



41110SE0035 2 16468 FALCONBRIDGE

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SUMMARY REPORT  
1994 RECONNAISSANCE SURVEY AND SAMPLING PROGRAM  
AT THE FALCON GOLD PROPERTY,  
FALCONBRIDGE TOWNSHIP, SUDBURY DISTRICT, ONTARIO

2.16468

GORDON BAILEY (M.Sc. Geol.)

NOVEMBER 25, 1994

*Gordon Bailey*

*2.16468*

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## STATEMENT OF QUALIFICATIONS

1. I am a professional geologist having successfully completed B.Sc. studies at the University of Alberta and M.Sc. studies at Queens University in Kingston Ontario.
2. I have been practicing my profession since 1984, and am currently employed in said capacity.
3. I have no financial interest in any property owned or operated by Pentland Firth and that all observations and opinions expressed within this report are based solely on an examination Falcon Mine property, assay results and a review of pertinent literature.

October 31/1995

*Gordon Bailey*  
Gordon Bailey

## **SUMMARY AND RECOMMENDATIONS**

On Sept. 10/1994, a one-day reconnaissance property visit and sampling program was completed on the Falcon Gold property. The area near the former Falcon mine site was examined and nine samples were collected and chemically analyzed.

A total of five samples from near the mine site were collected and assayed for gold. Two pyrite-rich surface samples assayed 50.47 and 53.21 g Au/tonne\* whereas three pyrite-rich dump samples assayed 33.60, 38.33 and 40.46 g Au/tonne.

Four whole-rock total-oxide geochemical analysis were completed on samples collected near the Falcon mine site. The analysis indicate that a number of alteration processes were associated with gold mineralization at the deposit. These processes include soda-metasomatism (Na<sub>2</sub>O to 7.07%), silicification (SiO<sub>2</sub> to 80.10%) chloritization and possibly carbonatization (10.49% MgO + 4.61% Fe<sub>2</sub>O<sub>3</sub> with 26.77% CaO and 24.48% LOI).

The analytical results confirm that high-grade gold mineralization is present at the Falcon mine site and is associated, at least locally, with soda metasomatism, chloritization, silicification and sulphidization of the hosting meta-sedimentary rocks.

As numerous areas affected by albitization (Na-metasomatism) have been reported in similar units of Huronian rocks east of the

Sudbury structure, the author believes that further geochemical sampling and remapping of trenches at the Falcon mine site would allow the development of an effective geochemical model for gold exploration in a similar environment. As the adjacent Copper Prince property has reportedly returned assays of up to 1.1 oz Au/ton over 5 feet and of 4.8% Cu and 0.07 oz Au/ton over 5 feet, and appears to be along strike of the Falcon deposit along the Garson Fault, a purchase or joint venture agreement with its' owners should be considered as a first step towards gold exploration in this environment beyond the Falcon Gold property.

\* Average values from two assays are given for all 1994 Au assays quoted in this report.

**TABLE OF CONTENTS**

SUMMARY AND RECOMMENDATIONS . . . . .	i
INTRODUCTION . . . . .	1
Property description, location, access . . . . .	1
Previous work (pre-1960) . . . . .	3
Previous work (post-1980) . . . . .	3
Geology . . . . .	5
1994 PROPERTY EXAMINATION . . . . .	9
Assay Samples . . . . .	9
Geochemical Sampling . . . . .	11
DISCUSSION . . . . .	14
Alteration . . . . .	14
Structure . . . . .	15
Age of mineralization . . . . .	15
RECOMMENDATIONS . . . . .	17
APPENDIX 1. 1994 ASSAY REPORTS . . . . .	19
REFERENCES . . . . .	22

**LIST OF FIGURES**

Figure 1. Regional Location Map . . . . .	2
Figure 2. Property Geology . . . . .	7
Figure 3. Sample Location Map . . . . .	10

## **INTRODUCTION**

On Sept. 10, 1994 The Falcon Gold property was examined on a reconnaissance basis, by the author and D. Comba, to verify/corroborate previous mapping, to confirm previously reported gold values and to determine if there is a discrete assemblage of metasomatically altered rocks associated with the Falcon gold deposit which may provide a guide to exploration for similar deposits.

An irregular 15 by 30 m, recently-excavated trench adjacent to the Falcon mine shaft was examined and nine trench and mine dump samples were collected and subsequently analyzed. A single dump sample was examined in thin-section.

### **Property description, location and access**

The Falcon Gold property (Figure 1) consists of six patented mining claims (north 1/4 Lot 5, Con 2 and south 1/2 Lot 5, Con 3) and one adjacent staked claim (northwest corner Lot 4 Con 2), all in Falconbridge Township. The claims are located 4.5 km east of the Falconbridge smelter and were accessed by a 3 km easterly walk starting at the southern end of a car-accessible tailings dam 600 m south of the Falconbridge East Mine.

**Previous work (pre-1960)**

Exploration has been conducted on the Falcon Gold property since prior to the turn of the century when gold was first discovered by prospecting. The following summary is drawn primarily from an unpublished Falconbridge Ltd report (E. S. Barnett, 1987) and subsequent exploration reports completed by, and for, Falconbridge Ltd.

Gold was discovered on surface at the Falcon Gold property prior to 1900 and by 1923 the exposure was stripped and a 50-foot-deep shaft and a 54-foot-long cross-cut were excavated. The shaft was later deepened to 200 feet and 150 feet of drifting was completed on the 100-foot level. Numerous channel samples were collected from that level. Diamond drill logs indicate that 4031 feet of diamond drilling in 21 holes was completed between 1927 and 1937, although Barnett noted that a total of 4328 feet was indicated in an undated report by Hitchcock. Later drilling includes three holes totalling 640.5 feet (1948-1951) and five holes totalling 7640 feet (1955). All eight of these later holes were apparently drilled to meet assessment requirements.

**Previous work (post-1980)**

In 1981, D. Owen calculated that the Falcon Deposit contained a mineral inventory of 36 000 tons of rock grading 0.21 oz Au/ton.

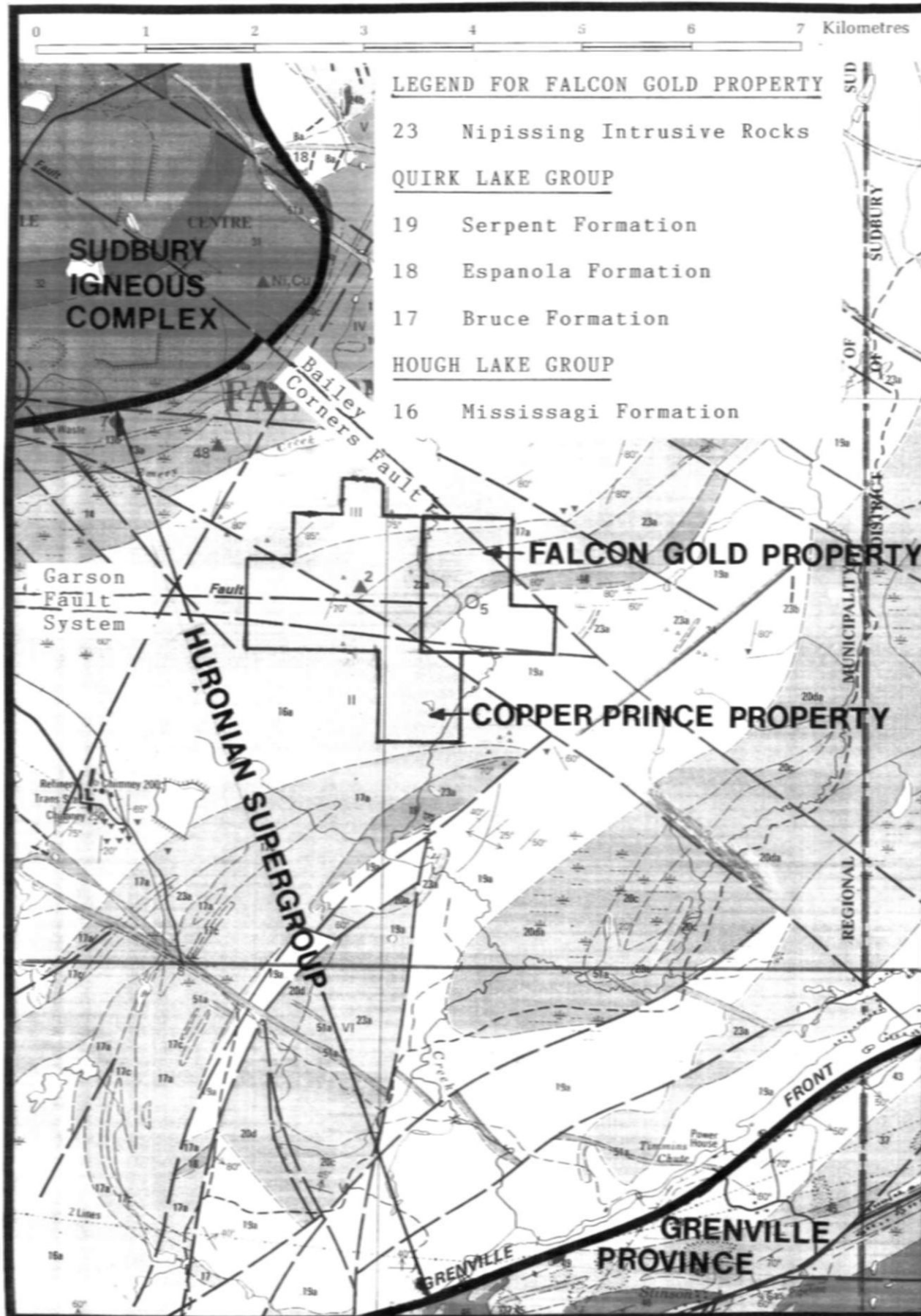


FIGURE 3. Regional Location Map. Part of OGS map 2491 used as a base map.



Geophysical exploration included a Dighem III survey flown in 1984 and, in 1987, 9.03 line miles of I.P. surveys and 22.65 miles of magnetic and VLF-Em surveys by JVX Ltd. These surveys were completed on NW-SE and NE-SW grids totalling 23 miles cut with a 200-foot spacing between lines.

The property was mapped by Falconbridge Ltd in 1987 on the newly cut grid system.

In 1988, Falconbridge completed a 24-hole, 14 951-foot drill program which increased the mineral inventory of the Falcon deposit to 59 400 tons grading 0.226 oz Au/ton in a pyritiferous zone traced to a vertical depth of 600 feet with an average dimension of 11 by 100 feet. The western margin of the deposit is Nipissing Diabase whereas the eastern margin is Sudbury Breccia.

One of the 1988 holes (FG-17) drilled 170 feet east of the main deposit intersected a pyrite-pyrrhotite-chalcopyrite-rich zone at a vertical depth of 540 feet. This zone averaged 0.14% Ni, 0.26% Cu and 705 ppb Au over a core length of 28 feet and included a 3.4 foot section grading 0.50% Ni and 0.56% Cu and a 2.5 foot section grading 0.076 oz Au/ton.

In 1988, nine trenches were mechanically excavated and were mapped and sampled in the following year. The main trench (Trench A) exposed a gold-mineralized zone immediately south of the Falcon mine shaft (now capped) whereas most of the other trenches tested

geophysical anomalies that were subsequently interpreted to have been caused by lithological contacts.

Five roughly 20-pound representative samples from the Falcon mine muck piles were collected in 1989 to determine if the material was worth transporting and milling. Only low assay values were returned ranging from 291 ppb to 3.43 g Au/tonne. Of nine selected muck pile samples the best analytical result was 16.08 g Au/ton (average of two assays).

### **Geology**

Regionally, the Falcon Gold property is located within the early-Proterozoic Southern Province of the Canadian Shield and occurs within a thick succession of north-easterly striking, steeply-dipping, mostly meta-sedimentary rocks of the Huronian Supergroup intruded by Nipissing Diabase dikes and sills (2100 Ma). The Grenville Front forms the southern limit of the succession 5 km southeast of the property whereas the Sudbury Igneous Complex (1850 Ma) truncates the succession 3.5 km northwest of the property.

The property is primarily underlain by steeply-dipping, southeasterly facing clastic and chemical meta-sedimentary rocks of the Bruce, Espanola and Serpent formations of the Quirk Lake Group and by the Mississagi Formation of the Hugh Lake Group. These units are intruded by Nipissing Diabase and Sudbury Breccia and, based on regional geological maps (OGS map 2491, 1984), appear to be cut by

the easterly-striking Garson Fault and the northeasterly-striking Bailey Corners Fault.

The property (Figure 2) was mapped by Falconbridge Ltd in 1987 on a 1:2400-scale and is described in a report by E. S. Barnett (1987). In his report Barnett noted that the Mississagi Formation occurs in the northern portion of the property and is comprised of coarse-grained, thickly-bedded, locally cross-bedded sandstones and thin interbeds of siltstone. It is unconformably overlain by and possibly in fault contact with the Bruce Formation paraconglomerate which, in turn, is overlain by the Espanola Formation which occurs only rarely as a distinct carbonate unit. This carbonate unit grades into thinly-bedded sandstones and argillites of the Serpent Formation which, up-section, grade into massive, thickly-bedded sandstones (distinguished from the Mississagi Formation by a lack of prominent cross-bedding). Barnett suggested that the thinly-bedded sedimentary rocks at the base of Serpent Formation may be lateral equivalents of the Espanola Formation.

The Bruce-Espanola contact is intruded by a Nipissing Diabase and Sudbury Breccia intrudes all units on the property and was mapped as a distinct 800 by 2600 ft unit in the east-central portion of the property, 100 feet east of the Falcon mine shaft.

Gold-mineralization at the Falcon mine site was described as being associated with about 5% pyrite cubes to 1 cm in a carbonate-actinolite-chlorite-talc shear zone which strikes  $105^{\circ}$  -  $115^{\circ}$  and

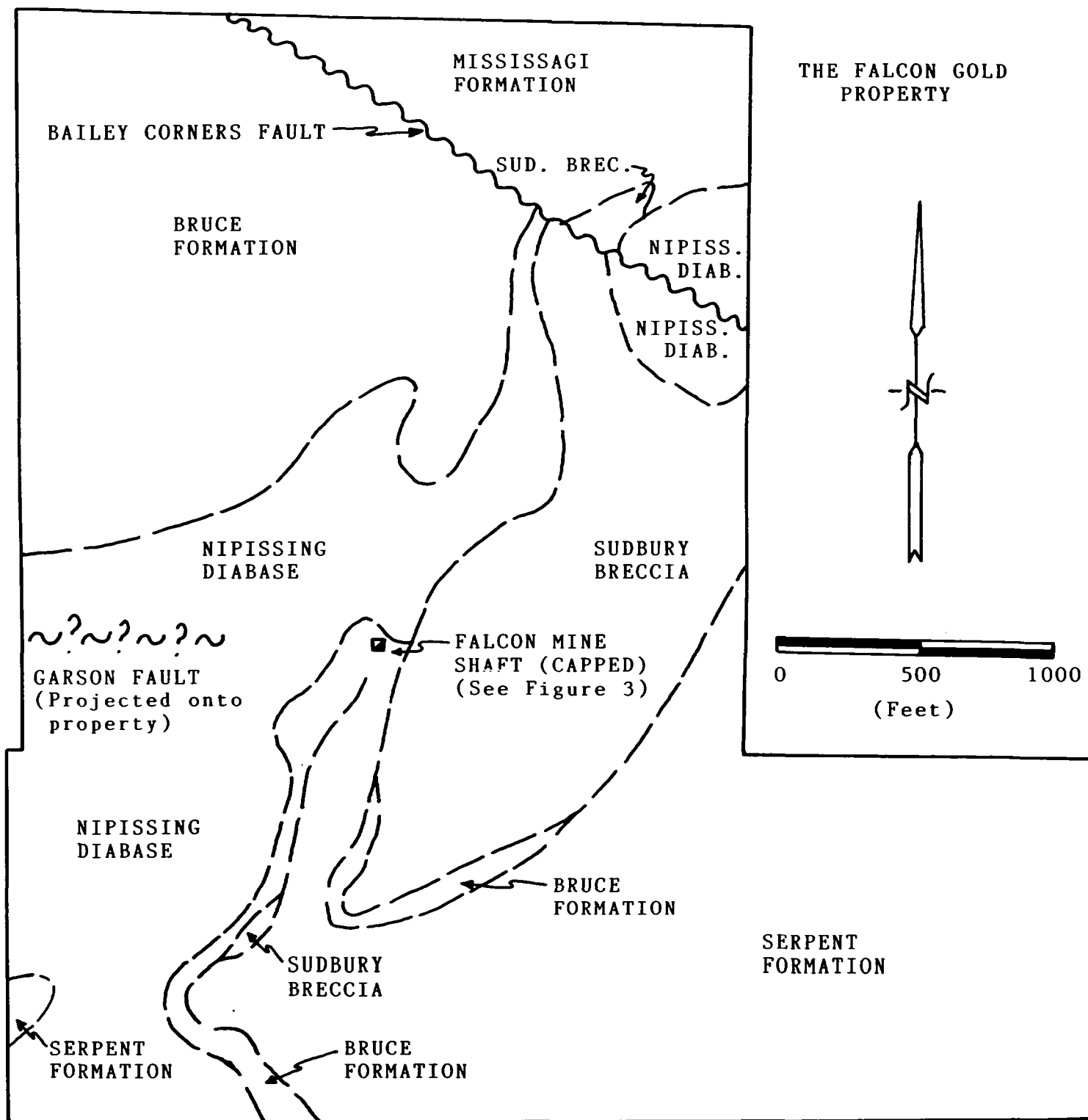


FIGURE 2. Property Geology. Adapted from Barnett, 1987.

dips  $65^{\circ}$  -  $70^{\circ}$  SW. Diamond drilling in 1988 showed the zone to average 11 by 100 feet and to extend to a vertical depth of 600 feet and to be contained to the west by Nipissing Diabase and to the east by Sudbury Breccia.

Descriptions of chemically altered rocks on the property include carbonate-actinolite schist and zones of intense grey silicification associated with 50% "buckshot" pyrite at the Falcon mine site and, elsewhere, fracture controlled calcite, local zones of silicification, hematite staining and minor epidotization of the Nipissing Diabase.

#### **1994 PROPERTY EXAMINATION**

The majority of time spent on the Falcon Gold Property was spent in the examination of rocks in and near "Trench A", immediately south of the old Falcon mine shaft and in the surrounding muck piles (Figure 3).

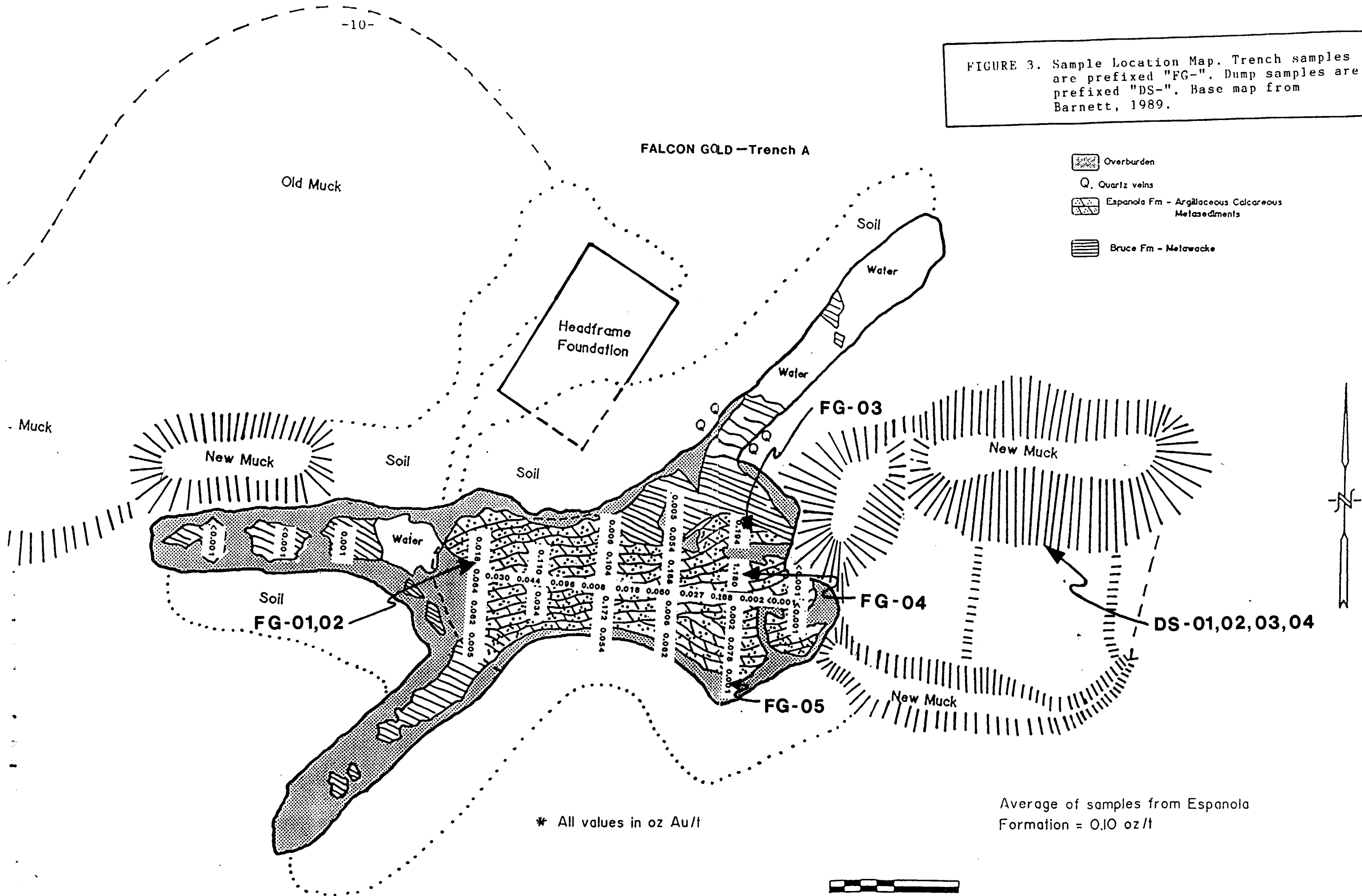
Based on this brief examination, it appears that the previous mapping of trenches appears to be substantially correct. Notably different however, was the observation of strongly altered meta-gabbro in the southern portion of the trench and the recognition of various distinct alteration assemblages both in the trench and in samples in the muck piles.

#### **Assay Samples**

A total of five samples were collected and analyzed for Au, Ag, As, Cu, Ni, Pt, Pb and Hg. These samples (which include two surface and three dump samples) were collected to confirm analytical results from the 1989 trench sampling and, in an approximate fashion, from underground.

The two surface samples Fg-03 and FG-04 (Figure 3) assayed 51.02 and 54.61 g Au/tonne respectively. Sample FG-03 was collected from a 1- to 5-cm-wide, irregular bedding-crosscutting pyrite-carbonate-(calcite)-quartz vein whereas sample FG-04 was comprised mostly of pyrite from a zone of strataform pyrite mineralization where masses

FIGURE 3. Sample Location Map. Trench samples are prefixed "FG-". Dump samples are prefixed "DS-". Base map from Barnett, 1989.



of pyrite to 5 cm across and dodecahedral pyrite to a cm across are common. This selected sampling confirms analytical results from previous trench sampling and shows that pyrite in both bedding-parallel and bedding-crosscutting masses/veins carries gold.

The three dump samples, all from carbonate-quartz(+/-actinolite and chlorite) schists with abundant pyrite assayed 33.87, 38.33 and 40.40 g Au/tonne confirming that relatively high-grade gold was mined at the Falcon Deposit and might be expected elsewhere in a similar geological environment.

#### **Geochemical Sampling**

A total of four samples were submitted for whole-rock, total-oxide analysis to confirm the character of alteration interpreted from hand samples. Two samples were collected from the west-central portion of the pit as they appeared to be representative of intensively albitized/silicified (FG-01) and chloritized (FG-02) rocks present in the trench (Figure 3). Sample FG-01, a hard, cherty, weakly calcitic, salmon pink rock with weak relict bedding and 1-2% pyrite yielded analytical results of 80.10% SiO<sub>2</sub>, 7.79% Al<sub>2</sub>O<sub>3</sub>, 4.52% Na<sub>2</sub>O and about 1.5% each of CaO and Fe<sub>2</sub>O<sub>3</sub>. A rock comprised of roughly 42% albite, 53% quartz and 2.5% each of pyrite and calcite would account for virtually all of these oxides and suggests that albitization and silicification are the processes that produced that rock. [This mineral calculation is based on the assumption that all of the Na<sub>2</sub>O was derived from albite with a



composition similar to that given in Deer, Howie and Zussman, 1966. Such an albite would consume all of the Al<sub>2</sub>O<sub>3</sub> and 28% SiO<sub>2</sub> and leave 52% SiO<sub>2</sub> and the Fe<sub>2</sub>O<sub>3</sub> and CaO unaccounted for. These remaining oxides presumably were derived from quartz, pyrite and calcite]. Similarly, chemical analysis of FG-02, a dark-green calcite-chlorite schist, confirmed that the rock was both chloritic (10.49% MgO and 4.61% Fe<sub>2</sub>O<sub>3</sub>) and calcitic (26.77% CaO and 24.48% LOI).

Sample DS-03, a very hard, fine-grained, salmon-pink, weakly calcitic dump sample was collected as a probable example of intensively albitized rock from the Falcon deposit. This interpretation was confirmed by an analysis of 7.07% Na<sub>2</sub>O suggesting that the sample was comprised of about 64% albite, 26% quartz and 10% carbonate, pyrite and chlorite.

Chemical analysis of sample FG-05, a dark-green, chloritic, moderately-calcitic rock interpreted as altered meta-gabbro confirmed that the rock has a basic chemical composition (10.88% Fe<sub>2</sub>O<sub>3</sub> and 10.41% MgO) and that, for a gabbroic rock, it has elevated Na<sub>2</sub>O (3.51% vs. a more typical 2.39% (Best, 1982)) indicating that this unit was also affected by soda-metasomatism.

A single dump sample was collected and examined in thin section to confirm the mineralogy of samples at the mine site. It is composed of 25% well-aligned blades of weakly pleochroic actinolite set in a matrix of mm- to cm-scale bands alternately dominated by

chlorite(+/-talc) or calcite. In the chloritic bands, the actinolite is commonly surrounded by a thin band of calcite. Quartz and an opaque mineral (pyrite) are minor constituents.

## **DISCUSSION**

### **Alteration**

Analytical results show that chemically altered rocks are associated with gold mineralization at the Falcon mine site and that the alteration processes include soda-metasomatism, silicification, chloritization and sulphidization. These processes are similar to those described for other Au-deposits located near Sudbury in similar Huronian Supergroup meta-sedimentary rocks. For example, B. I. Gates (1991) described the Orifino Resources Scadding Au deposit (about 15 km NE of the Falcon Gold property) as being directly associated with broad zones of soda-metasomatism hosting 30- to 50-m-wide, 100- to 300-m-long breccia zones containing narrow, pipe-like, chlorite-rich Au-mineralized zones with either pyrite or arsenopyrite as the principal sulphide mineral. He modelled the deposit as occurring within a broad zone of soda-metasomatism at the Serpent Fm/Bruce Fm contact which, because of its brittle nature, was easily fractured providing channels for further solutions with the introduction of chlorite, sulphide minerals and gold. W. Meyer (1992) noted that the Norstar deposit in Davis Township is similarly associated with soda-metasomatism and stated that remapping of many old Au-showing east of Wanapitei Lake (15 km north of the Falcon Gold property) show them to be associated with soda metasomatism. In a visit to the Willet Green Miller Northern Development and Mines building in Sudbury (Sept. 1994) Meyer showed the author of this report

numerous samples of salmon pink, albitized rock collected from the Sudbury/Wanapitei Lake area including samples with large euhedral calcite rhombs and samples with calcite rhombs variously pseudomorphed by pyrite or quartz. Meyer suggested that early albitization, followed by an overlapping sequence of carbonatization, chloritization, silicification, sulphidization and gold mineralization are the processes associated with the development of many of the gold deposits and showings east of the Sudbury Basin.

### **Structure**

It seems likely that structural features are also necessary for the development of these deposits. Examples of this include the well-defined chlorite-breccia zones at the Scadding Deposit (Gates, 1991., Larson, 1981), the along strike occurrence of the Garson Fault System with mineralization at both the Copper Prince property (M. Ogdem, 1982) and the Falcon Gold property, and the proximity of major faults with most Au showings shown east of Sudbury on OGS Map 2491. These cross-cutting structures may pre-date or be syngenetic with alteration and have provided a passage-way for metasomatic and hydrothermal solutions.

### **Age of Mineralization**

Schandl et al. (1992) reported a 1700+/-2 Ma age from hydrothermal monzonites collected at the Scadding Mine and at the Sheppard Au-

property which post-dates both the Nipissing Diabase (2100 Ma) and the Sudbury Igneous complex (1850 +/-1 Ma - Krogh 1984). If the alteration and mineralization at the Falcon Mine is of a similar 1700 Ma age, the mineralization at the deposit is not actually cut to the west by the Nipissing Diabase or to the east by Sudbury Breccia, rather that these older units may never have been sufficiently fractured to allow the influx of mineralizing hydrothermal solutions or that they simply may not have had a primary chemical character favourable to the alteration and Au-mineralization in comparison to the adjacent carbonate rich rocks of the Espanola Formation. This interpretation is supported by the chemical analysis of a unit of gabbro (Nipissing Diabase) in "Trench A" that returned elevated Na<sub>2</sub>O values.

## RECOMMENDATIONS

1) In order to develop a well-defined model of gold-deposit associated alteration applicable in the Huronian meta-sedimentary rocks east of the Sudbury Structure, "Trench A" to the immediate south of the Falcon mine shaft and nearby outcrops should be remapped and geochemically sampled.

2) As the adjacent Copper Prince property has reportedly returned assays of up to 1.1 oz Au/ton over 5 feet and 4.8% Cu and 0.07 oz Au/ton over 5 feet (Ogden, 1976), and appears to be along strike of the Falcon Gold deposit along the Garson Fault, a purchase or joint venture agreement with its' owners should be considered as a first step towards gold exploration beyond the Falcon Gold Property.

3) Falconbridge Limited drill data should be re-examined to determine if the altered gabbro sampled in "Trench A" correlates with the Nipissing Diabase intersected by diamond drilling and to subsequently evaluate the potential for significant gold mineralization below that unit.

APPENDIX 1.

1994 ASSAY REPORTS



Established 1928

# Swastika Laboratories

A Division of TSL/Assayers Inc.

Assaying - Consulting - Representation

## Assay Certificate

4W-2281-RA1

Company: **PENTLAND FIRTH VENTURES LTD**  
Project: **5101**  
Attn: **K. Tylee**

Date **OCT-25-94**

We hereby certify the following Assay of 5 Rock samples submitted SEP-23-94 by .

Sample Number	BAILEY No.	Au g/tonne	Au Check g/tonne	Ag g/tonne	As PPM	Cu PPM	Ni PPM	Pt PPB	Pd PPB	Hg PPB
H-8001	DS-01	41.35	40.46	1.3	790	64	215	<10	<5	50
H-8002	FG-03	50.47	51.57	2.2	319	50	189	<10	<5	45
H-8003	FG-04	56.02	53.21	1.3	2490	147	639	<10	<5	55
H-8004	DS-02	38.40	38.26	1.9	1750	253	241	<10	<5	65
H-8005	DS-04	33.60	34.15	2.2	844	59	298	<10	<5	70

**CONFIDENTIAL**

Certified by

P.O. Box 10, Swastika, Ontario P0K 1T0  
Telephone (705) 642-3244 FAX (705) 642-3300



PENTLAND FIRTH VENTURES LTD.

ATTN: K. TYLEE

PROJ: 5101

4U-2282-RA1

TSL/ASSAYERS LABORATORIES

1270 REVERSTER DRIVE, UNIT 3 MISSISSAUGA, ONTARIO L4W-1A4

PHONE #: (905)625-1544 FAX #: (905)206-0513

REPORT No. : M3957

Page No. : 1 of 1

File No. : SP30RA

Date : SEP-30-1994

I.C.A.P. TOTAL OXIDE ANALYSIS

Lithium Metaborate Fusion

SAMPLE #	SiO2	Al2O3	Fe2O3	CaO	MgO	Na2O	K2O	TiO2	MnO	P2O5	Ba	Sr	Zr	Y	Sc	Mo	Br	Mi	Cr	Cu	V	Co	Zn	LOI	TOTAL
	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
8006 <sup>BAILLY</sup> FG-01	80.10	7.79	1.66	1.39	0.41	4.52	0.34	0.29	0.08	0.12	50	40	60	12	2	30	3	50	1165	20	90	5	30	0.91	97.60
8007 FG-02	28.03	5.41	4.61	26.77	10.49	0.60	0.06	0.15	0.18	0.16	10	150	80	28	10	< 30	2	10	155	< 5	80	5	< 5	24.48	100.96
8008 FG-05	45.75	15.36	10.88	4.20	10.41	3.51	1.38	0.55	0.07	0.08	140	30	50	16	38	< 30	2	85	125	15	240	15	10	5.58	97.77
8009 DS-03	67.07	13.22	3.22	3.80	2.52	7.07	0.36	0.43	0.04	0.16	40	40	140	18	14	< 30	2	55	550	30	105	25	5	2.69	100.56

-20-

**CONFIDENTIAL**

SIGNED :

*Randy Soad*

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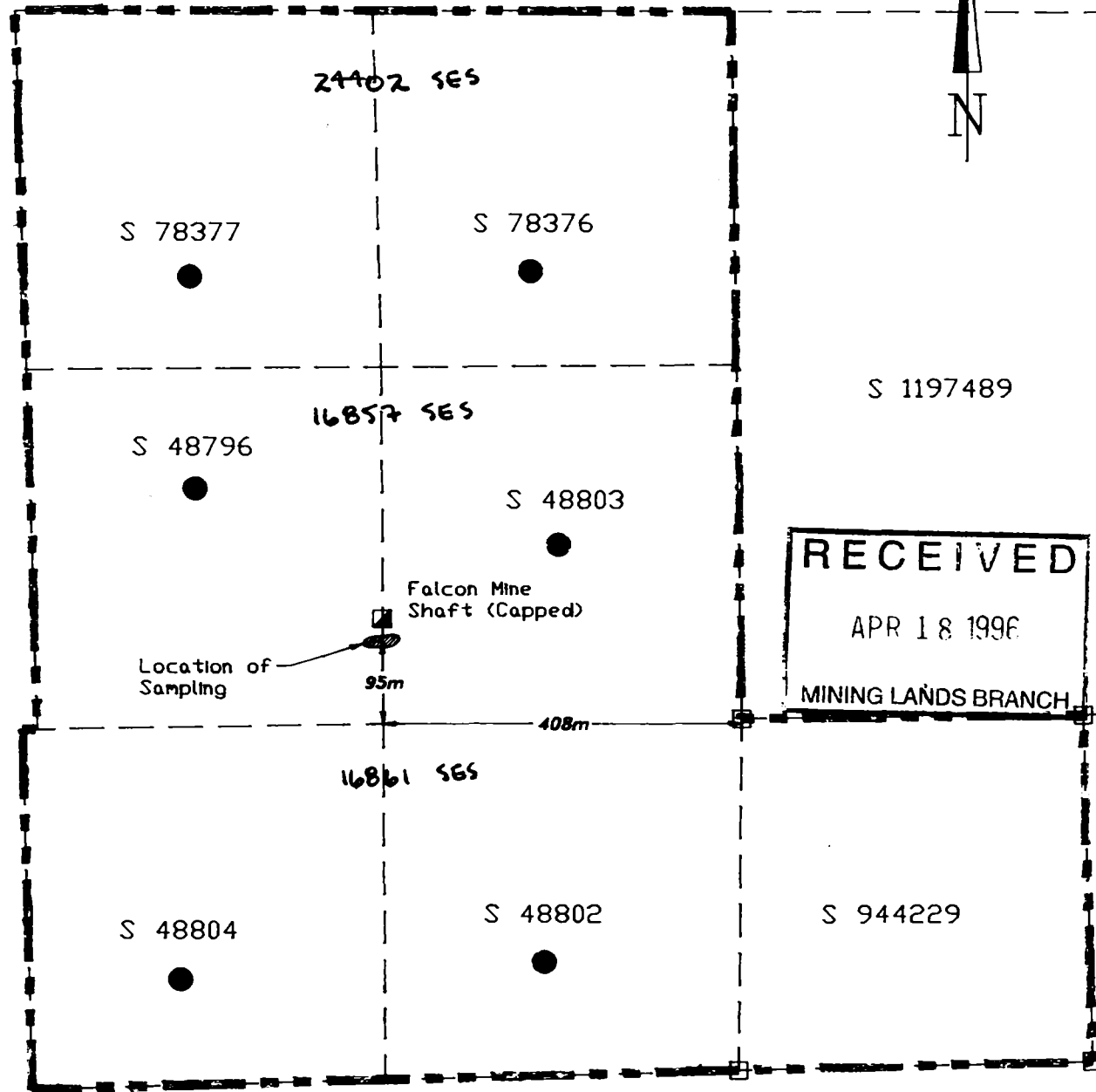
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2.11.83

ASTRONOMIC



PROPERTY OWNERSHIP

● PATENT, SURFACE & MINING RIGHTS

PENTLAND FIRTH VENTURES LTD.

TOWNSHIP ONTARIO

Sudbury Mining Division

The Falcon Gold Property  
(6101)

Falconbridge Township

DATE	AMOUNT	DATE	PROJECT
		JULY 26/95	
		75	150 225 300
PLAN No.	105		

See 667912

This is subject to  
 the provisions of the  
 Mining Act of Ontario  
 and the regulations  
 thereunder and the  
 provisions of the  
 Mining Act of Ontario  
 (R.S.O. 1950) which  
 may be amended  
 from time to time  
 before the  
 date of this  
 instrument.  
 L.M. of T.  
 1953  
 \$100  
 Canceled on 1953  
 5

Under "Mining Lands" Patent 7612 Sudbury East Section, dated 27th day of January, A.D. 1953, and made in consideration of \$240.00, ~~FALCONBRIDGE NICKEL MINES LIMITED~~, with its head office in the City of Toronto, in the County of York, is the owner in fee simple with an Absolute Title as Mining Lands, or that certain parcel of land situate in the Township of Falconbridge in the District of Sudbury, and Province of Ontario, namely:

NORTH QUARTER OF LOT NUMBER FIVE IN THE SECOND CONCESSION OF THE SAID TOWNSHIP OF FALCONBRIDGE being Mining claims S.48802 and S.48804, containing by admeasurement Eighty acres, be the same more or less.

SAVING, EXCEPTING AND RESERVING the surface rights only on and over any public or colonization roads or any highways crossing the said lands at the date of the Letters Patent.

EXCEPTING AND RESERVING five per cent of the acreage hereby granted for roads and the right to lay out the same where the Crown or its Officers may deem necessary, as reserved in the original Patent from the Crown.

SUBJECT NEVERTHELESS to the reservations and exceptions contained in the original Patent from the Crown, namely, all trees, standing or being on the said land, together with the right to enter upon said land to remove said timber, as provided by Section 103 of "The Mining Act of Ontario," and the free use, passage and enjoyment of, in, over and upon all navigable waters which shall or may hereafter be found on or under or be flowing through or upon any part of the said land, and also right of access to the shores of all rivers, streams and lakes for all vessels, boats and persons, together with the right to use so much of the banks thereof, not exceeding one chain in depth from the water's edge, as may be necessary for fishery purposes.

The Title of the said owner is subject to the following:

1. To any unpaid Provincial or Municipal taxes, charges, rates, assessments and school or water rates imposed upon the said land, or charges imposed in respect of Statute Labour.
2. To the condition contained in Section One Hundred and Two of The Mining Act, requiring that all ores or minerals raised or removed therefrom shall be treated and refined within Canada, and that in default thereof the land herein granted shall revert to Her Majesty.

AND IS ALSO SUBJECT to the exceptions and qualifications mentioned in Section 9 of the Land Titles Act, being R. S. O. 1950, Chapter 197 and all subsequent amendments.

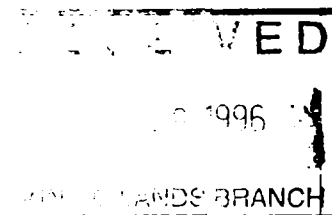
IN WITNESS WHEREOF I have hereunto subscribed my name, this 16th day of March, A. D. 1953.

NOTICED TO SHERIFF  
 ISSUED L. C.

*B. St. Pierre*  
 LOCAL MASTER OF TITLES.

BY 667912 REG. 89-12-18  
 NAME CHANGED TO  
 FALCONBRIDGE LIMITED

*R. Valentini*  
*A. Dief L.R.*



MICROFILMED

AUG 22 1990

Falconbridge Twp.

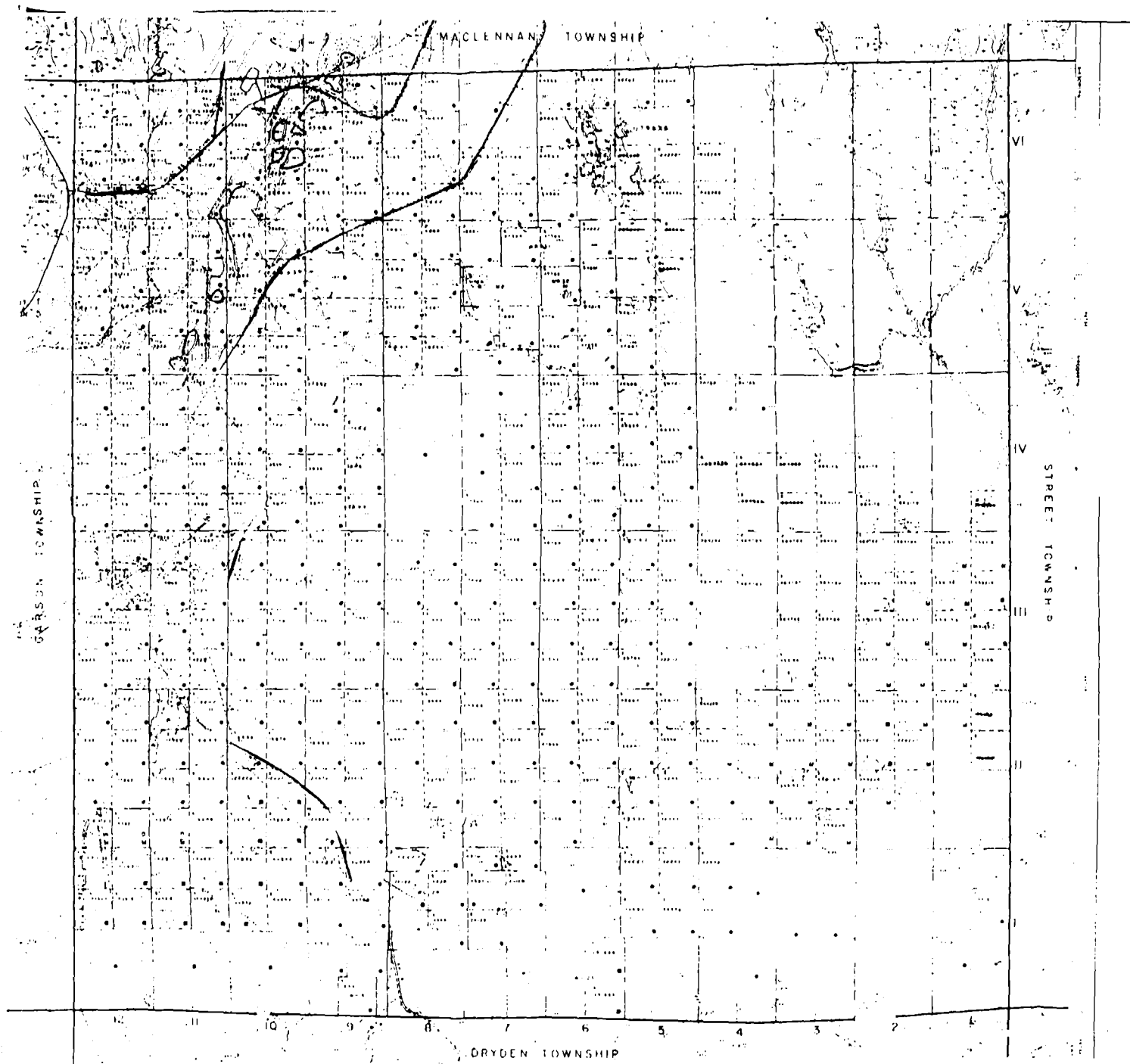
Sudbury Mining Division

2-16468

RECEIVED

APR 18 1906

MINING LANDS BRANCH





Report of Work Conducted After Recording Claim

Mining Act

Transaction Number 9670.00020

Res - Sudbury

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used for correspondence. Questions about this collection should be directed to the Provincial Manager, Mining Lands, Ministry of Northern Development and Mines, Fourth Floor, 159 Cedar Street, Sudbury, Ontario, P3E 6A5, telephone (705) 670-7264.

- Instructions: - Please type or print and submit in duplicate. - Refer to the Mining Act and Regulations for rec Recorder. - A separate copy of this form must be complete. - Technical reports and maps must accompany tl - A sketch, showing the claims the work is assigni

2.16468



41110SE0035 2 16468 FALCONBRIDGE

900

Recorded Holder(s) FALCONBRIDGE LTD. (limited) Client No. 130679 Address 95 Wellington St. W. Suite 1200 Toronto, Ont. Telephone No. (416) 956-5700 Mining Division Sudbury Township/Area Falconbridge Twp. M or G Plan No. G-4048 Dates Work Performed From: September 10, 1994 To: September 10, 1994

Work Performed (Check One Work Group Only)

Table with columns Work Group and Type. Includes checkboxes for Geotechnical Survey, Physical Work, Rehabilitation, Other Authorized Work, Assays, and Assignment from Reserve. A 'RECEIVED' stamp is present with date APR 18 1996 and MINING LANDS BRANCH.

Total Assessment Work Claimed on the Attached Statement of Costs \$ 1313

Note: The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report)

Table with columns Name and Address. Entry: Mr. Gordon Bailey, 1431 Kingslea Court, Sudbury, Ont. P3A 3P4

(attach a schedule if necessary)

Certification of Beneficial Interest \* See Note No. 1 on reverse side

I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder. Date Feb 7/96 Recorded Holder or Agent (Signature) [Signature]

Certification of Work Report

I certify that I have a personal knowledge of the facts set forth in this Work report, having performed the work or witnessed same during and/or after its completion and annexed report is true.

Name and Address of Person Certifying Ken Tylee, P.O. Box 1690 South Porcupine, Ont. Telephone No. (705) 235-2311 Date Feb 7/96 Certified By (Signature) KD [Signature]

For Office Use Only

Total Value Cr. Recorded Applied 1313.00 Date Recorded Feb. 09. 96 Mining Recorder [Signature] Date Approved MAY 9/96 Received Stamp: SUDBURY RECEIVED FEB 09 1996



Work Report Number for Applying Reserve	Claim Number (see Note 2)	Number of Claim Units
	16857 SES	2
	S 944229	1
Total Number of Claims		2

Value of Assessment Work Done on this Claim	Value Applied to this Claim
1313	—
1313	1313
Total Value Work Done	Total Value Work Applied
1313	1313

Value Assigned from this Claim	Reserve Work to be Claimed at a Future Date
1313	—
1313	—
Total Assigned From	Total Reserve
1313	—

Credits you are claiming in this report may be cut back. In order to minimize the adverse effects of such deletions, please indicate from which claims you wish to prioritize the deletion of credits. Please mark (✓) one of the following:

- Credits are to be cut back starting with the claim listed last, working backwards.
- Credits are to be cut back equally over all claims contained in this report of work.
- Credits are to be cut back as prioritized on the attached appendix.

In the event that you have not specified your choice of priority, option one will be implemented.

Note 1: Examples of beneficial interest are unrecorded transfers, option agreements, memorandum of agreements, etc., with respect to the mining claims.

Note 2: If work has been performed on patented or leased land, please complete the following:

I certify that the recorded holder had a beneficial interest in the patented or leased land at the time the work was performed

Signature: *[Handwritten Signature]* Date: Feb 7 / 96

**Statement of Costs  
for Assessment Credit**

Transaction No./N° de transaction

W9670.0020

**État des coûts aux fins  
du crédit d'évaluation**

**Mining Act/Loi sur les mines**

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used to maintain a record and ongoing status of the mining claim(s). Questions about this collection should be directed to the Provincial Manager, Minings Lands, Ministry of Northern Development and Mines, 4th Floor, 159 Cedar Street, Sudbury, Ontario P3E 6A5, telephone (705) 670-7264.

Les renseignements personnels contenus dans la présente formule sont recueillis en vertu de la Loi sur les mines et serviront à tenir à jour un registre des concessions minières. Adresser toute question sur la collecte de ces renseignements au chef provincial des terrains miniers, ministère du Développement du Nord et des Mines, 159, rue Cedar, 4<sup>e</sup> étage, Sudbury (Ontario) P3E 6A5, téléphone (705) 670-7264.

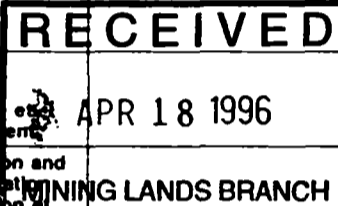
**1. Direct Costs/Coûts directs**

Type	Description	Amount Montant	Totals Total global
Wages Salaires	Labour Main-d'oeuvre		
	Field Supervision Supervision sur le terrain		
Contractor's and Consultant's Fees Droits de l'entrepreneur et de l'expert- conseil	Type Recon / Sampling Mapping		1313
Supplies Used Fournitures utilisées	Type		
Equipment Rental Location de matériel	Type		
<b>Total Direct Costs Total des coûts directs</b>			

**2. Indirect Costs/Coûts indirects**

\*\* Note: When claiming Rehabilitation work Indirect costs are not allowable as assessment work.  
Pour le remboursement des travaux de réhabilitation, les coûts indirects ne sont pas admissibles en tant que travaux d'évaluation.

Type	Description	Amount Montant	Totals Total global
Transportation Transport	Type		
Food and Lodging Nourriture et hébergement			
Mobilization and Demobilization Mobilisation et démobilisation			
<b>Sub Total of Indirect Costs Total partiel des coûts indirects</b>			
<b>Amount Allowable (not greater than 20% of Direct Costs) Montant admissible (n'excédant pas 20 % des coûts directs)</b>			
<b>Total Value of Assessment Credit (Total of Direct and Allowable indirect costs)</b>		<b>Valeur totale du crédit d'évaluation (Total des coûts directs et indirects admissibles)</b>	



Note: The recorded holder will be required to verify expenditures claimed in this statement of costs within 30 days of a request for verification. If verification is not made, the Minister may reject for assessment work all or part of the assessment work submitted.

Note : Le titulaire enregistré sera tenu de vérifier les dépenses demandées dans le présent état des coûts dans les 30 jours suivant une demande à cet effet. Si la vérification n'est pas effectuée, le ministre peut rejeter tout ou une partie des travaux d'évaluation présentés.

**Filing Discounts**

1. Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.
2. Work filed three, four or five years after completion is claimed at 50% of the above Total Value of Assessment Credit. See calculations below:

Total Value of Assessment Credit	Total Assessment Claimed
	x 0.50 = .

**Remises pour dépôt**

1. Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.
2. Les travaux déposés trois, quatre ou cinq ans après leur achèvement sont remboursés à 50 % de la valeur totale du crédit d'évaluation susmentionné. Voir les calculs ci-dessous.

Valeur totale du crédit d'évaluation	Évaluation totale demandée
	x 0,50 =

**Certification Verifying Statement of Costs**

I hereby certify:  
that the amounts shown are as accurate as possible and these costs were incurred while conducting assessment work on the lands shown on the accompanying Report of Work form.

that as Land Administrator I am authorized  
(Recorded Holder, Agent, Position in Company)

to make this certification

**Attestation de l'état des coûts**

J'atteste par la présente :  
que les montants indiqués sont le plus exact possible et que ces dépenses ont été engagées pour effectuer les travaux d'évaluation sur les terrains indiqués dans la formule de rapport de travail ci-joint.

Et qu'à titre de \_\_\_\_\_ je suis autorisé  
(titulaire enregistré, représentant, poste occupé dans la compagnie)

à faire cette attestation.

Signature [Signature] Date Feb 7 / 96

Ministry of  
Northern Development  
and Mines

Ministère du  
Développement du Nord  
et des Mines

Geoscience Approvals Office  
933 Ramsey Lake Road  
6th Floor  
Sudbury, Ontario  
P3E 6B5

Telephone: (705) 670-5853  
Fax: (705) 670-5863

June 18, 1996

Our File: 2.16468  
Transaction #: W9670.00020

Mining Recorder  
Ministry of Northern Development & Mines  
933 Ramsey Lake Road, 3rd Floor  
Sudbury, Ontario  
P3E 6B5

Dear Mr. Denomme:

**SUBJECT: APPROVAL OF ASSESSMENT WORK CREDIT ON MINING LAND, CLAIM(S)  
16857 SES (ET AL.) IN FALCONBRIDGE TOWNSHIP (AREA)**

The 45 days outlined in the Notice dated May 02, 1996 have passed.

No analyses cost were provided. Assessment credit will be allowed for the following:

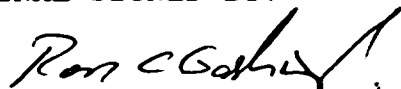
4 Whole rock analyses @ \$25/sample	\$ 100
5 samples, 8 elements @ \$25/sample	\$ 125
	-----
	\$ 225

Accordingly, assessment work credit has been approved as outlined on the attached sheet. The credit has been approved under Section(s) 17, Assays (ASSAY), of the Assessment Work Regulation.

**The approval date is June 14, 1996.** Please indicate this approval on the claim record.

If you have any questions regarding this correspondence, please contact Bruce Gates at (705) 670-5856.

Yours Sincerely,  
ORIGINAL SIGNED BY:



Ron C. Gashinski  
Senior Manager, Mining Lands Section  
Mines and Minerals Division

*BIG* BIG/cc

Enclosure:

cc: Resident Geologist  
Sudbury, Ontario

✓ Assessment Files Library  
Sudbury, Ontario

**DISTRIBUTION OF ASSESSMENT WORK CREDIT**

Note: credit distribution reflects the value of assessment work performed on mining land.

Date June 18, 1996

File Number: 2.16468

Transaction #: W9670.00020

**CLAIM NUMBER**

16857 SES

**VALUE OF WORK PERFORMED**

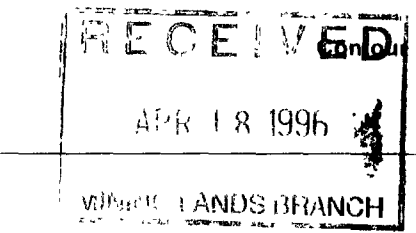
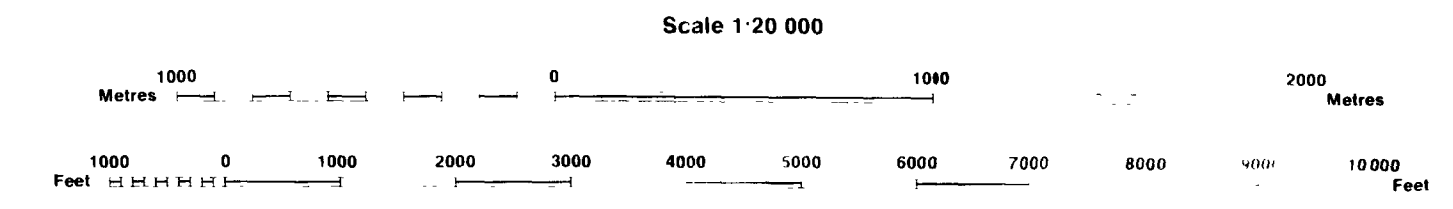
\$ 225

INDEX TO LAND DISPOSITION

PLAN G-4048  
TOWNSHIP FALCONBRIDGE

M.N.R. ADMINISTRATIVE DISTRICT SUDBURY  
MINING DIVISION SUDBURY  
LAND TITLES/REGISTRY DIVISION SUDBURY

2.16468  
DATE OF ISSUE APR 18 1989  
SUDBURY MINING RECORDER'S OFFICE



AREAS WITHDRAWN FROM DISPOSITION  
MRO - Mining Rights Only  
SRO - Surface Rights Only  
M+S - Mining and Surface Rights

SYMBOLS

Table with columns: Description, Order No, Date, Disposition, File. Lists symbols for Boundary, Township, Road allowance, Lot/Concession, Parcel, Right-of-way, Reservation, Contour, Control point, Flooded land, Pipeline, Railway, Road, Shoreline, Transmission line, Wooded area, etc.

DISPOSITION OF CROWN LANDS

Table with columns: Disposition, Symbol. Lists: Patent (Surface & Mining Rights, Surface Rights Only, Mining Rights Only), Lease (Surface & Mining Rights, Surface Rights Only, Mining Rights Only), Licence of Occupation, Order-in-Council, Cancelled, Reservation, Sand & Gravel.

FOR INFORMATION: THIS INDEX IS FOR THE PLAN G-4048 ONLY. OTHER LOTS IN THIS TOWNSHIP ARE NOT INDEXED. FOR A COMPLETE LIST OF LOTS WITH THE MINING RECORDS, PLEASE REFER TO THE MINING RECORDS IN THE OFFICE OF THE MINING RECORDS, 100 BALDWIN STREET, SUDBURY, ONTARIO.

