010

ST. JOE CANADA INC.

REPORT ON A GEOLOGY SURVEY
GOLDROCK CLAIM GROUP

KENORA MINING DIVISION
DISTRICT OF KENORA

COVERING WORK COMPLETED BETWEEN

JUNE 10 - JULY 30, 1984

TABLE OF C

REPORT ON A GEOLOGY SURVEY ON THE GOLDROCK CLAIM GROUP

PART A

I INTRODUCTION

The following is a report on a geology survey carried out by St. Joe Canada Inc. between June 10 and July 30, 1984; on the Goldrock Claim Group.

II PROPERTY: DESCRIPTION, LOCATION AND ACCESS

The property consists of fifty (50) contiguous mining claims, Nos. K696301-310 incl., K696388-389, K706215, K729699-706 incl., K730098-99, K733104-107 incl., K740273-292 incl., K754744, K781513-514 inclusive. The claims are included as part of the larger Manitou Lake Property and are registered in the name of:

St. Joe Canada Inc.
111 Richmond Street W.,
Suite 418
Toronto, Ontario
M5H 2J4
Mining Licence T1109

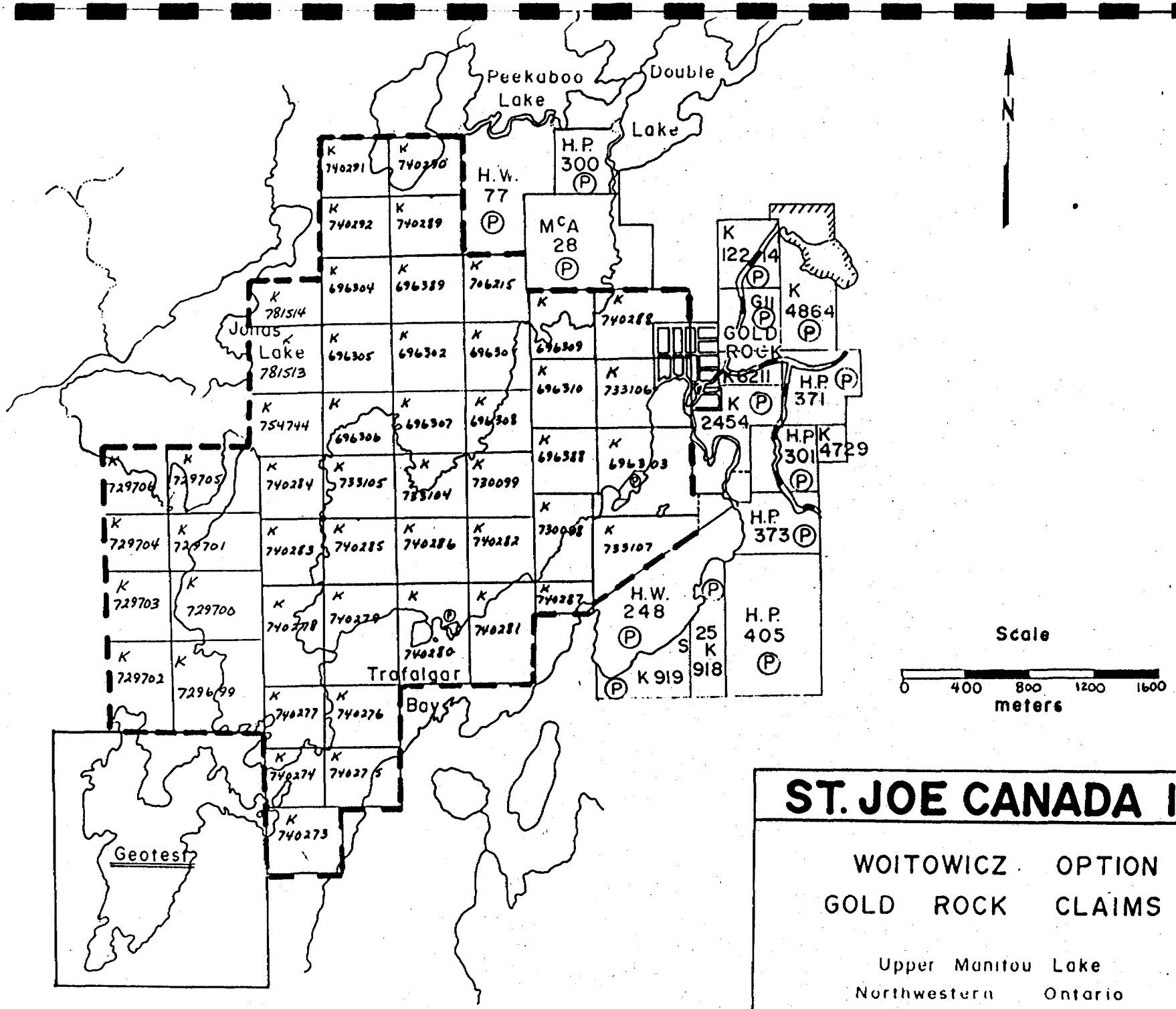
The property has been optioned from M. Woitowicz from Dryden, Ontario.

The claim group is located on the north portion of Upper Manitou Lake between Trafalgar Bay and Jonas Lake (N.T.S. 52F/7) approximately 25 miles (40 km) south of Dryden, Ontario. (see Figures 1 and 2).

Access is by float and/or ski-equipped aircraft provided by Swanair Limited of Dryden.

A 10 mile (16 km) lumber road, passable only by four-wheel drive vehicle terminates at the shore of Jonas (Bell) Lake which connects the north end of Upper Manitou Lake. The property can then be reached by motorized boat or canoe.

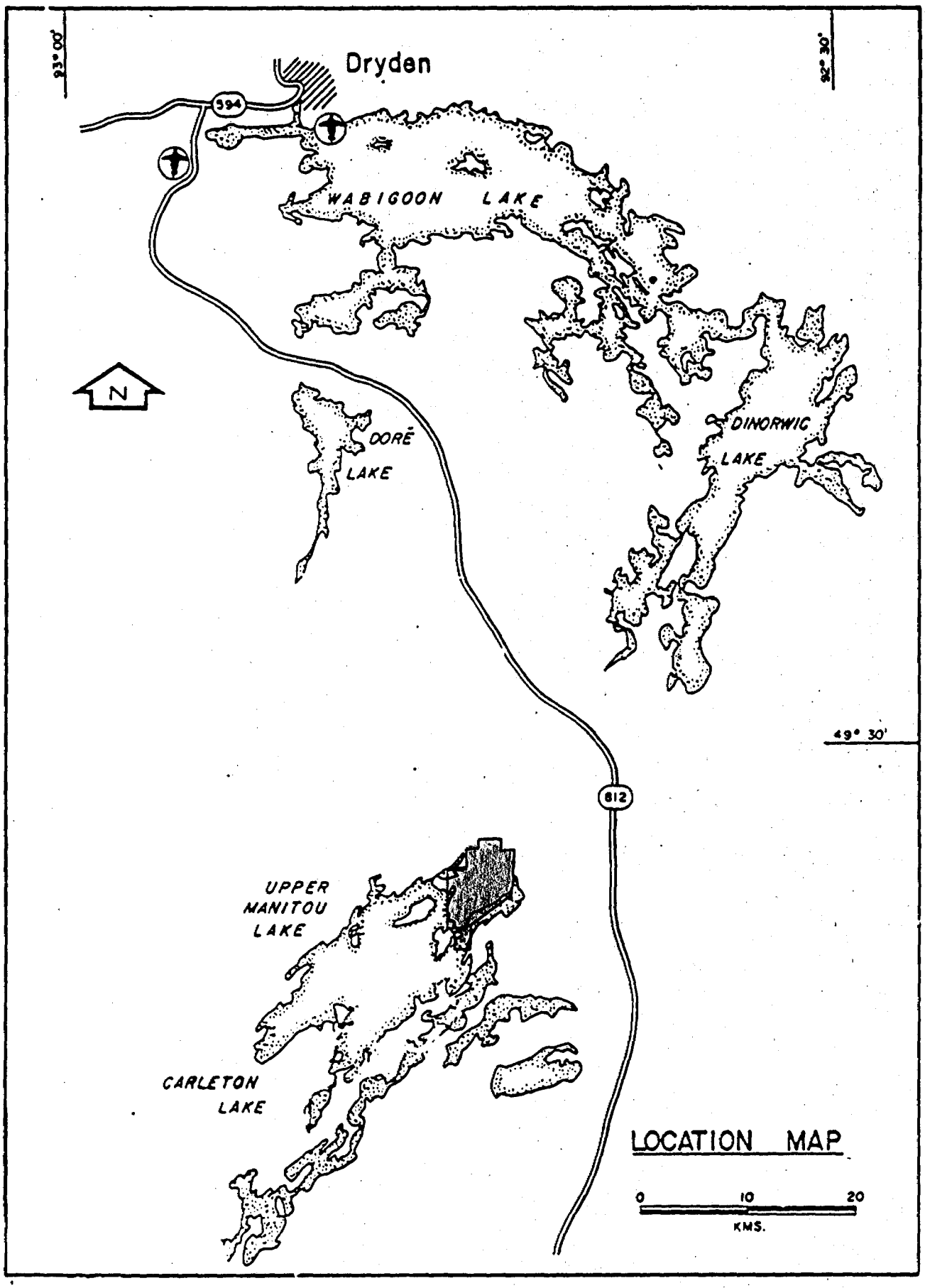
Accommodation is available during spring, summer and fall months in the vicinity of Trafalgar Bay.



ST. JOE CANADA INC.

WOITOWICZ OPTION
GOLD ROCK CLAIMS

Upper Manitou Lake
Northwestern Ontario


93° 00'
Dryden
594
WABIGOON LAKE
N
OORÉ LAKE
DINORWIC LAKE
92° 30'
49° 30'
812
UPPER MANITOU LAKE
CARLETON LAKE
LOCATION MAP
0
10
20
KMS.

III HISTORY

Prior to 1930:

Sinking of the Oxford shaft situated 400m south of Sharpe Lake, little is known about the development of the Oxford Prospect.

1970:

Freeport Canadian Exploration carried out an airborne EM survey which included a portion of Trafalgar Bay. The company identified seven conductive zones which were recommended as ground targets. The majority of the anomalies are medium strength, fair conductivety anomalies within a basic volcanic and sedimentary environment.

1980:

O.G.S. carried out an airborne EM and magnetic survey over the Manitou-Stormy Lakes area.

1981:

A part of the Goldrock claims was included in an eight claim group staked by R. Cone. The property was later drilled (presently claim #740279) in 1981. The hole intersected chlorite schist and agglomerate containing minor sulphides.

1984:

St. Joe Canada carried out a VLF-EM and magnetics survey. A group of complex magnetic anomalies were identified across the north part of the claims and a number of conductors were outlined suggesting the presence of weakly mineralized shear zones.

IV GENERAL GEOLOGY

The property lies in the Manitou-Stormy Lakes Archean Greenstone Belt. The most recently published geology is O.G.S. Report 202 (1981) by C. Blackburn. The Manitou-Stormy Lake area is characterized by a thick volcanic sequence, consisting of mafic to felsic flow and pyroclastic rocks and minor volcaniclastic rocks, and a sedimentary sequence, part of the Manitou "Series" of Thomson, intruded by mafic to felsic rocks of batholithic, stock and sill-like form (after-Blackburn 1979).

The property occupies the contact of a dominantly mixed sequence of fault blocked mafic flows and felsic to mafic pyroclastic rocks of the Upper Manitou Group and an overlying sequence of massive to pillowed mafic flows of the Pincher Lake Group. All lithologic units have been intruded by felsic dike rocks.

The property is located just northwest of the Manitou Straits Fault and along the core and nose of the northeasterly trending Manitou Anticline into which the metavolcanic rocks are tightly folded.

Strong shearing, north trending faults and the presence of quartz veins is characteristic of the claims area.

Gold mineralization is concentrated along pyritiferous shear zones hosted for the most part within pyroclastic rocks of the Upper Manitou Group.

The following classification lists the rocks found on the claim area.

Table 1

Table of Formations

Felsic Hypabyssal Rocks:

a. Aplite
b. Granite, Granodiorite, Qtz. Diorite
c. Quartz Feldspar Porphyry
d. Felsite, Carbonatized Felsite, Sheared Felsite

intrusive contact

Mafic Intrusive Rocks:

a. Gabbro

intrusive contact

Felsic Metavolcanics:

a. Med. to Fine Grained Dacite to Rhyodacite

Intermediate Metavolcanics:

a. Med. to Fine Grained Andesite, Dacite
b. Fine Lapilli-Ash Tuff, Crystal Tuff, Tuff Breccia
c. Lapilli Tuff to Agglomerate
d. Chlorite Schist, Chlorite Carbonate Schist, Chl./carb./Ser. Schist

Mafic Volcanics:

a. Med. to fine Grained Basalt, Andesite
b. Coarse to Med. Grained Basalt, Andesite
c. Coarse Grained Basalt (Gabbroic)
d. Pillowed, Porphyritic, Vesicular Basalt
e. Porphyritic, Glomeroporphyritic Basalt
f. Brecciated, Flow Brecciated Basalt, Andesite
g. Chlorite Schist, Chlorite Carbonate Schist
h. Lapilli Tuff to Agglomerate
i. Fine Lapilli-Ash Tuff, Crystal Tuff, Tuff Breccia

V MAPPING SURVEY

The survey was carried out between June 10-July 30, 1984 by:

Kevin Leonard
886 Tanager Avenue
Burlington, Ontario
L7T 2Y2

Steve Riddell
420 Wellesley St. East
Toronto, Ontario
M4X 1H6

Bernadette Hughes
R.R. #2
Aurora, Ontario

Ian Mitchell
207 Woodland Drive
Midland, Ontario

Data from the mapping survey have been plotted on Plans 1 and 2 inclusive, located in the back of the report.

A baseline and two tie lines trending parallel to the regional strike of the rocks was established with pickets spaced 25m apart. Grid lines were turned off the baseline at 100m intervals and were cut, chained and picketed at 25m spacings.

The survey was completed at a scale of 1:2500.

(i) Physiography

The area is largely drained by Pincher Creek which flows south through the central part of the property. Pincher Creek links Double Lake which is located immediately northeast of the claims to Trafalgar Bay of Upper Manitou Lake.

Relief over the Goldrock claims is 50m with elevations ranging from 420 a.s.l. on the cliffs bordering the east shore of Jonas Lake to 370m a.s.l. at Pincher Creek.

The creek basin consists of open, bladed swamp grass bordered by dense tag alder amd aspen. The creek meanders through rugged outcrop and steep cliffs to the south, up to 40m relief.

Rock exposures are good and soils are poorly developed. Overburden depths in the vicinity of Pincher Creek are in the range of 3m.

Dominant vegetation around Trafalgar Bay is mostly spruce and mixed stands of hardwood (balsam, birch, jackpine) with pockets of thick alder undergrowth in semi-dry areas between outcrop ridges.

The area of the property between Sharpe Lake and Pincher Creek is covered by very dense balsam forest.

Briefly, the main surficial components over the mapped area in order of decreasing areal importance are bedrock outcrop, semi-dry alder swamp, dense balsam forest, spruce, balsam and jackpine forest, wet bladed grassland, hummocky muskeg, rock talus.

(ii) GOLDROCK CLAIMS GEOLOGY (Plans 1 and 2)

Approximately two-thirds of the Goldrock claims are underlain by volcanic rocks of the Upper Manitou Group comprising felsic to mafic pyroclastics and massive to pillowed mafic flows of Archean Age. Massive to schistose porphyritic and pillowed mafic flows of the Pincher Lake Group underlie the northern 30% of the property.

The inferred contact between the mafic pyroclastic and schistose mafic flow units is assumed to represent the geologic boundary between the Upper Manitou Lake and Pincher Lake Groups as interpreted by Blackburn (1981).

The Pincher Lake Group volcanic rocks have been subdivided into two categories based on textural and structural criteria (i) massive, porphyritic and pillowed mafic flows and (ii) schistose mafic flows.

The majority of rocks in the first category are typically dark green, massive, medium to fine grained heterogeneous rocks with pillowed, porphyritic and flow brecciated phases observed west of Sharpe Lake. Minor amounts of pale grey, red weathering, conchoidally fractured rhyo-dacite (possibly altered, silicified basalt) occur cutting the unit at shallow angles. Structural measurements show these rocks range in strike between N35°E to N50°E, dip vertically to steeply southeast. Top determinations indicate the rocks face north-northwest suggesting the sequence has been overturned.

The second category is a distinctly mappable unit consisting of strongly schistose (banded to laminated) carbonatized, magnetite bearing mafic flows. They strike between N40°E and N50°E and dip steeply to the southeast. These rocks are cut by many narrow, discontinuous (in part concordant and in part discordant) felsite units which for the most part show sharp contact (intrusive) relationships with the volcanic stratigraphy. These units crosscut lithological and fault boundaries. They are highly internally variable, ranging from aplitic to granodioritic and are occassionally pyritic, carbonated and quartz veined within shear zones. According to Blackburn (1981) they may represent shallow level sills or flows coeval with volcanism but they may also be a product of late stage felsic volcanism emplaced along zones of weakness within the stratigraphic sequence.

The magnetite bearing mafic flows explain the strong magnetic expression identified during the winter 1984 geophysical survey (see Report On A Magnetic and VLF-EM Survey On The Goldrock Claim Group). Magnetite occurs as fine disseminations but where the rocks have been strongly sheared, form paper thin to 2cm wide layers with concentrations up to 10 percent. Magnetite may be the result of metamorphism and deformation of iron rich tholeiitic rocks.

The Upper Manitou Group volcanic rocks have been classified into three categories, (i) felsic to intermediate pyroclastic rocks, (ii) mafic pyroclastic rocks, and (iii) massive to pillowed mafic flows.

Felsic to intermediate pyroclastics outcrop along the north end of Trafalgar Bay opposite the Goldrock townsite, on the peninsula that projects southwestward from the east shore of Trafalgar Bay, and on the peninsula between Jonas (Bell) Lake and Red Rock Narrows. These rocks are predominantly intermediate (dacitic to andesitic) in composition, containing predominantly light coloured felsic, clasts which vary from a few mm. (lapilli) to 10cm (tuff-breccia) in size. Intense shearing has deformed many of the pyroclastic rocks, altering them to a salmon pink coloured sericite-carbonate ± chlorite schist. In some places the clasts are hardly recognizable making it difficult to distinguish sheared pyroclastic rocks from sheared, carbonated felsite units. These rocks pass gradationally across strike into mafic pyroclastics and come into fault contact with massive to pillowed mafic flows.

Mafic pyrolcastics form a group of linear, steep sided outcrops across the central portion of the property. They strike about N45°E and dip steeply southward. These rocks are similar to the felsic to intermediate pyroclastics except that the stretched, buff coloured clasts are embedded in a fine grained, dark green tuffaceous matrix.

Massive to pillowed mafic flows outcrop along the shore of Trafalgar Bay and continue across the property until they terminate against a north trending fault about 300m east of the north west shore of Upper Manitou Lake. The rocks are typically massive basaltic flows and chlorite schist with minor pillowed phases. Four northerly trending faults transect the mafic rocks and offset their contacts with the pyroclastics. These faults have dextral horizontal movement components.

Table 2 below summarizes the main Goldrock mineralized zones.

GOLDROCK MINERALIZED ZONES

NAME	LOCATION	GEOLOGY	EXPOSED LENGTH AND AVG. WIDTH (m)	GEOPHYSICAL EXPRESSION
McEdna Shaft Zone	L34 - 35N 3+25 - 3+75E CL# 696309	quartz vein system and a pyritic halo hosted within sheared intermediate pyroclastics	100 x 2m	along flank of VLF response, direct correlation with a magnetic low
Pincher Creek Zone	L21+60N - 28+25N 3+30E - 4+85E CL#'s 696307-308	quartz-carbonate schist with sulphides spatially associated with a discontinuous felsite unit	665 x 2m	no direct geophysical expression
Lunchbox Bay Zone	L5+80 - 10+25N 7+95 - 8+70E CL#'s 740277-740279	pink altered, silicified qtz stockworked schist in sheared intermediate pyroclastics	550 x 4m	no direct geophysical expression
Oxford Shaft Zone	L32+20 - 33+ 4 + 40W CL# 740289	qtz-carb-tourmaline stockwork hosted by chlorite-sericite ± magnetite schist (mafic pyroclastics) 30m deep shaft with 1,000 + tons on the dump	70 x 2m	coincident magnetic high
Trafalgar Bay Zone	L17 - 18N 14+50 - 14+65E CL# 740281	strongly altered zone of qtz-carb tourmaline veining, silicification and pyritic halo in the main zone	50 x 12m	coincident magnetic low no direct VLF anomaly
Peninsula Zone	L8+30N - 9+10N 4+25W - 3+00W CL# 729701	qtz-carb veined/brecciated chl-carb schist with tourmaline pyrhotite and pyrite	150 x 6m	coincident mag. no VLF response
Goldrock Zone	L32+79N to L33N 13+15E to 13+27E CL# 733106	red to pink altered, silicified and carbonated zone with pyrrhotite and pyrite and minor chalcopyrite and galena, accessory tourmaline	20m x 12m	coincident VLF anomaly

MINERALIZATION

Anomalous gold mineralization is contained within strong shear zones associated with pervasive quartz-carbonate alteration predominantly hosted within pyroclastic rocks. A number of minerals accompany the alteration pattern, the most important in relative order of abundance being carbonate, quartz, chlorite, sericite, pyrite, tourmaline, magnetite and fushite. Trace amounts of chalcopyrite, pyrrhotite and galena occur in the alteration zones. Carbonate occurs as a pervasive red-brown to cream coloured weathering stain whereas silicification manifests itself as quartz veins, stringers and complex stockworks. Pyrite is ubiquitous within the alteration zones but is rarely observed in concentrations greater than 5 per cent.

For the most part shearing tends to parallel, (i.e. Pincher Creek Zone, Lunchbox Bay Zone, Oxford Shaft Zone) stratigraphy. According to Blackburn (1976) this may be due to mechanical contrast between units suggesting gold mineralization is genetically related to volcanism and that its final emplacement has been modified by shearing and/or faulting. This theory may be supported by the fact a number of the "important" shear zones on the property are situated near the contacts of contrasting lithological units, notably the transition between pyroclastics and mafic flow sequences. In addition to the apparent stratiform nature of mineralization, some zones including the Trafalgar Bay Zone and the McEdna Shaft Zone are likely influenced by northerly trending fault structures.

VI CONCLUSIONS AND RECOMMENDATIONS

From June 10 to July 30, 1984 a geology survey was carried out on the Goldrock claims in the Trafalgar Bay - Jonas Lake region of Upper Manitou Lake.

The survey has successfully screened geophysical anomalies and outlined a number of sheared alteration zones which appear encouraging for gold mineralization. Additional work including detailed rock sampling, stripping and trenching will be used for the purpose of delineating drill targets.

Respectfully submitted
ST. JOE CANADA INC.

Kevin Leonard

Kevin Leonard
Geologist

VII References

Blackburn C.E.

1974:

Upper Manitou Lake Area, District of Kenora; Ontario Div. Mines, Prelim. Map P961, scale 1 inch to ¼ mile (1:15840). Geology 1973.

1976:

Geology of the Lower Manitou-Uphill Lake Area, District of Kenora; Ontario Div. Mines, Geoscience Report 142, 81p. Accompanied by Map 2320, scale 1 inch to ½ mile (1:31680).

1979:

Geology of the Upper Manitou Lake Area, District of Kenora; Ontario Div. Mines, OGS Report 189, 74p. Accompanied by Map 2409, scale 1 inch to ½ mile.

ODM-GSC

1961:

Upper Manitou Lake, Kenora District, Ontario; Ontario Dept. Mines - Geol. Surv. Canada, Aeromagnetic Map 1153G, scale 1 inch to 1 mile (1:63360). Survey 1961.

1980:

Manitou-Stormy Lakes Area, District of Kenora; O.G.S.; Geophysical/Geochemical Series, Map 80464 Scale 1:20,000. Survey and Compilation, November, December 1979 and January, February 1980.

APPENDIX I

Certificate

CERTIFICATE

I, Kevin Leonard, of the City of Burlington, Province of Ontario, do hereby certify that:

1. I reside at 886 Tanager Avenue, Burlington, Ontario.

2. I have worked as a geologist for the last 6 years.

3. I am a graduate of McMaster University with an Honours Degree (1978) in Geology.

4. I am a member of the Prospectors and Developers Assoc. of the Canadian Institute of Mining and Metallurgy, and of the Geological Association of Canada.

5. I helped carry out the geology survey. The map preparation was done under my supervision. I have written the report.

Kevin Leonard
Kevin Leonard

DATED AT TORONTO THIS 24th day of October, 1984

APPENDIX II

Technical Data Statement

Ontario

Ministry of Natural Resources

File _____

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

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) Geology

Township or Area Harper and Boyer Lake

Claim Holder(s) St. Joe Canada Inc.
111 Richmond St. W., Ste. 418, TOR, Ont.

Survey Company St. Joe Canada Inc.

Author of Report Kevin W. Leonard

Address of Author same as above

Covering Dates of Survey June 10 - July 30, 1984
(linecutting to office)

Total Miles of Line Cut 45

SPECIAL PROVISIONS CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

DAYS per claim.

Geophysical
–Electromagnetic _____
–Magnetometer _____
–Radiometric _____
–Other _____
Geological 20
Geochemical _____

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

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

DATE: Oct. 24/84 SIGNATURE: _____
Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

(prefix) (number)

See schedule "A" attached

If space insufficient, attach list

TOTAL CLAIMS 43

837 (5/79)

Mining Lands Section

File No 2.7374

Control Sheet

TYPE OF SURVEY

___ GEOPHYSICAL

✓ GEOLOGICAL

___ GEOCHEMICAL

___ EXPENDITURE

MINING LANDS COMMENTS:

L. Hurst

Signature of Assessor

84-11-5

Date

1984 12 11

Your File: 240-84
Our File: 2.7374

Mining Recorder
Ministry of Natural Resources
808 Robertson Street
Box 5080
Kenora, Ontario
P9N 3X9

Dear Sir:

RE: Notice of Intent dated November 9, 1984.
Geological Survey on Mining Claims K 696301
et al in the Boyer Lake 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,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-6918

S. Hurst:sc

cc: St. Joe Canada Ltd
Suite 418
111 Richmond Street West
Toronto, Ontario
M5H 2J4

cc: Kevin Leonard
886 Tanager Avenue
Burlington, Ontaraio
L7T 2Y2

cc: Mr. G.H. Gerguson
Mining & Lands Commissioner
Troonto, ontario

Resident Geologist
Kenora, Ontario

Ministry of Natural Resources
Ontario

Technical Assessment Work Credits

File 2.7374

Date 1984 11 09

Mining Recorder's Report of Work No. 240-84

Recorded Holder: ST. JOE CANADA INC

Township or Area: BOYER LAKE AREA

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical Electromagnetic _____ days Magnetometer _____ days Radiometric _____ days Induced polarization _____ days Other _____ days Section 77 (19) See "Mining Claims Assessed" column Geological 20 days Geochemical _____ days Man days ☐ Airborne ☐ Special provision ☒ Ground ☒ ☐ Credits have been reduced because of partial coverage of claims. ☐ Credits have been reduced because of corrections to work dates and figures of applicant.	K 696301-02 696304 to 310 inclusive 696388-89 706215 730099 733104-05 740278 740282 to 286 inclusive 740288 - 92 754744 781513

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

15 DAYS	10 DAYS	5 DAYS
K 729700	K 696303	K 729706
730098	729699	740274-75-81
733106	729701-05	
740277-79-89-91	740280-90	
	781514	

No credits have been allowed for the following mining claims

☐ not sufficiently covered by the survey ☐ Insufficient technical data filed

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical — 80; Geological — 40; Geochemical — 40; Section 77(19) — 60:

828 (83/6)

1984 11 29

Your File: 240-84
Our File: 2.7374

Mining Recorder
Ministry of Natural Resources
808 Robertson Street
Box 5080
Kenora, Ontario
P9N 3X9

Dear Sir:

RE: Notice of Intent dated November 9, 1984.
Geological ~~Geophysical (Electromagnetic)~~ Survey on
K 696301 et al in the Boyer Lake 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,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-6918

S. Hurst:sc

cc: St. Joe Canada Ltd
Suite 418
111 Richmond Street West
Toronto, Ontario
M5H 2J4

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

cc: Kevin Leonard
886 Tanager Avenue
Burlington, Ontario
L7T 2Y2

ccResident Geologist
Kenora, Ontario

Ministry of
Natural
Resources

Ontario

NRO 26/84

1984 11 09

Your File: 240-84
Our File: 2.7374

Mining Recorder
Ministry of Natural Resources
808 Robertson Street
Box 5080
Kenora, Ontario
P9N 3X9

Dear Madam:

Enclosed are two copies of a Notice of Intent with statements listing a reduced rate of assessment work credits to be allowed for a technical survey. Please forward one copy to the recorded holder of the claims and retain the other. In approximately fifteen days from the above date, a final letter of approval of these credits will be sent to you. On receipt of the approval letter, you may then change the work entries on the claim record sheets.

For further information, if required, please contact Mr. R.J. Pichette at 416/965-4888.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3

S. Hurst:mc

Encls.

cc: St. Joe Canada Ltd
Suite 418
111 Richmond Street West
Toronto, Ontario
M5H 2J4

cc: Kevin Leonard
886 Tanager Avenue
Burlington, Ontario
L7T 2Y2

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

845

Ministry of Natural Resources

Ontario

Notice of Intent

for Technical Reports

1984 11 09

2.7374/240-84

An examination of your survey report indicates that the requirements of The Ontario Mining Act have not been fully met to warrant maximum assessment work credits. This notice is merely a warning that you will not be allowed the number of assessment work days credits that you expected and also that in approximately 15 days from the above date, the mining recorder will be authorized to change the entries on his record sheets to agree with the enclosed statement. Please note that until such time as the recorder actually changes the entry on the record sheet, the status of the claim remains unchanged.

If you are of the opinion that these changes by the mining recorder will jeopardize your claims, you may during the next fifteen days apply to the Mining and Lands Commissioner for an extension of time. Abstracts should be sent with your application.

If the reduced rate of credits does not jeopardize the status of the claims then you need not seek relief from the Mining and Lands Commissioner and this Notice of Intent may be disregarded.

If your survey was submitted and assessed under the "Special Provision-Performance and Coverage" method and you are of the opinion that a re-appraisal under the "Man-days" method would result in the approval of a greater number of days credit per claim, you may, within the said fifteen day period, submit assessment work breakdowns listing the employees names, addresses and the dates and hours they worked. The new work breakdowns should be submitted direct to the Land Management Branch, Toronto. The report will be re-assessed and a new statement of credits based on actual days worked will be issued.

Ministry of Natural Resources
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

FWM 2.7374 Decll # 240-84

Mining Act

Instructions: – Please type or print.
– If number of mining claims traversed exceeds space on this form, attach a list.
Note: – Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
– Do not use shaded areas below.

Type of Survey(s)	Township or Area
Geology	Boyer Lake G-2572

Claim Holder(s)	Prospector's Licence No.
St. Joe Canada Inc.	T 1109

Address: 111 Richmond Street West, Suite 418, Toronto, Ontario

Survey Company	Date of Survey (from & to)	Total Miles of line Cut
St. Joe Canada Inc.	10 06 84 (Day Mo. Yr.) – 30 07 84 (Day Mo. Yr.)	45

Name and Address of Author (of Geo-Technical report): Kevin Leonard, (as above)

Credits Requested per Each Claim in Columns at right

		Days per Claim
Special Provisions: For first survey: Enter 40 days. (This includes line cutting) For each additional survey: using the same grid: Enter 20 days (for each)	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	20
	Geochemical	
Man Days: Complete reverse side and enter total(s) here	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	
Airborne Credits: Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
K	See Schedule 'A' Attached	

RECEIVED OCT 12 1984 MINING LANDS SECTION

KENORA MINING DIV. RECEIVED OCT 12 1984 AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

696301

Total number of mining claims covered by this report of work: 43

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures: $ ÷ 15 = Total Days Credits

Instructions: Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
860	Oct 12/84	M E Lemay (acting)
	Date Approved as Recorded	Branch Director
	See Revised Statement	

Date	Recorded Holder or Agent (Signature)
Oct. 4, 1984	Kevin Leonard

Certification Verifying Report of Work

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

Name and Postal Address of Person Certifying: Kevin Leonard 886 Tanager Avenue, Burlington

Date Certified	Certified by (Signature)
October 4, 1984	Kevin Leonard

1362 (81/9)

#240-84

SCHEDULE A

K 696301	20
696302	20
696303	20
696304	20
696305	20
696306	20
696307	20
696308	20
696309	20
696310	20
696388	20
696389	20
K 706215	20
K 729699	20
729700	20
729701	20
729705	20
729706	20
K 730098	20
730099	20
733104	20
733105	20
733106	20
K 740274	20
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740277	20
740278	20
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740281	20
740282	20
740283	20
740284	20
740285	20
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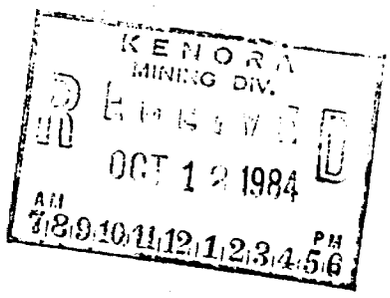
740289	20
740290	20
740291	20
740292	20
K 754744	20
K 781513	20
781514	20



Ontario

Ministry of Natural Resources

File _____

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

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) Geology

Township or Area Harper and Boyer Lake

Claim Holder(s) St. Joe Canada Inc.
111 Richmond St. W., Ste. 418, TOR, Ont.

Survey Company St. Joe Canada Inc.

Author of Report Kevin W. Leonard

Address of Author same as above

Covering Dates of Survey June 10 - July 30, 1984
(linecutting to office)

Total Miles of Line Cut 45

SPECIAL PROVISIONS CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

DAYS per claim.

Geophysical
–Electromagnetic _____
–Magnetometer _____
–Radiometric _____
–Other _____
Geological 20
Geochemical _____

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

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

DATE: Oct. 24/84 SIGNATURE: Kevin Leonard
Author of Report or Agent

Res. Geol. _____ Qualifications 2.5133

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
See schedule "A" attached	

If space insufficient, attach list

TOTAL CLAIMS 43

OFFICE USE ONLY

837 (5/79)

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 _____

MAGNETIC

Instrument _____

Accuracy – Scale constant _____

Diurnal correction method _____

Base Station check-in interval (hours) _____

Base Station location and value _____

_____

ELECTROMAGNETIC

Instrument _____

Coil configuration _____

Coil separation _____

Accuracy _____

Method: ☐ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line

Frequency _____
(specify V.L.F. station)

Parameters measured _____

GRAVITY

Instrument _____

Scale constant _____

Corrections made _____

_____

Base station value and location _____

_____

Elevation accuracy _____

INDUCED POLARIZATION RESISTIVITY

Instrument _____

Method ☐ Time Domain ☐ Frequency Domain

Parameters – On time _____ Frequency _____

– Off time _____ Range _____

– Delay time _____

– Integration time _____

Power _____

Electrode array _____

Electrode spacing _____

Type of electrode _____

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** _____

GEOCHEMICAL SURVEY – PROCEDURE RECORD

Numbers of claims from which samples taken _____

_____

_____

Total Number of Samples _____

Type of Sample _____
(Nature of Material)

Average Sample Weight _____

Method of Collection _____

_____

Soil Horizon Sampled _____

Horizon Development _____

Sample Depth _____

Terrain _____

_____

Drainage Development _____

Estimated Range of Overburden Thickness _____

_____

_____

SAMPLE PREPARATION
(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis _____

_____

_____

_____

General _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

ANALYTICAL METHODS

Values expressed in: per cent ☐
p. p. m. ☐
p. p. b. ☐

Cu, Pb, Zn, Ni, Co, Ag, Mo, As,-(circle)

Others _____

Field Analysis (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Field Laboratory Analysis

No. (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Commercial Laboratory (_____ tests)

Name of Laboratory _____

Extraction Method _____

Analytical Method _____

Reagents Used _____

General _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

SCHEDULE A

K	696301	20
	696302	20
	696303	20
	696304	20
	696305	20
	696306	20
	696307	20
	696308	20
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	696388	20
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K	706215	20
K	729699	20
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K	730098	20
	730099	20
	733104	20
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K	740274	20
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	740292	20
K	754744	20
K	781513	20
	781514	20

JONAS LAKE

SHARPE LAKE

Massive, Porphyrytic & Pillowed Mafic Flows

Schistose Mafic Flows

Pincher Lake Group

Upper Manitou Lake Group

Mafic Pyroclastics

Felsic - Int. Pyroclastics

Coarse Massive to Pillowed Mafic Flows

Massive to Pillowed Mafic Flows

Oxford Shaft Zone

McEdna Shaft Zone

Pincher Creek Zone

Goldrock Zone

Patented Ground

Trafalgar Bay

UPPER MANITOU LAKE

Location Map

North Sheet

South Sheet

LEGEND

5) Felsic Hypabyssal Rocks :

a. Aplite
b. Granite, Granodiorite, Qtz. Diorite
c. Quartz Feldspar Porphyry
d. Felsite, Carbonatized Felsite, Sheared Felsite

4) Mafic Intrusive Rocks :

a. Gabbro

3) Felsic Metavolcanics :

a. Med. to Fine Grained Dacite to Rhyodacite

2) Intermediate Metavolcanics :

a. Med. to Fine Grained Andesite, Dacite
b. Fine Lapilli-Ash Tuff, Crystal Tuff, Tuff Breccia
c. Lapilli Tuff to Agglomerate
d. Chlorite Schist, Chlorite Carbonate Schist, Chl./carb./Ser. Schist

1) Mafic Volcanics :

a. Med. to Fine Grained Basalt, Andesite
b. Coarse to Med. Grained Basalt, Andesite
c. Coarse Grained Basalt (Gabbroic)
d. Pillowed, Porphyritic, Vesicular Basalt
e. Porphyritic, Glomeroporphyritic Basalt
f. Brecciated, Flow Brecciated Basalt, Andesite
g. Chlorite Schist, Chlorite Carbonate Schist
h. Lapilli Tuff to Agglomerate
i. Fine Lapilli-Ash Tuff, Crystal Tuff, Tuff Breccia

SYMBOLS

- Area of Bedrock Outcrop
- Bedding (Incl., Vert.)
- Pillow Flow Top
- Foliation (Incl., Vert)
- Geologic Boundary
- Fault Trace (Assumed)
- Jointing (Incl., Vert)
- Veining
- Shaft
- Swamp
- Trail
- Trench, Pit
- Adit
- Claim Post
- Claim Line
- Grid Line
- Cliff
- Hill

ABBREVIATIONS

qv	Quartz vein
Qtz	Quartz
Ank	Ankerite/Fe Carbonate
Tour	Tourmaline
Py	Pyrite
Po	Pyrrhotite
Cpy	Chalcopyrite
Gal	Galena
Fu	Fuschite
Ser	Sericite
Mag	Magnetite, Magnetic
Lim	Limonite

St. Joe Canada Inc.

WOITOWICZ OPTION
GOLD ROCK PROPERTY
NORTH SHEET

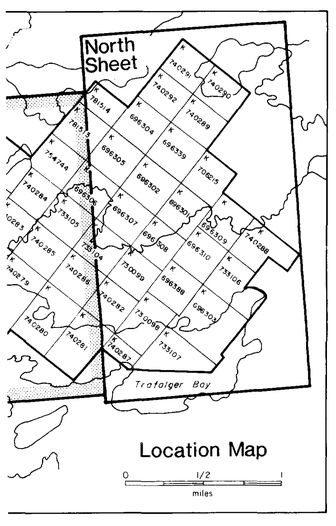
BEDROCK GEOLOGY

50 0 50 100 150 200 metres

Surveyed:	Scale 1:2500	N.T.S.
Approved by K. Leonard	Drafted by J.Meek & Assoc	Plan No. 2

52F07NE0052 2.7374 BOYER LAKE

200



LEGEND

5) Felsic Hypabyssal Rocks :

a. Aplite
b. Granite, Granodiorite, Qtz. Diorite
c. Quartz Feldspar Porphyry
d. Felsite, Carbonatized Felsite, Sheared Felsite

4) Mafic Intrusive Rocks :

a. Gabbro

3) Felsic Metavolcanics :

a. Med. to Fine Grained Dacite to Rhyodacite

2) Intermediate Metavolcanics :

a. Med. to Fine Grained Andesite, Dacite
b. Fine Lapilli-ash Tuff, Crystal Tuff, Tuff Breccia
c. Lapilli Tuff to Agglomerate
d. Chlorite Schist, Chlorite Carbonate Schist, Chl./carb./Ser. Schist

1) Mafic Volcanics :

a. Med. to Fine Grained Basalt, Andesite
b. Coarse to Med. Grained Basalt, Andesite
c. Coarse Grained Basalt (Gabbroic)
d. Pillowed, Porphyritic, Vesicular Basalt
e. Porphyritic, Glomeroporphyritic Basalt
f. Brecciated, Flow Brecciated Basalt, Andesite
g. Chlorite Schist, Chlorite Carbonate Schist
h. Lapilli Tuff to Agglomerate
i. Fine Lapilli-ash Tuff, Crystal Tuff, Tuff Breccia

ABBREVIATIONS

qv	Quartz vein
Qtz	Quartz
Ank	Ankerite/Fe Carbonate
Tour	Tourmaline
Py	Pyrite
Po	Pyrrhotite
Cpy	Chalcopyrite
Gal	Galena
Fu	Fuschite
Ser	Sericite
Mag	Magnetite, Magnetic
Lim	Limonite

SYMBOLS

- Area of Bedrock Outcrop
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- Veining
- Shaft
- Swamp
- Trail
- Trench, Pit
- Adit
- Claim Post
- Claim Line
- Grid Line
- Hill
- Cliff

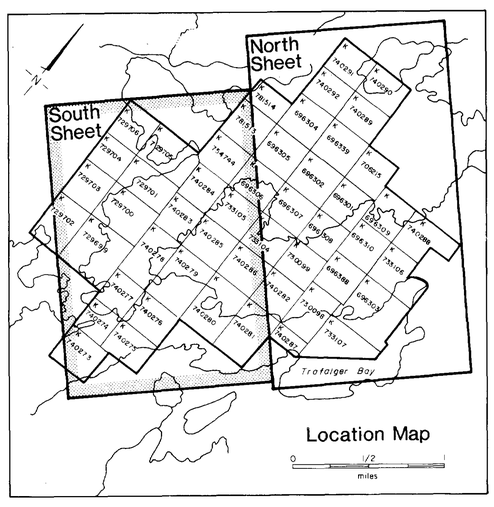
St. Joe Canada Inc.

WOITOWICZ OPTION
GOLD ROCK PROPERTY
SOUTH SHEET

BEDROCK GEOLOGY

50 0 50 100 150 200 metres

Surveyed	Scale 1:2500	N.T.S.
Approved by	Drafted by J. Meek & Assoc.	Plan No.



LEGEND

5) Felsic Hypabyssal Rocks :

a. Aplite
b. Granite, Granodiorite, Qtz. Diorite
c. Quartz Feldspar Porphyry
d. Felsite, Carbonatized Felsite, Sheared Felsite

4) Mafic Intrusive Rocks :

a. Gabbro

3) Felsic Metavolcanics :

a. Med. to Fine Grained Dacite to Rhyodacite

2) Intermediate Metavolcanics :

a. Med. to Fine Grained Andesite, Dacite
b. Fine Lapilli-Ash Tuff, Crystal Tuff, Tuff Breccia
c. Lapilli Tuff to Agglomerate
d. Chlorite Schist, Chlorite Carbonate Schist, Chl./carb./Ser. Schist

1) Mafic Volcanics :

a. Med. to Fine Grained Basalt, Andesite
b. Coarse to Med. Grained Basalt, Andesite
c. Coarse Grained Basalt (Gabbroic)
d. Pillowed, Porphyritic, Vesicular Basalt
e. Porphyritic, Glomeroporphyritic Basalt
f. Brecciated, Flow Brecciated Basalt, Andesite
g. Chlorite Schist, Chlorite Carbonate Schist
h. Lapilli Tuff to Agglomerate
i. Fine Lapilli-Ash Tuff, Crystal Tuff, Tuff Breccia

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- Pillow Flow Top
- Foliation (Incl., Vert)
- Geologic Boundary
- Fault Trace (Assumed)
- Jointing (Incl., Vert)
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- Adit
- Claim Post
- Clai
- Gric
- Hill
- Clif