

31M04SW0037 2.3525 STRATHCONA

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MINING LANDS SECTION

St. Joseph Explorations Ltd.
SOIL GEOCHEMISTRY LOWELL LK. OPTION
Strathcona Twp.
Temagami Area
Ontario

Claims: 399,084 399,085;
437,828 to 437831;
438,464 to 438466;
438,469, 438470.
438,473; 438474;
437,946;

A.W. Beecham
30 Oct. 1980.

N.I.S. 31-M-4

INTRODUCTION

The area covered in this survey is part of a group of claims, held under option from L. Savard of Lafontaine, P.Q. The survey was undertaken in an attempt to locate concentrations of Au, Ag, Cu, and Zn. Arsenic was also analyzed as a pathfinder element for Au and Ag. Previous work (see below) had indicated anomalous concentrations of Cu and Zn in extensive fine silicious pyrrhotite-rich sediments and gold values in quartz carbonate veins. The similarity of the geological setting to the Cobalt area and the presence of Ag - bearing float around Karol Lake (Ferguson et al) immediately west of the property are the reasons for considering the silver potential.

LOCATION AND ACCESS

The claims are located about 5 km. south of the Town of Temagami in Strathcona Township. Highway 11 approximately marks the western boundary and the Lowell Lake Road (the old Ferguson Highway) an all weather gravel road passes through the middle of the claims from north to south.

TOPOGRAPHY

The maximum relief in the area is about 50 m. (possibly up to 75m.). However there are abundant rock exposures and numerous steep cliffs from a few metres up to 20 m. high. This rugged topography is mainly in areas underlain by Huronian conglomerates.

PROPERTY DESCRIPTION

The Lowell Lake property consists of 17 contiguous, 40 acre (16 hectare) claims. They were held under a working option from L. Savard of 112 Place Yanick, Apt. 2, Lafontaine Que. Early in September 1980 the claims were transferred back to Mr. Savard and the work described here is submitted on his behalf.

List of Claims in Lowell Lake Option Covered in this Report

<u>Claim No.</u>	<u>Recording Date</u>
S-399084	3 May 1977.
S-399085	8 June 1977.
S-437828, 829	30 Jan. 1976.
S-437830, 831	3 Mar. 1976.
S-438464 - 470	23 Oct. 1975.
S-438473 - 474	23 Oct. 1975
S-437946	20 July 1976

GENERAL GEOLOGY and MINERAL OCCURRENCES

The geology of the claims is described by Binney, (1977). The Temagami area was mapped by Bennett (1974) of the Ontario Division of Mines from 1969 - 1972 at a scale of 1,000 ft. to the inch.

The basement rocks of the area consist mainly of Archean mafic volcanics with minor amounts, but areally extensive, silicious sulphide - rich sediments. The volcanics are intruded by a large trondhjemite mass on the west side of the property (the Ice Land Lake Pluton) and numerous small feldspar porphyry dykes. The Archean volcanics appear to be in tight recumbant folds with gentle dips. Overlying the Archean basement unconformably is the Gowganda Formation of the Huronian Supergroup. This consists of conglomerates, quartzites and siltstones. These are only weakly deformed. Both the Huronian and Archean rocks are intruded by sheets and dykes of the Nipissing Diabase.

Of main interest in the area are extensive pyrrhotite - rich siliceous sediments which in many places carry about 0.20 % Cu and similar amounts of Zn. These are very similar to exhalite horizons of massive sulphide producing camps. However, extensive geophysical suggests there are no large, shallow, massive sulphide bodies along these exhalite horizons. The presence of these very anomalous Cu and Zn levels in exhalites in a productive base metal camp would be very interesting. However, here it is felt that the Cu and Zn were likely derived from a Nipissing Diabase - generated hydro-thermal system and may be 'red herrings' when looking for volcanogenetic base metals.

In the northeast, minor silver and gold values occur in drill holes on claim S-437828. The best of these values are in drill hole 189 # 1 as listed below:

From	To	Core Length (metres)	g/tonne		Remarks
			Ag	Au	
81	- 82.5	1.5	21.9	0.17	quartz- carbonate pyrite, arsenide vein in Gowganda Conglomerate
138.1	- 138.4	0.3	5.8	6.5	quartz-carbonate, pyritic, pyrrhotite, chalcopyrite vein, in Nipissing Diabase.

SUMMARY OF PREVIOUS WORK

- 1955 - Sylvanite G.M.C.: trenching and sampling of area north of Lowell Lk.
- Newkirk Mining Corp: ground magnetic and E.M., resistivity, 5 short drill holes at Maille Lk.
- 1969 - Geological mapping, Hg. soil geochemistry and magnetic survey in Maille Lk. area.
- 1977 - St. Joseph Explorations: horizontal loop E.M. and ground magnetics, geological mapping (Binney) over 47 claim block including present claims and area south of Lowell Lk.
- Airborne E.M. Survey INPUT System.
- 1978 - St. Joseph Explorations Turam (E.M.) survey by Geosearch Consultants Ltd. of an area North of Lowell Lk. (attempt to locate deep A.E.M. response.)
Re-oriented E.M. Survey area north of Lowell Lk. to locate deep INPUT response.
- Diamond drilling (662 metres) to test deep E.M. response N.E. of Lowell Lake.
- I.P. Survey area N.E. Lowell Lake
- 1980 - Turam (E.M.) North Lowell Area.

DESCRIPTION OF SOIL GEOCHEMICAL SURVEY

After considerable work on the property, as described about, it was decided as a last resort to use soil geochemistry in an attempt to locate gold and/or copper - zinc - mineralization. Because of a similar geological environment to Cobalt, soils were also analysed for Ag. Arsenic analysis were also done as As is an abundant element with Cobalt ores and is a common associate of gold.

A total of 498 A₀ and A₁ soil samples were collected in June 1980. Picket lines cut in 1976 - 1977 were used for control and where these were overgrown control was by pace and compass.

Topography soil and vegetation types were described at each sample point. Although only humus -rich samples were to be collected, it is obvious from the number of non-Humus (N.H. on map) notes that there was some careless sampling. This has reduced the effectiveness of the survey for Au and As (only humus - rich samples can be run by the neutron activity technique used.)

Gold and arsenic analyses were done by X-Ray Laboratories by neutron activation. These same samples were then analyzed by Bell-White Laboratories of Haileybury for Cu and Zn and Ag by atomic absorption. Approximately 100 of the samples from the northeast area were misplaced by X-Ray Laboratories and hence have not been run for Cu, Zn and Ag.

Silver, arsenic and gold data are shown in Fig. 1. No statistical analyses of these data have been made, but by comparison with work in other areas, there are very few Au, Ag, or As anomalies.

INTERPRETATION and CONCLUSIONS

Silver, Arsenic Gold: There is one isolated Ag anomaly at L 11N; 1 + 00E;.

There is no obvious explanation. However, it warrants only low priority for follow-up.


The As levels are generally low, considerable below levels associated with silver-arsenide veins in the Cobalt area. However, no data on As associated with gold is immediately available and it is not known if the 'weak' As anomalies have significance for gold exploration.

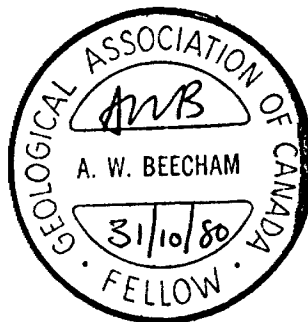
One strongly anomalous Au sample is located at L 16 N 4 + 25 W. This is within an area of mafic volcanics with some pyrite mineralization. This warrants follow-up i.e. detailed sampling and prospecting. (At time of writing re-sampling has been done but data have not yet been received from the Laboratory.) A 20 ppb. Au value on line 19 N;

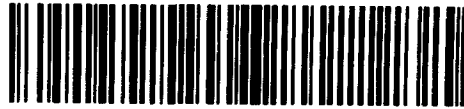
2 + 50 W may be weakly anomalous. If re-sampling confirms the 130ppb. Au at L 16 N; 4 + 25 W, resampling around the 20 ppb. value is warranted.

Copper, Zinc: There are a number of scattered copper and zinc 'highs'. Zinc highs are more or less coincident with copper highs and only Cu is contoured in Fig. 2. Most of these highs e.g. at L 13 + 50 N; 2 + 25 W and L9; 1 + 25W are associated with known Cu, Zn concentrations in siliceous pyrrhotite - rich sediments and they do not seem to indicate any new mineralization not already obvious in pits and trenches. There is a line of highs along the east side of Highway 11 from L 12 N to 19 N. for which there is no known cause. More prospecting in this area is warranted. However as the anomalies are of the same level as those associated with subeconomic Cu and Zn in bedrock at e.g. L 13 + 50 N; 2 + 25 W, follow-up should be given low priority.

31 October 1980.


A.W. Beecham
Senior Geologist
St. Joseph Explorations Ltd.





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MINING LANDS SECTION

TURAM (E.M.) SURVEY
ON LOWELL LAKE OPTION AND
ADJOINING CLAIMS

Strathcona Township
Temagami , Ontario

Claims:

S-437828
S-437829
S-438472
S-438474
S-473532
S-473533

Cobalt, Ontario
31 October 1980

A.W. Beecham
J.L. Wright

St. Joseph Explorations

SUMMARY

The TURAM survey gave the same poor ambiguous response as previous H.L.E.M. surveys. This survey did not define the airborne anomaly to our satisfaction.

INTRODUCTION

The Turam survey was run to delineate an airborne anomaly which was not properly defined in previous work.

This survey was confined to the immediate area in which the anomaly lies and as such total coverage of the claims listed was not made.

PROPERTY DESCRIPTION AND LOCATION

The claims covered are part of the Lowell Lake Option (from L. Savard). They lie in Strathcona Township, N.T.S. 31-M-4, in the Sudbury Mining Division. The claims lie about 5 to 6 km. south of the town of Temogami.

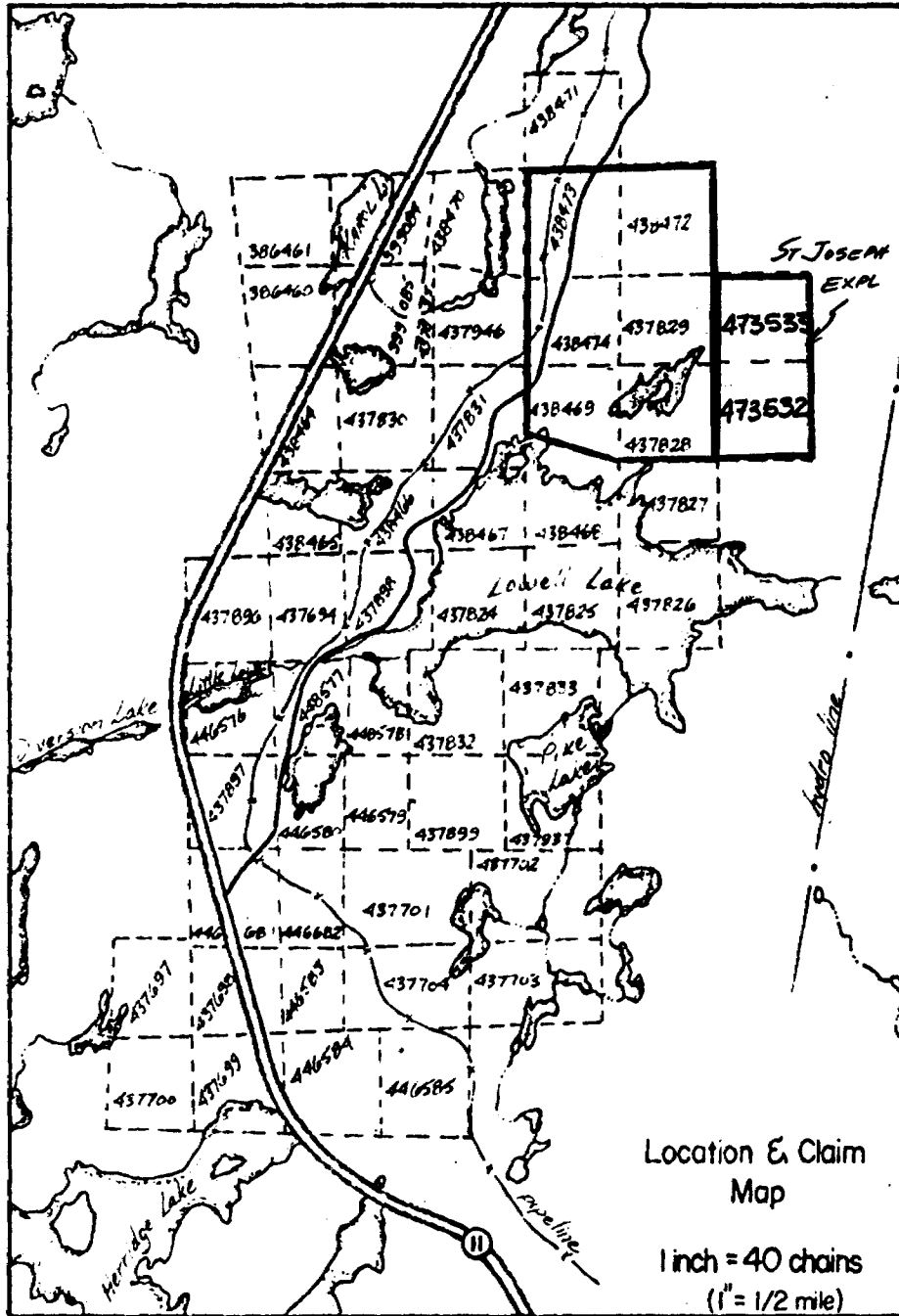
ACCESS

Access to the property is via the Lowell Lake Road which runs through the property.

RESULTS AND INTERPRETATION

The data are plotted in profile on a base map of scale 1:2500 and the profile scales of 1cm. = 10% NFRS and 1 cm. = 5° P.D. Details concerning the plotting convention can be found on the map in the pocket. Normalization of the field strength ratios (FRS) to form the normalized field strength ratios (NFSR) was performed and is adequately reviewed in any standard geophysical text book.

No good conductor was noted. A poorly formed anomaly extends from L 4+75E; 19+50N to L 7+00E; 19+25N. Depth estimate is about 100m. The conductivity of the anomaly seems moderately good. Both the depth estimate and the conductivity is somewhat ambiguous.



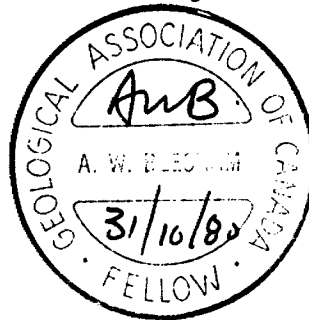
Best responses appear on L 7+00E. There is a possible extension to L 8+00E; 19+00N. Unusual values near the corners of the loop are typical because of coupling found at loop corners.

One small and shallow anomaly is noted on L 9+00E; 18+75N. This may be related to the airborne anomaly.

RECOMMENDATIONS AND CONCLUSIONS

This survey did not define the airborne anomaly to our satisfaction. Any further work to follow-up the airborne anomaly should be given a low priority.

31 October 1980



A.W. Beecham

A.W. Beecham
Senior Geologist

James L. Wright

J.L. Wright
Geophysicist



GEOPHYSICAL - GEOLOGICAL
TECHNICAL DATA



31M045W0037 2.3525 STRATHCONA

900

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

Type of Survey(s) TURAM

Township or Area STRATHCONA TWP.

Claim Holder(s) L. SAVARD

Survey Company ST. JOSEPH EXPLORATIONS LTD.

Author of Report T.L. WRIGHT, A.W. BEECHAM

Address of Author P.O. BOX 350, CORAL TWP., P.O. BOX 100

Covering Dates of Survey APRIL 6 - 11, 1980
(linecutting to office)

Total Miles of Line Cut _____

MINING CLAIMS TRAVERSED
List numerically

- S-438473
(prefix) (number)
- S-438474
- S-438469
- S-437946
- S-437828
- S-437829

If space insufficient, attach list

SPECIAL PROVISIONS CREDITS REQUESTED

<p>ENTER 40 days (includes line cutting) for first survey.</p> <p>ENTER 20 days for each additional survey using same grid.</p>	<p style="text-align: right;">DAYS per claim <u>20</u></p> <p>Geophysical _____</p> <p>-Electromagnetic _____</p> <p>-Magnetometer _____</p> <p>-Radiometric _____</p> <p>-Other _____</p> <p>Geological _____</p> <p>Geochemical _____</p>
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AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

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

DATE: 31/10/80 SIGNATURE: [Signature]
Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

TOTAL CLAIMS 6

PLEASE USE ONLY

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 267 Number of Readings 538
Station interval 25M. Line spacing 100M, 50M.
Profile scale Phase difference 1cm = 5 degrees, Normalized field strength ratio 1cm = 10%
Contour interval

MAGNETIC

Instrument
Accuracy - Scale constant
Diurnal correction method
Base Station check-in interval (hours)
Base Station location and value

ELECTROMAGNETIC

Instrument ANDROTEK ELFAST PROTOTYPE TURAM UNIT
Coil configuration Horizontal Mode
Coil separation 50M.
Accuracy PHASE DIFFERENCE - 2.5 to 5 degrees, FIELD STRENGTH RATIO +/- 0.5%
Method: [X] Fixed transmitter [] Shoot back [] In line [] Parallel line
Frequency 675 HZ. (specify V.L.F. station)
Parameters measured FIELD STRENGTH RATIO, PHASE DIFFERENCE

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



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) Soil Geochemical

Township or Area Strathcona

Claim Holder(s) Lionel Savard

Survey Company St. Joseph Explorations Ltd.,

Author of Report A.W. Beecham

Address of Author P.O. Box 350, Cobalt, Ontario.

Covering Dates of Survey June 1980 - Oct. 1980
(linecutting to office)

Total Miles of Line Cut NIL

MINING CLAIMS TRAVERSED
List numerically

- S.....-399084 *
(prefix) (number)
 - S.....-399085
 - S.....-437828 *
 - S.....-437829 *
 - S.....-437830
 - S.....-437831 *
 - S.....-438464
 - S.....-438465 *
 - S.....-438466 *
 - S.....-438469 *
 - S.....-438470
 - S.....-438473 *
 - S.....-437946
 - S.....-437474
- * claims only partly traversed.

If space insufficient, attach list

SPECIAL PROVISIONS
CREDITS REQUESTED

DAYS
per claim

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

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

ENTER 20 days for each additional survey using same grid.

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

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

DATE: 31/10/1980 SIGNATURE: A.W. Beecham
Author of Report or Agent

Res. Geol. _____ Qualifications 2.2509

Previous Surveys

File No.	Type	Date	Claim Holder

TOTAL CLAIMS 12

OFFICE USE ONLY

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 12

Total Number of Samples 498

Type of Sample _____
(Nature of Material)

Average Sample Weight 100-150 gm.

Method of Collection _____

Soil Horizon Sampled A₁ & A₀.

Horizon Development Moderate

Sample Depth Surface Sample

Terrain Rugged, numerous outcrops,
local swamps

Drainage Development Moderately, well-drained

Estimated Range of Overburden Thickness 0 - 10 m.

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis -80

General _____

ANALYTICAL METHODS

Values expressed in: per cent
p. p. m. AsAgCuZn
p. p. b. Au

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

Others Au

Field Analysis (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Field Laboratory Analysis

No. (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Commercial Laboratory ~~X-Ray Assay Au, Ag~~ (tests)

Name of Laboratory Bell White Cu Zn Ag

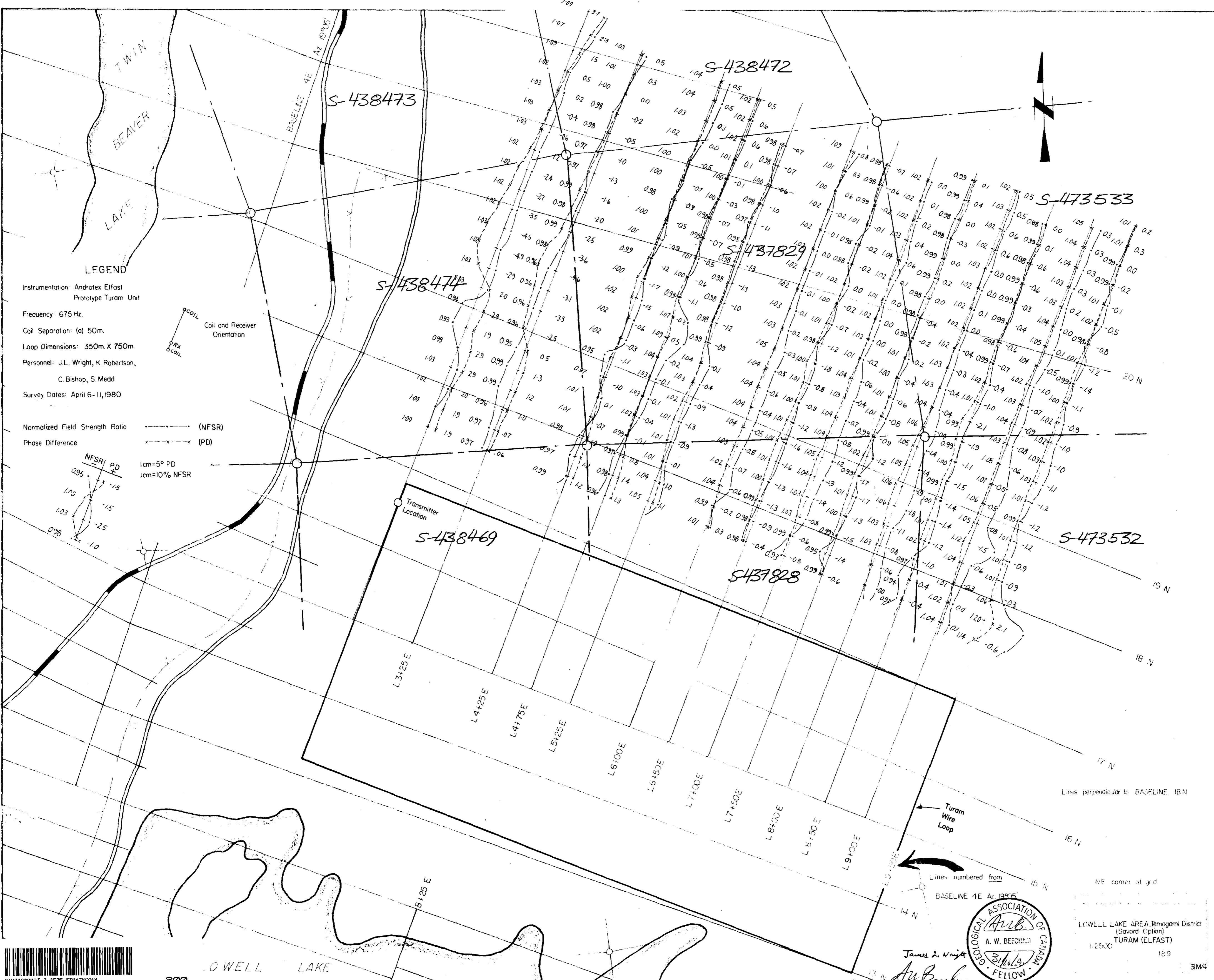
Extraction Method 1/2 hr HNO₃ + 1hr. HCl, Hot

Analytical Method Au, As. Neutron Activatio

Reagents Used HNO₃ 3 parts

HC l 1 part

General _____



LEGEND

Instrumentation: Androtex Elfast
 Prototype Turam Unit

Frequency: 675 Hz.

Coil Separation: (a) 50m.

Loop Dimensions: 350m. X 750m.

Personnel: J.L. Wright, K. Robertson,

C. Bishop, S. Medd

Survey Dates: April 6-11, 1980

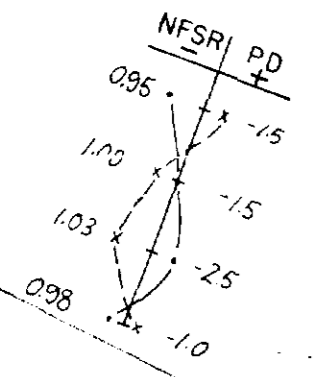
Normalized Field Strength Ratio

(NFSR)

Phase Difference

(PD)

1cm=5° PD
 1cm=10% NFSR



Coil and Receiver Orientation



Transmitter Location

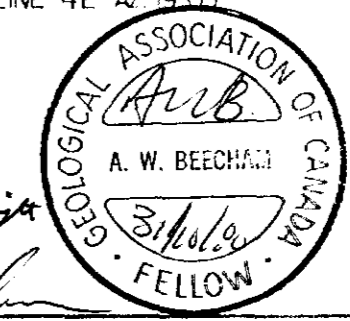
Turam Wire Loop

Lines numbered from BASELINE 4E Az 19905

Lines perpendicular to BASELINE 18N

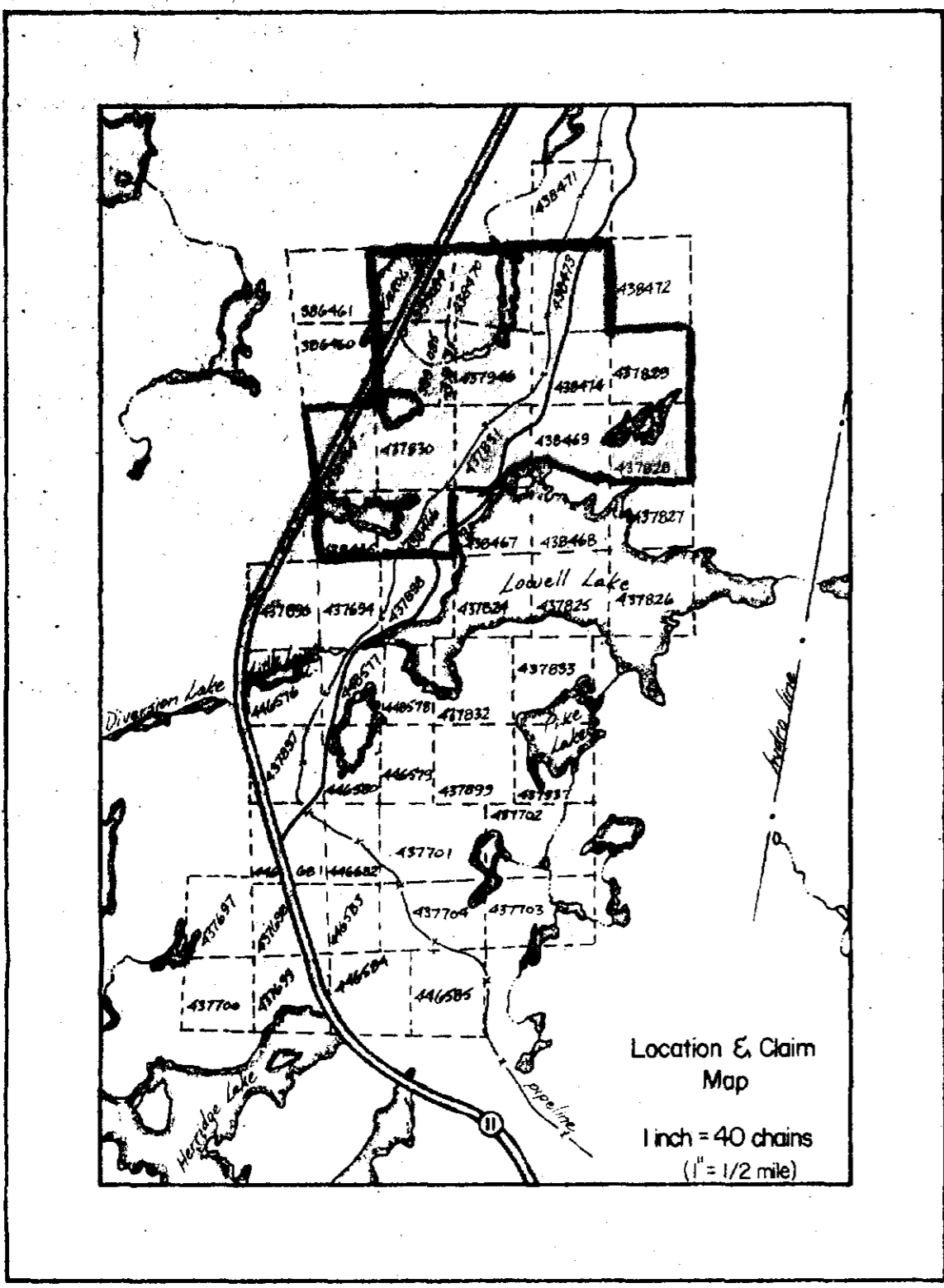
NE corner of grid

LOWELL LAKE AREA, (Jemogami District)
 (Savard Option)
 TURAM (ELFAST)
 1:2500
 189

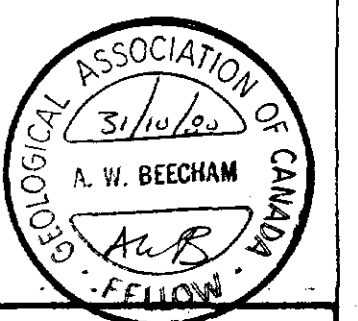


James L. Wright
A.W. Beecham





A.W. Becham



ST. JOSEPH EXPLORATIONS LIMITED
TORONTO, CANADA

October '80

LOWELL LAKE, DISTRICT OF NIPISSING (Savard Option)

SCALE 1:2500

APPROX LAT & LONG OF LOWER RE COR OF DWG

PROJECT NO. 3189

REPORT NO. _____

SHEET NO. _____ OF _____

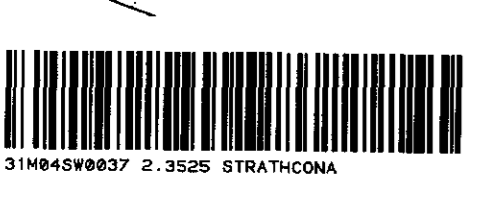
DATE OF SAMPLING - June 1, 1980

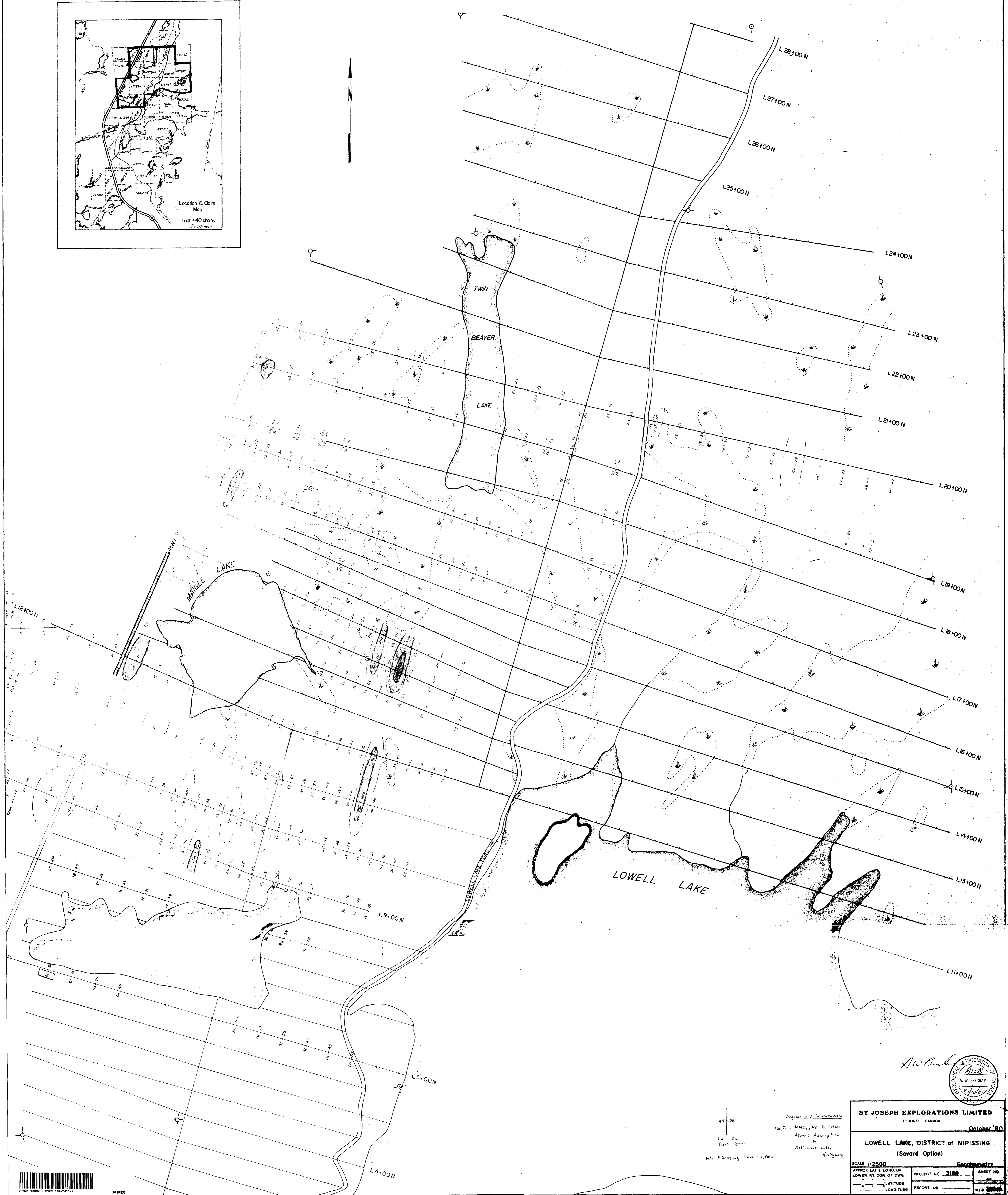
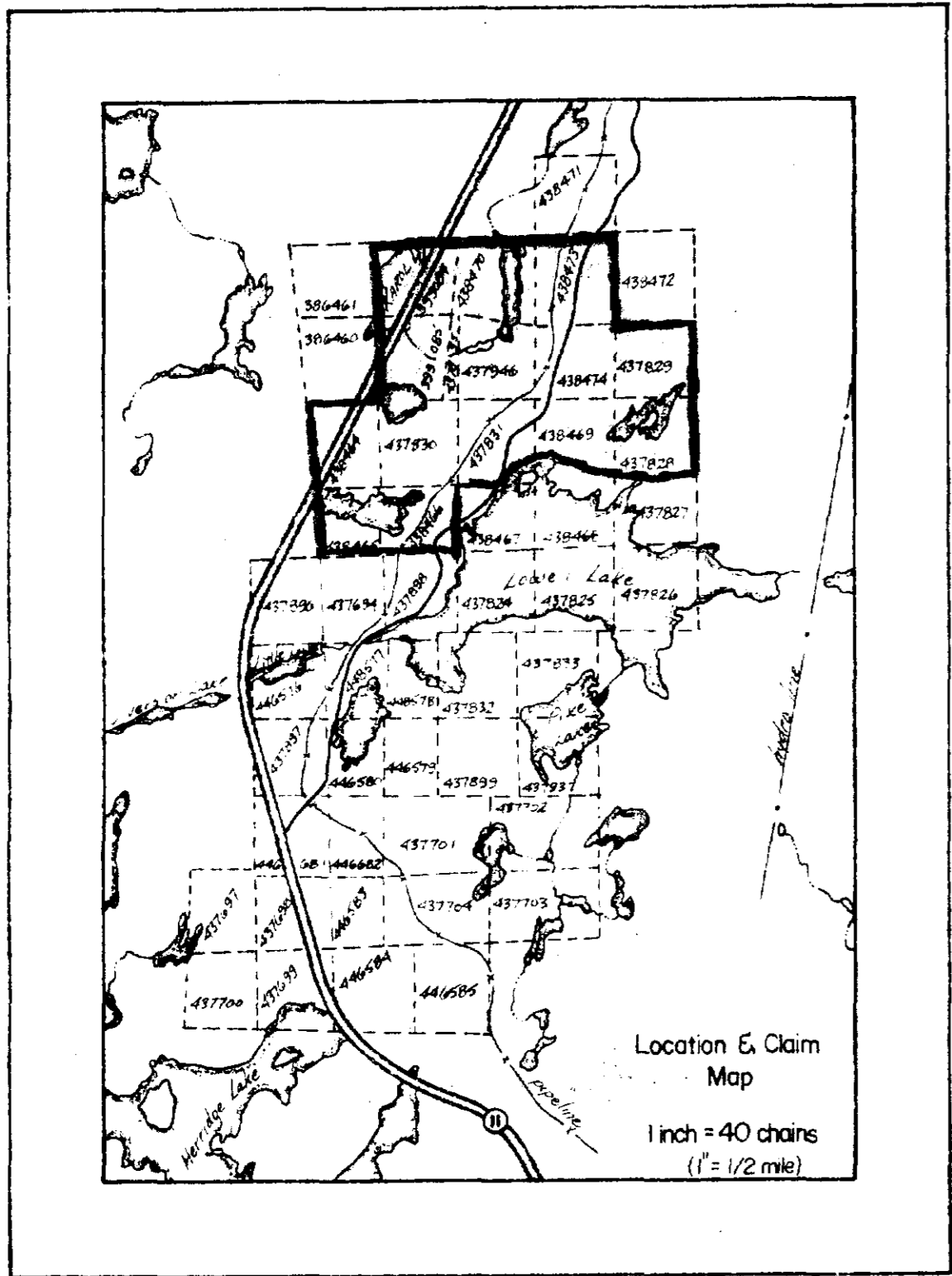
Geochemistry

Organic Soil Geochemistry

Au, As - Neutron Activation Analysis
X-Ray Laboratories, Dan Mills

As - HNO₃, HCl Digestion
Atomic Absorption
Bell-White Labs, Haleybury





A.W. Beecham
 ASSOCIATION OF
 GEOLOGICAL ENGINEERS
 OF CANADA
 A. W. BEECHAM
 3/10/80
 FELLOW

48-38
 Organic Soil Geochemistry
 Cu, Zn - HNO₃, HCl Digestion
 Atomic Absorption
 by
 Bell White Labs.
 Heidelberg

ST. JOSEPH EXPLORATIONS LIMITED
 TORONTO, CANADA
 October 80

LOWELL LAKE, DISTRICT OF NIPISSING
 (Seward Option)

SCALE 1:2500
 APPROX. LAT. & LONG. OF LOWER RT. COR. OF DWG.
 PROJECT NO. 3188 SHEET NO. 1 OF 1
 REPORT NO. N.Y.A. 20000

Date of Sampling - June 27, 1980

