

DIAMOND DRILLING

ASSESSMENT REPORT

ON

(a) ME 2 Group Mineral Claims

(b) ME 7 Group Mineral Claims

ATLIN M. D.

NTS 114P/10E

Lat.: 59 39' N
Long.: 136 35' W
Owner: Falconbridge Limited
Operator: Falconbridge Limited



John R. Wilson

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

11,835
PART 1 OF 2

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INTRODUCTION

The ME 2 group of mineral claims consists of MOE 2 (20 units), MOE 3 (12 units), MOE 4 (18 units), MOE 5 (12 units), MOE 6 (20 units), the Victoria crown grant (lot 903), and reverted crown grants New York, Regina, Britania, State of Montana, Montreal, Toronto, Treadwell, Whitehorse, Evening, Bangor, Blackhawk, New Brunswick, Iceland, Nova Scotia, Crackerjack, Comet and Edan.

The ME 7 group of mineral claims consists of MOE 7 (20 units), MOE 10 (9 units), MOE 11 (18 units), MOE 12 (20 units), MOE 13 (20 units), MOE 14 (12 units), and the Maid of Erin crown grant (Lot 722).

The current owner and operator is Falconbridge Limited.

The claims are in the Coast Mountains, about 15 kilometres northwest from Pleasant Camp on the Alaska - B. C. border. The Haines - Haines Junction highway is about two kilometres east from the claims and an old mine road has been upgraded to provide access to the drilling areas.

The claims contain several crown granted mineral claims that have been worked intermittently since about 1900. The deposits are skarns occurring in a roof pendant of sedimentary rocks (argillites, quartzites, and limestones). Ore minerals (sphalerite, galena, bornite and chalcopyrite) occur as massive lenses and disseminations. Pyrrhotite, pyrite, and magnetite are common. According to Campbell and Dodds (GSC open file 926, 1983) the Devonian to Late Triassic and (?) older roof pendant is surrounded by Oligocene granites-quartz monzonites. Dykes and sills of gabbro and feldspar porphyry also intrude the sediments.

K. de P. Watson (BCDM Bull. 25, 1948) reports that 157 tons of ore from the Maid of Erin crown grant, mined prior to 1922, yielded 77,658 pounds of copper, 5849 oz. of silver, and 6 oz. of gold. Fifteen hundred metres south-east from Maid of Erin, the Victoria Crown Grant displayed 22.1 percent lead, 26.6 percent zinc, and 8.5 oz. per ton silver over a six foot wide trench. Early drilling and an adit, however, failed to intersect any mineralization.

In 1955 St. Eugene Mining Corporation Limited began road building to the Maid of Erin minesite. In 1956 and 1957 a total of 3465 tons of ore was mined yielding 463379 pounds of copper, 41,947 oz. of silver, and 5 oz. of gold.

In 1981 and 1982 Falconbridge conducted geological, geophysical and geochemical surveys over their claims and, in 1983, diamond drilled targets on the Maid of Erin and Victoria crown grants.

Twenty NQ holes totalling 1481.0 metres were centered on the former crown grant. Erratically distributed bornite chalcopyrite was found which comprises a small, elongate, lowgrade Cu-Ag zone. Molybdenite was encountered in several of the wider spaced, deeper holes but was not pursued by fill-in drilling. However, despite the depth of molybdenite mineralization and its sometimes spotty distribution, the few encouraging grade and width intersections ensure further evaluation when molybdenum prices improve.

Four NQ holes totalling 545.6 metres tested the Victoria crown grant from a set up on the MOE 4 claim. Although the first hole intersected massive galena-sphalerite-chalcopyrite, surrounding drillholes were all barren and showed evidence of severe structural disruptions. Small lenses of massive mineralization exposed at surface apparently occur at depth also. Economic potential of small, discontinuous, mineralized pods within a structurally complex zone is not good.

DRILLING-GENERAL

Figure 015-83-3 and 17 shows the positions of drill holes relative to claim boundaries.

A longyear 38 drill was used for the program, moves being facilitated by a caterpillar tractor which also prepared cat roads and drill pads. Water was usually available from roadside creeks and ponds but, during a dry spell, the supply pump was positioned by helicopter at a mountainside spring.

Hole dips at surface were measured by transit or brunton. Downhole dips were calculated from the acid etch method. Surveying of all collars and some hole directions was made by transit.

Split core was assayed by Bondar-Clegg, Whitehorse. Pulps, rejects, and core from holes 6, 7 and 12 is stored at the Delta, B. C. warehouse of Falconbridge Limited. Most of the core remained on the property.

DRILLING INTERPRETATION ME 7 Claims Group

Except for one hole on the MOE 7 claim drill holes numbered consecutively ME-83-1 to ME-83-20 were on the Maid of Erin crown grant. All holes were vertical except ME-83-19, which was drilled at minus 72 degrees to ensure missing nearby underground workings.

The purpose of drilling was to search for hidden mineralized skarn near the Maid of Erin minesite. This was traditionally considered the most alluring showing in the region and its status was confirmed by 1981 and 1982 exploration throughout a large portion of the roof pendant.

An initial drill pattern of nine holes was chosen based on previous seasons' work. Eight of the nine holes reached the intrusive contact. Encouraging zones of Cu-Ag and Mo mineralization were located. The subsequent eleven holes were drilled at closer spacing to pursue near surface Cu-Ag. Drilling thus outlined a small, elongate zone of average low grade following the axis of long section k-k' (figure 015-83-7).

Each of five consecutive holes in long section k-k' contain two metre intersections assaying 4.9% Cu and 375 g/t Ag or better. Such values occur within much wider sections of lower grade with the exception of hole number 19 which has four metres of superior assays without adjacent low grade. Hole 19 is the northwestern terminus of these mineralized holes and is alongside the Maid of Erin minesite. Hole number 12, however, shows the best "high grade zone" results, averaging 6.4% Cu and 697.5 g/t Ag over 8 metres. Coincidentally the twelfth hole is central in the area chosen for initial drilling.

Cross-sections through the mineralized zone show the better Cu-Ag assays to be aligned along section k - k'. Poorer grades are up dip and down dip from this narrow band. Observations to date have not led to theories for this restricted zone of good grade.

Examination of core reveals the distribution of both mineralization and lithologies to be highly variable between adjacent holes. Higher grade zones thus occur as small random bodies which mitigate against underground mining. The small overall size and presence of numerous barren zones also bodes ill for surface mining.

DRILLING AND INTERPRETATION ME 2 Claims Group

Holes numbered ME-83-21 to ME-83-24 were collared from the same set up on the MOE 4 claim and were all drilled at angles across the claim boundary into Victoria crown grant.

This program was undertaken to test for massive sulphide skarn mineralization associated with a near vertical, possible breccia pipe passing through marble. Surface exposures of massive, silver bearing galena-sphalerite on the perimeter of a 60 metre diameter calc. silicate hornfels breccia pipe were mapped in 1982.

The first hole was successful in locating massive Cu Pb Zn Ag skarn mineralization associated with marble near a brecciated section. This hole (ME-83-21) inclined at minus thirty five degrees located massive sulphides sixty metres vertically below surface.

Hole ME-83-22, passing closely below number 21 at minus fifty degrees failed to locate any mineralization, probably due to a radical change in lithology. Instead of marble in the breccia zone, argillites, siltstones and quartzites were found, all displaying widespread evidence of faulting. The lack of carbonate host presumably deterred skarn sulphide development.

Holes ME-83-23 and 24 were again inclined at minus thirty-five degrees and flanked the first hole. Neither located economic mineralogy. Number 23 passed below surface trenches carrying massive sulphide and located brecciation and marble. Hole 24 also intersected breccia, marble, and argillite.

The presence of considerable argillite and siltstone close to surface in these holes was surprising as no such rocks are exposed nearby on surface. Furthermore, the local structure was believed to be fairly simple with near vertical bedding attitudes. Severe low angle faulting is a likely explanation for these unexpected lithologic changes.

Probing for massive sulphides resulting from the coincidence of suitable carbonate host proximal to the breccia pipe is a sound exploration project. However the small size of deposits located to date and complexities induced by unexpected dislocations reduce interest in the property.

STATEMENT OF EXPENDITURES

A.- WAGES

1 Project geologist

20 Office days: June 1-3, 6-10, 13-17, 20-24, 27,28, 1983
in preparation for fieldwork.
79 Field days: June 29-Sept. 12, Sept. 22-24, 1983.
Project supervision, core logging, camp
construction, mobilization and demobilization.
21 Office days: Sept. 26-30, Oct. 3-7, 12-13, 20-21, 28,
Nov. 1-3, 8-9, 14. Assessment report preparation.
Total 120 days at \$145.00/day \$ 17,400.00

1 Field geologist

6 Office days: June 21-24, 27-28, 1983 in preparation for
fieldwork.
67 Field days: June 29-Sept. 3, 1983. Core logging, drafting.
Total 73 days at \$84.00/day 6,132.00

1 Field assistant

76 field days: June 29-Sept. 12, 1983. Core splitting and
handling, camp maintenance and expediting.
3 Office days: Sept. 26-28, 1983. Equipment maintenance and
storage, core handling and storage.
Total 79 days at \$61.00/day 4,819.00

1 Surveyor

16 Field days: July 1-5, 12-15, Aug. 6-9, Sept. 1-3, 1983.
Drill hole surveys and drafting. Camp construction.
Total 16 days at \$152.00/day 2,432.00

1 Field assistant

15 Field days: June 29-July 5, July 12-15, Aug 6-9. Camp
construction and assisting surveyor.
Total of 15 days at \$70.00/day 1,050.00

1 Draftsman

13 Office days: Oct. 28, 31, Nov. 1, 4, 7-10, 14-18
Total of 13 days at \$152.00/day 1,976.00

1 Typist

17 Office days

Total of 17 days at \$56.00/day \$ 952.00

B.-CONSULTING FEES

1 Day (plus expenses), July 14, 1983 499.70

C.-DRILL CONTRACTOR CHARGES

June 28-Sept. 12, 1983. Includes mobilization and demobilization of drill and cat, diamond drilling, meals, road snow plowing, site preparations for drill, drill moves, and some supplies such as mud, core boxes, and fuel. 192,164.81

D.- FUEL

For trucks used to service the program, the operation of camp and drilling (diesel, gasoline, stove oil, propane). 10,717.18

E.- DRILLING MUD AND ADDITIVES 6,336.42

F.- CORE BOXES AND LIDS 567.78

G.- SEED FOR RECLAMATION WORK 216.00

H.- ASSAYS

Several combinations of elements, 407 analyses 8,308.50

I.- COMMUNICATIONS

Rental of radio and power supply pack for 3 months (minimum) at 200 dollars per month. 600.00

J.- FREIGHT COSTS

To ship equipment from Delta, B. C. to Whitehorse, Y. T. 880.00

K.- Expenses during expediting trips (taking out drill core and samples, hauling food, fuel, mud, camp equipment and parts) between Whitehorse or Dezadeash and the property (exclusive of fuel costs).

Includes truck expenses, meals, accomodation
June 30, July 4, 6, 8, 9, 15, 20, 22, 23, 26, 29, Aug. 1,
2, 5, 8, 11, 12, 14, 16, 17, 19, 26, 31, Sept, 1, 5, 6, 8. \$ 2,867.70

L.- TRAVELLING EXPENSES

For Falconbridge personnel during mobilization and demobilization
(to and from Delta, B. C.).
20 man days (June 29-July 3, Sept. 12, Sept. 22-24)
Includes air fares, meals, accommodation, and truck expenses
other than fuel. 1,217.30

M.- Transportation by helicopter, of surveyor and helper to the
Property from their nearby base and back (4 times) and
moving drill supply pump to and from water source (once). 5,404.75

N.- REPORT REPODUCTION 37.40

TOTAL APPLICABLE EXPENDITURES \$ 264,578.54

APPLICATION OF EXPENDITURES

Total drill related costs are detailed above. A total of 2026.6 metres were drilled at a cost of \$264,578.54 which is about \$130.55 per metre. The apportioning of expenditures for assessment purposes has utilized this average cost per metre to distribute costs between the two claims groups receiving drilling.

ME 7 GROUP

A total of 1481.0 metres were drilled in this claim group
1481.0 m @ \$130.55/m = \$ 193,344.55

ME 2 GROUP

The remiainder of the total sum expended applies to this
claim group \$264,578.54-193,344.55 = \$ 71,233.99

STATEMENT OF QUALIFICATIONS

John Wilson graduated from the University of British Columbia in 1972 with a BSc (honours) in Geology. He has worked as an exploration geologist since graduation and is a Fellow of the Geological Association of Canada.

APPENDIX A

LITHOLOGIES

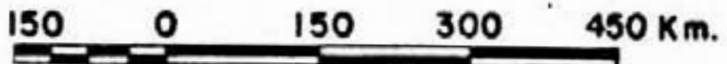
- Unit 1.- Exoskarn. Hard. Usually medium to coarse grained. Changes due to zoning of colours (yellows, browns, greens and reds), mineralogy, and grain size can be sudden and usually parallels the intrusive contact. Internal banding, within skarn zones, is often diffuse and has a mottled appearance. Idocrase and garnet are the dominant silicates. Idocrase is usually combinations of pale green and pale brown. It is recognized by crystal form, either radiating aggregates or as darker coloured striated prisms. Garnets, also recognizable by form, are pale to dark browns, greens, and yellows.
- However, the dark brown and bright yellow-green garnets are not common. Monticellite skarn is also not widespread. A medium-dark green dense (amphibole or pyroxene?) skarn was found in a few drill holes.
- Unit 2.- Endoskarn. Skarn developed in the intrusive mass. Moderately hard. Light to dark green (varying due to pyroxene content increasing toward the contact). Fine to medium grained (inherited from the original intrusive texture). Veinlets of quartz, calcite, and pyroxene are common.
- Unit 3.- Calc. silicate Hornfels. Hard. Usually pale green (diopside) sometimes pale grey or pale tan (garnet). Fine grained. Irregular bands and patches, up to several centimetres in size, of biotite quartzite are common. The unit is often localized between skarn and quartzite or marble.
- Unit 4.- Quartz Monzonite. Hard, light grey and medium grained with about 10% biotite speckles.
- Unit 4A.-Tonalite. Hard, light to medium greenish grey. Coarse biotite and hornblende grains near contact.
- Unit 5.- Feldspar Porphyry Dyke. Very hard, pale grey, with aphanitic groundmass. 15% anhedral, white feldspars to 3mm in length. 10% mafics to 1mm. diameter.
- Unit 7.- Biotite Quartzite. Hard to moderately hard. Pale to medium grey, sometimes with a purplish tinge. Fine to medium grained. Disseminated pyrrhotite usually common. Fine grained biotite/muscovite seldom has preferred orientation but sometimes is concentrated into streaks of wavy, weak foliations. Rarely the micas occur as medium grained speckles. Patches and streaks of calc. silicate hornfels can occur throughout this unit.
- Unit 7A.-Quartzite. Moderately hard. White. Groundmass appears bleached. Fine grained.

- Unit 7B.- Chloritic Quartzite. Hard, dark greenish grey. Medium grained. Usually with minor streaks of pale green calc. silicate hornfels.
- Unit 8.- Marble. Medium to soft hardness. Medium grey to white colour with occasional streaks of wispy chlorite, magnetite, or garnet. Medium to coarse grained. Well bedded. Occasional fetid odour.
- Unit 9.- Argillite. Very hard, black, fine grained rock. Well bedded and usually thinly laminated. Disseminations, fracture fillings, and laminations of pyrite and especially pyrrhotite are common.
- Unit 10.- Siltstone. Medium hard. Dark grey sometimes with a greenish or purplish tinge. Fine to medium grained. Well bedded and usually thinly laminated. Stronger amounts of biotite-muscovite result in foliated layers parallel to bedding.



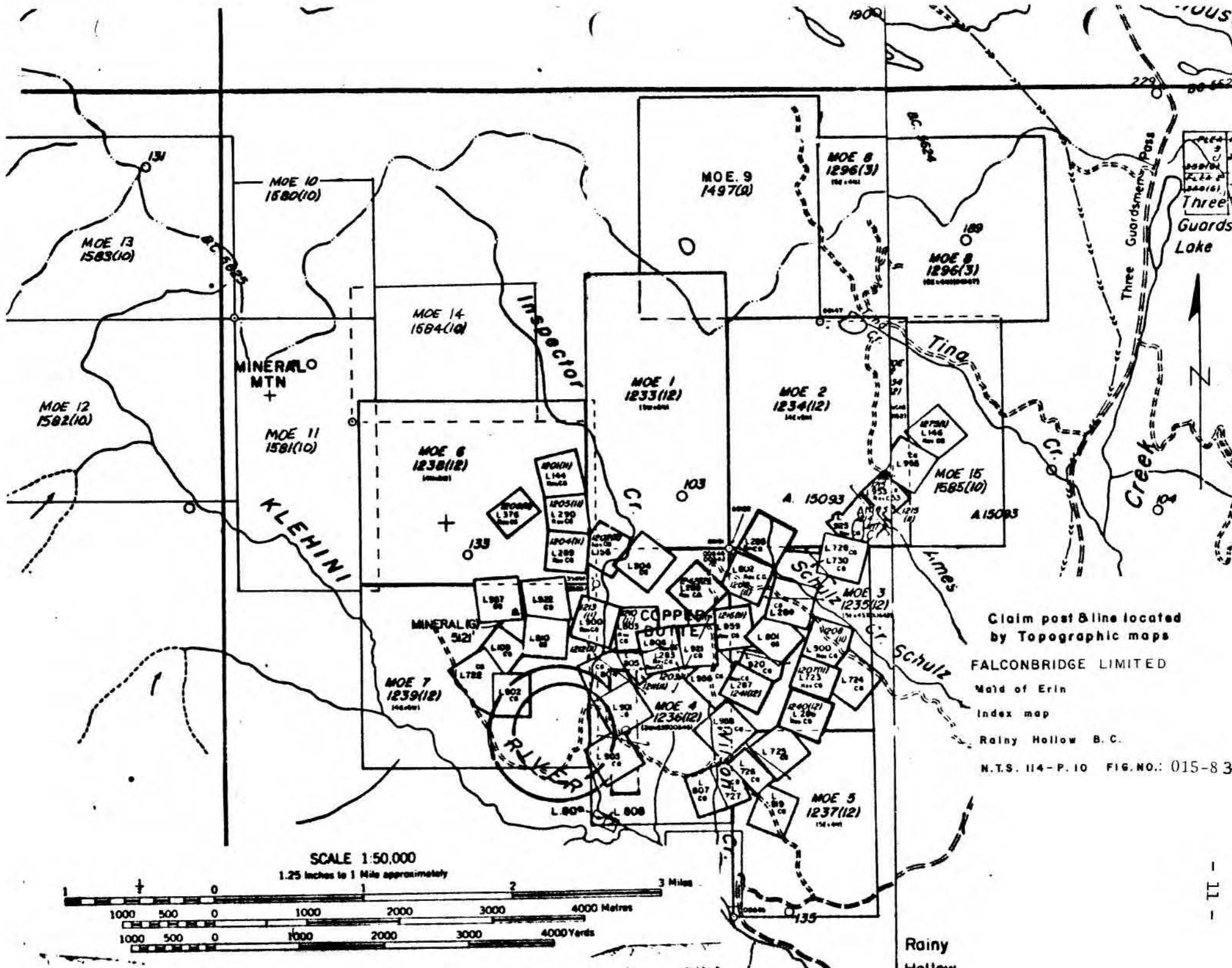
INDEX MAP

BRITISH COLUMBIA



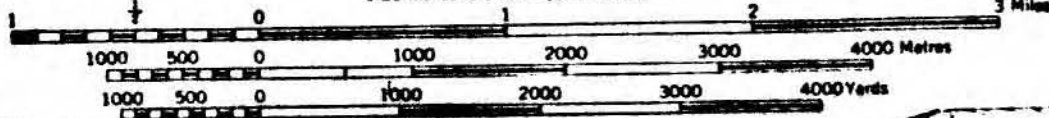
SCALE 1: 7 500 000

Fig. 015-83-1



SCALE 1:50,000

1.25 inches to 1 Mile approximately



Claim post & line located
by Topographic maps

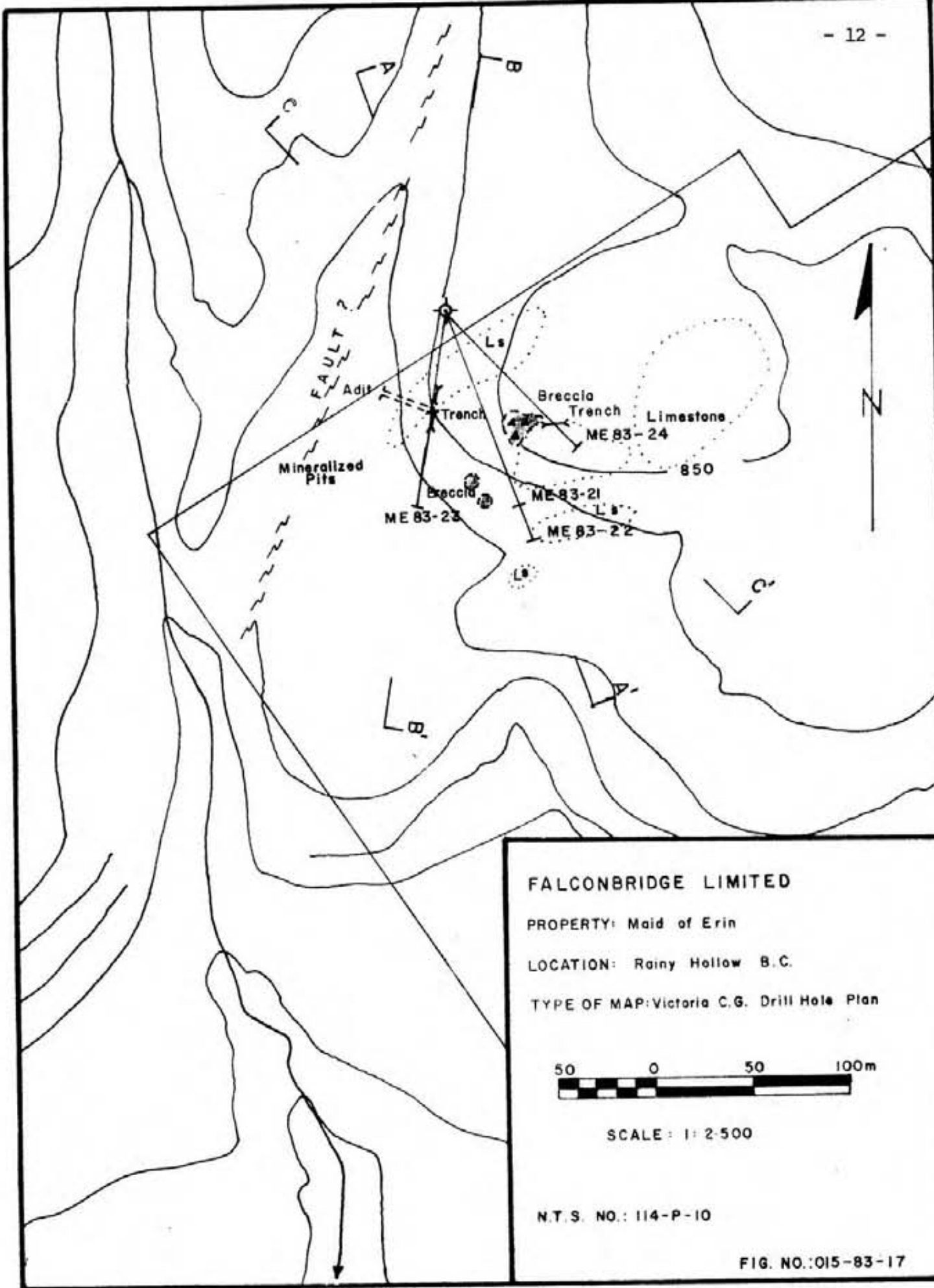
FALCONBRIDGE LIMITED

Maid of Erin

Index map

Rainy Hollow B.C.

N.T.S. 114-P.10 FIG. NO.: 015-83



FALCONBRIDGE LIMITED

PROPERTY: Maid of Erin

LOCATION: Rainy Hollow B.C.

TYPE OF MAP: Victoria C.G. Drill Hole Plan



SCALE: 1: 2 500

N.T.S. NO.: 114-P-10

FIG. NO.: 015-83-17