



52E10SW8579 2.10911 SHOAL LAKE

010

ST. JOE CANADA INC.

REPORT ON MAGNETIC SURVEY
SHOAL LAKE (KPM) PROPERTY
CLAIM NO.: K896887

SHOAL LAKE, NORTHWESTERN ONTARIO

RECEIVED

MAR 14 1988

MINING LANDS SECTION

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52E10SW8579 2.10911 SHOAL LAKE

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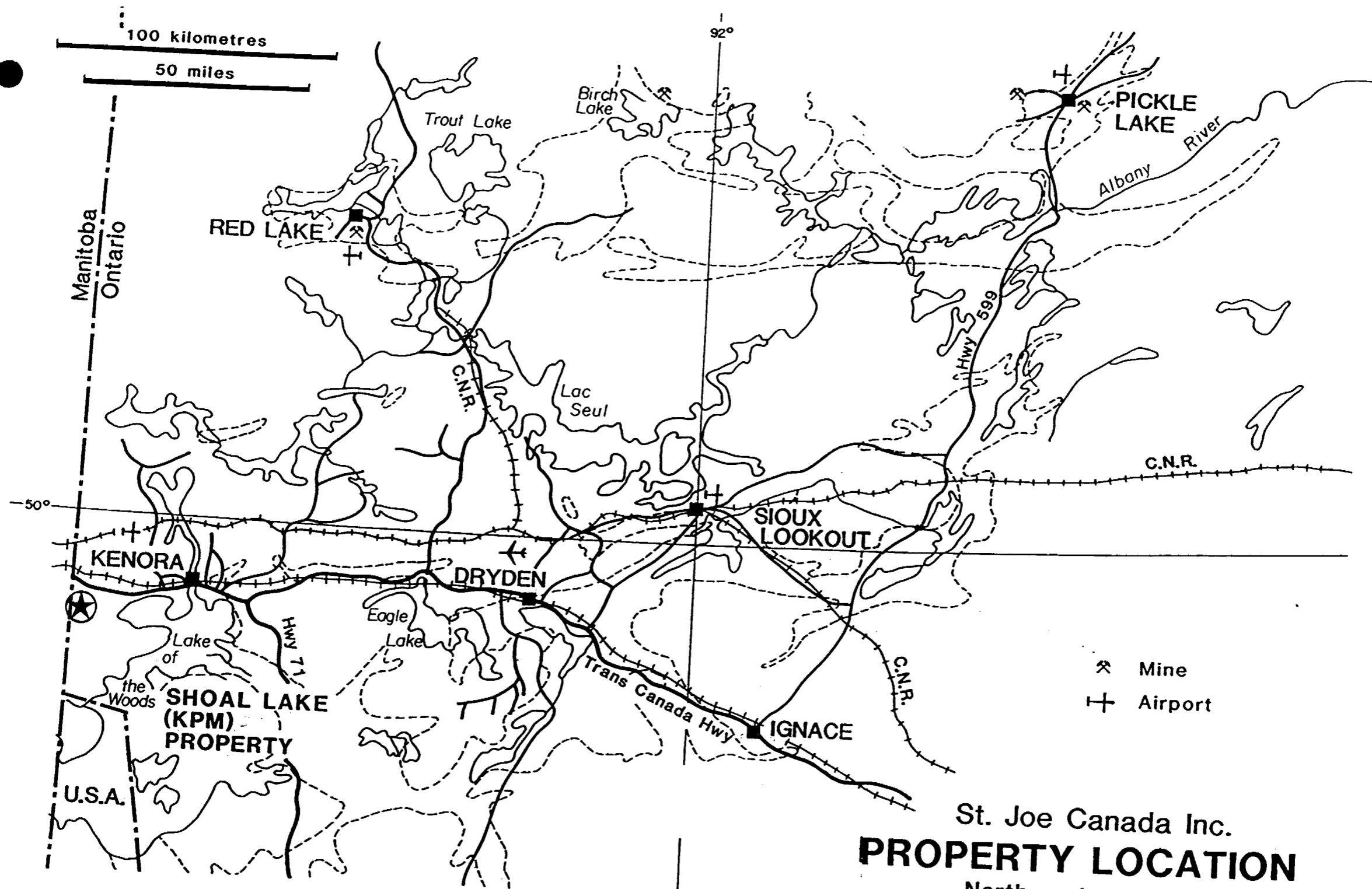


Figure 2

Shoal Lake
(KPM)
Property

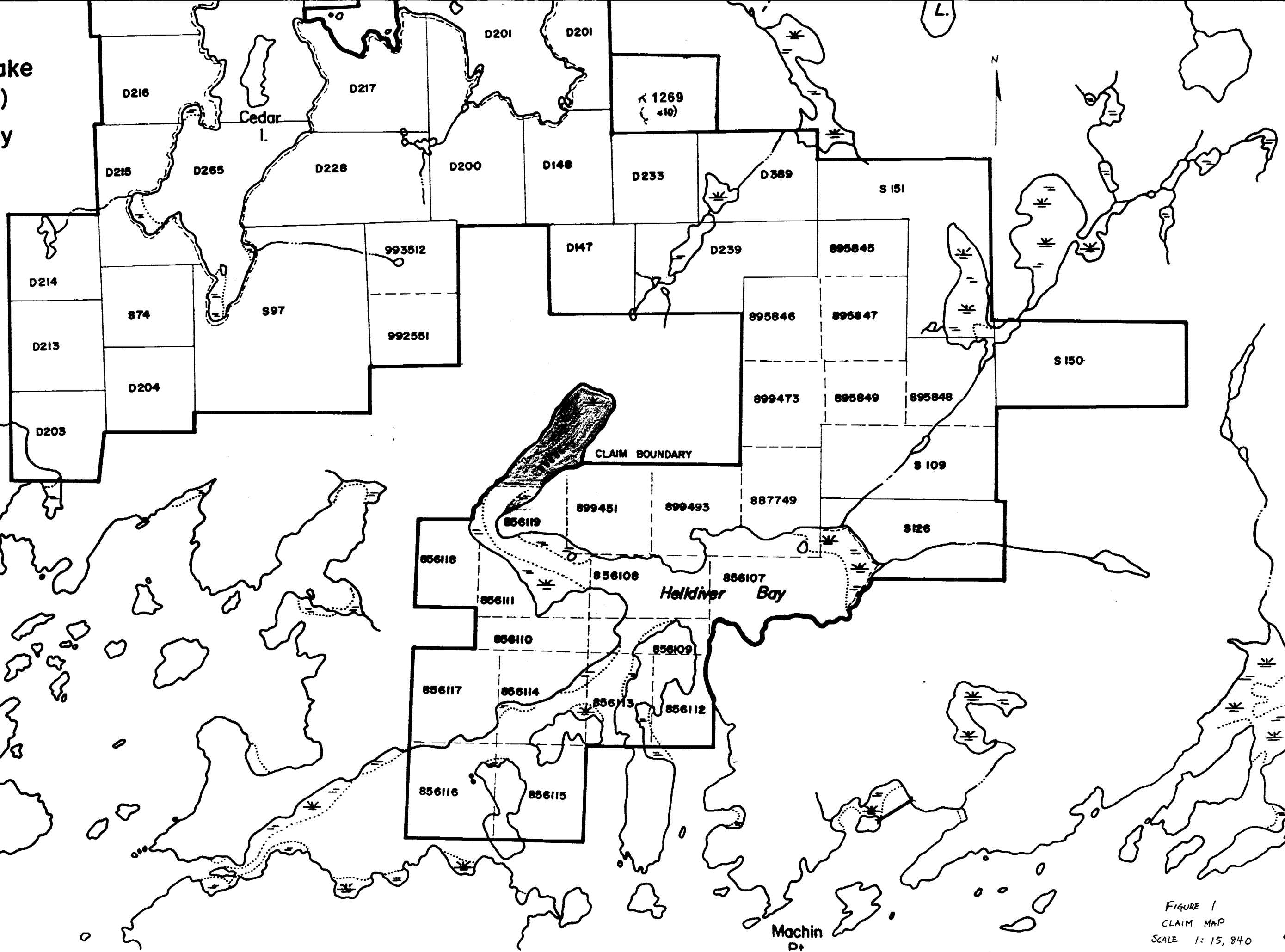


FIGURE 1
CLAIM MAP
SCALE 1:15,840

1. INTRODUCTION:

The following is a report on a ground magnetic survey carried out by St. Joe Canada Inc., between February 9-14, 1988 on claim K896887, a part of the Shoal Lake (KPM) property.

2. DESCRIPTION, LOCATION & ACCESS:

Shoal Lake (KPM) project is a farm-in/joint venture program under which St. Joe Canada Inc. can acquire 50% interest from Kenora Prospector's and Miners.

Shoal Lake (KPM) property encompasses 72 contiguous patented (21) and unpatented (52) mining claims totalling 1294 hectares. The property is located about 60km west of Kenora and 14km south of the Trans-Canada Highway. The property lies within NTS Quadrange 52E/10SW, Glass Township, in the Shoal Lake area of northwestern Ontario. The claims are recorded on the Shoal Lake claim map G Plan 2642 (see Figures 1 and 2).

Access to the property can be made by float and/or ski-equipped aircrafts from Kenora or via Trans-Canada Highway to the Rush Bay Road turn off and along a gravel road about 10km to Clytie Bay Landing situated 4km north by water from the property.

The surveyed claim K896887 is located at the northwestern portion of Helldiver Bay, Shoal Lake.

All claims are registered in the name of:

St. Joe Canada Inc.
Suite 1100
20 Adelaide Street, East
Toronto, Ontario
M5C 2T6

Mining Licence T3608

3. HISTORY:

Gold exploration and mining activities in this region started in the late 1800's. Three former producing mines are present on the property. Production figures for the Mikado Mine No. 1 and No. 2 veins indicate 57,813 tonnes milled grading 17g/t gold. Main production years were 1896 to 1902 with limited gold recoveries during 1910-1911 and 1931. A total of 16,997 tonnes grading 10g/t gold were produced from Cedar Island (Cornucopia) Mine during 1886-1887 and 1931-1936. Olympia Gold Mine, partially on the property and located to the immediate west of the surveyed area, produced 11,353 tonnes grading 7.8g/t gold in 1906, 1911, 1912 and 1915.

4. REGIONAL GEOLOGY:

Regional and detailed geological mapping of the area was performed in 1978 and 1986, respectively, by J.C. Davies and P.M. Smith of the Ontario Geological Survey.

The property is underlain by rocks of Archean-age within the Superior Province of the Precambrian Shield and lies on the southwest edge of the Canoe Lake quartz-diorite batholith. The volcanic assemblage consists of a sequence of fine to medium-grained pillowed and feldspar phyric basalt flows intercalated with coarse-grained flows of gabbroic composition. The rocks are folded into a northeast trending anticline. Two major directions of shearing and/or faulting have been recognized. One striking about 120° parallel to the vein structure of Cedar Island and the other one striking about 340° along with the Mikado Vein.

Gold mineralization, associated with varying percentage of sulphides appears to occur in quartz veins along shears and fissures in the mafic flows as well as in the dioritic intrusives.

5. MAGNETIC SURVEY:

The survey was carried out between February 9-14, 1988. A grid, totalling 2.9km was established on ice, over the northwest end of Helldiver Bay, Shoal Lake. A baseline, totalling 0.65km at 50° was chained and picketed. Cross lines, 50m apart, were turned off from the baseline and picketed at 25m spacings.

The magnetic survey was performed over the grid using an EDA-PPM 350 proton magnetometer. An EDA-PPM 400 proton magnetometer was used as a base station.

Results from the magnetic survey are presented on Plan 1 attached to this report.

The magnetic relief of the area is generally low, within five hundred gamma. The data of the survey provides a distinct reflection of the northeasterly trending local stratigraphy. Moderately higher magnetic readings, about 200-300 gamma above the mean, were recorded along the northwest shoreline of the bay between L18+00W to L20+00W. An isolated higher magnetic reading, 400 gamma above the mean was recorded at the south end of L23+00W. The moderately lower magnetic readings, registered in the central portion of the grid, trending in the same orientation as Helldiver Bay, can be interpreted as a weak indication of shearing and/or faulting. However, due to limited coverage of the survey, a more conclusive interpretation is prohibited.

6. SUMMARY & CONCLUSIONS:

A ground magnetic survey was performed on mining claim K896887, a part of St. Joe Canada Inc.'s Shoal Lake (KPM) property.

Results of the survey reflect the northeast trending local stratigraphy. There is also a weak evidence of a fault or shear zone trending in the same direction.


7. RECOMMENDATIONS:

1. The existing grid should be expanded to cover a larger area on adjoining claim blocks. VLF-EM and magnetic surveys should be performed on the expanded grid in order to provide a more detailed interpretation of local geology.
2. Detailed mapping and geochemical surveys are also recommended. Combining these results with the results from geophysical surveys would assist to locate gold-bearing structures and to select diamond drilling targets.

CERTIFICATE OF QUALIFICATIONS

I, Sha-Pak Cheung, of the City of North York, Province of Ontario do hereby certify that:

1. I reside at #104 - 131 Torresdale Avenue, Willowdale, Ontario.
2. I have worked as a geologist since 1978.
3. I hold a Bachelor of Science (Honours) degree from McMaster University, a Master of Science degree from The University of Manitoba and a Master of Business Administration degree from York University.
4. I am a Professional Engineer registered with The Association of Professional Engineers of Saskatchewan.
5. The survey was performed under my supervision. I have prepared the map and have written the report.


S.P. Cheung, P. Eng.

Dated at Toronto, this 23rd day of February, 1988.



T.S

#47

Mini

Type of Survey(s): **GEOPHYSICAL (Magnetometer)**

Claim Holder(s): **ST JOE CANADA INC.**

Address: **1100-20 Adelaide St. E. Toronto, Ont M2C 2T6**

Survey Company: **ST JOE Canada Inc.**

Name and Address of Author (of Geo Technical report): **S. P. CHEUNG, 1100-20 Adelaide St. E. Toronto, Ont M2C 2T6**

Township or Area: **Shoal Lake 62642**

Prospector's Licence No.: **73608**

Date of Survey (from & to): **9 2 88** to **14 2 88**

Total Miles of line Cut: **2.9 Km**

Credits Requested per Each Claim in Columns at right

Mining Claims Traversed (List in numerical sequence)

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Electromagnetic	40
	Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	Radiometric	
	Other	
	Geological	
	Geochemical	

Man Days	Geophysical	Days per Claim
Complete reverse side and enter total(s) here	Electromagnetic	
	Magnetometer	
	Radiometric	
	Other	
	Geological	
	Geochemical	

Airborne Credits	Geophysical	Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Prefix	Mining Claim Number	Expend. Days Cr.	Prefix	Mining Claim Number	Expend. Days Cr.
K	896887				

MINING AND GEOLOGICAL SURVEY
ASSESSMENT FILES OFFICE
MAR 24 1988
RECEIVED

KENORA MINING DIV.
RECEIVED
FEB 29 1988
AM 7 8 9 10 11 12 1 2 3 4 5 PM

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.

896887

Total number of mining claims covered by this report of work: 1

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
40	Feb 29/88	<i>[Signature]</i>
	Date Approved as Recorded	Branch Director
	15 March 88	<i>[Signature]</i>

Date: **Feb. 26, 1988**

Recorder Holder or Agent (Signature): *[Signature]*

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: **S. P. CHEUNG, 1100-20 Adelaide St. East Toronto, Ont M2C 2T6**

Date Certified: **Feb 26, 1988**

Certified by (Signature): *[Signature]*



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) Geophysical (Magnetic)
Township or Area Shoal Lake G2642
Claim Holder(s) St. Joe Canada Inc.
Survey Company St. Joe Canada Inc.
Author of Report Sha-Pak Cheung
Address of Author #104 - 131 Torresdale Ave., Willowdale
Covering Dates of Survey Feb. 9 - Feb. 14, 1988
Total Miles of Line Cut 2.9km

MINING CLAIMS TRAVERSED
List numerically

Table with columns for prefix and number. Row 1: K (prefix), 896887 (number). Subsequent rows are empty.

If space insufficient, attach list

SPECIAL PROVISIONS CREDITS REQUESTED table with columns for Geophysical, Geological, Geochemical and DAYS per claim.

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

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

DATE: 26th Feb 1988 SIGNATURE: Sha-Pak Cheung
Author of Report or Agent

Res. Geol. _____ Qualifications on this file

Previous Surveys

Table with columns: File No., Type, Date, Claim Holder. Multiple empty rows.

TOTAL CLAIMS 1

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 205 Number of Readings 205
Station interval 12.5m Line spacing 50m
Profile scale 1:1,250
Contour interval 100 gamma

MAGNETIC

Instrument EDA PPM 350 with PPM 400 base station
Accuracy - Scale constant +/- 0.02 gamma sensitivity; +/- 15 ppm at 23C accuracy
Diurnal correction method Diurnal base station recorder
Base Station check-in interval (hours) 8 hours
Base Station location and value on grid

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 _____

REFERENCES

AREAS WITHDRAWN FROM DISPOSITION

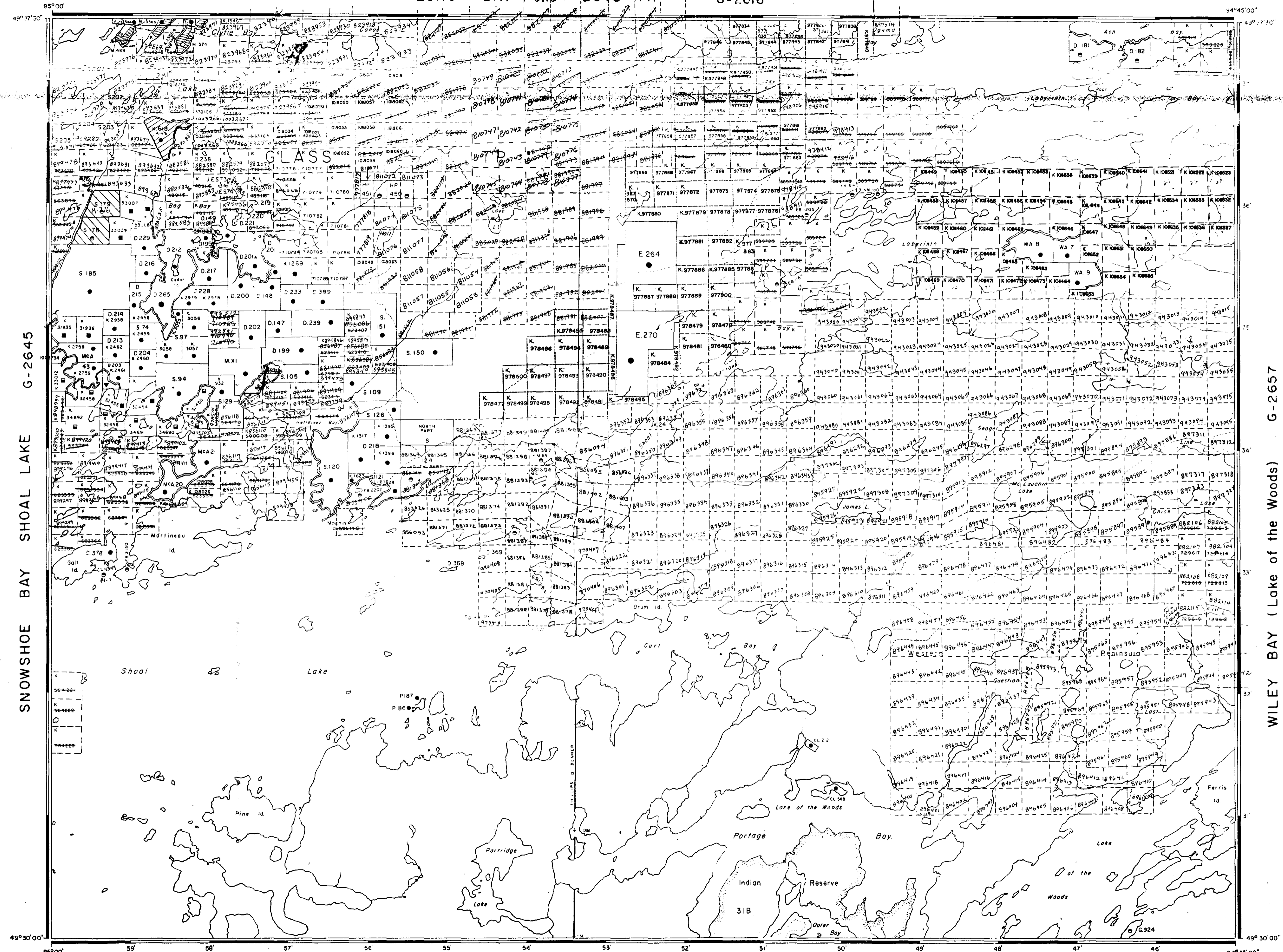
- M.R.O. MINING RIGHTS ONLY
- S.R.O. SURFACE RIGHTS ONLY
- M.S. MINING AND SURFACE RIGHTS

Description Order No. Date Disposition File

Flooding Rights Reserved to 100' mean sea level.

Islands in Shoal Lake and inlets thereto do not form part of Glass Township.

ECHO BAY and BOYS TP. G-2616



SNOWSHOE BAY SHOAL LAKE G-2645

WILEY BAY (Lake of the Woods) G-2657

MONUMENT BAY (Lake of the Woods) G-2632

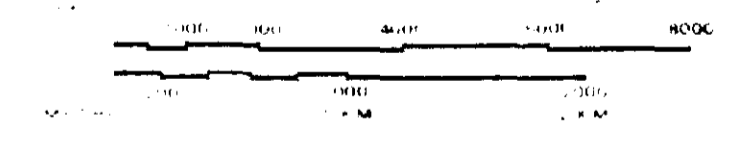
LEGEND

DISPOSITION OF CROWN LANDS

TYPE OF DISPOSITION	SYMBOL
MINING RIGHTS ONLY	●
SURFACE RIGHTS ONLY	○
MINING AND SURFACE RIGHTS	⊙
RESERVED	□
UNDEVELOPED	○
WATER RIGHTS	○
WATER RIGHTS ONLY	○
WATER RIGHTS AND SURFACE RIGHTS	○
WATER RIGHTS AND MINING RIGHTS	○
WATER RIGHTS AND SURFACE RIGHTS AND MINING RIGHTS	○

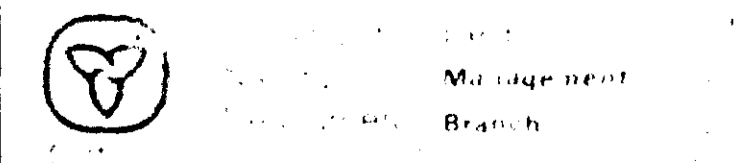
NOTE: MINING RIGHTS ARE RESERVED BY THE FEDERAL GOVERNMENT IN ALL CROWN LANDS.

SCALE 1 INCH = 40 CHAINS

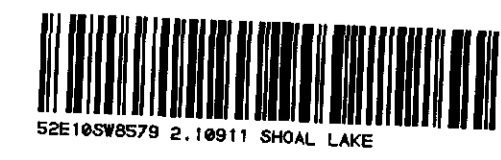


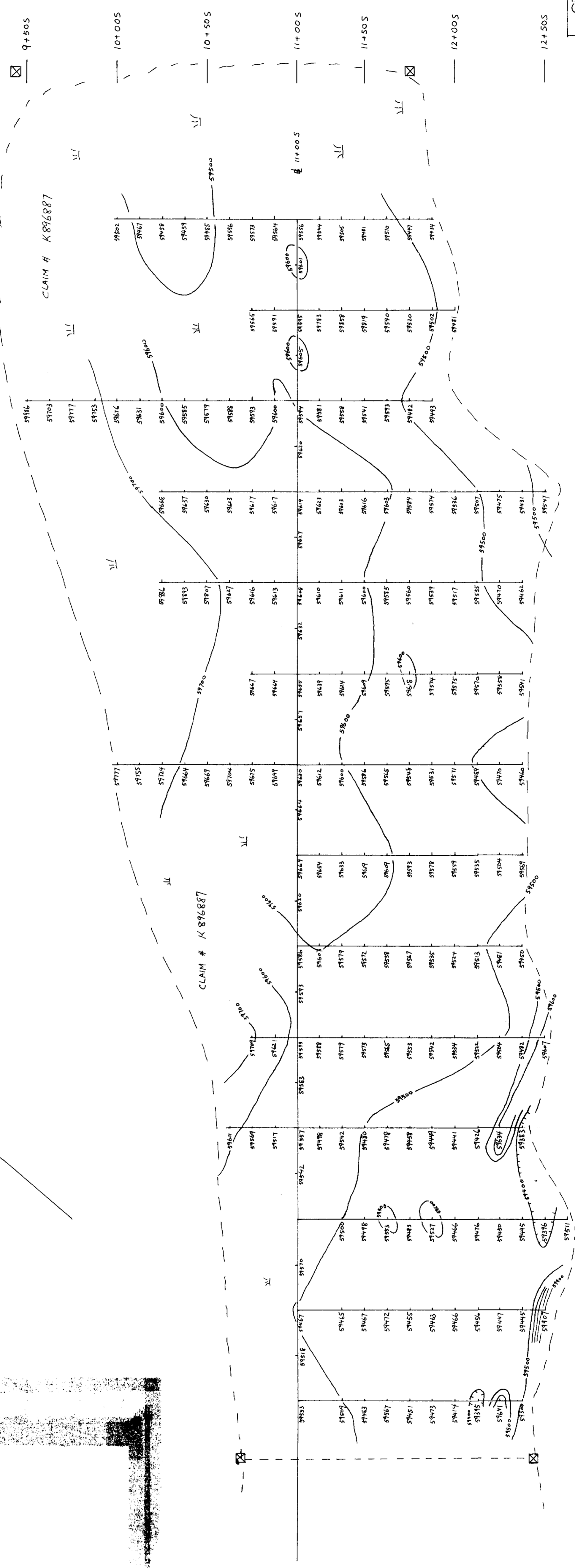
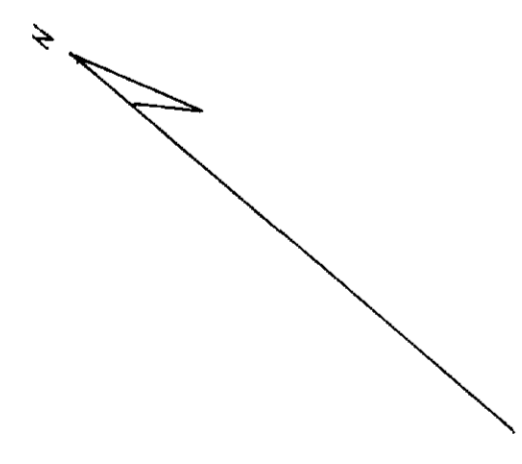
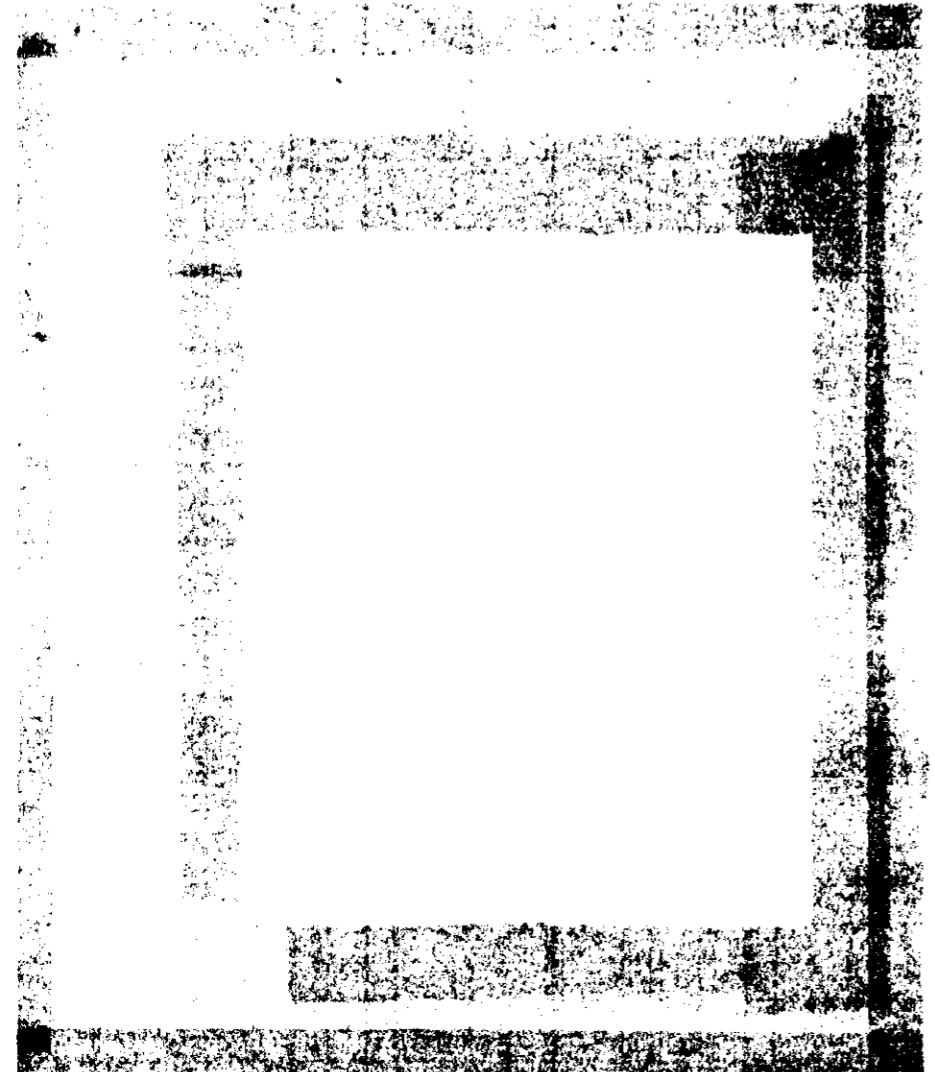
SHOAL LAKE

KENORA
 KENORA
 KENORA



FEBRUARY, 1984
 M-2339 G-2642





2.10911

ST JOE CANADA INC

SHOAL LAKE (KPM) PROPERTY
 MAGNETIC SURVEY
 TOTAL FIELD in GAMMA
 CONTOUR INTERVAL 100 GAMMA

SCALE 1:1250
 0 25 50 m

DRAWN BY: DATE: PLAN 1
 NITS REF: 51E/10SW

17+00W

18+00W

19+00W

20+00W

21+00W

22+00W

23+00W

LEGEND

☒ CLAIM POST

--- CLAIM BOUNDARY / SHORE LINE

~ SWAMP

