



41015SW9071 2.9967 DENYES

010

REPORT on the PROPERTY
of
GLEN AUDEN RESOURCES LIMITED
Denyes Township
Porcupine Mining Division
District of Cochrane
by
R.K. Abernethy, B.A. Sc.
March, 1987

RECEIVED

APR 23 1987

MINING LANDS SECTION



41015SW9071 2.9967 DENYES

010C

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SUMMARY

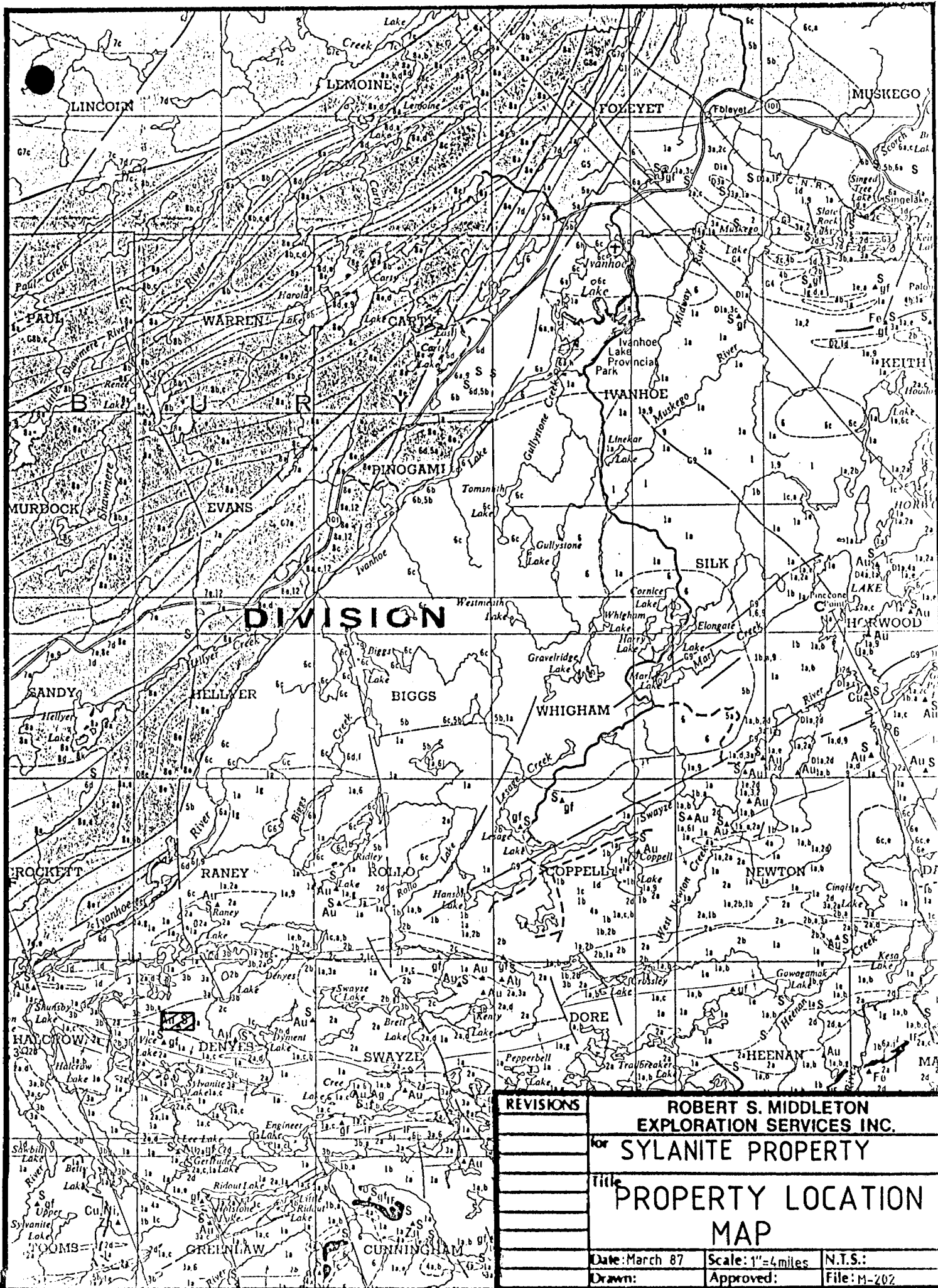
Six unpatented mining claims in central Denyes Township were mapped and sampled in November 1986. Rocks on the property are part of a long, east-west trending, east plunging, steeply dipping volcanic pile consisting of mafic to felsic volcanics, feldspar and quartz-feldspar porphyries, diabase dikes and sediments. Structural deformation and lithologic alteration appears to be most intense in a north-east trending zone which may be a fault zone along the contact between mafic and felsic volcanics. A small open ended gold bearing zone was confirmed in the old Sylvanite Trenches which returned assay values as great as 0.321 oz/ton and averaged 0.074 oz/ton over 11 samples. Follow-up programs of line-cutting, ground magnetics and VLF-EM, induced polarization, humus geochemical sampling, stripping and channel sampling, and diamond drilling are recommended.

INTRODUCTION

This report summarizes the reconnaissance geological mapping performed on the property of Glen Auden Resources Limited on their Sylvanite prospect in central Denyes Township. The survey was performed in November, 1986 and consisted of geological mapping (1:2,500) and sampling along pace and compass lines with 100-200m line spacing on north-south lines and 200-400m spacing on east-west lines. All claim lines were mapped and the shorelines of two unnamed lakes were mapped. The valley walls of the unnamed creek trending north-northeast across the property contain 70% of the outcrop on the property and was traversed and mapped. Detailed mapping was performed close to the known showings and grab samples were taken to confirm old assay results. The survey was performed by geologist Henry Hutteri and the author [Abernethy].

LOCATION AND ACCESS

The property is situated in the northwest quadrant of Denyes Township 1 1/2 miles north of Sylvanite Lake (Figure 1). Access to the property is via float plane from the Ivanhoe Lake airbase to Jackleg Lake, a small lake just north of the property, or a one day canoe and portage from the Swayze Lumber road in eastern Swayze Township.



REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for SYLANITE PROPERTY		
	Title		
	PROPERTY LOCATION MAP		
Date: March 87	Scale: 1"=4miles	N.T.S.:	
Drawn:	Approved:	File: M-202	

PROPERTY

The six unpatented mining claims which comprise this property are:

<u>CLAIM NO'S</u>	<u>NO. OF CLAIMS</u>	<u>EXPIRY DATE</u>
931813-818	6	June 12, 1987

PREVIOUS WORK

The original prospecting in Denyes Township followed the discovery of the Kenty Mine in northeastern Swayze Township in 1932 and 33. Eighteen claims were staked by Sylvanite Gold Mines Limited over the present Glen Auden property and prospecting under the direction of Duncan Campbell was undertaken. Trenching on the present 931816 claim uncovered a series of parallel porphyry dikes striking northwest which intrude schistose greywackes and tuffs. Rickaby (1934) visited the working for the Ontario Department of Mines and describes the property:

"The porphyry and schist have been fractured and the fractures filled with quartz heavily mineralized with pyrite and carbonates. The quartz vein with an indicated length of 200 feet lies along the contact between bedded tuffs and porphyry extending from trench B to trench D...No native gold is visible, but channel-sampling over 3 foot widths over a length of 160 feet of this vein are reported to give values up to 0.40 ounces per ton in gold. Grab samples of the quartz carrying considerable pyrite gave values up to 0.36 oz/ton in gold."

Erie Canadian Mines Limited optioned the property in 1934.

RANEY TWP.

DENYES TWP.

*Denyes
Lake*

*Dyment
Lake*

931813	931814	931815
931818	931817	931816

REVISIONS

R. P. BOWEN ENGINEERING INC

for

GLEN AUDEN RESOURCES LTD.

Title

Sylvanite Property

CLAIM LOCATION MAP

Date: Jan. 1987

Scale: 1"=1/2mile

N.T.S.

Drawn: C.G.

Approved:

File: M-202

Geologist J. Akers performed geological mapping over the entire present Glen Auden property, and cleaned and detail mapped seventeen trenches, ten of which were over the main showing (Figure 4). The best values obtained in chip samples (Figure 4) over a 140 foot length of a quartz vein in trench No.3 are:

<u>GRADE</u>	<u>WIDTH</u>
.34oz	4.7 feet
1.75oz	5.3 feet
1.85oz	10.2 feet
2.41oz	8.2 feet*
.40oz	4.0 feet
1.50oz	4.5 feet
.11oz	7.0 feet
1.20oz	3.8 feet
1.86oz	10.4 feet*
1.61oz	10.2 feet

Notes:

1. All samples taken along vein are reported.
2. Values represent weighted average of channel samples taken across the trenched vein.
3. Asterisk represents where unrealistically high grades have been cut to 5oz/ton.
4. Samplers most likely sampled best looking parts of vein.
5. Source: file T-2072 Timmins Assessment Files.

Five short diamond drill holes were recommended by Erie Canadian Mines on the basis of the trenching, but no evidence that the holes were drilled exists.

Resampling of the old trenches in 1940 by Sylvanite Gold Mines Ltd. confirmed the Erie results and extended the length of the mineralized zone to 300 feet.

In 1972 Falconbridge Nickel Mines Limited staked six claims which included the gold showing and most of the present property.

Work included geological mapping on a line grid with crosslines at 400 foot intervals and old trenches on the main porphyry zone were reconditioned (?) for sampling (Kelly 1973).

Thirty-five chip samples of relatively fresh, unleached material were taken. Results of the gold assays were disappointing in comparison to the Sylvanite and Erie results. Only one short zone, 0.22oz weighted average over 8.5 feet over a possible 16 foot length, was delineated. As a result the claims were allowed to lapse.

Manville Canada Inc. restaked the property in 1981. A new grid was cut and a geological and radiometric survey conducted by R.F. Kaltwasser and J. Goodger, and the old trenches were resampled where fresh exposures existed. Grab samples from quartz-carbonate veins in the old trenches resulted in assays up to 0.20 oz/ton over five feet (Evelegh 1984). Retrenching and systematic sampling was recommended but not performed.

GEOLOGY

Regional Geology

The rocks of the Glen Auden property are part of the east-west trending Swayze greenstone belt, approximately 28 miles long by 18 miles wide. The rocks are all Precambrian in age and are steeply dipping in fold structures, whose axis trend in a sinuous east-west path across the area. Faults and shear zones

trend predominantly north to north-west.

The belt shows wide lithologic variety but mafic volcanic flows predominate with felsic volcanic rocks and sediments occupying long linear structures towards the centre of the belt. Diabase is rare but several long dikes traverse the belt with a north-northeasterly trending orientation. Ultramafic flows, granitic plugs and iron formation are also found in the belt.

The Swayze belt is truncated in the west by the Kapuskasing structure and to the east bifurcates with one arm trending towards the Porcupine gold camp and the other arm trending towards the Kirkland Lake gold camp.

Property Geology

The property is almost entirely covered by thin rolling moraines and sand planes. Bedrock exposure is limited and restricted to valley walls of the north-easterly flowing creek that traverses claims 931815 and 931816. Mafic volcanic rocks were found in the southeast corner of the property whereas felsic volcanics and feldspar porphyries were found on the north side of the creek. The mafic volcanic rocks are massive, dark green, aphanitic with variable chlorite, calcite and pyrite alteration. No pillows or other structures were found. Where the mafic volcanic rocks have a well developed foliation, they were mapped as chlorite schists.

The felsic volcanic rocks consisted entirely of intermediate

to felsic tuffs with ash to lapilli sized fragments. No true rhyolites were found. The felsic volcanic most commonly found was a buff to pale green, massive or very weakly foliated rock with 1-2mm, white, sub-rounded fragments comprising about 20% of the weathered rock surface. The matrix is fine grained and weakly chloritized with little or no calcite, pyrite or sericite. The feldspar porphyries found on the property are pink to beige on the weathered surface, massive, with 1-2mm white, euhedral feldspar phenocrysts comprising 30% of the rock face and a fine grain siliceous, pale matrix.

Alteration was most prevalent in close proximity to the Sylvanite Trench where tuffs and porphyries (?) are now altered to feldspar-chlorite-sericite schists with moderate to strong calcite alteration. Iron carbonate, silicification, pyrite and chalcopryite alteration is extensive surrounding the trench areas. The prevailing structure on the property is an east-west schistosity noted in some outcrops. A diabase dike trending north-south was observed intruding an intermediate tuff.

The Sylvanite Trenches are located in the south half of claim 931817. From limited exposures in the trenches it appears that a thin quartz-carbonate-sulphide vein pinches and swells from 6" to 5' over a length of 160' trending approximately 110°. Northeast faults have displaced the vein up to 10' in places. The wallrock is an altered chlorite schist of uncertain origin

intruded by several highly sheared and altered quartz-feldspar porphyries. Quartz veining crosscuts both lithologies. Pyrite and minor chalcopyrite was observed in the quartz veins and in surrounding haloes disseminated throughout the wallrock. Ankerite and Dolomite were common accessories within quartz veins and as discrete veins.

RESULTS

Eighteen bedrock grab samples were taken on the property and sent to Bell-White Laboratories of Haileybury for analyses. The results are summarized as follows:

<u>SAMPLE NUMBER</u>	<u>GOLD ppb</u>	<u>GOLD OZ/TON</u>
24833	36	
24834	27	
24835	110	
24836	14	
24837	124	
24838	686	
24839		0.054
24840		0.103
24841		0.321
24842	54	
24843	274	
24844		0.096
24845		0.046
24846		0.035
24847		0.068
24848		0.098
24849		0.034
24850	45	

DISCUSSION OF RESULTS

Seventeen of the eighteen samples taken on the property were taken from the Sylvanite Trenches. Furthermore, the best samples (24838 to 24849) appear to come from a discrete zone 100 feet long and open at both ends due to water and land fill. The arithmetic average for all samples from this zone is 0.074 oz/ton. The best samples were almost entirely of quartz-carbonate-sulphide veins with up to 5% pyrite and minor chalcopyrite disseminated in the wallrock. No visible gold was observed. This highly altered zone appears to pinch out to the east or is covered by water and land fill. The western extent is not known. The structural implications are not yet recognized due to poor exposure but the strong shear in the alteration zone is most likely associated with mineralization.

RECOMMENDATIONS

The Sylvanite deposit consists of east-west trending quartz-carbonate-sulphide veins in a highly sheared and altered deformation zone which may lay at or near the contact of the mafic and felsic volcanics. These characteristics facilitate well known exploration techniques:

PHASE 1. Five to ten kilometers of lines should be cut at close spacing immediately over the existing trench system and at wider spacing surrounding the trenches.

PHASE 2. Ground magnetic and VLF-EM surveys should be performed to define any structure, deformation zones, lithologic changes or conductive bodies. Overburden is generally thin and conducive to these surveys.

PHASE 3. A time domain induced polarization survey should follow the VLF-EM and magnetic surveys in any areas of interest and, of course, immediately over the trench system.

PHASE 4. Humus geochemical samples should be taken at 12.5m intervals immediately surrounding the trenches.

PHASE 5. Stripping and cleaning of existing trenches so that they may be properly mapped and channel sampled in detail. Any new zones discovered in phases 1 to 4 may be stripped at this time.

PHASE 6. Diamond drilling and/or bulk sampling of the best zones defined in phases 1 to 5.

Respectfully submitted



R.K. Abernethy, B.A.Sc.

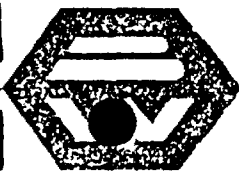
REFERENCES

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1968
Geology of Halcrow-Ridout Lakes Area;
Ontario Department of Mines,
G.R. No.63
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1935
Recent developments in the Swayze and
West Shiningtree area; Ontario
Department of Mines, Vol. XLIV,
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1963
Ridout, District of Sudbury,
Aeromagnetic Series, Joint Publications
Scale: 1 inch to 1 mile No.2245G
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1963
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Scale: 1 inch to 1 mile No.2246G
- O.G.S.
1982
Airborne Electromagnetic and Total
Intensity Magnetic Survey, Swayze
Area, Cree Lake Sheet, District of
Sudbury; by Questor Surveys Limited
for the Ontario Geological Survey,
Map 80541. Scale 1:20,000

TIMMINS ASSESSMENT FILES

T-2068
T-2072
T-2651
T-2538

A P P E N D I X



BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187.

HAILEYBURY, ONTARIO

TEL: 672-3107

Certificate of Analysis

NO. 0223

DATE: January 23, 1987

SAMPLE(S) OF: Rock (18)

RECEIVED: January 1987

SAMPLE(S) FROM: Mr. Rob Abernethy, R.S. Middleton Exploration Services

M 202

<u>Sample No.</u>	<u>Gold ppb</u>	<u>Oz. Gold</u>
24833	36	
4	27	
5	110	
6	14	
7	124	
8	686**	
9		0.054**
24840		0.103**
1		0.321**
2	54	
3	274	
4		0.096**
5		0.046**
6		0.035**
7		0.068**
8		0.098**
9		0.034**
24850	45	

** Checked

BELL-WHITE ANALYTICAL LABORATORIES LTD.

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

PER. 



W 8706-74

Minin

900

Type of Survey(s) **GEOLOGICAL** DENYES TOWNSHIP

Claim Holder(s) **GLEN AUDEN RESOURCES LIMITED** Prospector's Licence No. **T-1415**

Address **BOX 1637 TIMMINS ONTARIO**

Survey Company **ROBERT S. MIDDLETON EXPLORATION** Date of Survey (from & to) **22 11 86 28 11 86** Total Miles of line Cut

Name and Address of Author (of Geo-Technical report) **Rob. K. Abernethy Box 1637 TIMMINS ONT P4N7L8**

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	
	- Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	20
	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	

Mining Claim		Expend. Days Cr.	Mining Claim		Expend. Days Cr.
Prefix	Number		Prefix	Number	
P.	931813				
	931814				
	931815				
	931816				
	931817				
	931818				

RECEIVED
MAY 11 1987
MINING LANDS SECTION

RECEIVED
APR 28 1987

RECORDED
APR 27 1987

RECORDED
APR 27 1987

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.

Total number of mining claims covered by this report of work. **6**

For Office Use Only

Total Days Cr. Recorded **120** Date Recorded **April 27/87** Mining Recorder **[Signature]**

Date Approved as Recorded **9 June/87** Branch Director **ACTING MINING RECORDER**

Date **April 21/87** Recorded 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 **NADIA CAHA**

Box 1637 TIMMINS ONT P4N7L8

Date Certified **APRIL 21/87** Certified by (Signature) **[Signature]**

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 _____

DENYES

DISTRICT OF
SUDBURY

PORCUPINE
MINING DIVISION

SCALE: 1-INCH = 40 CHAIN

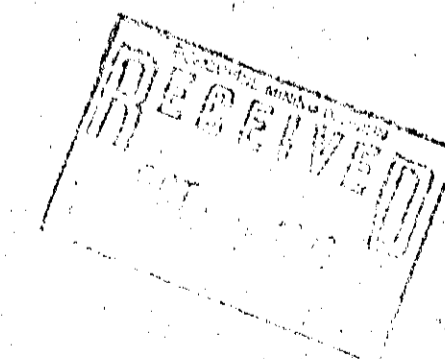
LEGEND

- PATENTED LAND (P)
- CROWN LAND SALE (C)
- LEASES (L)
- LOCATED LAND (Lr)
- LICENSE OF OCCUPATION (L.O.)
- MINING RIGHTS ONLY (M.R.)
- SURFACE RIGHTS ONLY (S.R.)
- ROADS (R)
- IMPROVED ROADS (IR)
- KING'S HIGHWAYS (KH)
- RAILWAYS (Rl)
- POWER LINES (PL)
- MARSH OR MUSKOG (M)
- MINES (Mn)
- CANCELLED (C)
- PATENTED FOR S.R.O. (P.F.S.R.O.)

NOTES

400' surface rights reservation along
the shores of all lakes and rivers.

L. U. P.



Received Jan. 4/80

PLAN NO. M.758

ONTARIO

MINISTRY OF NATURAL RESOURCE

SURVEYS AND MAPPING BRANCH

Raney Twp. - M.1069

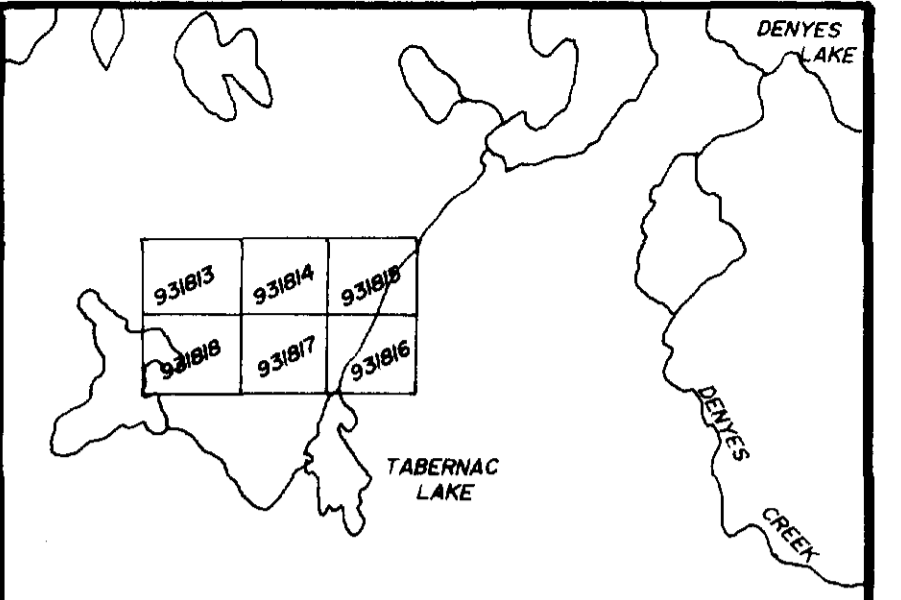
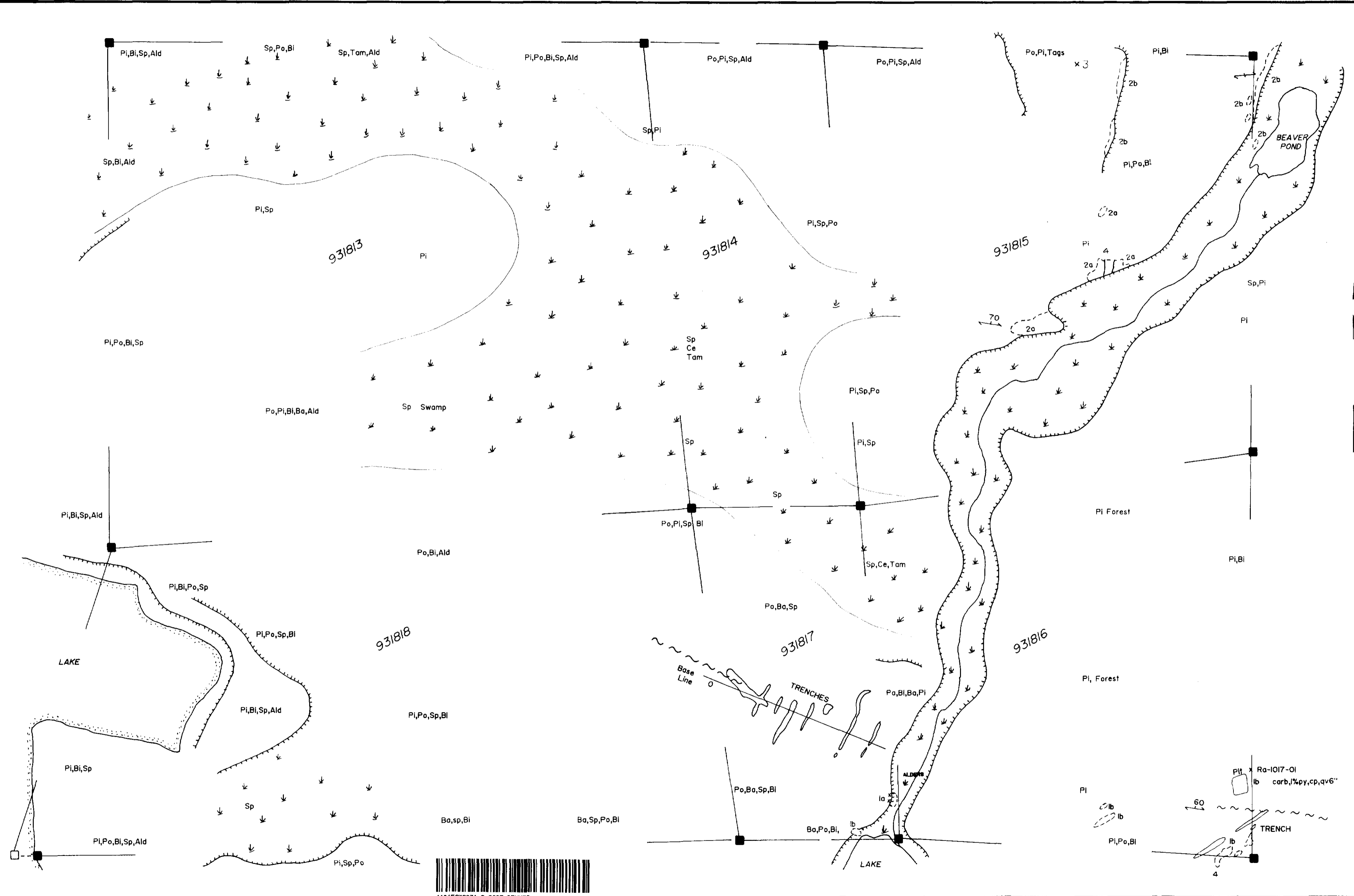
Halcrow Twp. - M.906

Swayze Twp. - M.1150

Greenlaw Twp. - M.895



410155W9071 2.9967 DENYES



LEGEND

- 1. Mafic Volcanics
- 1a. Massive Unsubdivided
- 1b. Chlorite Schist
- 2. Intermediate To Felsic Volcanics
- 2a. Intermediate Tuff
- 2b. Felsic Tuff
- 2c. Felsic Lapilli Tuff
- 3. Feldspar Porphyry
- 4. Diabase Dykes

29967

R.S. Mccarty

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for GLEN AUDEN RESOURCES LTD.		
	Title SYLVANITE PROSPECT TRENCH MAP		
	Date: Feb /87	Scale: 1:2500	N.T.S.:
	Drawn: C.G.P.G.	Approved:	File:

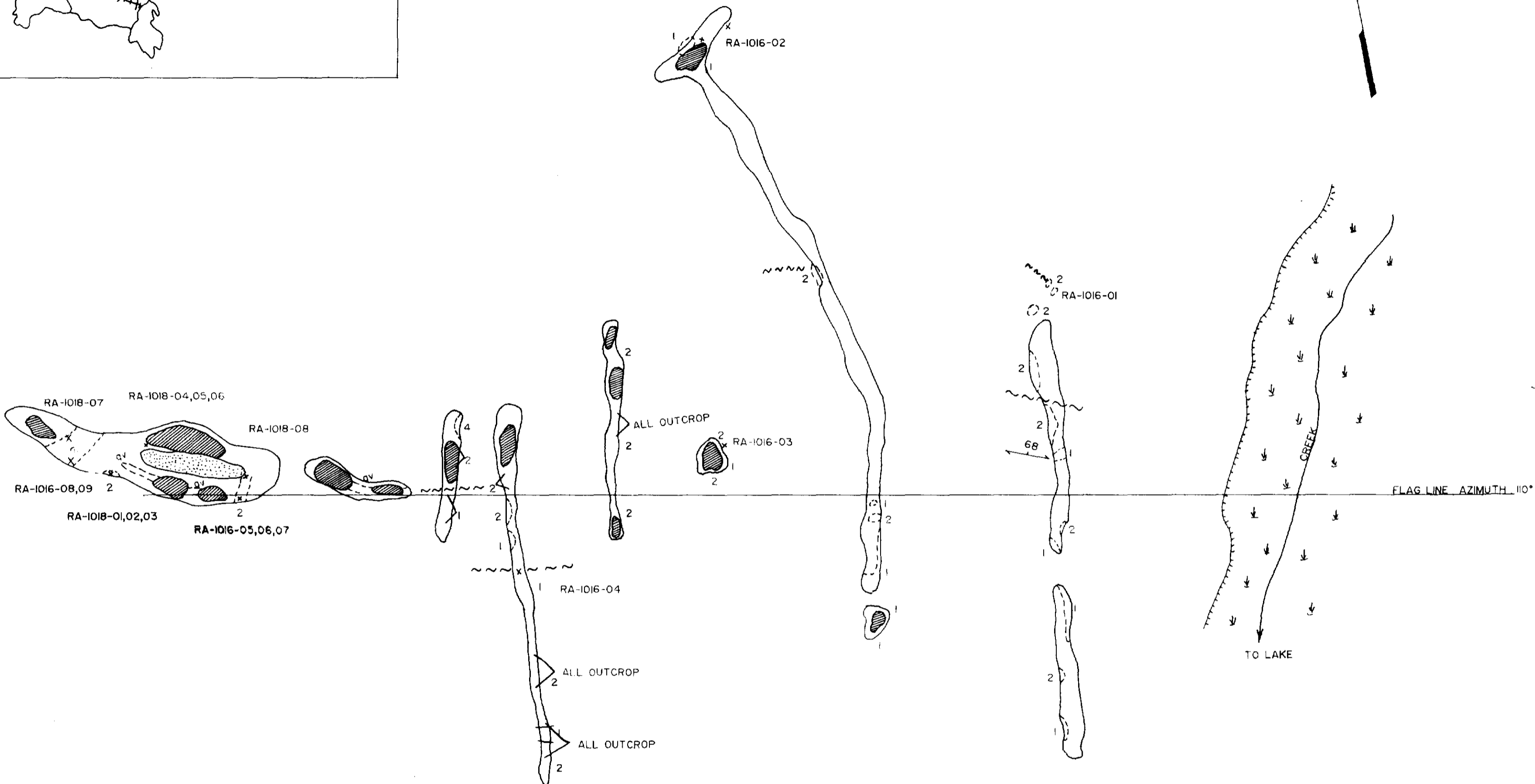


LOCATION

DENYES LAKE

DENYES TWP.

TRENCHES



LEGEND

- 1. Sheared Mafic Volcanic (Chlorite Schist)
- 2. Feldspar Porphyry With Quartz

- Quartz Vein
- Water Filled
- Filling
- Shear Zone

2.9967

Robert S. Middleton

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for	GLEN AUDEN RESOURCES LTD.	
	title	SYLVANITE PROSPECT	
		TRENCH SKETCH AND ASSAY PLAN MAP	
	Date: Feb /87	Scale: 1:500	N.T.S.:
	Drawn: C.G.P.G.	Approved:	File: M-202



410155#9871 2.9967 DENYES