



52002NE0004 2.12197 MATAPESATAKUN BAY

010

GEOLOGICAL REPORT
CALEY LAKE GROUP
JEWETT LAKE PROPERTY

NTS 52 0/2

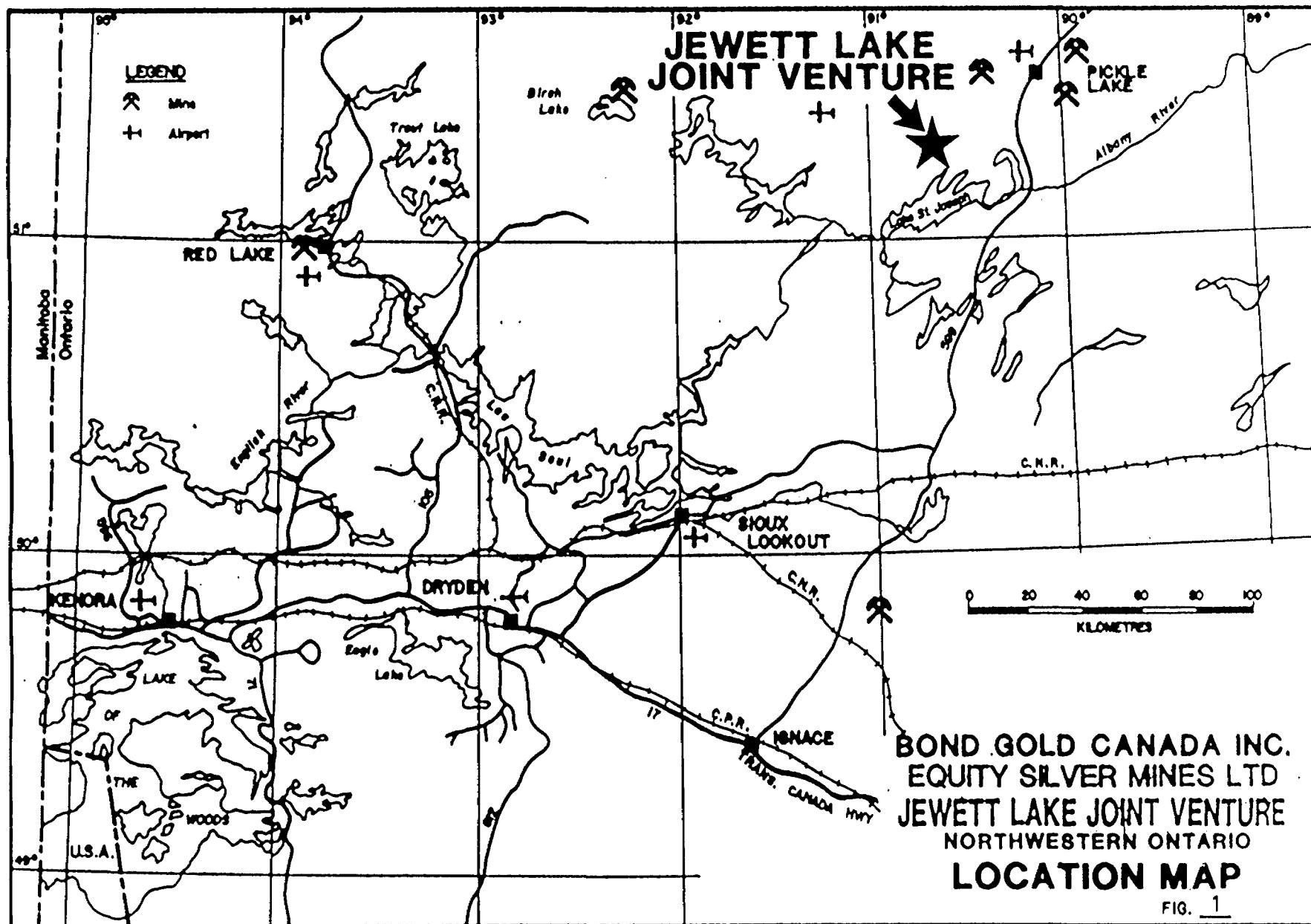
90 35' 00"
51 15' 00"

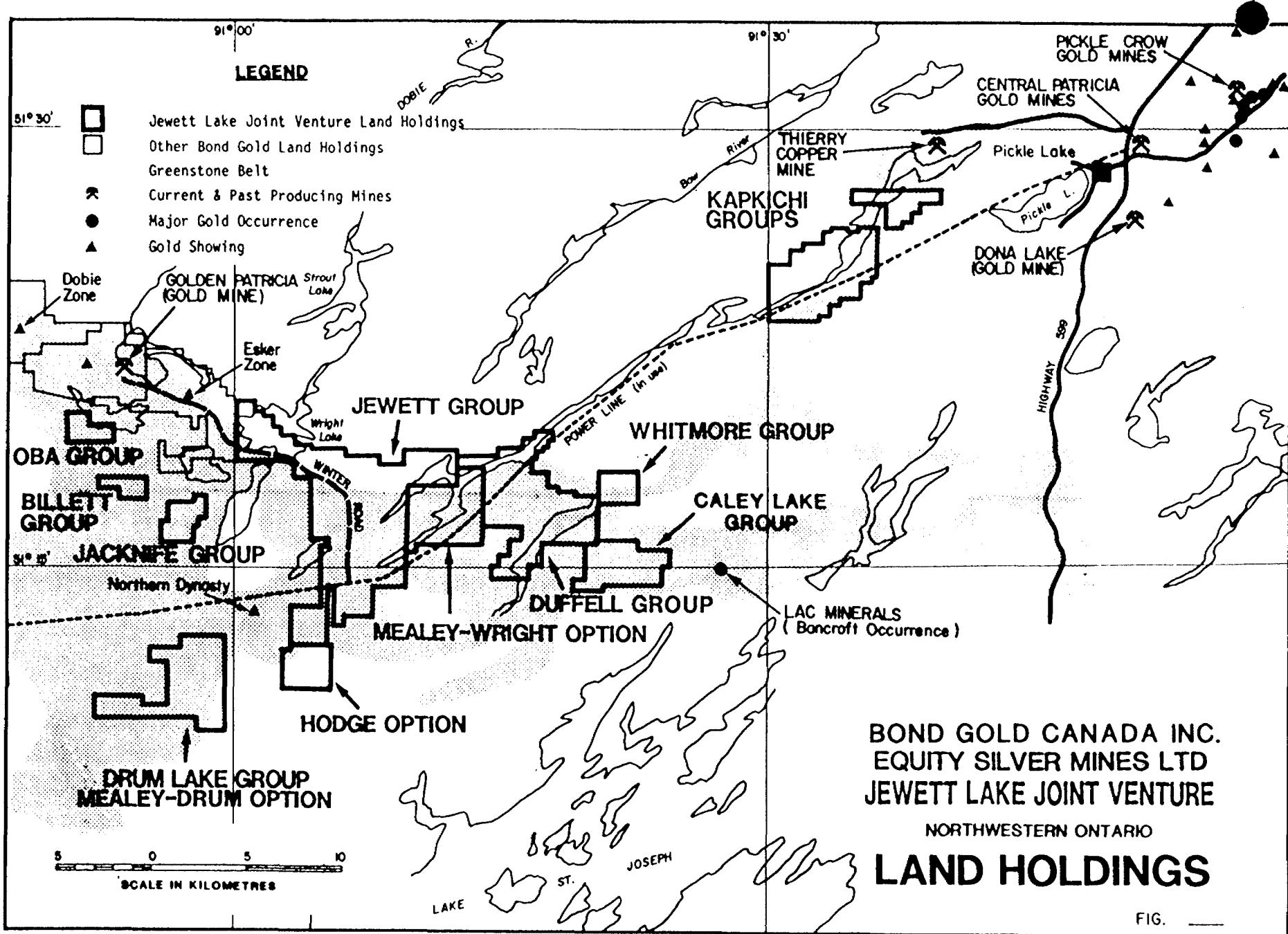
RECEIVED

FEB 1 1989

MINING LANDS SECTION

BOND GOLD CANADA INC.
JANUARY, 1989





CALEY LAKE GRID

GRID, LOCATION AND ACCESS

The Caley Lake grid is situated between the south shore of Caley Lake and the north shore of Sky Lake some 35 km southwest of Pickle Lake (Figure 1). The area is accessible by ski/float equipped aircraft to Caley Lake. The grid extends over a 3.9 km baseline cut at 92 degrees azimuth with a total of 48.5 line km. Topographically, the area has mild to moderate relief, covered mostly by mature birch and poplar stands with thick underbrush. A large black spruce swamp extends over most of the eastern portion. The grid was mapped between the 9th and 14th of September, 1988.

CLAIMS

The Caley Lake grid covers the following claims numbers:

P1081639-1081646
P1081652-1081659
P1081676-1081677
P1081686-1081692
P1082074-1082085

PREVIOUS FIELD WORK

Field observations show evidence of a very thorough mapping program prior to the current work. A drill collar was also located at 3+20E, 0+75N.

GEOLOGY

(Map 1)

The Caley Lake claim block is composed of a sequence of mafic and intermediate volcanics over/underlain by a mafic source-derived sedimentary unit within the Bancroft Lake volcanic cycle. The Sky Lake Stock intruded the northern portion of the claims, possibly introducing a number of minor shears and dykes. After a period of metamorphism the area was subjected to intrusion by a number of gabbro dykes.

Small scale deformation associated with strong carbonate and silica alteration within the intermediate volcanics to the west, was observed in abundance.

Intrusives

Several types of intrusives occur on the property, including a gabbro(6b), an alkali feldspar granite(8a) and a fine-grained felsic intrusive(7d).

The gabbro occurs as discontinuous dykes paralleling the surrounding geology. The dykes are mottled on the weathered surface, usually fine-grained and massive. The fresh surface is dark green to black. The appearance of the gabbro implies a late stage intrusion as they have not been subjected to the same degree of metamorphism as the surrounding volcanics.

A small granitic stock centered on Sky Lake is composed of a granitic core surrounded by a fine-grained felsic intrusive of similar composition. The granite is buff-brown on the weathered surface, medium grained and massive to weakly foliated. The fresh surface is pinkish-brown to grey-brown. Disseminated pyrite up to 1% is common throughout the granite. The fine-grained felsic phase of the granite may be a result of rapid crystallisation adjacent to the contact.

Metasediments

Only two outcrops of a mafic source-derived sediment were observed on the southeast portion of the property. They consist of a brown, fine-grained and strongly foliated to gneissic sediment.

Metavolcanics

This is the most predominant rock type of the area. It is mostly intermediate in composition although a large ridge of mafic metavolcanics was observed to the southeast. The intermediate metavolcanics are commonly light to medium green, locally buff coloured, fine-grained, moderately to strongly foliated, and on occasion to the west, crenulated. Outcrop scale folding within this unit is common. Narrow sedimentary and volcanioclastic units were observed interbedded with the volcanics. They are usually less than 1 m wide and are more common to the northwest.

Structure

Structure in the area is centered around the Sky Lake Stock as units are gently folded striking 50 degrees in the east and gradually changing to 110 degrees in the western portion. At outcrop scale minor shear zones paralleling the direction of strike, up to 1 m in width were observed within the metavolcanics. Crenulated foliation and outcrop scale folding is quite common to the northwest.

Alteration

The two most common alterations are a weak to moderate pervasive silicification and a strong carbonate alteration within the intermediate volcanics and, to a lesser extent, in the mafic volcanics.

Silicification is commonly observed adjacent to gabbroic dykes. Carbonatization seems to be intimately linked to small scale deformation of the intermediate volcanics. The most intensely carbonatized section was observed on the island to the north of L6E.

A strong but limited sericitic alteration occurs as distinct bands up to 5 m in width along the western portion of the shore of Caley Lake.

Mineralization

Mineralization is usually weak but common throughout all rock types of the area. The most common sulphide is pyrite occurring as euhedral, fine-grained disseminations and stringers. The intermediate volcanics commonly contain up to 1% sulphides and occasionally up to 3%. Quartz veins located within the granitic stock contain combined pyrite, pyrrhotite and chalcopyrite up to 4%.

ROCK GEOCHEMISTRY

Thirty-six samples were taken on the Caley Lake grid. Results were encouraging around the Sky Lake Stock and to the east around the iron formation. Results included 0.69 and 1.03g Au/t in a shear in the Sky Lake Stock, 1.03g Au/t in an iron formation and 1.37g Au/t in a silicified mafic volcanic in close proximity to the iron formation. Results are displayed in Appendix I and sample locations on Map 7a.

CONCLUSIONS AND RECOMENDATIONS

The Caley Lake claim block is composed of a sequence of mafic and intermediate volcanics over/underlain by a mafic source-derived sedimentary unit. The Sky Creek stock intruded the northern portion of the claims, possibly introducing a number of minor shears and dykes.

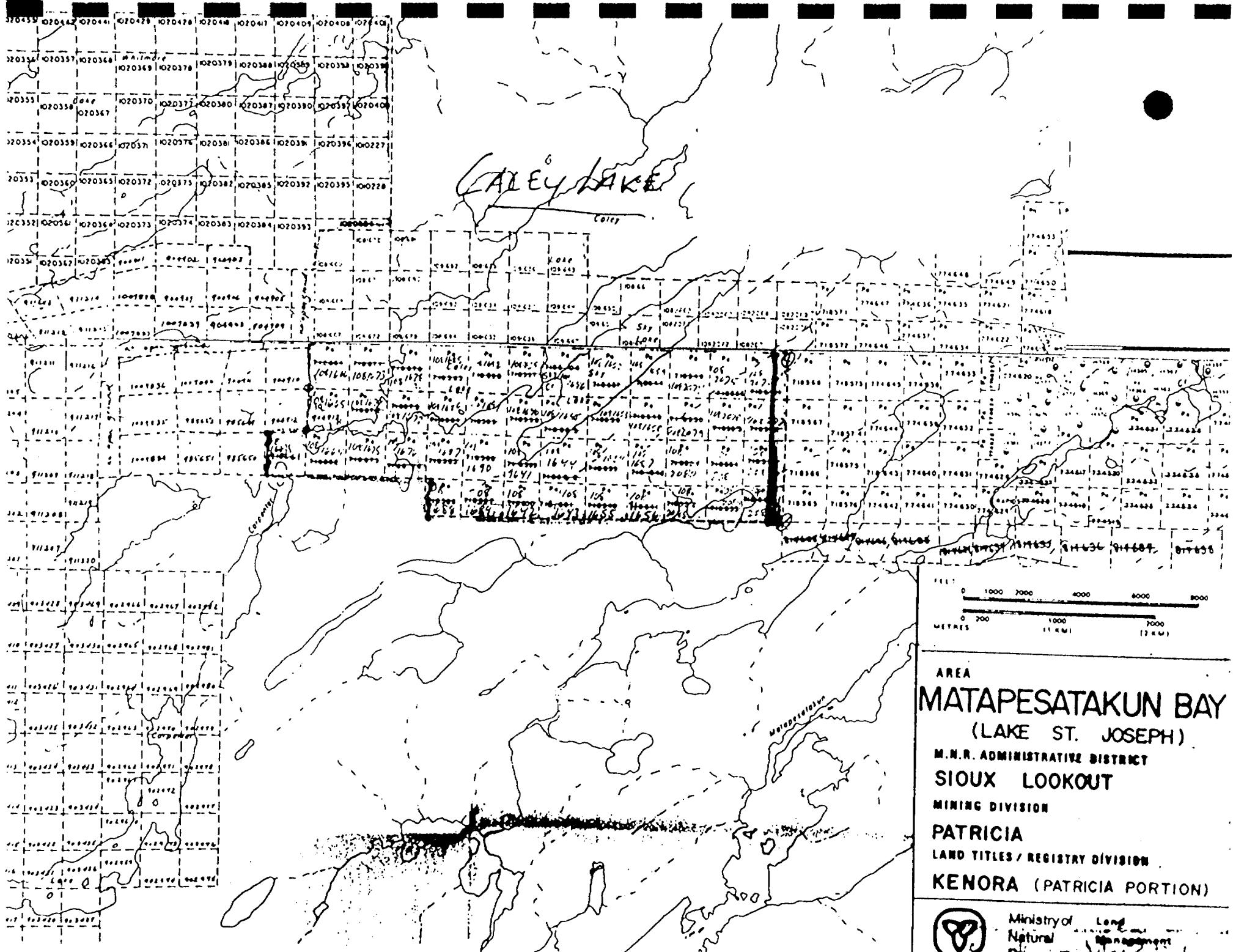
After a period of metamorphism the area was intruded by a number of gabbro dykes.

Abundant small scale deformation associated with strong carbonate and silica alteration within the intermediate volcanics to the west, in conjunction with the earlier shear zones may be a likely target for mineralization. The felsic nature of the granitic stock

and its sulphide content may also prove to be a target of interest.

The narrow iron formation observed to the southeast, along strike with the Brancroft Lake showing, is viewed as a potential auriferous unit.

In conclusion, the Caley Lake grid holds some potential as an interesting target but due to lack of good outcrop coverage ground geophysics will be an asset in picking out areas on which further groundwork or drilling should be done.



AREA
MATAPESATAKUN BAY
(LAKE ST. JOSEPH)
M.N.R. ADMINISTRATIVE DISTRICT
SIOUX LOOKOUT
MINING DIVISION
PATRICIA
LAND TITLES / REGISTRY DIVISION
KENORA (PATRICIA PORTION)



Ministry of Natural Resources
Ontario

CERTIFICATION

I, Jeffrey Scott Ackert, do hereby certify that:

- 1) I have graduated from the University of Toronto with a Specialist Bachelor of Science Degree in Geology 1985.
- 2) I have actively practiced as a Geologist since that time.
- 3) I have worked on the aforementioned property and all comments and data are true and correct.
- 4) I live at 117 Parkside Drive, Toronto, Ontario M6R 2Y8.

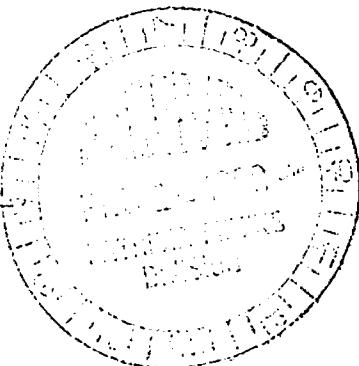
Date: JANUARY 31, 1989

SIGNED:

Jeff Ackert.

APPENDIX I
CALEY LAKE GROUP

PA 1081639	40
PA 1081640	40
PA 1081641	40
PA 1081642	40
PA 1081643	40
PA 1081644	40
PA 1081645	40
PA 1081646	40
PA 1081653	40
PA 1081654	40
PA 1081655	40
PA 1081656	40
PA 1081657	40
PA 1081658	40
PA 1081659	40
PA 1081686	40
PA 1081687	40
PA 1081688	40
PA 1081689	40
PA 1081690	40
PA 1081691	40
PA 1082074	40
PA 1082075	40
PA 1082076	40
PA 1082077	40
PA 1082078	40
PA 1082079	40
PA 1082080	40
PA 1082081	40
PA 1082082	40
PA 1082083	40
PA 1082084	40
PA 1082085	40
TOTAL DAYS	1320



Total Cines 33
Jeff [Signature]

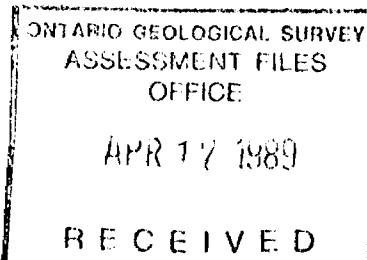
Mining Lands Section
3rd Floor, 880 Bay St.
Toronto, Ontario
M5S 1Z8

Phone: (416) 965-4888

Your file: W 8903-24
Our file: 2.12197

March 16, 1989

Mining Recorder
Ministry of Northern Development and Mines
Court House
Box 3000
Sioux Lookout, Ontario
POV 2T0



Dear Madam:

Re: Notice of Intent dated February 24, 1989
Geological Survey on Mining Claims
PA 1081645 et al in Matapesatagan Bay area

The assessment work credits, as listed with the above-mentioned notice of Intent, have been approved as of the above date.

Please inform the recorded holder of these mining claims and so indicate on your records.

Yours sincerely,

W.R. Cowan
Provincial Manager, Mining Lands
Mines & Minerals Division

DK/eb

Enclosures

cc: Mr. G.H. Ferguson
Mining and Lands Commissioner
Toronto, Ontario

cc: Resident Geologist
Sioux Lookout

cc: Bond Gold Canada Inc.
1100-20 Adelaide St. E
Toronto, Ontario
Attn: Jeff Ackert



Ministry of
Northern Development
and Mines

Ontario

Technical Assessment
Work Credits

File
2.12197

Date
February 24, 1989

Mining Recorder's Report of
Work No.
W8903-24

Recorded Holder
BOND GOLD CANADA INC

Township or Area
MATAPESATAKUN BAY

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	
Electromagnetic _____ days	PA 1081640
Magnetometer _____ days	1081642 to 44 incl
Radiometric _____ days	1081653 to 58 incl
Induced polarization _____ days	1081687 to 90 incl
Other _____ days	1082074 to 82 incl
Section 77 (19) See "Mining Claims Assessed" column	
Geological 40 days	
Geochemical _____ days	
Man days <input type="checkbox"/>	Airborne <input type="checkbox"/>
Special provision <input checked="" type="checkbox"/>	Ground <input checked="" type="checkbox"/>
<input type="checkbox"/> Credits have been reduced because of partial coverage of claims.	
<input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

30 days Geological

PA 1081641
1081659
1081691
1082083 to 85 incl.

20 days Geological

PA 1081639
1081645 - 46
1081686

No credits have been allowed for the following mining claims

not sufficiently covered by the survey

insufficient technical data filed



Ministry of
Northern Development
and Mines

**Geophysical-Geological-Geochemical
Technical Data Statement**

File _____

**TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.**

Type of Survey(s) GEOLOGICAL
 Township or Area MATADESATAKUN BAY / CARY LAKE
 Claim Holder(s) BOND Gold Canada inc
T3608
 Survey Company Bond Gold Canada inc.
 Author of Report JEFF ACKERT
 Address of Author 20 ADELAIDE ST. E. TORONTO.
 Covering Dates of Survey SEPT 1988 - January 1989.
(linecutting to office)
 Total Miles of Line Cut 48.5 Km.

MINING CLAIMS TRAVERSED
List numerically

See Attached

(prefix) (number)

<u>SPECIAL PROVISIONS</u>	<u>CREDITS REQUESTED</u>	<u>DAYS</u> <u>per claim</u>
ENTER 40 days (includes line cutting) for first survey.	Geophysical	
ENTER 20 days for each additional survey using same grid.	--Electromagnetic	
	--Magnetometer	
	--Radiometric	
	--Other	
	Geological	<u>40</u>
	Geochemical	

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: Jan 31, 1989 SIGNATURE: Jeff Ackert
Author of Report or Agent

Res. Geol. _____ Qualifications 210668

Previous Surveys

File No.	Type	Date	Claim Holder
.....
.....
.....
.....
.....

TOTAL CLAIMS _____

If space insufficient, attach list

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS - If more than one survey, specify data for each type of survey

Number of Stations _____ **Number of Readings** _____

Station interval _____ Line spacing _____

Profile scale _____

Contour interval _____

Instrument _____

Accuracy – Scale constant _____

Diurnal correction method _____

Base Station check-in interval (hours) _____

Base Station location and value _____

Instrument _____

Coil configuration _____

Coil separation _____

Accuracy _____

Method: Fixed transmitter Shoot back In line Parallel line

Frequency _____

(specify V.L.F. station)

Instrument _____

Scale constant _____

Corrections made _____

Base station value and location

Elevation accuracy _____

Instrument _____

Method Time Domain Frequency Domain

Parameters – On time _____ Frequency _____

— Off time _____ Range _____

— Delay time —

— Integration time —

Power

Electrode array

Electrode spacing _____

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

Corrections made _____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____
(type, depth – include outcrop map)OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

Additional information (for understanding results) _____

AIRBORNE SURVEYS

Type of survey(s) _____

Instrument(s) _____
(specify for each type of survey)Accuracy _____
(specify for each type of survey)

Aircraft used _____

Sensor altitude _____

Navigation and flight path recovery method _____

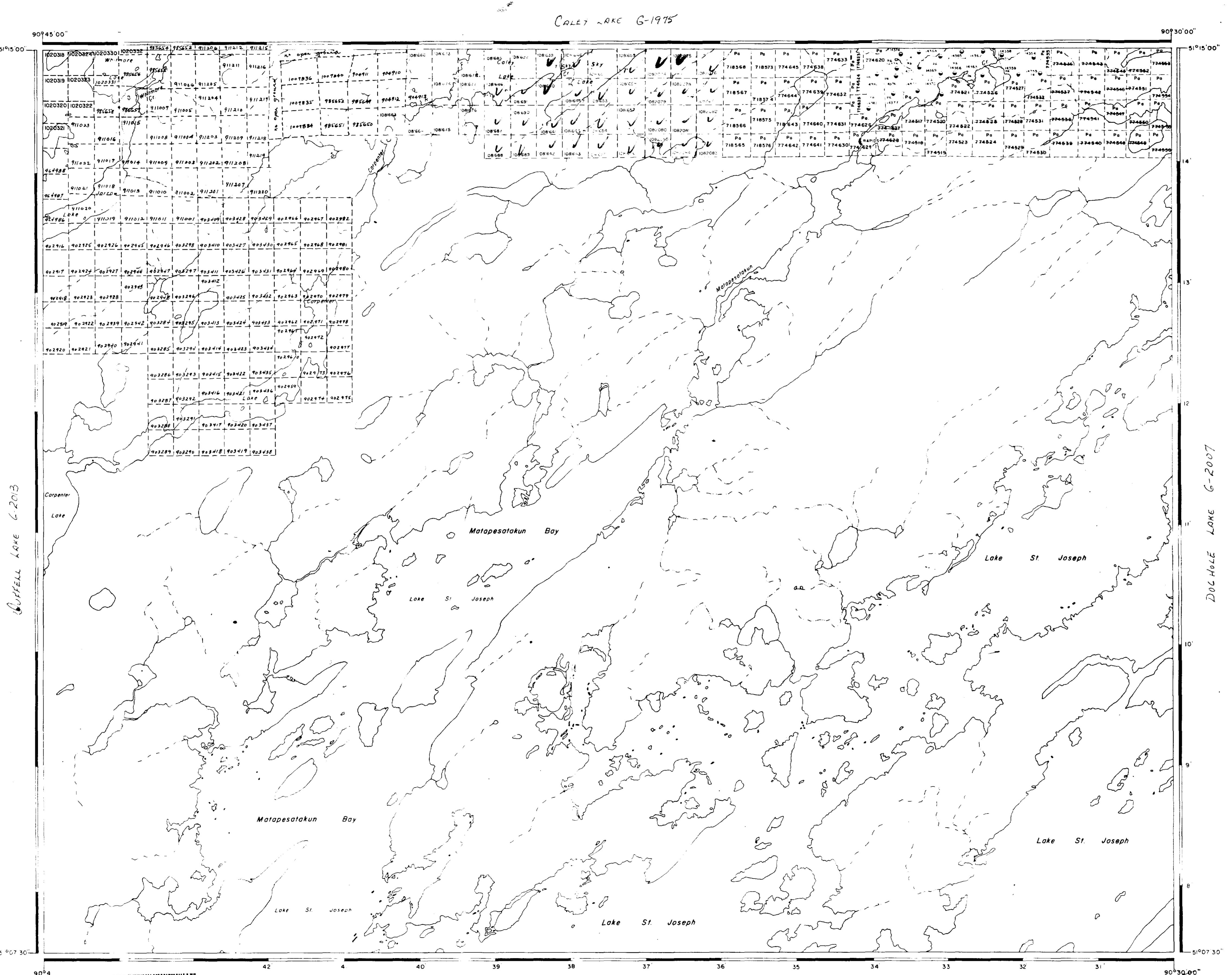
Aircraft altitude _____ Line Spacing _____

Miles flown over total area _____ Over claims only _____

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PA 1082077	40
PA 1082078	40
PA 1082079	40
PA 1082080	40
PA 1082081	40
PA 1082082	40
PA 1082083	40
PA 1082084	40
PA 1082085	40
TOTAL DAYS	1320

Sept. 2, 1987

**LEGEND**

HIGHWAY AND ROUTE No.	
OTHER ROADS	
TRAILS	
SURVEYED LINES:	TOWNSHIPS, BASE LINES, ETC.
	LOTS, MINING CLAIMS, PARCELS, ETC.
UNSURVEYED LINES:	LOT LINES
	PARCEL BOUNDARY
	MINING CLAIMS ETC.
RAILWAY AND RIGHT OF WAY	
UTILITY LINES	
NON-PERENNIAL STREAM	
FLOODING OR FLOODING RIGHTS	
SUBDIVISION OR COMPOSITE PLAN	
RESERVATIONS	
ORIGINAL SHORELINE	
MARSH OR MUSKEG	
MINES	
TRAVERSE MONUMENT	

DISPOSITION OF CROWN LANDS

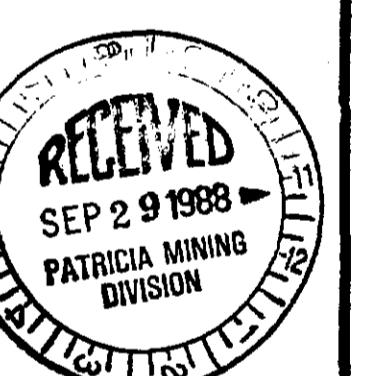
TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	●
" SURFACE RIGHTS ONLY	○
" MINING RIGHTS ONLY	■
LEASE, SURFACE & MINING RIGHTS	■
" SURFACE RIGHTS ONLY	□
" MINING RIGHTS ONLY	□
LICENCE OF OCCUPATION	▼
ORDER-IN-COUNCIL	OC
RESERVATION	○
CANCELLED	◎
SAND & GRAVEL	◎

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 5, 1913 VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970 CHAP. 380, SEC. 63, SUBSEC. 1

REFERENCES**AREAS WITHDRAWN FROM DISPOSITION**

M.R.O. - MINING RIGHTS ONLY
S.R.O. - SURFACE RIGHTS ONLY
M+S. - MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File No.
	JULY 5, 1984	July 8, 1984	April 14/86	
		Sept. 13, 1984	OCT. 30/86	
			OCT. 13/87	
			OCT. 11/87	



FLOODING
Flooding rights to contour 1230' on Lake St. Joseph to Ontario Hydro L.O. 6652 PLAN Y41-9 Files 99322, 92343

SCALE: 1 INCH = 40 CHAINS

FEET	0	1000	2000	4000	6000	8000
METRES	0	200	400	1000	2000	
				(1 KM)	(2 KM)	

AREA**MATAPESATAKUN BAY (LAKE ST. JOSEPH)**

M.N.R. ADMINISTRATIVE DISTRICT

SIOUX LOOKOUT

MINING DIVISION

PATRICIA

LAND TITLES / REGISTRY DIVISION

KENORA (PATRICIA PORTION)

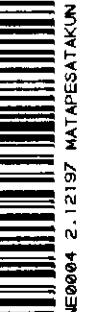
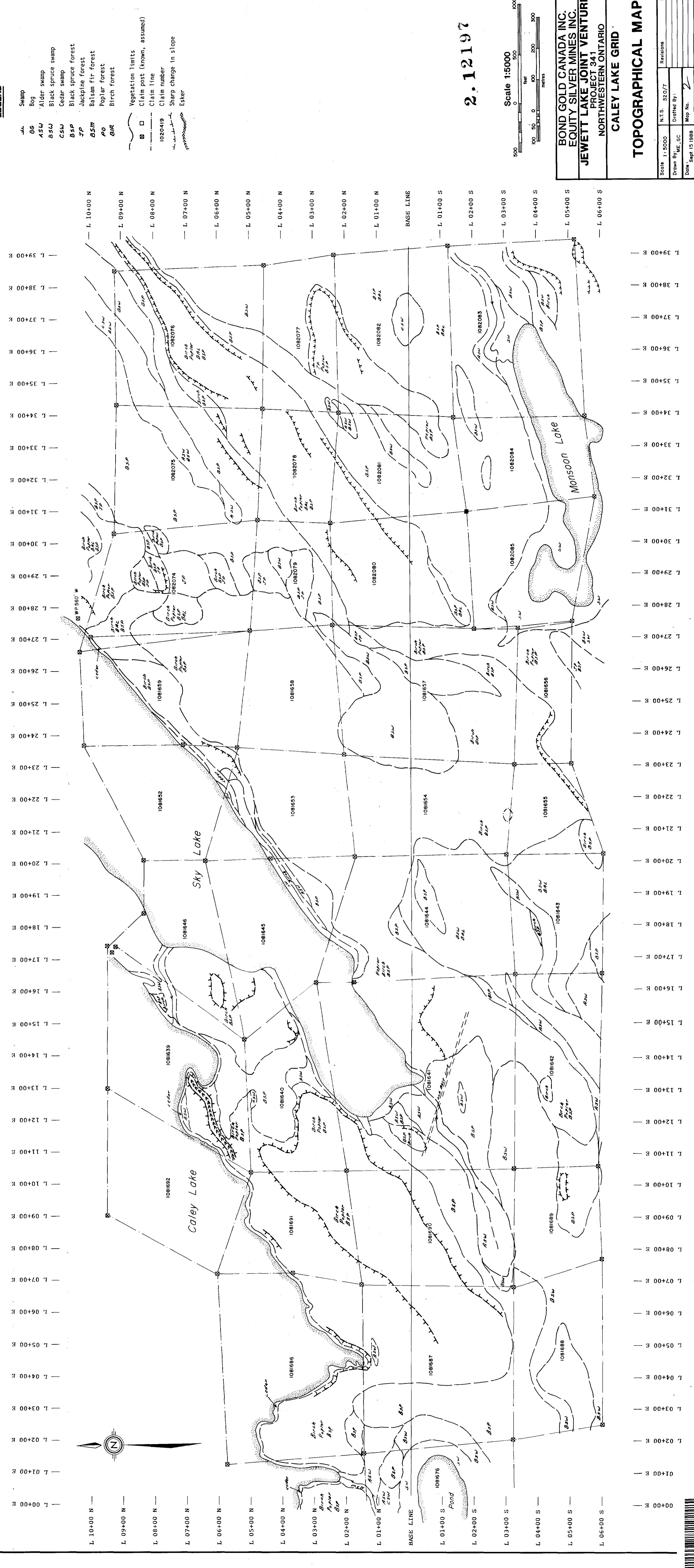
Ministry of Natural Resources Ontario Land Management Branch

Date: FEBRUARY, 1984 Number: G-217



200

512903

LEGEND

FELIC INTRUSIVE ROCKS
UNMETAMORPHOSED LATE TO POST-TECTONIC GRANITIC ROCKS

9a Monzonitic granite
9b Hornblende monzonitic granite
9c Granodiorite
9d Tonalite
9e Granitic dyke
9f Metamorphosed mafic intrusive rocks

METAMORPHOSED FELSIC PORPHYRY INTRUSIVE ROCKS

10a Quartz-feldspar porphyry
10b Quartz-feldspar porphyry
10c Quartz-feldspar porphyry
10d Quartz-feldspar porphyry
10e Quartz-feldspar porphyry
10f Quartz-feldspar porphyry
10g Quartz-feldspar porphyry
10h Quartz-feldspar porphyry
10i Quartz-feldspar porphyry
10j Quartz-feldspar porphyry
10k Quartz-feldspar porphyry
10l Quartz-feldspar porphyry
10m Quartz-feldspar porphyry
10n Quartz-feldspar porphyry
10o Quartz-feldspar porphyry
10p Quartz-feldspar porphyry
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10v Quartz-feldspar porphyry
10w Quartz-feldspar porphyry
10x Quartz-feldspar porphyry
10y Quartz-feldspar porphyry
10z Quartz-feldspar porphyry

METAMORPHOSED MAFIC INTRUSIVE ROCKS

11a Diorite

11b Gabbro

11c Metarhyolite

11d Metarhyolite

11e Metarhyolite

11f Metarhyolite

11g Metarhyolite

11h Metarhyolite

11i Metarhyolite

11j Metarhyolite

11k Metarhyolite

11l Metarhyolite

11m Metarhyolite

11n Metarhyolite

11o Metarhyolite

11p Metarhyolite

11q Metarhyolite

11r Metarhyolite

11s Metarhyolite

11t Metarhyolite

11u Metarhyolite

11v Metarhyolite

11w Metarhyolite

11x Metarhyolite

11y Metarhyolite

11z Metarhyolite

11aa Metarhyolite

11bb Metarhyolite

11cc Metarhyolite

11dd Metarhyolite

11ee Metarhyolite

11ff Metarhyolite

11gg Metarhyolite

11hh Metarhyolite

11ii Metarhyolite

11jj Metarhyolite

11kk Metarhyolite

11ll Metarhyolite

11mm Metarhyolite

11nn Metarhyolite

11oo Metarhyolite

11pp Metarhyolite

11qq Metarhyolite

11rr Metarhyolite

11ss Metarhyolite

11tt Metarhyolite

11uu Metarhyolite

11vv Metarhyolite

11ww Metarhyolite

11xx Metarhyolite

11yy Metarhyolite

11zz Metarhyolite

11aa Metarhyolite

11bb Metarhyolite

11cc Metarhyolite

11dd Metarhyolite

11ee Metarhyolite

11ff Metarhyolite

11gg Metarhyolite

11hh Metarhyolite

11ii Metarhyolite

11jj Metarhyolite

11kk Metarhyolite

11ll Metarhyolite

11mm Metarhyolite

11nn Metarhyolite

11oo Metarhyolite

11pp Metarhyolite

11qq Metarhyolite

11rr Metarhyolite

11ss Metarhyolite

11tt Metarhyolite

11uu Metarhyolite

11vv Metarhyolite

11ww Metarhyolite

11xx Metarhyolite

11yy Metarhyolite

11zz Metarhyolite

11aa Metarhyolite

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11dd Metarhyolite

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11jj Metarhyolite

11kk Metarhyolite

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11nn Metarhyolite

11oo Metarhyolite

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11rr Metarhyolite

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11xx Metarhyolite

11yy Metarhyolite

11zz Metarhyolite

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11cc Metarhyolite

11dd Metarhyolite

11ee Metarhyolite

11ff Metarhyolite

11gg Metarhyolite

11hh Metarhyolite

11ii Metarhyolite

11jj Metarhyolite

11kk Metarhyolite

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11mm Metarhyolite

11nn Metarhyolite

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11pp Metarhyolite

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11uu Metarhyolite

11vv Metarhyolite

11ww Metarhyolite

11xx Metarhyolite

11yy Metarhyolite

11zz Metarhyolite

11aa Metarhyolite

11bb Metarhyolite

11cc Metarhyolite

11dd Metarhyolite

11ee Metarhyolite

11ff Metarhyolite

11gg Metarhyolite

11hh Metarhyolite

11ii Metarhyolite

11jj Metarhyolite

11kk Metarhyolite

11ll Metarhyolite

11mm Metarhyolite

11nn Metarhyolite

11oo Metarhyolite

11pp Metarhyolite

11qq Metarhyolite

11rr Metarhyolite

11ss Metarhyolite

11tt Metarhyolite

11uu Metarhyolite

11vv Metarhyolite

11ww Metarhyolite

11xx Metarhyolite

11yy Metarhyolite

11zz Metarhyolite

11aa Metarhyolite

11bb Metarhyolite

11cc Metarhyolite

11dd Metarhyolite

11ee Metarhyolite

11ff Metarhyolite

11gg Metarhyolite

11hh Metarhyolite

11ii Metarhyolite

11jj Metarhyolite

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