



52N07SE2001 OP92-059 SHABUMENI LAKE

010

GEOLOGICAL REPORT
ON THE
SWAIN LAKE GOLD/BASE METAL PROSPECT
SHABUMENI LAKE AREA
NORTH-WESTERN, ONTARIO
NTS 52 N 7 SE

November 14, 1992

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Geologist



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Map; Scale 1:2500 (in rear pocket)

INTRODUCTION

This report describes the results of a geological mapping and sampling program carried out over a ten (10) claim gold/base metal prospect located in the Shabumeni Lake Area of north-western Ontario. The work was carried out during the period Aug. 10 - Sept. 7 1992; on a chainsawed grid which covers the entire property with 30 meter spaced lines.

A detailed description of the principal rock types encountered during the course of the survey is provided, along with a record of the character and dimension of veins and mineralized zones. Recommendations for further development of the property are also made. The survey was conducted by Rand Hodgson, geologist, of 1849 E. 2nd Ave., Vancouver, B.C.

PROPERTY DESCRIPTION, LOCATION AND ACCESS

The property is referred to as the "Guest Prospect" in government publications. It consists of ten contiguous unpatented mining claims located at the north-eastern edge of Swain Lake on the Shabumeni Lake Area claim map G-1881; Red Lake Mining Division; NTS Reference # 52-N-7 SE

Swain Lake is located approximately 90 kilometres north-east of the town of Red Lake. Access is by float-equipped aircraft from Red Lake or Ear Falls, or by boat through the Woman Lake water system.

The claims are registered in the name of Dennis Smith of Box

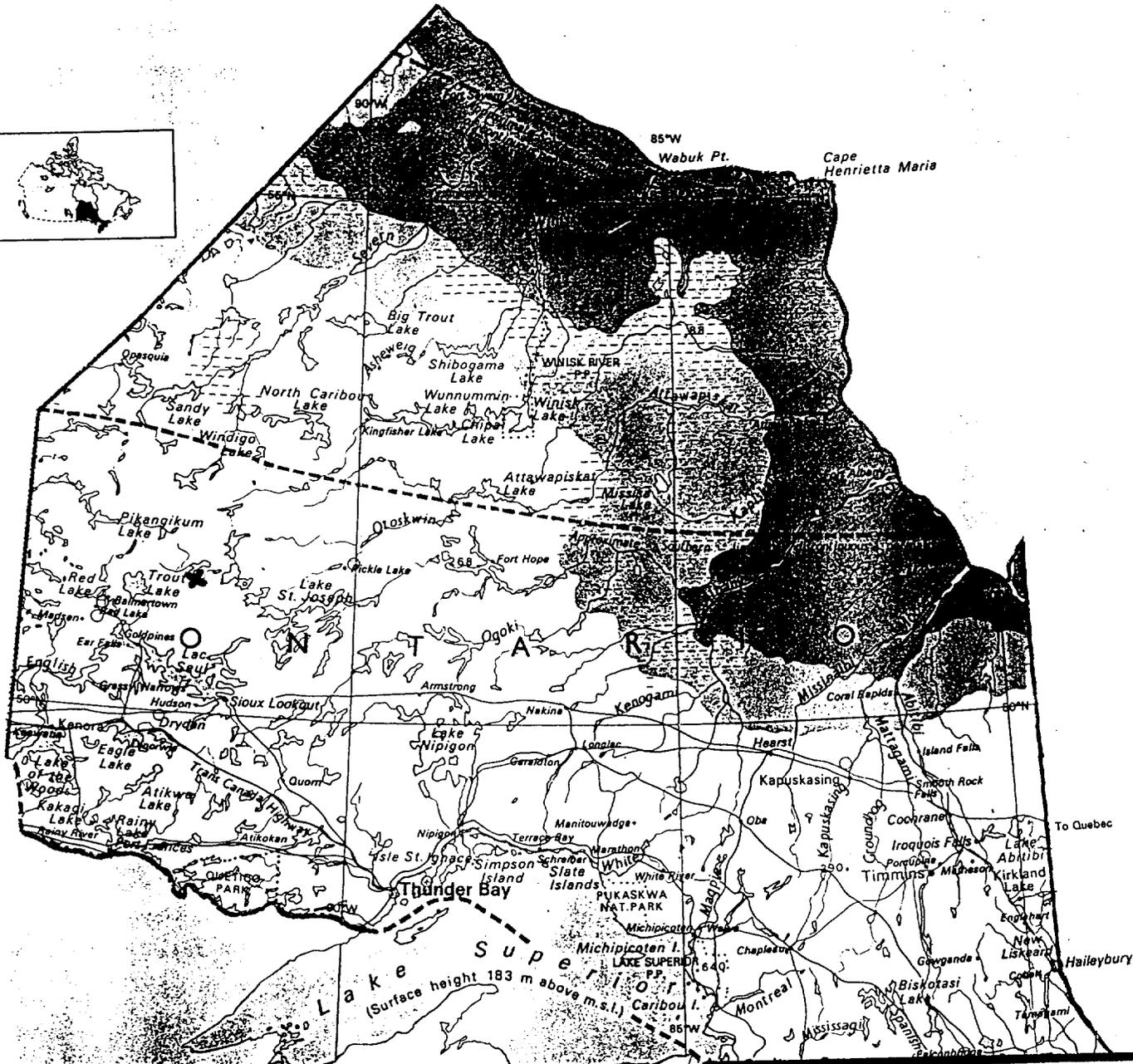
663, Red Lake, Ontario. They are jointly owned by Smith, Gerald Desmeulles, also of Red Lake, and Rand Hodgson of Vancouver, B.C. The claims schedule, containing a list of the claims and their assessment work due dates, is provided in the Appendix.

TOPOGRAPHY AND OVERBURDEN

All bedrock is Early Precambrian in age, part of the Birch/Uchi Lakes metavolcanic - metasedimentary belt within the Uchi Subprovince. A major north east trending deformation zone, the "Swain Lake Deformation Zone" (S.L.D.Z.) passes close to the property to the north-west. The rocks to the south-east of this deformation zone (including those on the property) are predominantly metasedimentary.

"The Guest prospect is located about 800 m south-east of the S.L.D.Z. and is 1.2 km west of a north-west trending fault extending through Bobarris Lake. A strong shear zone trends 060° to 090° along a contact between mafic metavolcanic flows and intermediate pyroclastic rocks immediately north of the Guest prospect.

East trending mafic metavolcanic flows intercalated with interflow metasediments consisting of siliceous tuff and chert-magnetite iron formation, are overlain by intermediate lapilli tuff, tuff breccia and feldspar crystal tuff (Beakhouse et al. 1989; Beakhouse 1989). The intermediate pyroclastic rocks were previously interpreted as metasediments by Asarco Exploration Co.



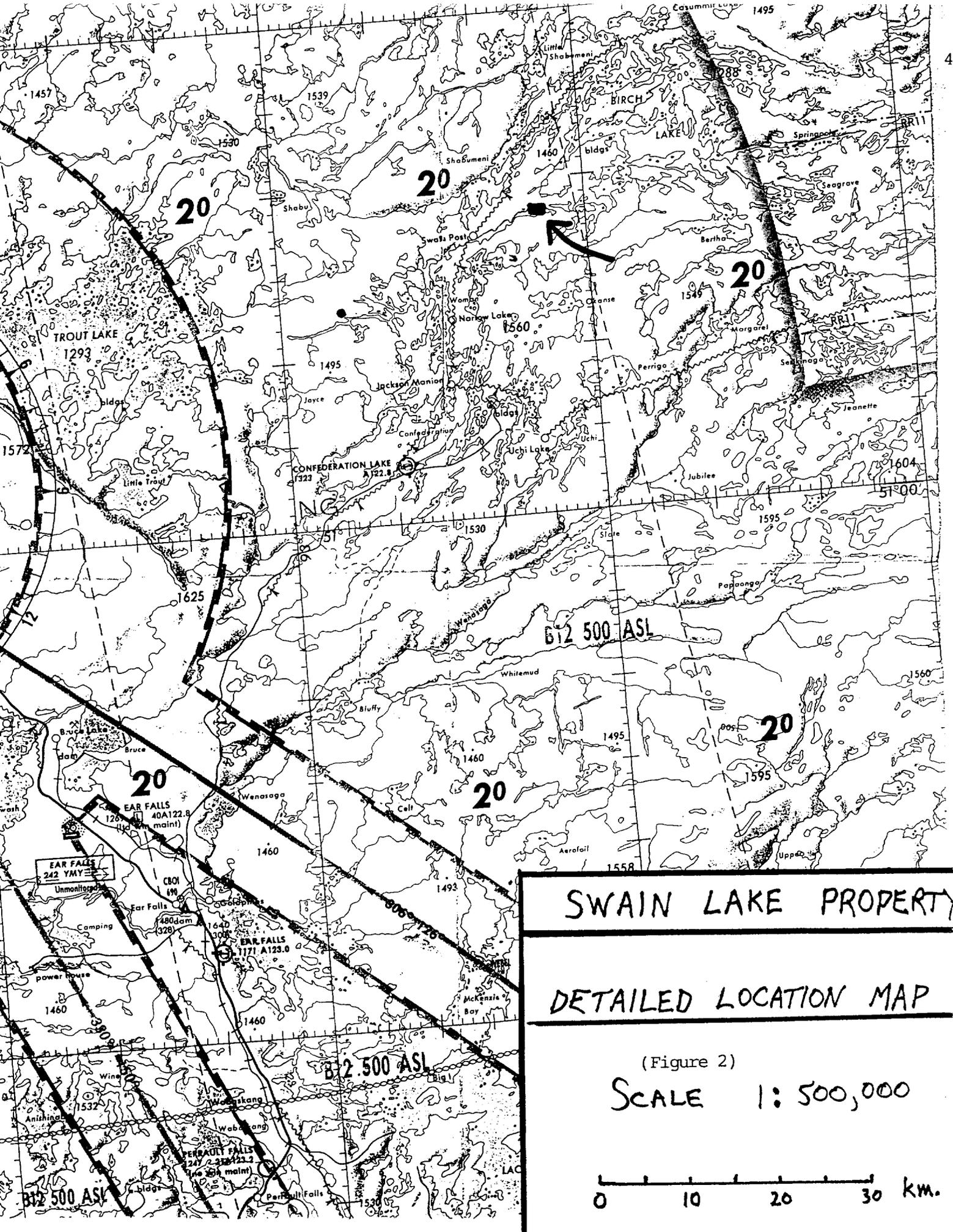
SWAIN LAKE PROPERTY

PROPERTY LOCATION MAP

(Figure 1)

SCALE 1 : 8,000,000

0 100 200 300 400 500 km

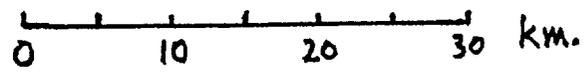


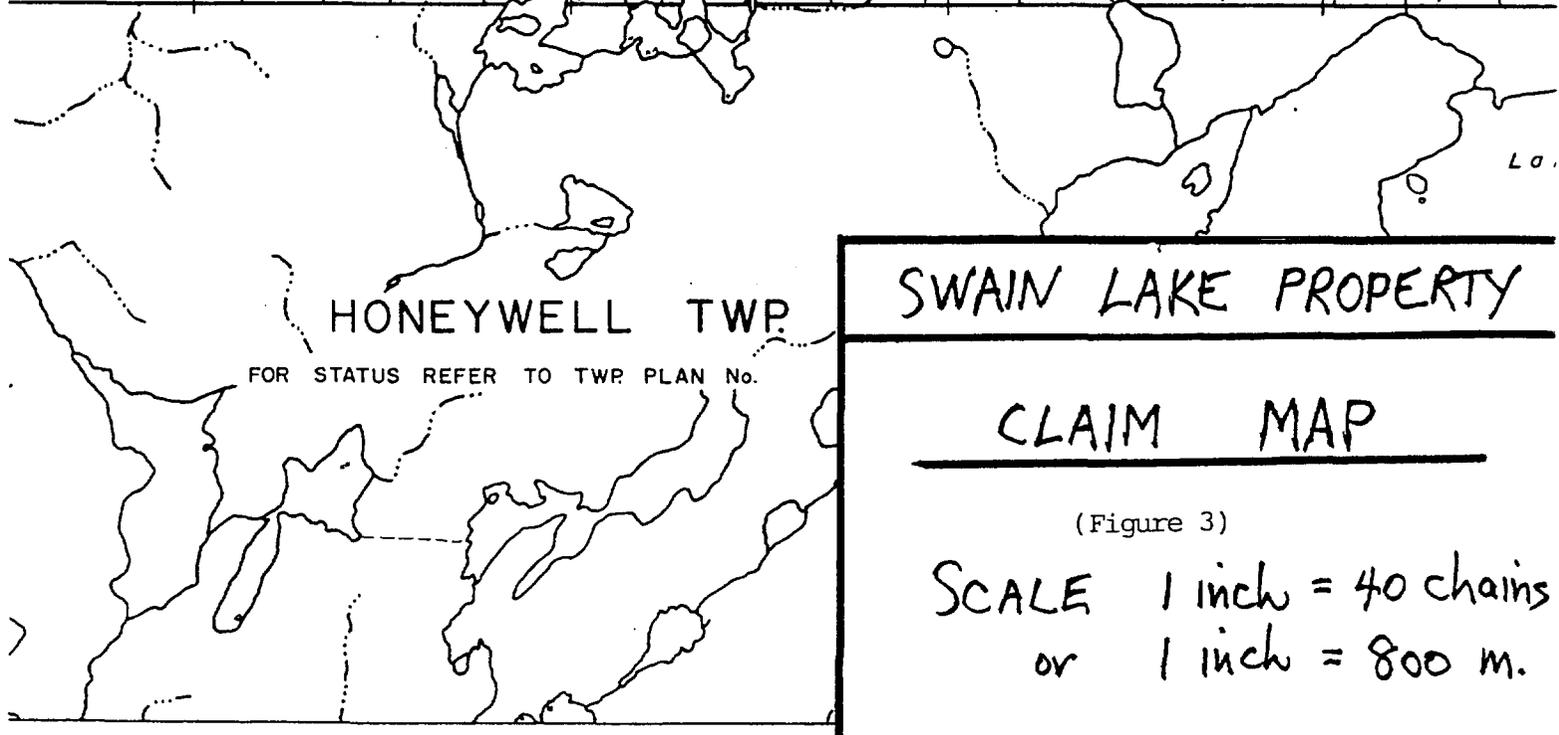
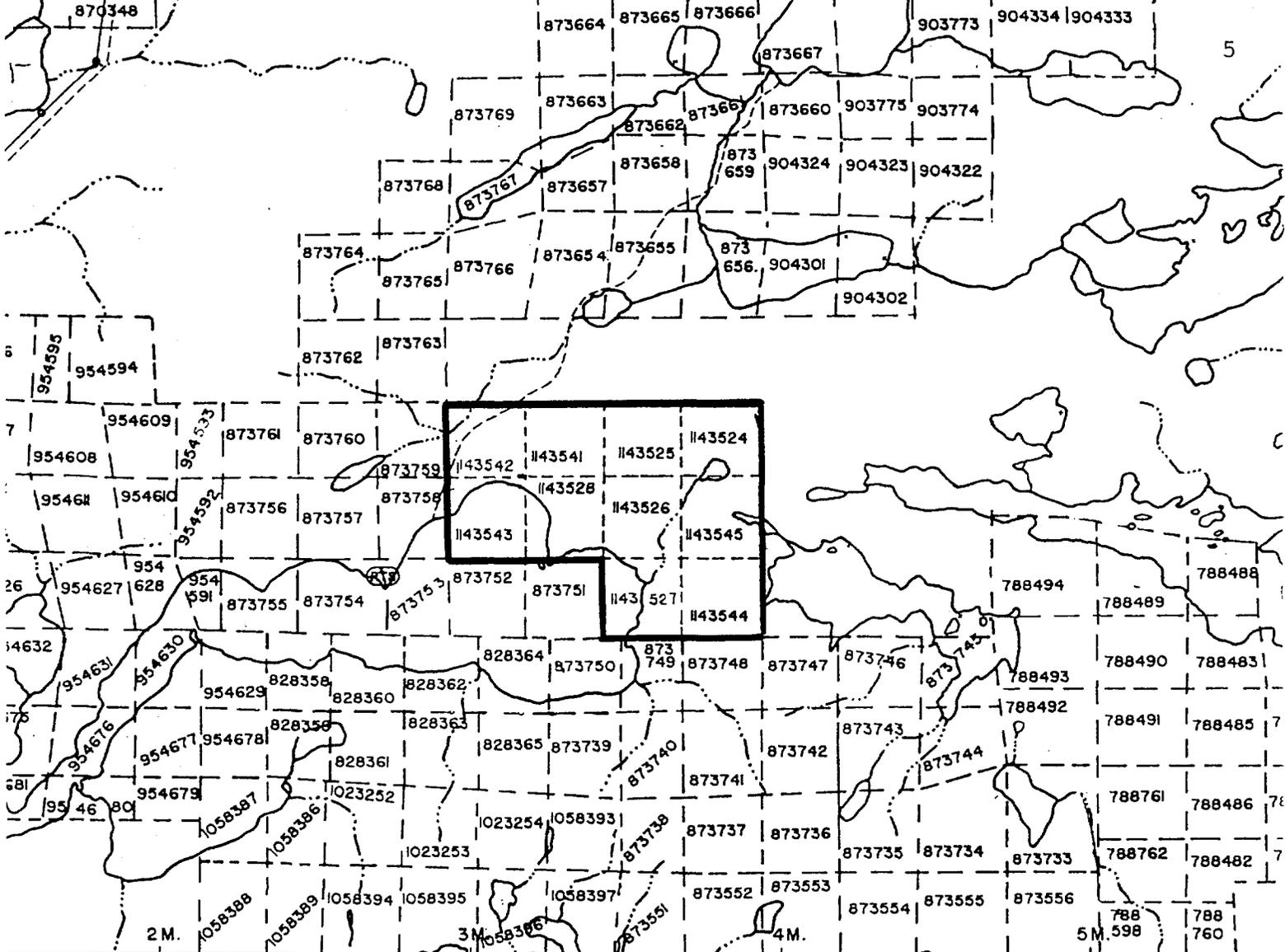
SWAIN LAKE PROPERTY

DETAILED LOCATION MAP

(Figure 2)

SCALE 1: 500,000





SWAIN LAKE PROPERTY

CLAIM MAP

(Figure 3)

SCALE 1 inch = 40 chains
or 1 inch = 800 m.

37' 36' 35'

Figure 4 - TABLE OF LITHOLOGIC UNITS

Phanerozoic
 Cenozoic
 Quaternary
 Pleistocene and Recent
 - glacial swamp, lake and stream deposits

unconformity

Precambrian
 Archean
 Felsic to Intermediate Intrusive Rocks
 - granite, grandiorite, tonalite, monzonite, porphyry,
 felsite, etc.

intrusive contact

Mafic and Ultramafic Intrusive Rocks
 - diorite, gabbro, peridotite, etc.

intrusive contact

Chemical Metasedimentary Rocks
 - chert, ironstone, carbonate, bedded sulphides, etc.

Clastic Metasedimentary Rocks
 - conglomerate, sandstone, siltstone, shale, arenite, wacke,
 argillite, etc.

Felsic Metavolcanic Rocks
 - flows, tuffs, tuff-breccias, crystal tuffs, lapilli,
 agglomerate, etc.

Mafic Metavolcanic Rocks
 - massive, pillowed, brecciated, variolitic, amygdaloidal,
 hyaloclastites, chlorite schists, tuffs, etc.

of Canada Ltd. Interflow iron formation is interlayered with chloritic tuffs and jasper. The metavolcanic rocks are intruded by hornblende syenite and quartz porphyry dikes and by the Swain Lake stock of diorite composition which is amphibole- and feldspar-phyric (Beakhouse et al. 1989; Beakhouse 1989). The metavolcanic rocks at the Guest prospect are part of the Cycle III sequence described by Thurston (1985, 1986)."*

SUMMARY OF PREVIOUS EXPLORATION AND DEVELOPMENT

- "1963: Staked by Gunnex Ltd., but exploration work was concentrated on the Swain Lake Cu-Co occurrence on the south shore of Swain Lake.
- 1965-1966: Staked by A.L. Guest Prospecting Grubstake and optioned to Asarco Exploration Co. of Canada Ltd. in joint venture with Noranda Explorations (The Northern Miner, July 7, 1966). Asarco conducted ground magnetic, electromagnetic and induced polarization geophysical surveys, geological mapping and diamond drilled 12 packsack drill holes totalling 160 m.
- 1969-1970: Vanco Exploration of Ontario Ltd. flew airborne magnetic, electromagnetic and gamma-ray spectrometer surveys over the property and conducted geological mapping and ground magnetic and self-potential geophysical surveys.
- 1974: St. Joseph Exploration Ltd. diamond drilled 3 holes totalling 556 m on claims KRL 368576 and 3685677.
- 1983-1984: Labrador Exploration (Ontario) Ltd. staked the Guest prospect which they referred to as the Signal claim group. The company conducted magnetic and horizontal loop geophysical surveys and diamond drilled 2 holes totalling 264 m.
- 1987: Explorco Properties Inc. conducted magnetic and electromagnetic geophysical surveys, as well as geological mapping and rock, soil and humus geochemical surveys.

- 1989: Noranda Exploration Co. Ltd. conducted prospecting and lithogeochemical sampling on the property.
- 1991: The guest property was staked by D. Smith."**

PROPERTY GEOLOGY AND STRUCTURE

Detailed mapping by the author has resulted in a map which is generally in agreement with the most recent government work. Mafic flows predominate in the southern part of the property and are overlain by a felsic pyroclastic unit to the north. Sulphide enrichment occurs within a sheared metasedimentary unit at the contact between the mafic flows and the felsic pyroclastics. The metasedimentary unit exhibits strong shearing and consists of intercalated chert, iron formation, and chlorite schists (mafic tuffs?). It contains pods, lenses, and stringers of pyrite, chalcopyrite, pyrrhotite, and minor sphalerite with associated sericite, carbonate, ankerite, and gold.

This sediment/shear zone is 200 meters thick and strikes the same as the regional strike - that being approximately 100°.

There is strong evidence to suggest the presence of a north-east trending thrust fault which passes through the lake at the north end of claim 1143545. At the south-west corner of the lake there are several occurrences of fault breccia with ankerite, biotite, and epidote. Also at this location (on the shoreline) is an outcrop of feldspar crystal tuff/lapilli tuff which is specifically diagnostic of the felsic pyroclastic unit normally found 150 meters to the north - see accompanying map. This would

also explain the apparent discontinuity of the iron formation/sedimentary unit.

The mafic flows to the south are generally fine-grained, pillowed, and silicified. Tourmaline and garnet are sometimes found in pillow selvages. In amygdaloidal flows, graded vesicle beds indicate tops to the north. Gabbros and quartz-feldspar porphyrys are also found in this unit, possibly reflecting proximity to the Swain Lake Pluton which outcrops at the southern extremity of the property.

The felsic pyroclastic unit is very distinct and consistent. The textures are white feldspar crystal tuffs, lapilli tuffs, and agglomerates. Sericitic alteration is common, which becomes dominant as the unit grades into the sericitic shear zone on the south side of Bobarris Lake (400 meters east of the property).

MINERALIZATION

Sulphide mineralization is predominantly associated with the metasedimentary unit between the mafic and felsic volcanics and locally within the felsics. The original Guest Occurrence consisted of the North showing (12-13 N, 160-170 W, on the grid) and the South showing centred on 10+50 N, 157 W on the grid. The highest recorded results from these showings are as follows:

South Showing

- 4% Cu across 1.4 ft. and 2.15% Cu across 6.3 ft. from pack-sack drilling (Asarco)
- grab sample of 0.22 ounces per ton Au. (Labrador)
- channel sample of 0.06 ounces per ton Au across 5 ft. (Noranda)

North Showing

- grab sample of 0.9 ounces per ton Au (Noranda)
- diamond drilling - 0.11% Cu and 0.08 o.p.t. Au across 5 ft. (St. Joe)

In addition to these, a significant new shear zone has been discovered (during this survey) in the felsic pyroclastic unit to the north. Located at 15 N on line 146 W of the grid, the zone is at least 10 meters thick and consists of a series of 10-20 cm thick quartz-carbonate-sulphide veins and stringers within a sheared sericitic schist. Several grab samples taken at different locations across strike within the zone indicate consistent high anomalous gold values up to 5280 ppb in the quartz and 1770 ppb in the sericite schist. Similar sericite schists in intermediate pyroclastics on the south side of Bobarris Lake (12 N, L 122 W on grid) gave consistent results up to 6,750 ppb.

A soil sample survey done by Exploreco in 1987 indicates consistent exceptionally high gold values commonly up to 300 ppb spread out all across the property's different lithologies. One soil sample assayed 2690 ppb Au (13+50 N, 140 W)

CONCLUSIONS AND RECOMMENDATIONS

The property comes highly recommended for the following reasons:

- 1.) Consistently high gold values in soil (up to 300 ppb and above) throughout the property.

- 2.) Presence of several faults and gold bearing shear zones with economic grade mineralization intersecting with the main regional Swain Lake Deformation Zone.
- 3.) Numerous unexplained V.L.F. electromagnetic conductors within both the mafic flows and the felsic pyroclastics present drill targets for both gold and base metal mineralization.

Four drill targets have been isolated based on a compilation of previous geophysical surveys and the author's findings. These are located on the map at the following locations on the grid:

- i) 11+50 N, L130W
- ii) 8 N, ~~L15W~~ 151 20
- iii) 13 N, L126W
- iv) 15 N, L146W

There is no doubt that detailed ground geophysics will outline more drill targets from the many known V.L.F. conductors on the property.

Respectfully submitted,



Rand G. Hodgson, B.Sc., B.Ed.

Date of Signature:

Nov. 14 / 92

REFERENCES

- * Parker, J.R. and Atkinson, B.T., O.G.S. Open File Report # 5835, 1992 Queens Printer for Ontario, Toronto, pg. 308.
- ** Parker, J.R. and Atkinson, B.T., Ibid., pg. 309.

BIBLIOGRAPHY

- 1989 Beakhouse, G.P., Forsyth, D.M., Scott, K.V., and Wallace, H., Precambrian Geology of the Western Birch Lake Area, Southern Half, District of Kenora, O.G.S. map, pg. 3118.
- 1981 Thurston, P.C., Jackson, M.C., and Pirie, I., Precambrian Geology of the Birch Lake Area, District of Kenora, O.G.S. map, pg. 2387.

<u>CLAIM #'S</u>	<u>WORK DUE DATES</u>
1143524	April 12, 1993
1143525	April 12, 1993
1143526	" " "
1143527	" " "
1143528	" " "
1143541	" " "
1143542	" " "
1143543	" " "
1143544	" " "
1143545	" " "



GEOCHEMICAL ANALYSIS CERTIFICATE



Rand Hodgson File # 92-3423

Box 65372 Station F, Vancouver BC V5N 5P3

Appendix II - Assay Certificate

SAMPLE#	Au* ppb
RH-1	57
RH-2	16
RH-3	51
RH-4	6750
RH-5	2400
RH-6	4580
RH-9	230
RH-10	130
RH-11	33
RH-12	320
RH-13	620
RH-14	1770
RH-15	1280
RH-16	1710
RH-17	3480
RH-18	760
RH-19	900
RH-20	5240
RH-21	400
RH-22	36
RH-23	2500
RH-24	4310
RH-25	20
RH-26	26
RE RH-22	53
RH-27	1520
RH-28	9230
RH-29	200
RH-163W 12N	16
STANDARD AU-R	530

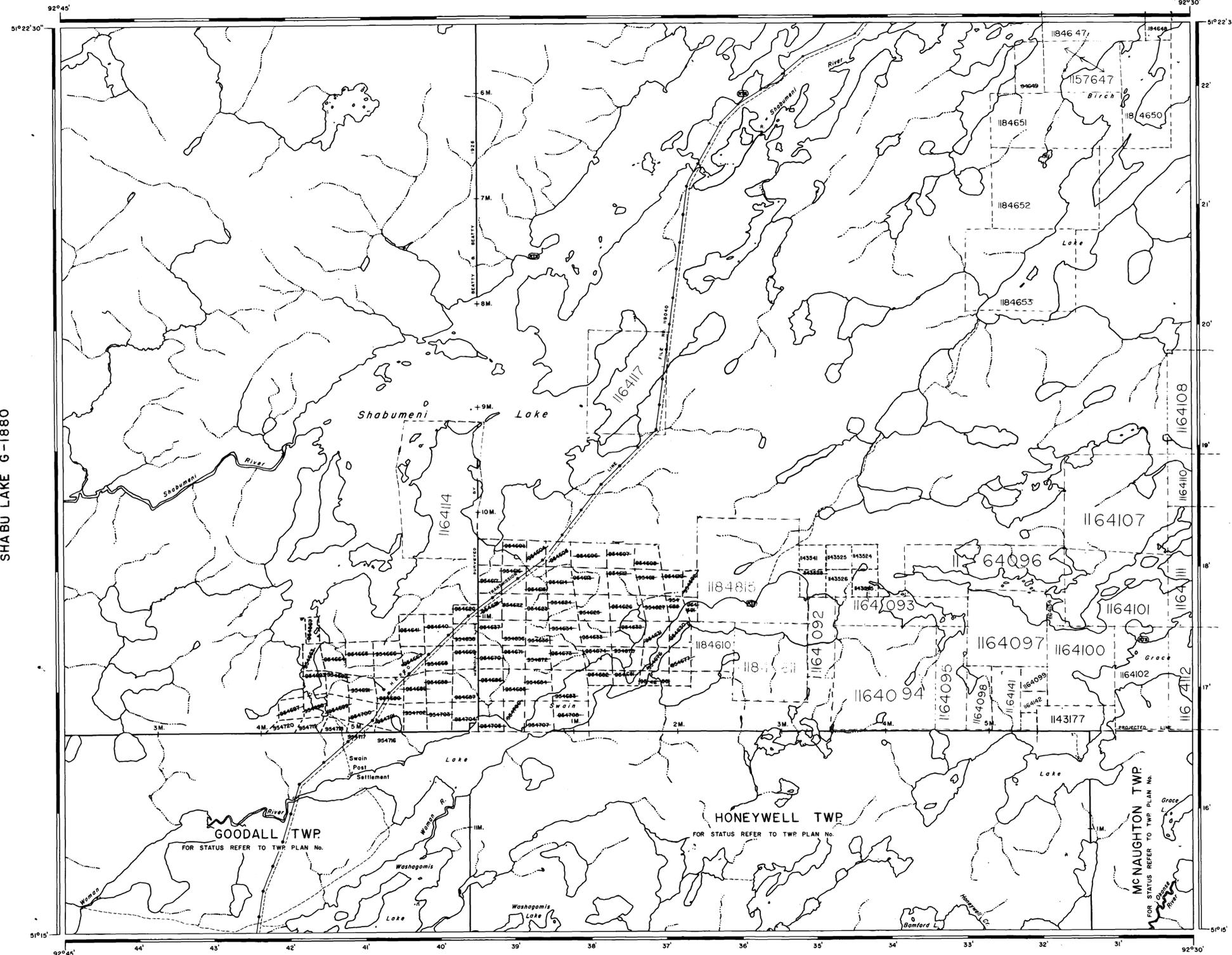
- SAMPLE TYPE: ROCK AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: SEP 30 1992 DATE REPORT MAILED: *Oct 5/92* SIGNED BY: *Chung* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

FOREST ACTIVITY INFORMATION
THIS TOWNSHIP/AREA FALLS WITHIN THE

AND MAY BE SUBJECT TO FORESTRY OPERATIONS
THE M.N.R. UNIT FORESTER FOR THIS AREA CAN BE
CONTACTED AT:
P.O. BOX 5003
RED LAKE, ONTARIO P0V 2M0
(807) 727-2253

LITTLE SHABUMENI LAKE G-1810



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

LEGEND

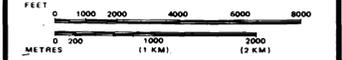
- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
 - TOWNSHIPS, BASE LINES, ETC.
 - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
 - LOT LINES
 - PARCEL BOUNDARY
 - MINING CLAIMS ETC.
 - RAILWAY AND RIGHT OF WAY
 - UTILITY LINES
 - NON PERENNIAL STREAM
 - FLOODING OR FLOODING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

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 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC. 1.

SCALE: 1 INCH = 40 CHAINS



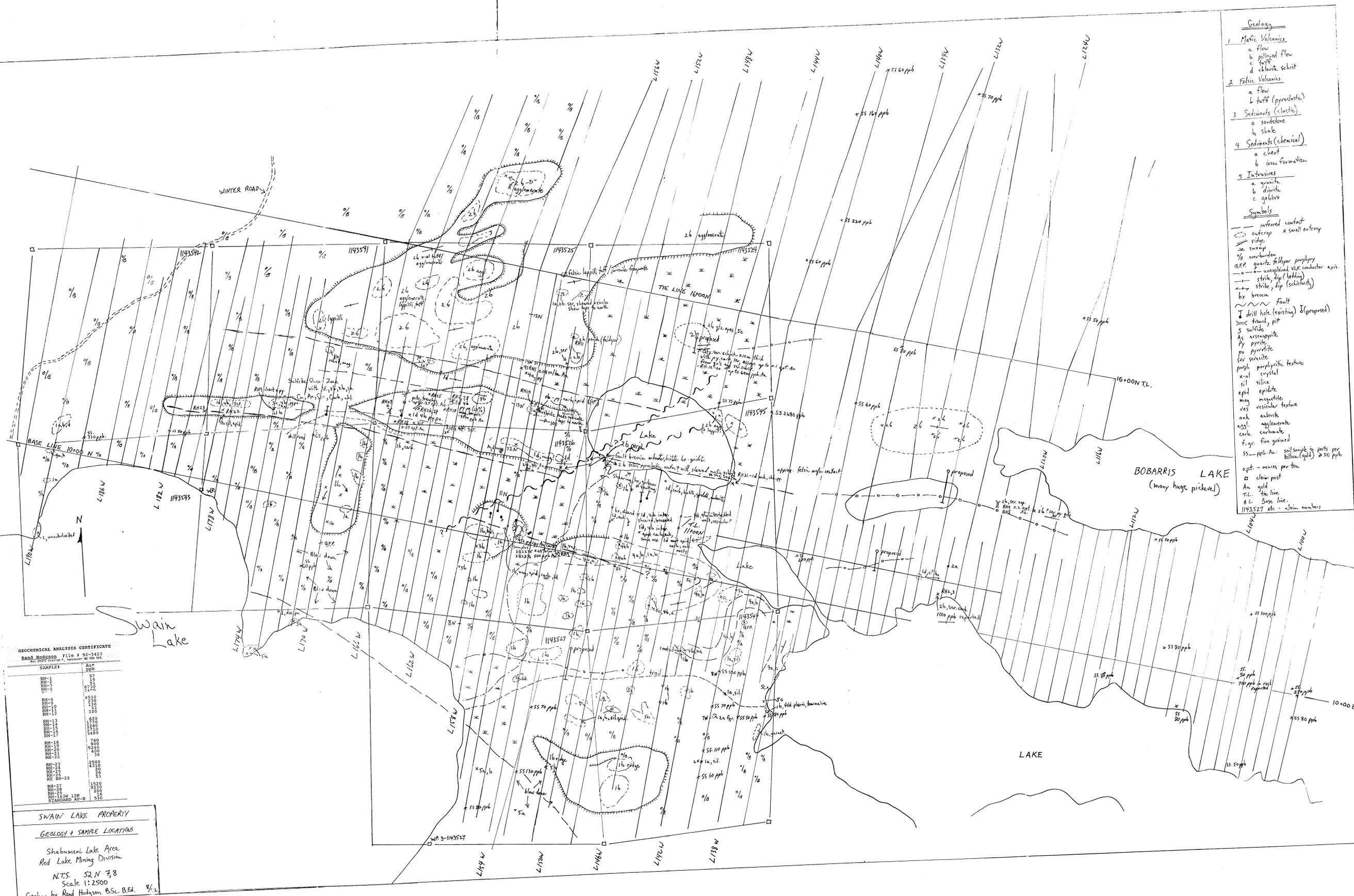
AREA
SHABUMENI LAKE
M.N.R. ADMINISTRATIVE DISTRICT
RED LAKE
MINING DIVISION
RED LAKE
LAND TITLES / REGISTRY OF DEEDS
KENORA / PATRIA
DATE OF ISSUE
OCT 13 1998

Ministry of Natural Resources
Ontario
PROVINCIAL RECORDING OFFICE - SUDBURY
Management Branch

Date FEB. 1983
Number
G-1881

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.





- Geology**
- Mafic Volcanics**
 - flow
 - pillowed flow
 - tuff
 - chlorite schist
 - Felsic Volcanics**
 - flow
 - tuff (pyroclastic)
 - Sediments (clastic)**
 - sandstone
 - shale
 - Sediments (chemical)**
 - chert
 - iron formation
 - Intrusives**
 - granite
 - diorite
 - gabbro
- Symbols**
- inferred contact
 - o outcrop
 - o small outcrop
 - o swamp
 - o concretion
 - o quartz, feldspar porphyry
 - o - unexplained vlf. conductor axis
 - o strike, dip (bedding)
 - o strike, dip (schistosity)
 - o by breccia
 - o Fault
 - o drill hole (existing) o (proposed)
 - o trench, pit
 - o sulfide
 - o arsenopyrite
 - o pyrite
 - o pyrrhotite
 - o ser. sericite
 - o porph. porphyritic texture
 - o sil. crystal
 - o sil. silica
 - o epid. epidote
 - o mag. magnetite
 - o ves. vesicular texture
 - o ank. ankite
 - o aggl. agglomerate
 - o carb. carbonate
 - o f. gr. fine grained
 - o ss - ppb. Au. soil sample in parts per billion (gold) > 30 ppb
 - o opt. - ounces per ton
 - o claim post
 - o Au. gold
 - o TL. true line
 - o B.L. Base line.
 - o 1143527 etc. - claim numbers

GEOCHEMICAL ANALYSIS CERTIFICATE
 Rand Hodgson File # 92-3423
 For 3378 samples, November 26, 1982

SAMPLE#	Au ppb
RH-1	97
RH-2	15
RH-3	27
RH-4	270
RH-5	4330
RH-6	130
RH-7	320
RH-8	630
RH-9	1280
RH-10	3180
RH-11	260
RH-12	800
RH-13	5240
RH-14	400
RH-15	36
RH-16	2300
RH-17	130
RH-18	30
RH-19	53
RH-20	1920
RH-21	9270
RH-22	210
RH-23	530
STANDARD 21-2	530

SWAIN LAKE PROPERTY
GEOLOGY + SAMPLE LOCATIONS
 Shabumeni Lake Area
 Red Lake Mining Division
 N.T.S. 52 N 7.8
 Scale 1:2500
 Geology by Rand Hodgson B.Sc. B.Ed. 8/2