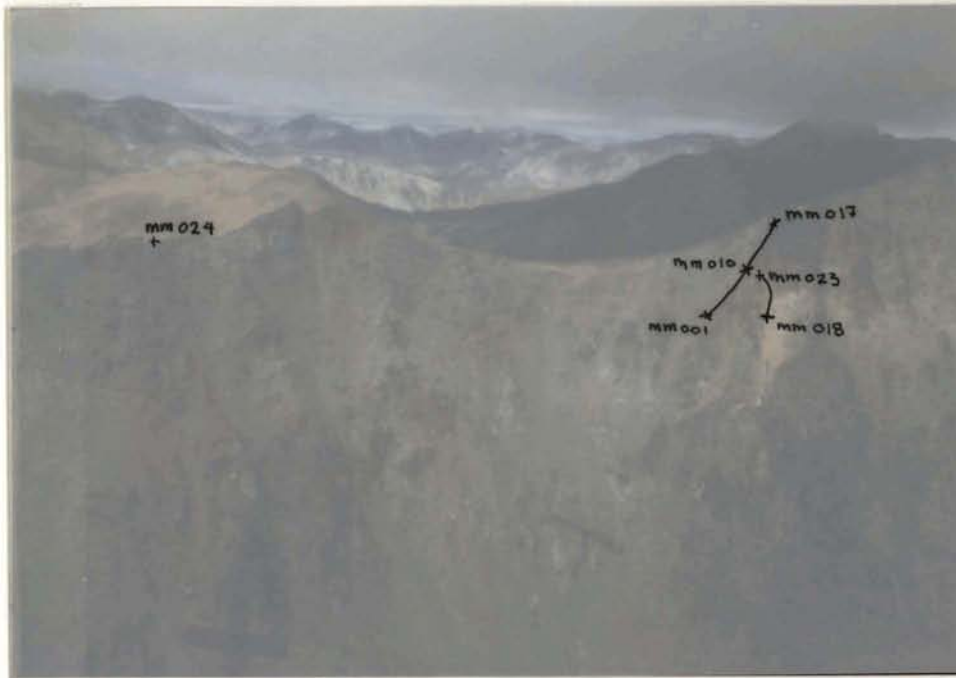


PLATE 1: Cliff on west side of cirque with approximate traverses and sample location.



PLATE 2: Cliff on southwestern side of cirque with high silver sample on ridge and inaccessible gossan in cliff along bedding.

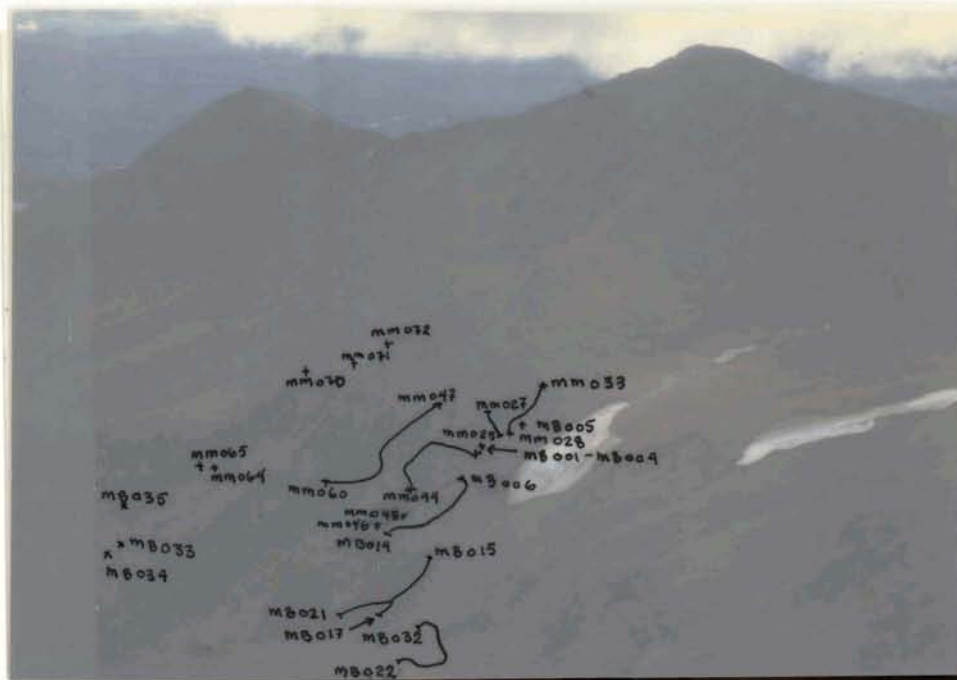


PLATE 3: Traverses and sample location in cliffs along south side of cirque.



PLATE 4: Subsidiary folds and sample location in sedimentary unit in cliffs on south side of cirque.

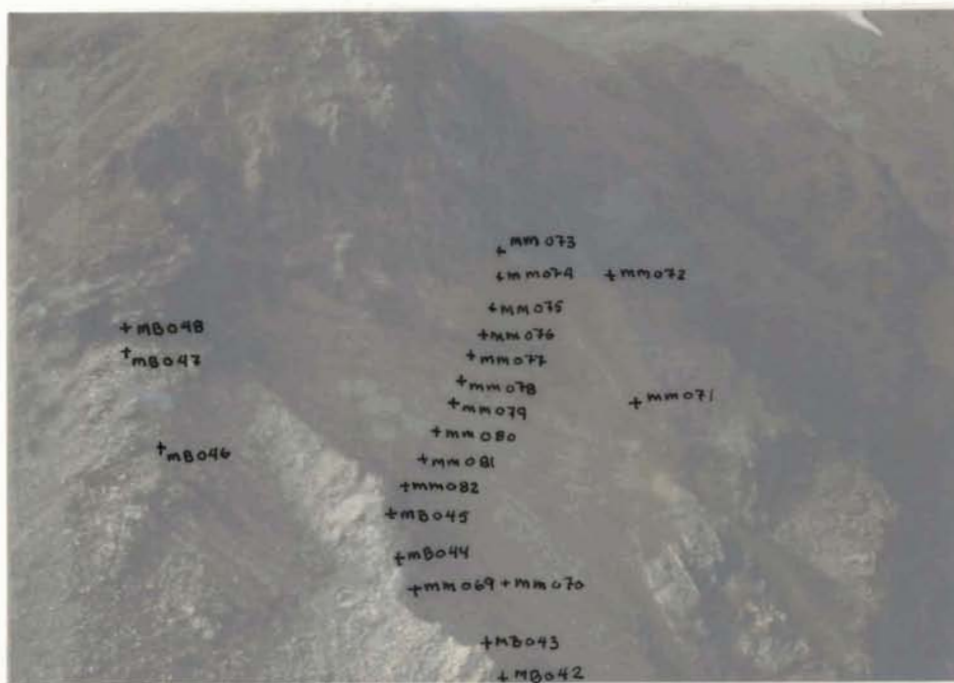


PLATE 5: Sample locations across the sedimentary unit in the cliff on the south side of the cirque.

REGIONAL GEOLOGY

The area is underlain by a northwest trending assemblage of faulted and folded marine Proterozoic to Mississippian rocks, a large mass of granitic rock (Cassiar batholith dated at 100 my), granitic stocks emplaced marginal to the Cassiar batholith (dated at 70 and 50 my), and local concentrations of Tertiary basalts.

Well defined glacial features are abundant and their features suggest that, during Pleistocene time, ice move in a northwesterly and easterly direction covering the entire area.

Table 1 summarizes the lithologies of the various rock units found in the Cassiar area. For a more detailed description, reference should be made to Gabrielse (1978).

Four distinct lithological units can be recognized in the area. From the youngest to the oldest, these are:

- 1) An antichinal area occupied by the Cretaceous Cassiar Batholith with granodiorite, quartz monzonite and granite.
- 2) Unidentified metamorphic rocks of Carboniferous age.
- 3) A southeasterly plunging synclinorium (McDame Synclinorium) the core of which is occupied by Devonian and Mississippian Sylvester Group shales, cherts, greywackes, and greenstones.
- 4) Upper Proterozoic to Late Plaeozoic sedimentary unites McDame Group, Ketchika Group, Atan Group and the Igenka Group.

Table I Lithologies of rock units found in the Cassiar reconn. area (after Gabrielse, 1963).

<i>Era</i>	<i>Period or epoch</i>	<i>Formation and thickness (feet)</i>	<i>Lithology</i>
Cenozoic	Pleistocene and Recent		Glacial and glacio-fluvial deposits, lacustrine deposits, stream deposits, felsenmeer, talus, soil
	Disconformable contact		
	Tertiary or Pleistocene I		Basaltic basalt
	Relations unknown		
	Tertiary and (?) Earlier	Rapid Formation in part	Conglomerate, sandstone, shale; coal
Mesozoic	Rapid Formation in fault contact with, or overlying unconformably, Cambrian and Precambrian rocks		
	Jurassic or Cretaceous	Cassiar Intrusions	Quartz monzonite, granodiorite, granite, porphyritic granite; aplite, pegmatite
	Cassiar Intrusions not in contact with Nizi Formation are intrusive into Sylvester Group and older rocks		
Palaeozoic	Middle Mississippian	Nizi Formation 1,000 ±	Limestone, cherty limestone, greywacke, pebble-conglomerate; minor slate and quartzite
	Nizi Formation unconformably overlies Sylvester Group between Four Mile and Rapid Rivers and Kechika Group east of Solitary Lake; relations between Nizi Group and ultramafic rocks unknown		
	Mississippian (?)		Peridotite, dunite, pyroxenite, serpentinite
	Intrusive contact		
	Upper Devonian and Lower Mississippian	Sylvester Group 15,000+	Greenstone, chert-quartz arenite, chert, argillite, slate, quartzite; greywacke, limestone, conglomerate
	Fault (?)		
	Middle and (?) Upper Devonian	McDame Group 375-560	Upper division: platy, grey limestone Lower division: grey and black, feid dolomite
	Disconformable contact		
Silurian and (?) Devonian	Sandpile Group (?) in part 1,160 ±	Upper division: laminated fine grained dolomite Middle division: sandstone, quartzite, dolomitic sandstone, sandy dolomite, dolomite, dolomite breccia Lower division: laminated sandstone and dolomite	

Table I (cont)

<i>Era</i>	<i>Period or epoch</i>	<i>Formation and thickness (feet)</i>	<i>Lithology</i>
	Silurian and (?) Devonian strata overlap disconformably over the Kachika Group on limbs of the Mid-Dome syncline and may be in part or entirely correlative to Sandpale Group		
	Upper Ordovician, Lower and Middle Silurian	Sandpale Group 1,500+	Dolomite, cherty dolomite, sandy dolomite, dolomitic sandstone, quartzite, chert
Disconformable contact			
	Middle and (?) Upper Cambrian, Lower and Middle Ordovician	Kachika Group 1,000-2,500+	Upper division: black, lami- nated, pyritic and carbo- naceous shale and slate, minor argillaceous lime- stone Lower division: limestone, argillaceous limestone, cal- careous phyllite, phyllite, conglomerate
Conformable contact			
	Lower Cambrian	Atan Group 3,000	Upper division: limestone, dolomite; minor shale Lower division: quartzite, argillite; slate, shale, silt- stone, pebble-conglom- erate
Conformable contact			
	Late Precambrian	Ingenika Group 4,000 ±	Limestone, dolomite, quartz- ite, grit, siltstone, sandy limestone, argillite, slate, red and green slate, shale, limestone
	Precambrian and/or Cambrian	Horseshoe Group 7,500+	Quartzite, feldspathic quartz- ite, quartz-mica schist, granitic gneiss; crystalline limestone, hornfels, skarn, peridotite, pegmatite

These units are intruded by late Cretaceous to early Tertiary stocks (Figure 6)

Rocks of the Ingenika Group (formerly named the Good Hope Group) can now be correlated with other rocks making up the Windermere Supergroup. Within the supergroup, regional lithostratigraphic correlations imply that depositional environments of like character extended throughout much of the Upper Proterozoic and adds to the concept of a clastic wedge building out along the margin of a Precambrian craton (Figure 7).

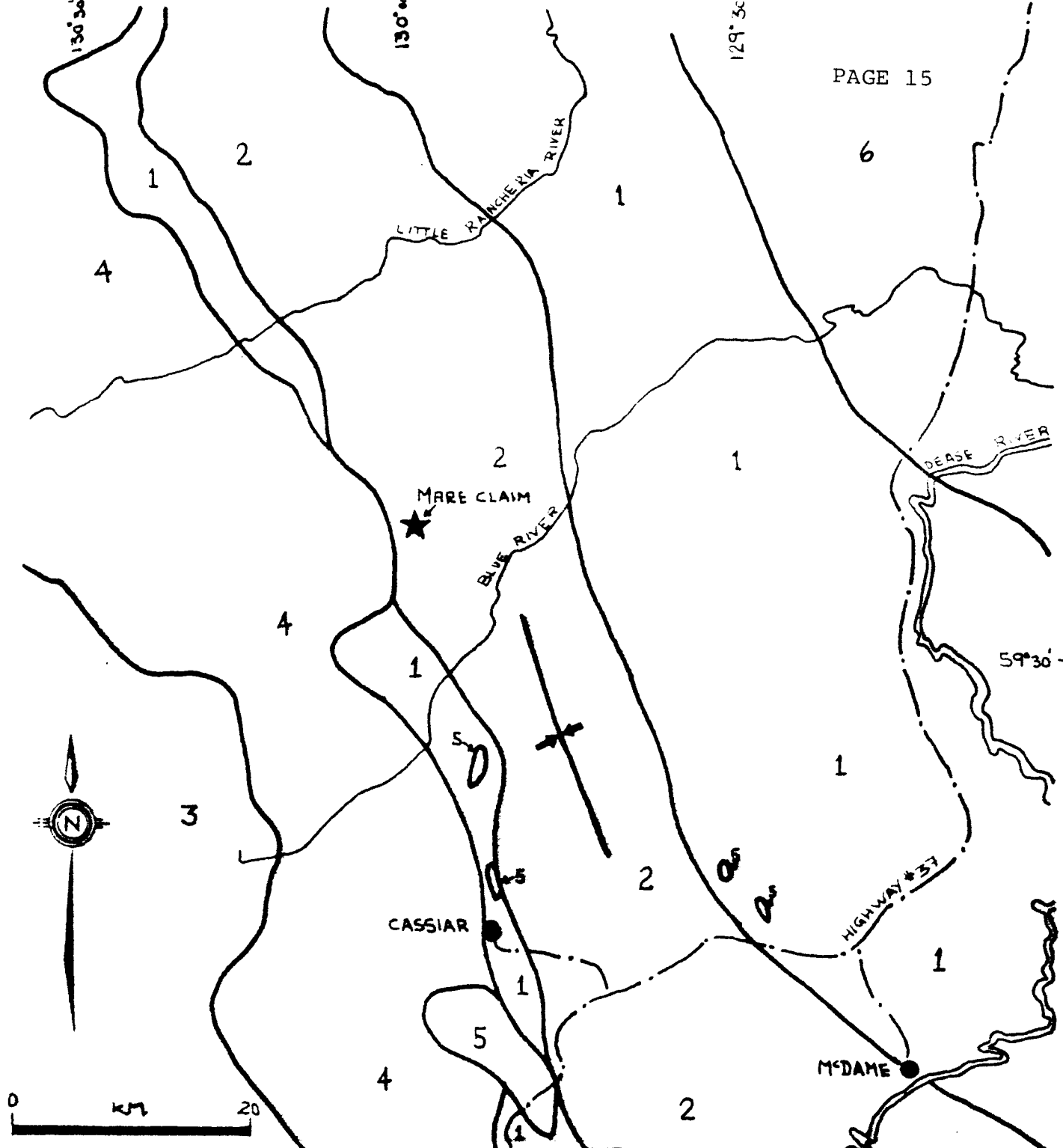
A major structural disconformity separates the shelf assemblage Upper Proterozoic and lower Paleozoic rocks, and the volcanic and related sedimentary rocks of the Sylvester Group.

Within rocks of the McDame Synclinorium northwest trending lineaments reflect the presence of major longitudinal faults which have been interpreted (Gabrielse, pers. comm.) to represent southwest dipping thrusts.

ECONOMIC GEOLOGY

Economic mineralization in the Cassiar area can be classified into five genetic types.

1. placer gold
2. asbestos presently being mined from serpentized ultramafic intrusives implaced into the lower Sylvester Group.
3. lode gold presently being mined from quartz veins cutting volcanic and related sedimentary rocks of the Sylvester Group.
4. molybdenite stockwork mineralization occurring in, or in close proximity to, 50 and 70 million year



- 6** Quaternary Sediments
- 5** Late Cretaceous - early Tertiary Stocks
- 4** Cassiar Batholith
- 3** Unidentified Carboniferous metamorphic Rocks
- 2** Sylvester Group
- 1** Upper Proterozoic - Late Paleozoic, Sedimentary Rocks

FALCONBRIDGE LIMITED
 FIGURE 6
 Geology of Cassiar Area

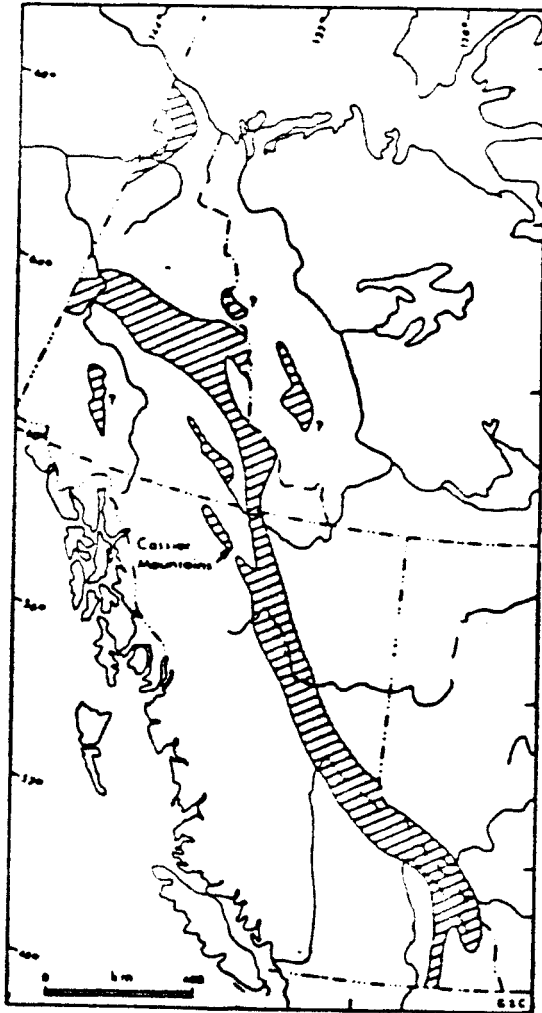


Figure 7 Distribution of rocks
of the Windermere Supergroup.

old granitic stocks implaced marginal to the Cassian batholith.

5. tungsten, tungsten-molybdenite and massive sulphide skarns formed in Upper Proterozoic and lower Paleozoic sedimentary rocks, and spatially associated with 50 and 70 million year old granitic stocks.

Placer gold and asbestos have been mined economically from the Cassiar area for several decades and during the last decade four small lode gold mines were put into production.

LOCAL GEOLOGY

The Mare Group, 49 units, were staked to cover anomalous gold values taken from pyritized volcanic rocks located northwest of Blue River, immediately south of Black Friday Lake.

The property covers a volcanic-sedimentary sequence within the lower Sylvester Group. Composition of the volcanic rocks ranges from plagioclase feldspar porphyritic andesite, to fine grained andesite, to augite-olivine porphyritic basalt. Intrabedded sediments include bedded chert, limestone and argillites trending at approximately 140° and dipping 50-60° SW.

The volcanic and sedimentary rocks contain 2-5% disseminated pyrite over a strike length of approximately 1,500 metres. The sediments have a pyritic, siliceous and sintery, leached appearance over several hundred metres. Disseminated chalcopryite and malachite staining are present in both the volcanic and sedimentary rocks in the anomalous area. The highest Au and Ag values were angular float of siliceous rock containing greater than 50% pyrite.

There are several gossans in the cliffs surrounding the cirque where the main outcrops on the property are found, Plates 1 through 5. The gossans follow bedding of the sediments for up to several hundred m with a thickness of 1 m to 50 m. The gossans could follow one horizon in the Sylvester Group because the Group is offset by several faults in the cliffs, but more detailed mapping needs to be done to confirm this.

Four different rock types were found on the property, bedded pyritized sediments, chert and minor argillite, volcanics (andesite-basalt), sedimentary breccia and quartz veins. The sampling was concentrated on the bedded pyritized sediments in the gossan, but the samples also include the three other rock types.

The sedimentary unit is a bedded sequence of fine to coarse equigranular siltstone-sandstone with minor fine-grained / aphanitic equigranular chert beds and isolated argillite beds. The beds are usually 1-20 cm thick with isolated beds up to 1 m thickness. The strike of the beds is about N140 E with a wide range of variation in dip from 45° NE to 64° SW. The variation in dip is due to the folding in the area.

A large scale anticline covers the northern part of the property with a general direction of the crest NW-SE. Along the limbs of the anticline the sedimentary (Plate 4) unit is folded in subsidiary folds. The fold axis of the subsidiary folds are believed to be parallel to the crest of the anticline, with a strike of about N140°E and plunging 8° to the NW. More detailed work has to be done on the sedimentary unit on the north and south side of the cirque to confirm the folding pattern and the origin of the subsidiary folds.

The sediments varies in color from white to grey white trace to minor chlorite. Most of the sediments are moderate to intensely silicified. Several beds contain minor to moderate calcite with isolated beds with pervassive calcite. The unit is fractured, locally the fracturing is intense. Local faults cut the beds with a displacement of up to 3.0 cm.

The sediments are pyritized with various amount of pyrite. Usually there is 1-2% disseminated pyrite, but in single beds it can decrease to less than 1% or up to 10% locally. Isolated irregular pyrite lenses up to 3 cm and isolated coarse cubic pyrite up to 8 mm. Locally the sediments have malachite staining. Limonite is found on the surface and on fractures.

On the ridge in the western end of the cliff a sedimentary breccia is located. The sedimentary fragments are angular to subrounded varying in size from .3 cm to 10.0 cm with a white to light grey and buff color. The breccia only have minor fine grained matrix with a decrease in matrix with increase in fragments to 1-2%. The fragments are intense silicified with locally minor calcite. Pyrite content varies from less than 1% up to 10%, disseminated. The breccia has traces of hematite with isolated larger fragments with a hematite halo up to 5 mm.

The sedimentary units have been located in the cliffs on the southern and western side of the cirque. The rest of the cirque area is a volcanic andesite-basalt, fine to medium grained green to greenish grey equigranular and porphyritic with subhedral and euhedral hornblende± augite phenocrysts 3-8 mm. Amount of phenocrysts varies between 1% and 15%. Locally the volcanics contain minor to moderate disseminated epidote, epidote lenses up to 5 cm and epidote veins .5-5mm. The volcanics are also found as sills and dykes within the sedimentary unit with a

thickness of 1- greater than 10 m. The volcanics contain traces of pyrite in the flows, while the sills and dykes are pyritized with between 1% and 10% disseminated pyrite usually with about 3 to 5%. Isolated sills and dykes have pyrite lenses up to 5 mm. Locally the volcanics were found to have 1% chalcopryrite in lenses up to 5 mm, and at this locality there is siderite and limonite on fractures.

Quartz veins are found throughout. They are fine to medium grained white to light grey with a thickness 1 to 5 cm. Isolated veins contain up to 5% disseminated pyrite and .5mm pyrite veins. Isolated fine to medium calcite veins .5 to 2 cm.

RESULTS

135 samples were taken. Of these, 130 were from outcrop and 5 were float. All samples were fire assayed for Au and Ag by CDN Labs, Delta. None of the samples ran as high as Canadian Superior's highest values. The average Au value was .003 oz/ton or .1 g/t Au. with a high MB011 (Plate 3 and Figure 5) of .093 oz/ton Au. This high sample is from one of the volcanic sills or dykes in the southern cliff, the volcanic contains 10% pyrite disseminated and in lenses up to 5 mm and 1% chalcopryrite in up to 5 mm lensed with siderite along fractures 3 to 8 mm. Two other samples gave interesting Au values. One MBo25 (Plate 3 and Figure 5) with .03 oz/ton or 1.03 g/t in a fine grained light green equigranular volcanic with epidote veins up to 5 mm and lenses up to 5 cm, disseminated pyrite, malachite staining and limonite on fractures. This sample is from the area where Canadian Superior found and angular float block with 3.5 oz/ton or 120.05 g/t Au. The other samples, MM017 (Plate and Figure 5) with .023 oz/ton or .79 g/t Au in a breccia from the ridge in the west side of the cirque with angular to subrounded fragments .1 to 3.0 cm fragments of medium grained white equigranular sediment with 10% disseminated pyrite and limonite on

fractures. The breccia is intensely silicified.

105 of the samples gave only traces of silver and the remaining samples run between .01 oz/ton or .34 g/t Ag and .24 oz/ton or 8.23 g/t Ag, with one single sample running 6.48 oz/ton or 222.13 g/t Ag. This sample, MM024, from the ridge at the southwestern side of the cirque (Plate 1 and Figure 5) is medium grained light-grey equigranular volcanic host. Minor pyrite and malachite and limonite staining.

CONCLUSION AND RECOMMENDATIONS

The property is located 35 km north of the gold camp at Cassiar and is in the same environment as this camp, although gold there is in quartz veins and related to phyllic alteration. High gold values have been found as float in the cirque and interesting Au and Ag values were encountered in outcrop during this program. These values, in addition to the fact that the large area along the cliff is still untested, warrants a further program on the Mare Claims.

Due to the adverse topography on the claims, most of the remaining work has to be done by mountaineers. Some of the ridge can be sampled by us. Due to the high elevation, the program should be done in late July or early August to avoid early snowfall.

REFERENCES

1. Gabrielse, H. (1963) The McDame map area, Cassiar district, B.C. Geol. Surv. Can., Mem. 319
2. Mansy, J.L. and Gabrielse, H. (1978) Stratigraphy terminology and rocks in the Omineca and Cassiar mountains, north-central B.C. Geol. Surv. Can., Pap. 77-19
3. Watkins, J.J. and Atkinson, M. (1981) Cassiar area reconnaissance (Canadian Superior Exploration Ltd., unpublished report)

BUDGET

A. Dihedral:

Field days 2 men 6 days @ \$200.00	\$2,600.00	
Office days 2 men 2 days @ \$150.00	600.00	
Weather days 2 men 2 days @ \$75.00	300.00	
	<u>300.00</u>	3,500.00

B. Camp:

Helicopter (mobilization and demob.) at \$1,300 4 hours	5,200.00	
Helicopter for crew move Bell 204 at \$550.00 4 hours	2,200.00	
1 Project Geologist 12 days	1,500.00	
1 assistant 12 days	800.00	
Groceries 4 men 12 days @ \$30.00	1,440.00	
Transport to Watson Lake from Van 2 men	500.00	
Transport to Watson Lake from Anchorage, Alaska 2 men	500.00	
Assaying 500 samples @ \$12.00	6,000.00	
	<u>6,000.00</u>	18,140.00
Overhead and office	<u>1,500.00</u>	1,500.00

TOTAL

\$23,140.00

APPENDIX

ASSAY RESULTS

To: Falconbridge Limited
 6415 64th St.
 Delta, B.C.
 V4K 4E2

File No.: 33-139
 Date: September 16, 1983
 Samples: rock
 page 1 of 5

CON RESOURCE LABORATORIES LTD.
 #8, 7550 RIVER ROAD, DELTA, B.C. V4G 1C8 / TEL. (604) 946-4448

ASSAY REPORT

Attention: Mr. J.B. Gammon

Sample No.	Au (oz/ton)	Ag (oz/ton)
MM001	.002	L
2	.002	L
3	.002	L
4	.002	L
5	.002	.03
THALUS MM005	<.001	L
MM006	<.001	L
7	<.001	L
8	<.001	L
9	<.001	L
10	<.001	L
THALUS MM011	<.001	.01
MM011	<.001	L
12	<.001	L
13	.002	L
14	.002	L
15	.003	L
16	.015	L
THALUS MM016	.002	L
MM017	.023	L
18	<.001	L
19	<.001	L
20	<.001	L
21	.002	L
22	.002	.05
THALUS MM022	.002	.11
23	.002	.01
24	.006	6.48
25	.015	.24
26	.002	.09
27	.002	L
28	.002	L
29	<.001	.04
30	<.001	.01
31	<.001	.02
32	<.001	.01

RECEIVED
 SEP 16 1983
 Ans'd.....

Rejects retained one month.
 Pulps retained one month
 unless specific arrangements
 made.

[Signature]
 Licensed Assayer of British Columbia

Falconbridge Limited
 To: 6415 64th St.
 Delta, B.C.
 V4K 4E2

File No.: 83-139

Date: September 16, 1983

Samples: rock

page 2 of 5

CDN RESOURCE LABORATORIES LTD.

#8, 7550 RIVER ROAD, DELTA, B.C. V4G 1C8 / TEL. (604) 946-4448

ASSAY REPORT

Sample No.	Au (oz/ton)	Ag (oz/ton)
MM 033	<.001	L
34	<.001	L
35	<.001	L
36	<.001	L
37	<.001	L
38	.009	L
39	.002	L
40	<.001	L
41	.003	L
42	.002	.01
43	<.001	L
44	<.001	L
45	<.001	L
46	.006	L
47	.002	L
48	<.001	L
49	<.001	L
50	<.001	L
51	<.001	L
52	<.001	L
53	<.001	L
54	<.001	L
55	<.001	L
56	<.001	L
57	<.001	L
58	<.001	L
59	.006	L
60	<.001	L
61	<.001	L
62	.011	L
63	<.001	L
64	<.001	.01
65	<.001	L
66	<.001	.14

Rejects retained one month.
 Pulps retained one month
 unless specific arrangements
 made.


 Licensed Assayer of British Columbia

To: Falconbridge Limited
 6415 64th St.
 Delta, B.C.
 V4K 4E2

File No.: 83-139
 Date: September 16, 1983
 Samples: rock
 page 3 of 5

CDN RESOURCE LABORATORIES LTD.

#8, 7550 RIVER ROAD, DELTA, B.C. V4G 1C8 / TEL. (604) 946-4448

ASSAY REPORT

Sample No.	Au (oz/ton)	Ag (oz/ton)
MM 067	.003	L
68	<.001	.05
69	<.001	L
70	<.001	.02
71	<.001	L
72	<.001	L
73	<.001	L
74	<.001	L
75	<.001	L
76	<.001	L
77	.006	L
78	<.001	L
79	<.001	L
80	<.001	L
81	<.001	L
82	<.001	L
MB 001	<.001	L
02	<.001	L
03	.002	L
04	.002	L
05	<.001	.02
06	<.001	L
07	.011	.02
08	.011	L
09	.009	L
10	.006	L
11	.093	.01
12	.014	L
13	.002	L
14	.006	L
15	.002	L

Rejects retained one month.
 Pulps retained one month
 unless specific arrangements
 made.


 Licensed Assayer of British Columbia

To: Falconbridge Limited
 6415 64th St.
 Delta, B.C.
 V4K 4E2

File No.: 83-139

Date: September 15, 1983

Samples: rock
 page 4 of 5

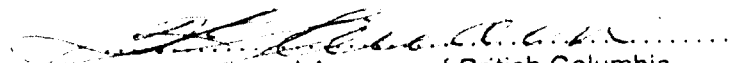
CDN RESOURCE LABORATORIES LTD.

#8, 7550 RIVER ROAD, DELTA, B.C. V4G 1C8 / TEL. (604) 946-4448

ASSAY REPORT

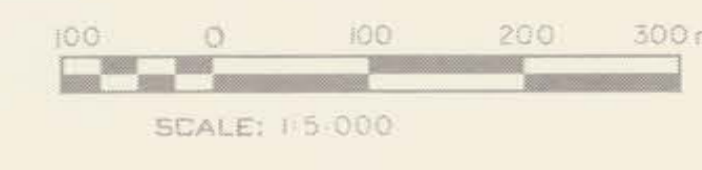
Sample No.	Au (oz/ton)	Ag (oz/ton)
MB 016	.002	L
17	.002	L
18	.006	L
19	.002	L
20	.002	.01
21	.006	L
22	.002	L
23	.009	L
(float)23	.004	.01
24	.002	.01
25	.030	.01
26	.006	.02
27	.002	.01
28	.002	L
29	.002	L
30	.002	.01
31	.002	.01
32	.002	.01
33	.002	L
34	.002	L
35	.002	L
36	.002	L
37	.002	L
38	< .001	L
39	< .001	L
40	< .001	L
41	< .001	L
42	< .001	L
43	< .001	L
44	< .001	L
45	< .001	.01
46	< .001	L
47	< .001	L
48	< .001	L

Rejects retained one month.
 Pulps retained one month
 unless specific arrangements
 made.

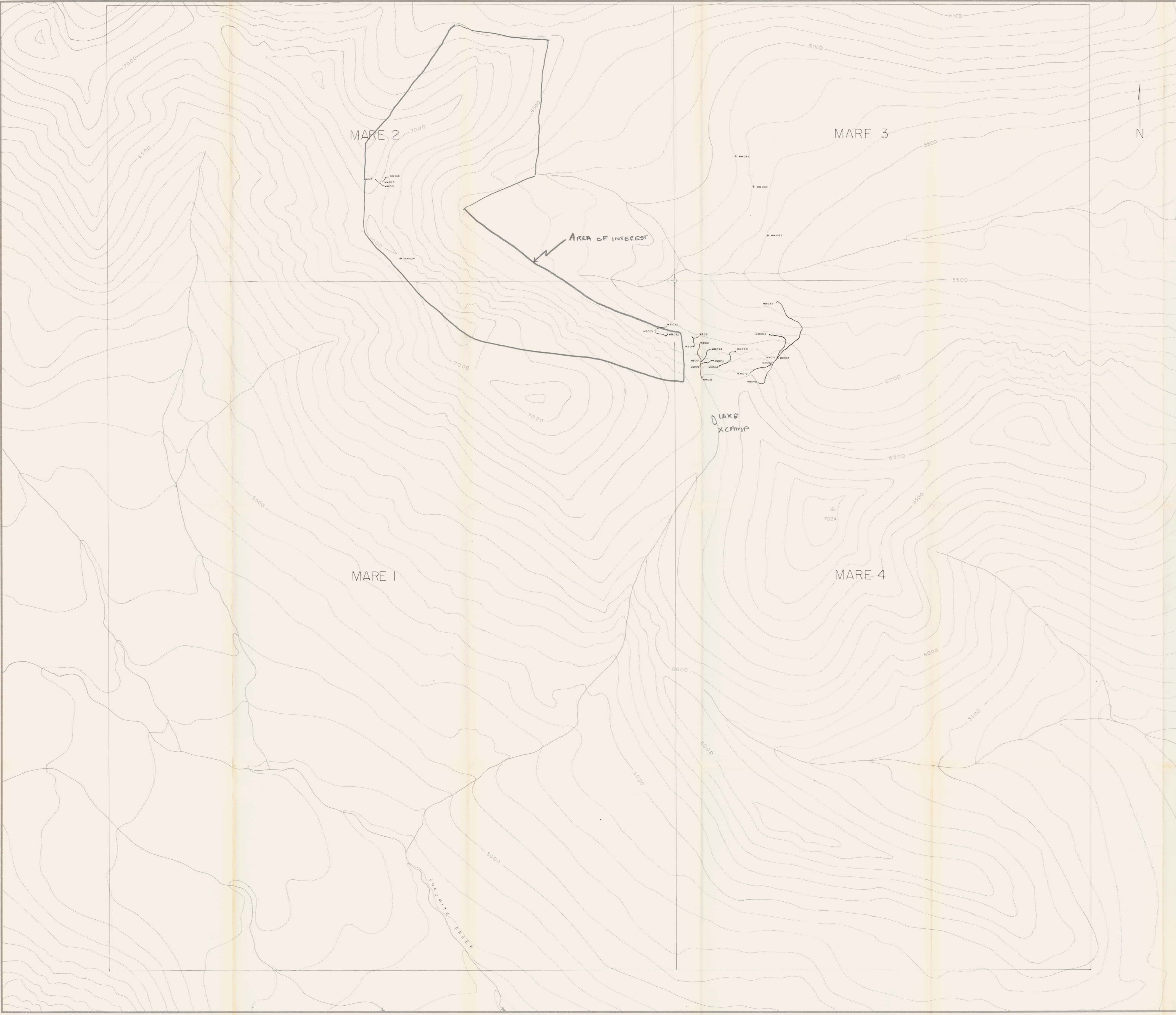

 Licensed Assayer of British Columbia

LEGEND

- + Point sample location
- Sample traverse: Series MB sample nos. 12 to 21
- ⊕ Legal corner post
- Claim boundary



FALCONBRIDGE NICKEL MINES LIMITED		
PROPERTY: Mare Claim Group		PROJECT NO.: PN 083
LOCATION: McDome Area B.C.		
TYPE OF MAP: Geochemical Sampling		
WORKING PLACE: Cassiar Range		
BASED ON: T.B. & C.B.		
DATE OF WORK: 29/8 to 1/9, 1983	MAP REF. NO.:	FIG. NO.:
DRAWN BY: C.B.		3
DATE: Sept 27, 1983	N.T.S. NO.: 104-P-12	

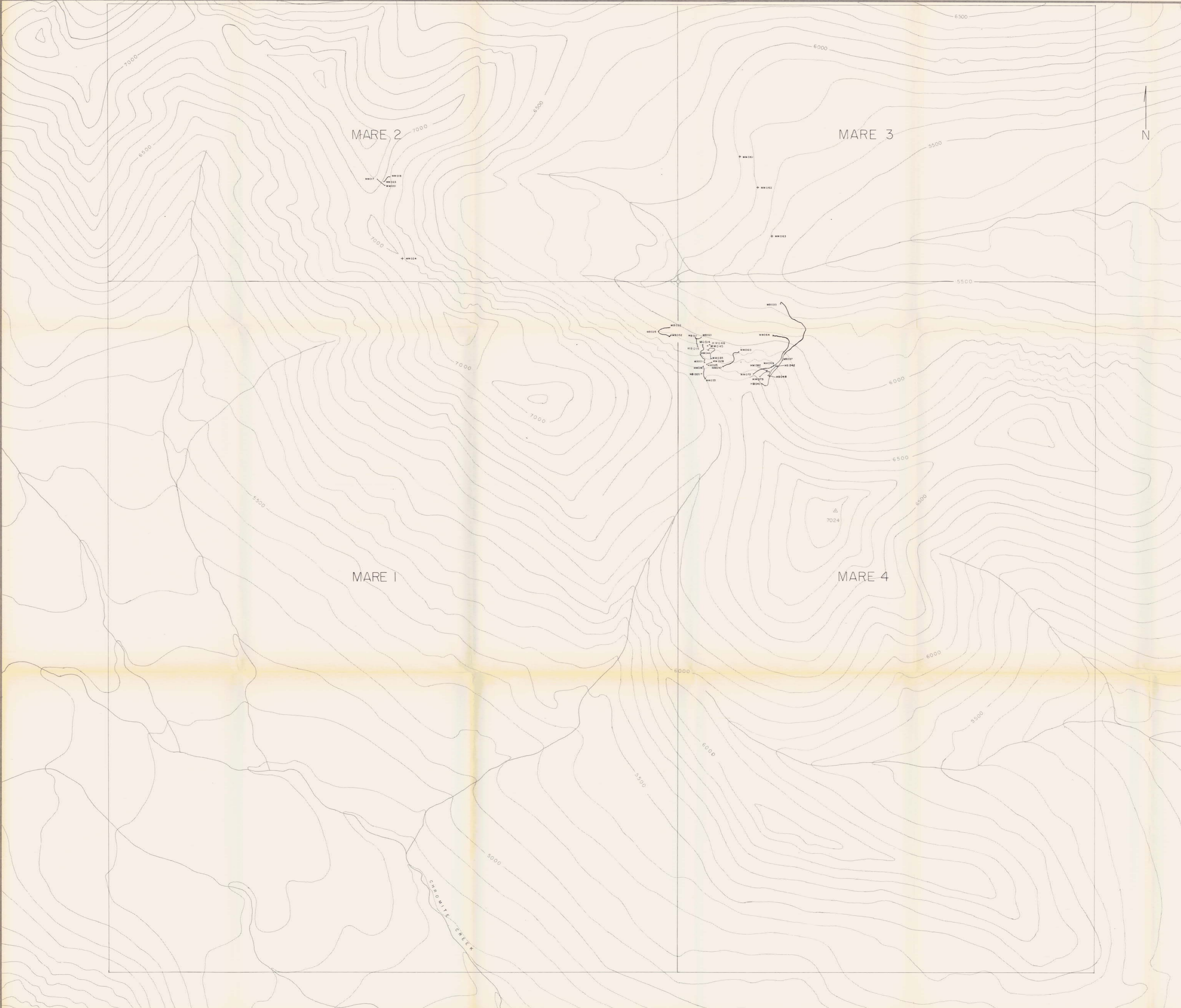


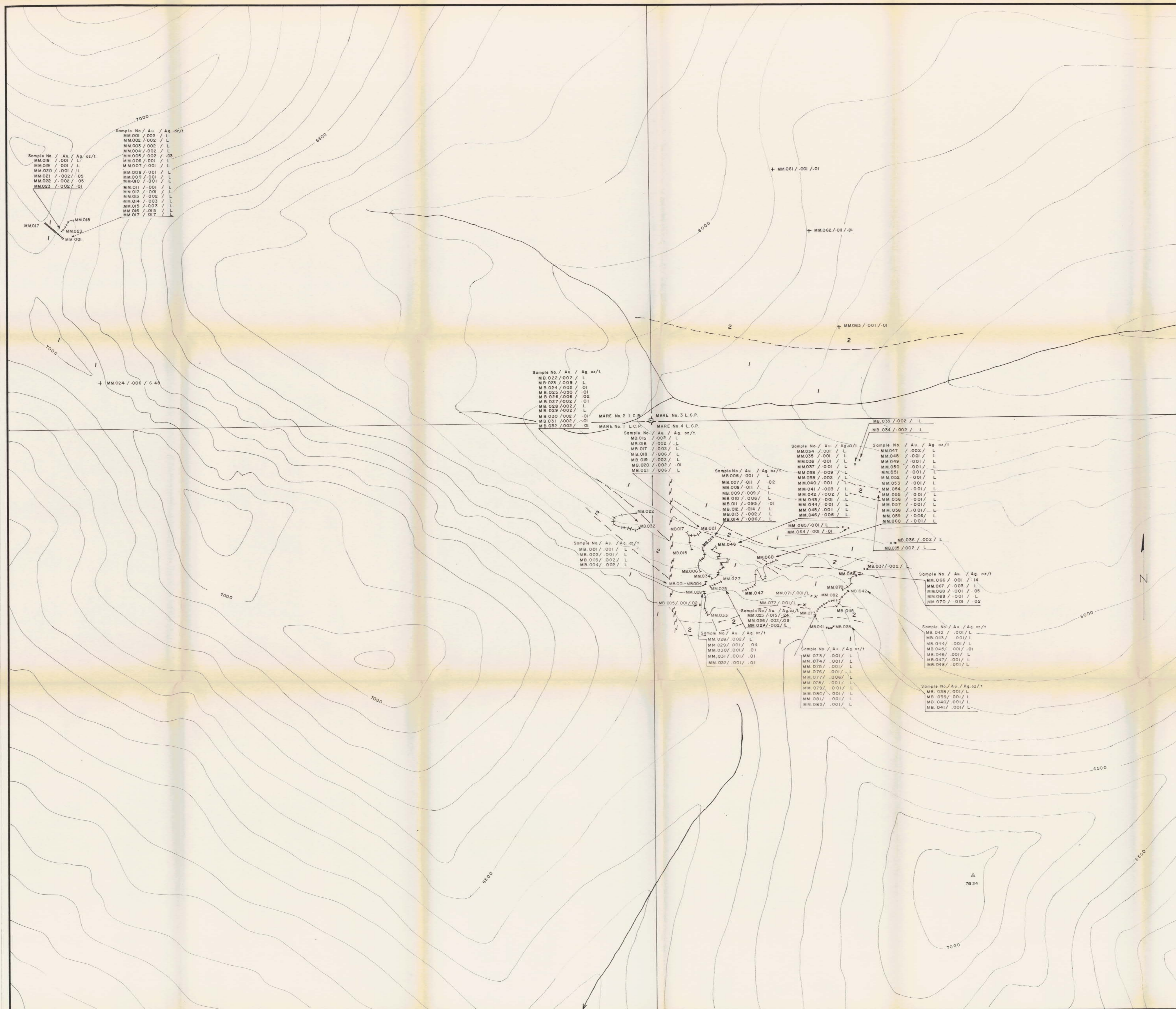
LEGEND

- + Point sample location
- Sample traverse
- ⊕ Legal corner post
- Claim boundary



FALCONBRIDGE NICKEL MINES LIMITED		
PROPERTY:	Mare Claim Group	PROJECT NO.: PN 083
LOCATION: McDome Area B.C.		
TYPE OF MAP: Geochemical Sampling		
WORKING PLACE: Cassiar Range		
BASED ON: T.B. & C.B.		
DATE OF WORK: 29/8 to 1/9, 1983	MAP REF. NO.:	FIG. NO.:
DRAWN BY: C.B.	N.T.S. NO.: 104-P-12	083-83-5
DATE: Sept 27, 1983		





Sample No. / Au. / Ag. oz/t.
 MM018 / .001 / L
 MM019 / .001 / L
 MM020 / .001 / L
 MM021 / .002 / .05
 MM022 / .002 / .05
 MM023 / .002 / .01

Sample No. / Au. / Ag. oz/t.
 MM001 / .002 / L
 MM002 / .002 / L
 MM003 / .002 / L
 MM004 / .002 / L
 MM005 / .002 / .03
 MM006 / .001 / L
 MM007 / .001 / L
 MM008 / .001 / L
 MM009 / .001 / L
 MM010 / .001 / L
 MM011 / .001 / L
 MM012 / .001 / L
 MM013 / .002 / L
 MM014 / .003 / L
 MM015 / .003 / L
 MM016 / .015 / L
 MM017 / .017 / L

Sample No. / Au. / Ag. oz/t.
 MB022 / .002 / L
 MB023 / .009 / L
 MB024 / .002 / .01
 MB025 / .030 / .01
 MB026 / .006 / .02
 MB027 / .002 / .01
 MB028 / .002 / L
 MB029 / .002 / L
 MB030 / .002 / .01
 MB031 / .002 / .01
 MB032 / .002 / .01

MARE No. 1 L.C.P.
 MARE No. 2 L.C.P.
 MARE No. 3 L.C.P.
 MARE No. 4 L.C.P.

Sample No. / Au. / Ag. oz/t.
 MB001 / .001 / L
 MB002 / .001 / L
 MB003 / .002 / L
 MB004 / .002 / L

Sample No. / Au. / Ag. oz/t.
 MB006 / .001 / L
 MB007 / .011 / .02
 MB008 / .011 / L
 MB009 / .009 / L
 MB010 / .006 / L
 MB011 / .039 / .01
 MB012 / .04 / L
 MB013 / .002 / L
 MB014 / .006 / L

Sample No. / Au. / Ag. oz/t.
 MM034 / .001 / L
 MM035 / .001 / L
 MM036 / .001 / L
 MM037 / .001 / L
 MM038 / .009 / L
 MM039 / .002 / L
 MM040 / .001 / L
 MM041 / .003 / L
 MM042 / .002 / L
 MM043 / .001 / L
 MM044 / .001 / L
 MM045 / .001 / L
 MM046 / .006 / L
 MM047 / .001 / L
 MM048 / .001 / L
 MM049 / .001 / L
 MM050 / .001 / L
 MM051 / .001 / L
 MM052 / .001 / L
 MM053 / .001 / L
 MM054 / .001 / L
 MM055 / .001 / L
 MM056 / .001 / L
 MM057 / .001 / L
 MM058 / .001 / L
 MM059 / .006 / L
 MM060 / .001 / L

MB033 / .002 / L
 MB034 / .002 / L

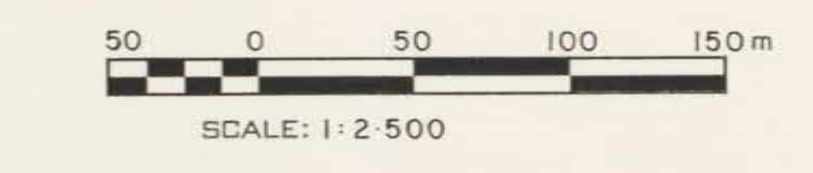
Sample No. / Au. / Ag. oz/t.
 MM066 / .001 / .14
 MM067 / .003 / L
 MM068 / .001 / .05
 MM069 / .001 / L
 MM070 / .001 / .02

Sample No. / Au. / Ag. oz/t.
 MB042 / .001 / L
 MB043 / .001 / L
 MB044 / .001 / L
 MB045 / .001 / .01
 MB046 / .001 / L
 MB047 / .001 / L
 MB048 / .001 / L

Sample No. / Au. / Ag. oz/t.
 MB038 / .001 / L
 MB039 / .001 / L
 MB040 / .001 / L
 MB041 / .001 / L

LEGEND

- 1 Sediment
- 2 Volcanics
- Chip Sample Location
- L <.01 Ag



FALCONBRIDGE LIMITED		
PROPERTY:	Mare Claim Group	
PROJECT NO.:		
LOCATION:	McDome Area B.C.	
TYPE OF MAP:	Geology & Chip Sampling Location and Assays	
WORKING PLACE:		
BASED ON:	Fieldwork by T.B. & C.B.	
DATE OF WORK:	Sept 1983	MAP REF. NO.:
DRAWN BY:	G.T.	FIG. NO.:
DATE:	Jan 1984	N.T.S. NO.: 104-P-12
		083-83-5