



410155E9093 2.9965 SWAYZE

010

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

**RECEIVED**

APR 23 1987

**MINING LANDS SECTION**



41015SE9093 2.9965 SWAYZE

010C

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SUMMARY

Thirty-nine unpatented mining claims in Swayze and Denyes Townships 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, mafic to felsic intrusives, diabase and sediments. Structural deformation and lithologic alteration appears to be most intense in the area between Swayze and Topboot Lakes. Two gold-bearing zones were found (verified) in this area which returned assay values as great as 1.336 oz/ton and which averaged 0.878 oz/ton in one zone and 0.223 oz/ton over a length of 250 feet in the other zone. Follow-up programs of line cutting, ground magnetics and VLF-EM, induced polarization, detailed mapping and sampling, lithochemical and humus geochemical surveys, stripping and channel sampling and diamond drilling are recommended.

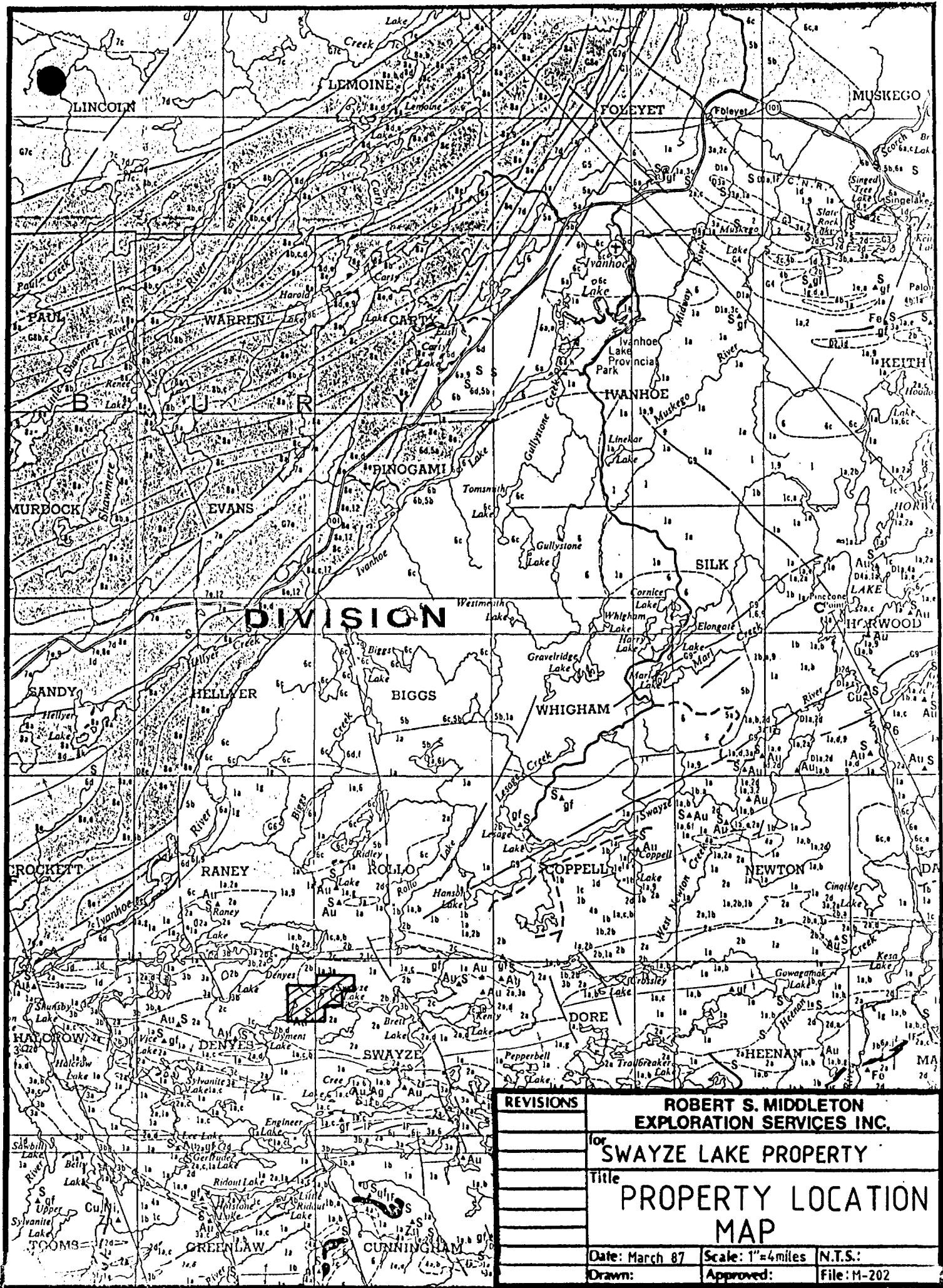
## INTRODUCTION

This report summarizes the reconnaissance geological mapping performed on the property of Glen Auden Resources Limited on their Swayze Lake Property in Swayze and Denyes Townships. 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 and islands of Topboot and Swayze Lakes were mapped entirely. 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 [Abernethey].

## SWAYZE LAKE PROPERTY

### LOCATION, ACCESS AND FACILITIES

The property straddles the boundary between north-western Swayze Township and northeastern Denyes Township, 54 air miles southwest of Foleyet, Ontario (see Figure 1). The property can be reached by float plane from the Ivanhoe Lake airbase by landing on Swayze or Topboot Lake. A gravel lumber road is presently under construction in eastern Swayze Township from which canoe access is possible via a series of lakes and portages. Helicopter service is available in Ramsey, 50km SE of



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

the property, or Timmins.

The property is within reasonable travel time from the Timmins-Kirkland Lake mining centres where equipment and trained mine personnel are available. Sufficient water and aggregate resources are present if required on the property for construction and mine operation. An electrical power line is 25 miles to the north.

PROPERTY

The property consists of 39 unpatented claims as shown on the claim map of Swayze and Denyes Townships (Figure 2).

DENYES TOWNSHIP

<u>CLAIM NUMBER</u>	<u>NO.</u>	<u>EXPIRY DATE</u>
932501 & 932502	2	June 12, 1987
932505-932510	6	June 12, 1987
866469-866471	3	June 12, 1987
932197-932200	4	June 12, 1987
931819-931821	3	June 12, 1987

SWAYZE TOWNSHIP

<u>CLAIM NUMBER</u>	<u>NO.</u>	<u>EXPIRY DATE</u>
932196	1	June 12, 1987
932503-932504	2	June 12, 1987
932511-932515	5	June 12, 1987
866466-866468	3	June 12, 1987
866472-866475	4	June 12, 1987
930726-930727	2	June 12, 1987
931809-931812	4	June 12, 1987

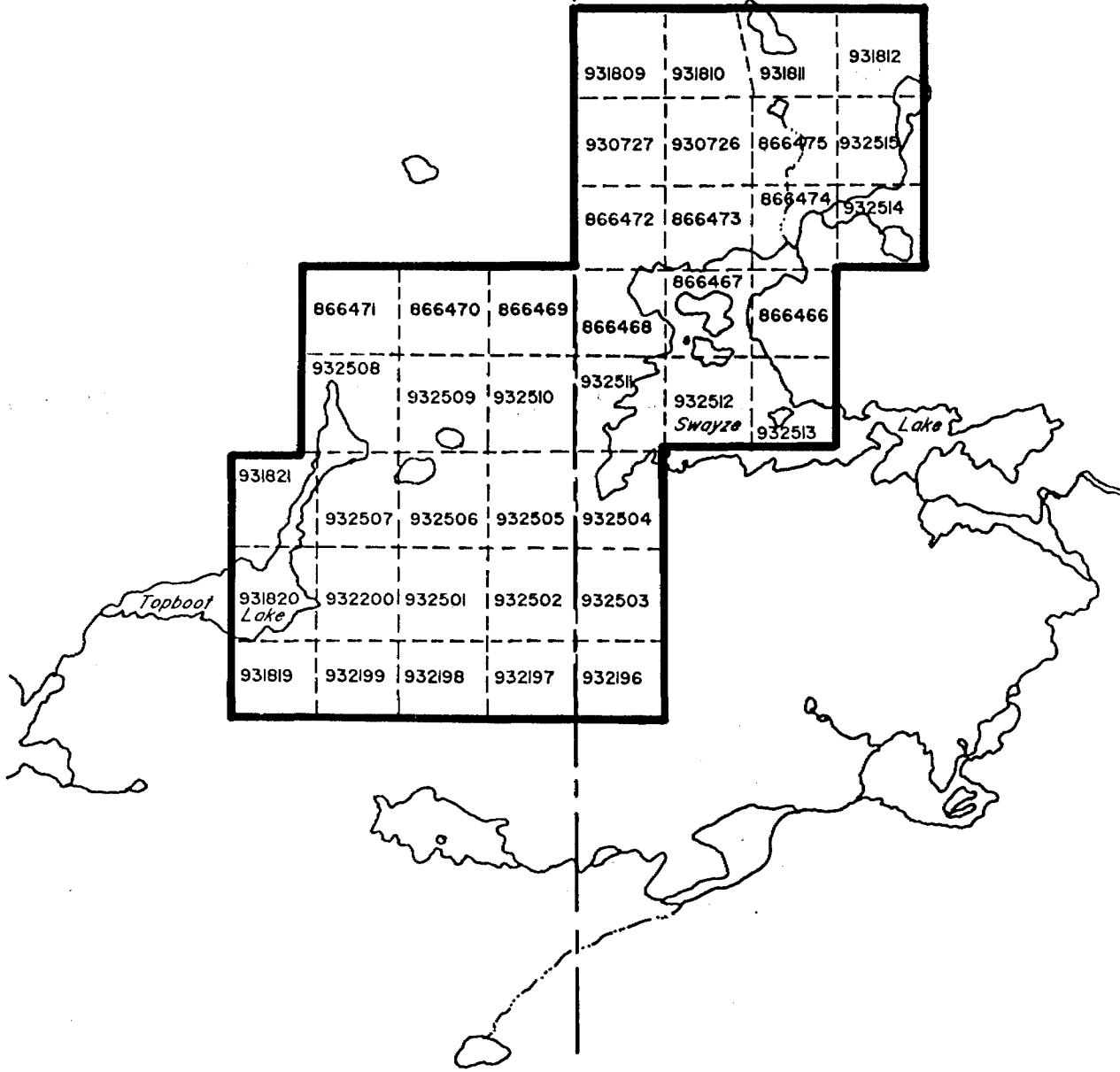
The claims have been transferred from the stakers and are held by Glen Auden Resources Limited.

RANEY TWP.

ROCHE TWP.

DENYES TWP.

SWAYZE TWP.



REVISIONS


**ROBERT S. MIDDLETON  
EXPLORATION SERVICES INC.**  
for  
**GLEN AUDEN RESOURCES LTD.**  
Title *Swayze Lake Property*  
**CLAIM LOCATION MAP**

Date: *Jan. 1987* Scale: *1"=1/2mile* N.T.S.:  
Drawn: *C.G.* Approved: File: *M-202*

PREVIOUS WORK

Assessment file examination reveals that several companies have been active in the area both on Glen Auden ground and properties surrounding it. Little work was done in the area previous to 1931 when a promising discovery of gold bearing quartz was made by J.G. and J.L. Kenty on the northeast shore of Brett Lake, 4 miles to the east of the property. Considerable prospecting followed this discovery resulting in a number of gold discoveries, including two gold discoveries now located on the Glen Auden property. In the fall of 1932, J.E. Derragh staked 8 claims within the property boundary, adjoining the eastern boundary of Denyes Township. Trenching of the discovery vein exposed 220 feet of quartz veining and stockwork parallel to a fault striking almost due north and south. M.C. Rickaby examined the discovery in 1934 for the Ontario Department of Mines and described it as an "almost continuous vein of quartz with small quartz veinlets in the footwall. The quartz is in the form of lenses with widths up to 6 feet." A brecciated lamprophyre dike lies long the fault and quartz porphyry dikes intrude the sediments. "The quartz is mineralized with pyrite, chalcopyrite, a little galena, and carbonates. Lenses of vein material with considerable chalcopyrite carry big values in gold, though no native gold was seen." Chip samples taken continuously across



the vein by Rickaby returned the following values in gold:

a) 8 inches, quartz with heavy sulphides	2.22oz/ton
b) 24 inches, chiefly quartz	.15oz/ton
c) 36 inches, altered wall rock	.03oz/ton
d) 56 inches, quartz	.24oz/ton
e) 24 inches, quartz	.32oz/ton

As a result of encouraging gold values in this vein Kirkland Hudson Bay Gold Mines Limited put down a series of short diamond drill holes in the winter of 1932-33. A total of 2,000 feet of drilling was completed. Results of the drilling are not known but apparently did not warrant further work and the option was dropped.

Prospecting of the property continued for ten years following the original discovery and spotty records of trenching and blasting assessment exist. Regional airborne electromagnetic and magnetic surveys were flown by several companies and twice by the Ontario Government, in 1964 and 1977.

George Mangotich of Englehart, Ontario staked 21 claims on the present Glen Auden Property in 1975-76. VLF-EM, magnetometer, geological mapping and one diamond drill hole totalling 170' are recorded for assessment. The geological map presented by W.F. Gilman shows rhyolite and rhyolitic fragmentals over all of the Mangotich property. The diamond drill hole, drilled due north near the northern boundary of present claim 932508 encountered rhyolite, chert and graphite, with quartz/calcite veining and 1/4" to 1" massive pyrite, diabase and

60 feet of quartz-sericite-feldspar schist injected with quartz-calcite-tourmaline-pyrite stringers. Very little sampling was performed and no assays were given.

Norminex Limited staked three claims straddling the boundary between Swayze and Denyes Townships in 1983. Norminex conducted 1"=400' geological mapping with detailed sampling of several old trenches and a 1"=200' magnetometer survey for assessment credit. The Norminex geologist, J.F. Davies, identified three main types of rock; 1) massive fine rhyolite, 2) crystal tuff or porphyritic rhyolite and 3) quartz-sericite schist which probably represents a sheared rhyolite.

The re-sampling of the Derrough trench, revealed values as low as .01 oz/ton in diabase to 1.65 oz/ton over 24". Recommendations for systematic re-sampling, lithochemical sampling and soil geochemical surveys and four diamond drill holes were never followed up and the property was allowed to come open.

The Canadian Nickel Co. Ltd. staked a large block of claims in Swayze, Dore and Denyes Townships in 1983 covering the northern half of the Glen Auden Property. Geological mapping by B. Bell found variably altered and carbonatized mafic to felsic volcanics, mafic to felsic intrusives, quartzite and minor quartz-feldspar porphyry. Bell recognized a similarity between the carbonatized mafic volcanics north of Swayze Lake and those

hosting the Kenty Mine Prospect and recommended further work.

## 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 volcanic centre felsic 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

A property geology map based on the mapping survey and various geophysical surveys is shown in Figure 3. Rocks on the property consist of mafic to intermediate tuffs, rhyolitic flows,

felsic tuffs, quartz-sericite schists, graphitic argillite, arkose, conglomerate, quartz feldspar porphyries and diabase. The mafic volcanic rocks trend east-west and are part of a thick mafic unit that extends across the township and are stratigraphically equivalent to those hosting the Kenty Mine. The basalts are typically dark green to black, massive or weakly foliated, aphanitic, and occasionally pillowed or brecciated. Alteration consists of moderate to strong chloritic alteration, traces of pyrite with erratic concentrations of up to 1%, moderate to strong calcite alteration and occasional fractures and shears infilled with quartz or quartz-carbonate veining. Mafic ash tuffs were found intercalated with the flows in thin, non-continuous units. The tuffs were generally very fine grained with less than 10% angular, mafic, rock fragments in a dark, moderately foliated matrix. No sedimentary structures were observed in these tuffs.

Rocks of intermediate composition were recognized in several locations stratigraphically between the mafic flows and felsic tuffs and porphyries. These rocks were similar in appearance to the mafic rocks but were generally lighter in colour and were harder due to a more siliceous matrix. The intermediate volcanic rocks were without structure and conformable to the enclosing mafic volcanics.

Felsic volcanic rocks and porphyries of intermediate felsic

composition were found in the southern two-thirds of the Glen Auden property which is part of a much thicker synform running east-west through central Swayze, Denyes and Dore Townships. Rhyolitic flows were extremely rare. Rhyolites were recognized by their hard, siliceous, beige appearance and thin laminations which may represent flow banding. Felsic ash to lapilli tuffs were the most common lithologies found on the property. The fragment composition varied from less than 10% clasts to a crowded, fragment supported variety. The matrix composition varied from a beige brown colour to a pale green. Alteration varied greatly in the tuffs as distinct alteration zones were noted. Calcite alteration was most prevalent with widespread zones of calcite enrichment. Calcite composition varied from 1-2% in some rocks to an estimated 20-30% calcite in the most obviously altered zones. Usually synchronous with calcite alteration was sericite enrichment (0-10%), pyrite (1-4%) and structure such as pervasive foliation and local shearing. Chlorite alteration was rarely observed but did exist in the more intermediate tuffs.

Crystal tuffs may have been present but were difficult to distinguish from porphyries. The quartz-feldspar porphyries were observed to be pink to beige, massive, medium to coarsely crystalline feldspar phenocrysts in an aphanitic pale green matrix. Close examination of the feldspar crystals reveals that

they are subhedral to euhedral, zoned phenocrysts that are occasionally fractured and cracked. Pyrite is rare in the porphyries.

A thin band of metasediments was found on the west shore of Swayze Lake. The outcrop was best described as an arkosic sandstone or a low density conglomerate, as rare pebble sized, sub-angular rock fragments were observed in an otherwise homogeneous feldspar rich sandstone. Clasts were heterogeneous and consisted of mafic rock fragments, felsic rock fragments, chert, quartz grains and a soft argillitic looking rock of uncertain composition. Long, thin non-magnetic, formational type conductors trend east-west through the central portions of Swayze Lake and are probably conductive graphite.

The major structural characteristic of the rocks is an east-west schistosity developed in the felsic volcanics and sediments. Weak or no schistosity was found in the mafic volcanics north of Swayze Lake. Pillow top directions indicate tops to be south which is consistent with the hypothesis that a volcanic vent located towards the south extruded a classic mafic to felsic volcanic pile.

All faults and shears and major lineations observed on the property trended in a northeasterly direction. This trend was also observed in the Derrough showing signifying the importance of north-south shears, faults and lineaments.

RESULTS

Twenty-six bedrock grab samples were taken for analysis. Samples were sent to Accurassay Laboratories Ltd. of Kirkland Lake and were assayed for gold. Assay results as follows:

<u>SAMPLE NUMBER</u>	<u>Au(ppb)</u>	<u>Au(oz/t)</u>	<u>RECHECK (oz/t)</u>
24801	9.4		
24802		1.336	1.369
24803		0.419	0.445
24804	142		
24805	34		
24806	8		
24807	5		
24808	35		
24809	44		
24810	23		
24811	9		
24812	49		
24813		0.039	0.039
24814	392		
24815	696		
24816	480		
24817	300		
24818		0.103	0.108
24819		0.074	0.079
24820	89		
24821	701		
24822		0.258	0.278
24823		0.238	0.243
24824		0.617	0.698
24825		0.522	0.502
24826		0.176	0.189

DISCUSSION OF RESULTS

The highest gold assays come from two zones 1500 feet apart. As expected, all samples taken from the Derrough showing returned very high gold values including a 250' long zone, buried at one end in which all samples averaged 0.223 oz/ton. The gold values

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1. Arithmetic average of samples 24802 and 24803.

are found in a wide variety of material including quartz vein material, quartz-carbonate veins and silicified and carbonatized wallrock. Pyrite is ubiquitous and varies from 1-10%. Chalcopyrite is more spotty but appears to have a good correlation with gold concentration. An important consideration is that gold values continue to be very high in wallrock material which would greatly increase the dimensions of the deposit.

Two samples were taken from a small pit, 1500 feet north of the Derrough Trench, from which no previous record of sampling is known. Gold values were very high, averaging .878 oz/ton.<sup>2</sup> These samples were taken from a silicified and carbonatized (Fe-carb) tuff with 2-5% pyrite and chalcopyrite. Again, the fact that these samples are from altered wallrock material is important for future tonnage considerations.

Although it is unlikely that these two zones represent one continuous mineralized body, they do have similar characteristics and are in the same structural zone and appear to be related to the same mineralizing event. The relationship of the quartz-feldspar porphyries and rock fabric and structure appears to be important but is not understood after the reconnaissance phase.

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2. Arithmetic average of samples 24818 to 24826.



### RECOMMENDATIONS

The gold values returned from grab samples taken from two zones on the property justify detailed follow-up work. The important characteristics of the mineralized zones are that they contain erratic high concentrations of fine grained gold in quartz-Fe-carbonate-sulphide zones within broad deformation zones somehow related to mafic and felsic intrusions. These characteristics facilitate proven exploration techniques which should be implemented as follows:

PHASE 1. 40-50kms of line covering the southern half of property where several broad structural zones occur. Closely spaced orthogonal lines should be cut over to and around the two gold zones.

PHASE 2. Ground magnetic and VLF-EM surveys covering the entire grid. The magnetic survey is useful for determining lithologies and structural features such as offsets and contacts. The VLF-EM survey is useful for determining shear zones and strong conductive bodies. Overburden is generally thin and acceptable for this survey.

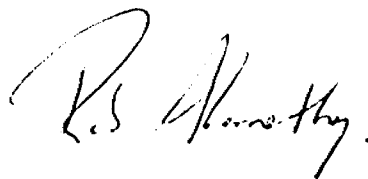
PHASE 3. Follow-up time domain induced polarization and synchronous detailed geological surveys. The IP survey should cover all areas of interest from the magnetic and VLF-EM surveys, the two gold zones and between the two gold zones, and should be available to survey any new zones found during the detailed geological survey. The detailed geological survey should cover all of the grid with special attention paid to any magnetic or VLF-EM anomalies. The gold zones should be detail mapped with extreme attention paid to rock fabric and any carbonate and sulphide zoning.

PHASE 3b. A lithochemical survey of all outcrops surrounding the gold zones and a humus geochemical survey at 12.5m spacing along grid lines surrounding the gold zones.

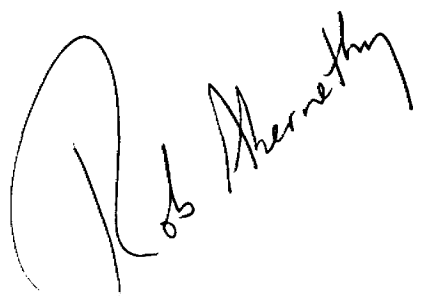
PHASE 4. Stripping and detail mapping of gold zones. This phase will include channel sampling across vein material and extending well into altered wallrock.

PHASE 5. Diamond Drilling - magnitude to depend on results of Phases 1-4.

Respectfully submitted

A handwritten signature in cursive script, appearing to read "R.K. Abernethy".

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

A handwritten signature in cursive script, appearing to read "Rob Abernethy".

REFERENCES

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1965  
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TIMMINS ASSESSMENT FILES

T-2446  
T-1722  
T-2796

A P P E N D I X

# ACCURASSAY LABORATORIES LTD.

P.O. BOX 604

KIRKLAND LAKE, ONTARIO, CANADA P2N 3J5

TEL.: (705) 567-6343

President: Dr. GEORGE DUNCAN, M.Sc., Ph. D., C. Chem (Ont.), C. Chem (U.K.), M.C.I.C., M.R.S.C., A.R.C.S.T.

## Certificate of Analysis

5225

R.S. Middleton Exploration  
Box 1637,  
Timmins, ON  
P4N 7W8

Date: November 7 1986

Att; Nadia Caira and Rob Abernethy

Assay results are as follows:

<u>Accurassay</u>	<u>Sample #</u> <u>Middleton</u>	<u>Au (ppb)</u>	<u>Au (oz/t)</u>	<u>Rechecks</u> ( <sup>Au</sup> <u>oz/t</u> )
86098-4631	24801	94		
32	02		1.336	1.369
33	03		0.419	0.445
34	04	142		
35	05	34		
36	06	8		
37	07	*5		
38	08	35		
39	09	44		
40	10	23		
41	11	9		
42	12	49		
43	13		0.039	0.039
44	14	392		
45	15	696		
46	16	480		
47	17	300		
48	18		0.103	0.108
49	19		0.074	0.079
50	20	89		
51	21	701		
52	22		0.258	0.270
53	23		0.238	0.243
54	24		0.617	0.698
55	25		0.522	0.502
56	26		0.176	0.189

Report of Work  
 Geophysical, Geological,  
 Geochemical and Expenditures)



41015SE9093 2.9965 SWAYZE

300

Mining Act

Do not use shaded areas below.

Township or Area  
 SWAYZE / OCNYES TWP

Prospector's Licence No.  
 J-1915

MINING RESOURCES LIMITED

637 TIMHINS ONTARIO P4N7W8

Date of Survey (from & to)  
 29 11 86 03 12 86  
 Day Mo. Yr. Day Mo. Yr.

Total Miles of line Cut

ROBERT S. MIDDLETON EXPLORATION

Address of Author (of Geo-Technical report)  
 ROB. R. ABERNETHY

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 time 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	

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 APR 29 1987

Airborne Credits	Days per Claim
Note: Special provisions	

Expenditures (excludes time cutting)

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.

Date April 21 1987 Recorded Holder or Agent (Signature) Modis

Mining Claim Prefix	Number	Expend. Days Cr.
P	932501	✓
	932502	✓
	932505	✓
	932506	✓
	932507	✓
	932508	✓
	932509	✓
	932510	✓
	866469	✓
	866470	✓
	866471	✓
	932197	✓
	932198	✓
	932199	✓
	932200	✓
	931819	1/4
	931820	1/2
	931821	~
	932196	✓
	932503	✓
	932504	✓

Mining Claim Prefix	Number	Expend. Days Cr.
P	932511	1/4
	932512	3/4
	932513	1/2
	932514	✓
	932515	✓
	866466	~
	866467	1/2
	866468	✓
	866472	✓
	866473	✓
	866474	1/4
	866475	✓
	930726	✓
	930727	✓
	931809	✓
	931810	✓
	931811	✓
	931812	✓

RECORDED  
 APR 27 1987

Total number of mining claims covered by this report of work. 39

For Office Use Only  
 Total Days Cr. Recorded 780 Date Recorded April 27 1987 Mining Recorder [Signature]  
 Date Approved as Recorded Branch Director ACTING MINING RECORDER

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 NANA QUILA

Date Certified Certified by (Signature)



Ontario

Ministry of  
Northern Development  
and Mines

July 6, 1987

Your File: 75/87  
Our File: 2.9965

Mining Recorder  
Ministry of Northern Development and Mines  
60 Wilson Avenue  
Timmins, Ontario  
P4N 2S7

Dear Sir:

RE: Notice of Intent dated June 9, 1987  
Geological Survey on Mining Claims  
P 931820, et al, in Swayze and Denyes  
Townships

---

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,

Gary L. Weatherson, Manager  
Mining Lands Section  
Mineral Development and Lands Branch  
Mines and Minerals Division

Whitney Block, Room 6610  
Queen's Park  
Toronto, Ontario  
M7A 1W3

Telephone: (416) 965-4888

*APB*  
DK/mc  
cc: Glen Auden Resources Limited  
Box 1637  
Timmins, Ontario  
P4N 7W8  
Attention: Nadia Cairra

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

Resident Geologist  
Timmins, Ontario

Encl.



Recorded Holder  
**GLEN AUDEN RESOURCES LIMITED**

Township or Area  
**SWAYZE AND DENYES TOWNSHIPS**

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	
Electromagnetic _____ days	P 932501 - 02
Magnetometer _____ days	932505 to 10 inclusive
Radiometric _____ days	866469 to 71 inclusive
Induced polarization _____ days	932197 to 200 inclusive
Other _____ days	931819
	931821
	932196
	932503 - 04
	932511
	932514 - 15
Section 77 (19) See "Mining Claims Assessed" column	866466
	866468
Geological _____ 20 _____ days	866472 to 75 inclusive
	930726 - 27
Geochemical _____ days	931809 to 12 inclusive
Man days <input type="checkbox"/> Airborne <input type="checkbox"/>	
Special provision <input checked="" type="checkbox"/> Ground <input checked="" type="checkbox"/>	
<input type="checkbox"/> Credits have been reduced because of partial coverage of claims.	
<input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	

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

<u>10 DAYS GEOLOGICAL</u>	<u>5 DAYS GEOLOGICAL</u>
P 931820	P 932512
932513	
866467	

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.





Ministry of Natural Resources

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) GEOLOGICAL

Township or Area DUNDAS / SUDAS

Claim Holder(s) GREEN ANDERSON RESOURCES LIMITED

Survey Company ROBERT S. HODGKINS CONSULTANTS

Author of Report FRANK ABBANATHY

Address of Author BOX 1637 TIMMINS ONT. P4N 7W8

Covering Dates of Survey NOV 24/86 DEC 8/86  
(linecutting to office)

Total Miles of Line Cut \_\_\_\_\_

MINING CLAIMS TRAVERSED	
List numerically	
P932501 (prefix)	P932511 (number)
932502	932512
932505	932513
932506	932514
932507	932515
932508	866466
932509	866467
932510	866468
866469	866472
866470	866473
866471	866474
932197	866475
932198	930726
932199	930727
932200	931809
432931819	931810
931820	931811
931821	931812
932196	
932503	
932504	
TOTAL CLAIMS <u>39</u>	

If space insufficient, attach list

SPECIAL PROVISIONS  
CREDITS REQUESTED

DAYS  
per claim

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

ENTER 20 days for each  
additional survey using  
same grid.

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: APRIL 21/87 SIGNATURE: Mark Coe  
Author of Report or Agent

Res. Geol. \_\_\_\_\_ Qualifications \_\_\_\_\_

Previous Surveys

File No.	Type	Date	Claim Holder

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 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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 \_\_\_\_\_

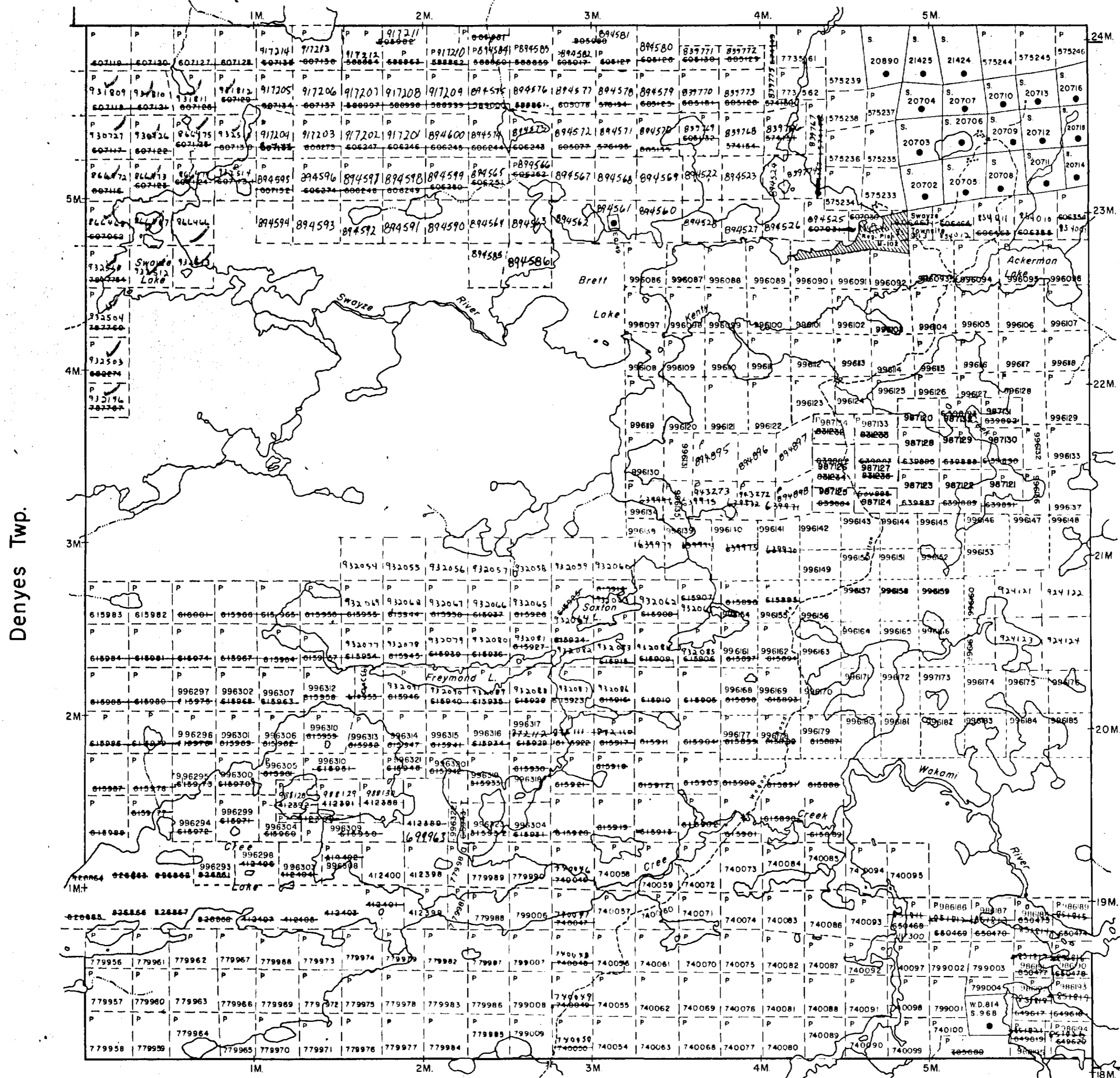
General \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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

Rollo Twp.



LEGEND

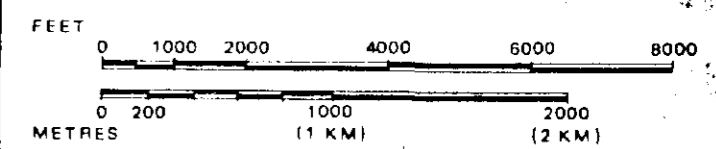
- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
  - TOWNSHIPS, BASE LINES, ETC.
  - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
  - LOT LINES
  - PARCEL BOUNDARY
  - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING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

DISPOSITION OF CROWN LANDS

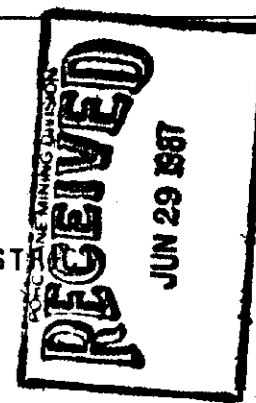
TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	●
" SURFACE RIGHTS ONLY	○
" MINING RIGHTS ONLY	◐
LEASE, SURFACE & MINING RIGHTS	■
" SURFACE RIGHTS ONLY	◼
" MINING RIGHTS ONLY	◻
LICENCE OF OCCUPATION	▼
ORDER-IN-COUNCIL	OC
RESERVATION	⊙
CANCELLED	⊗
SAND & GRAVEL	⊕

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. 360, SEC. 63, SUBSEC. 1.

SCALE: 1 INCH = 40 CHAINS



TOWNSHIP  
**SWAYZE**  
 M.N.R. ADMINISTRATIVE DISTRICT  
**CHAPLEAU**  
 MINING DIVISION  
**PORCUPINE**  
 LAND TITLES / REGISTRY DIVISION  
**SUDBURY**



Ontario Ministry of Natural Resources Land Management Branch

Date MARCH, 1985

Number

Checked L.P. S.N.

G-3249



Raney Twp. - M.1069

THE TOWNSHIP OF

DENYES

DISTRICT OF SUDBURY

PORCUPINE MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

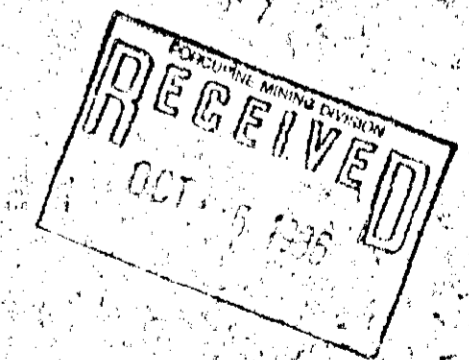
LEGEND

- PATENTED LAND Ⓟ
- CROWN LAND SALE Ⓢ
- LEASES Ⓛ
- LOCATED LAND Loc.
- LICENSE OF OCCUPATION L.O.
- MINING RIGHTS ONLY M.R.O.
- SURFACE RIGHTS ONLY S.R.O.
- ROADS —
- IMPROVED ROADS —
- KING'S HIGHWAYS —
- RAILWAYS —
- POWER LINES —
- MARSH OR MUSKEG —
- MINES Ⓜ
- CANCELLED Ⓢ
- PATENTED FOR S.R.O. Ⓢ

NOTES

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

L. U. P.



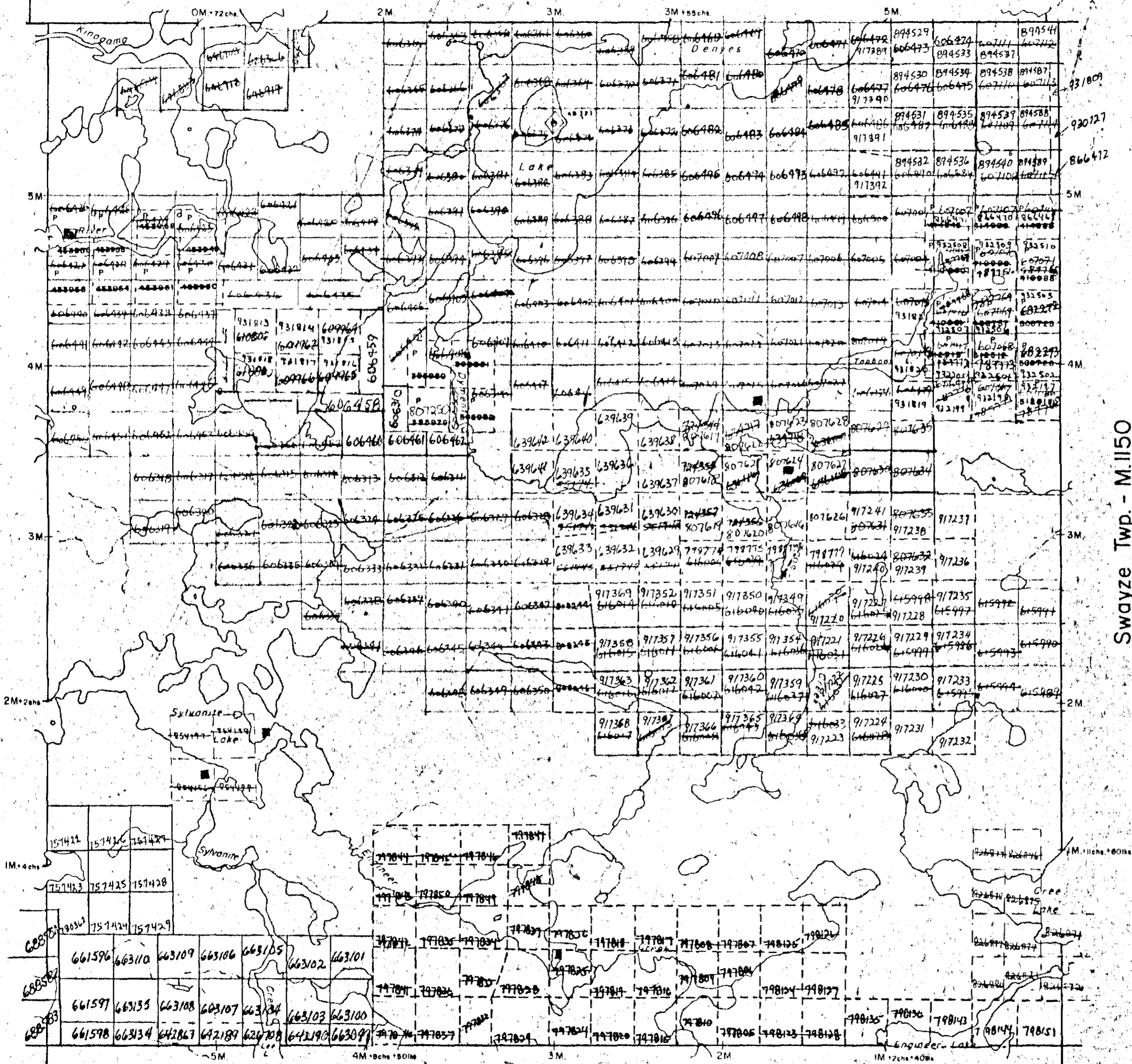
Received Jan 4/80

PLAN NO. M.758

ONTARIO  
MINISTRY OF NATURAL RESOURCES  
SURVEYS AND MAPPING BRANCH

Halcrow Twp. - M.906

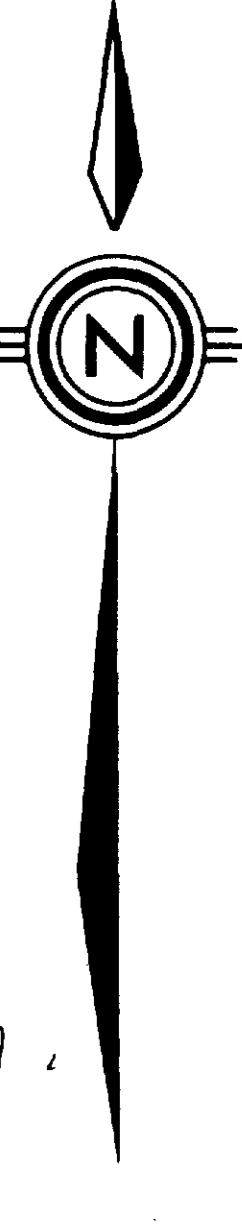
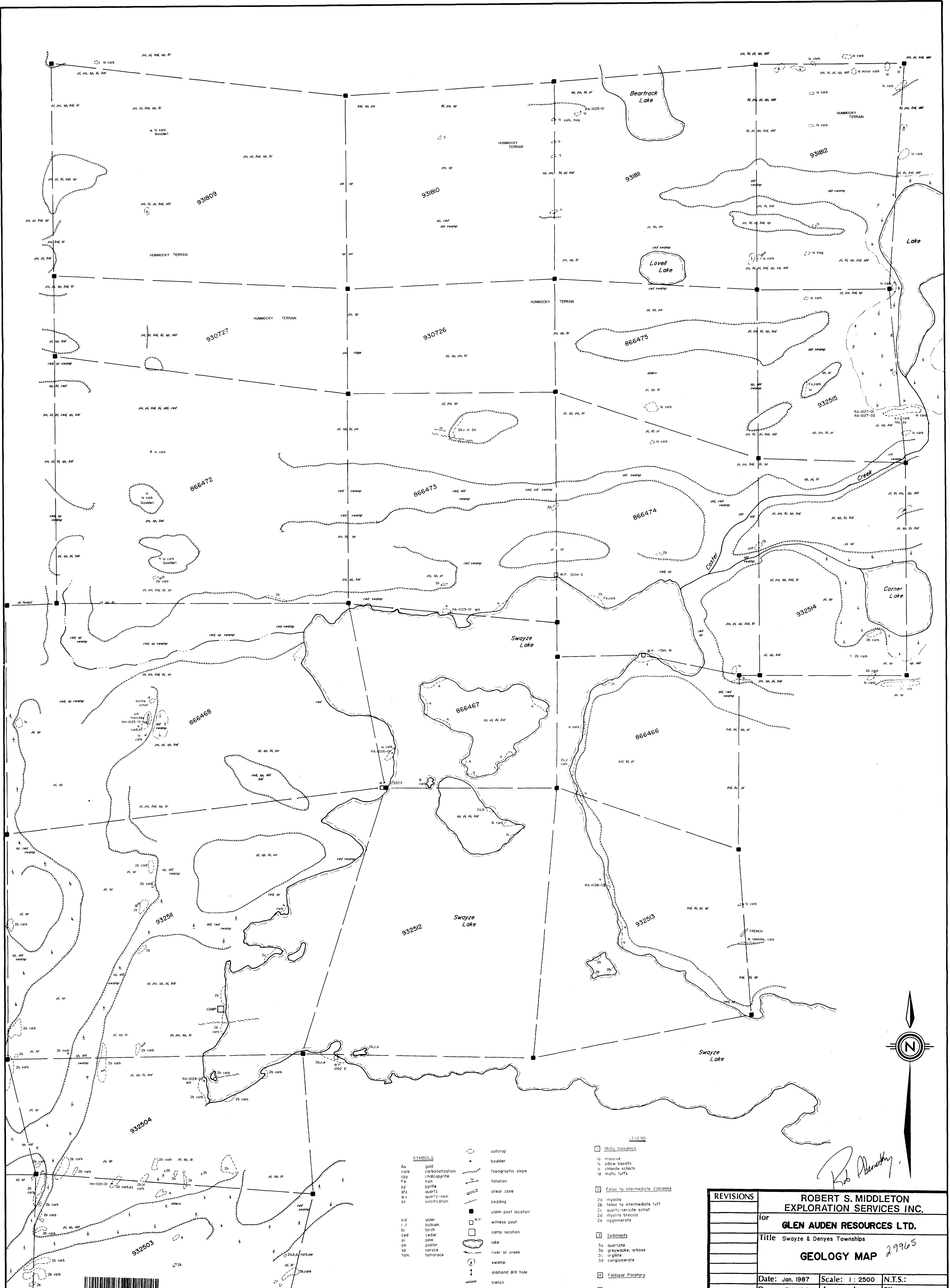
Swayze Twp. - M.1150



Greenlaw Twp. - M.895



410155E9093 2.9965 SWAYZE



*Rob Abernethy*

**SYMBOLS**

Au	gold	o	outcrop
carb	carbonization	x	boulder
cpy	calcoppyrite	~	topographic slope
Fe	iron	...	foliation
py	pyrite	...	shear zone
qtz	quartz	...	bedding
q.v.	quartz-vein	...	claim post location
sil	silicification	W.P.	witness post
old	alder	□	camp location
i-l	balsam	○	lake
bi	birch	—	river or creek
ced	cedar	~	swamp
pi	pine	+	diamond drill hole
pp	poplar	- - -	trench
sp	spruce		fault
tam.	tamarack		

**LEGEND**

□	Mafic Volcanics
□	Felsic to intermediate Volcanics
□	Sediments
□	Feldspar Porphyry
□	Diorabase

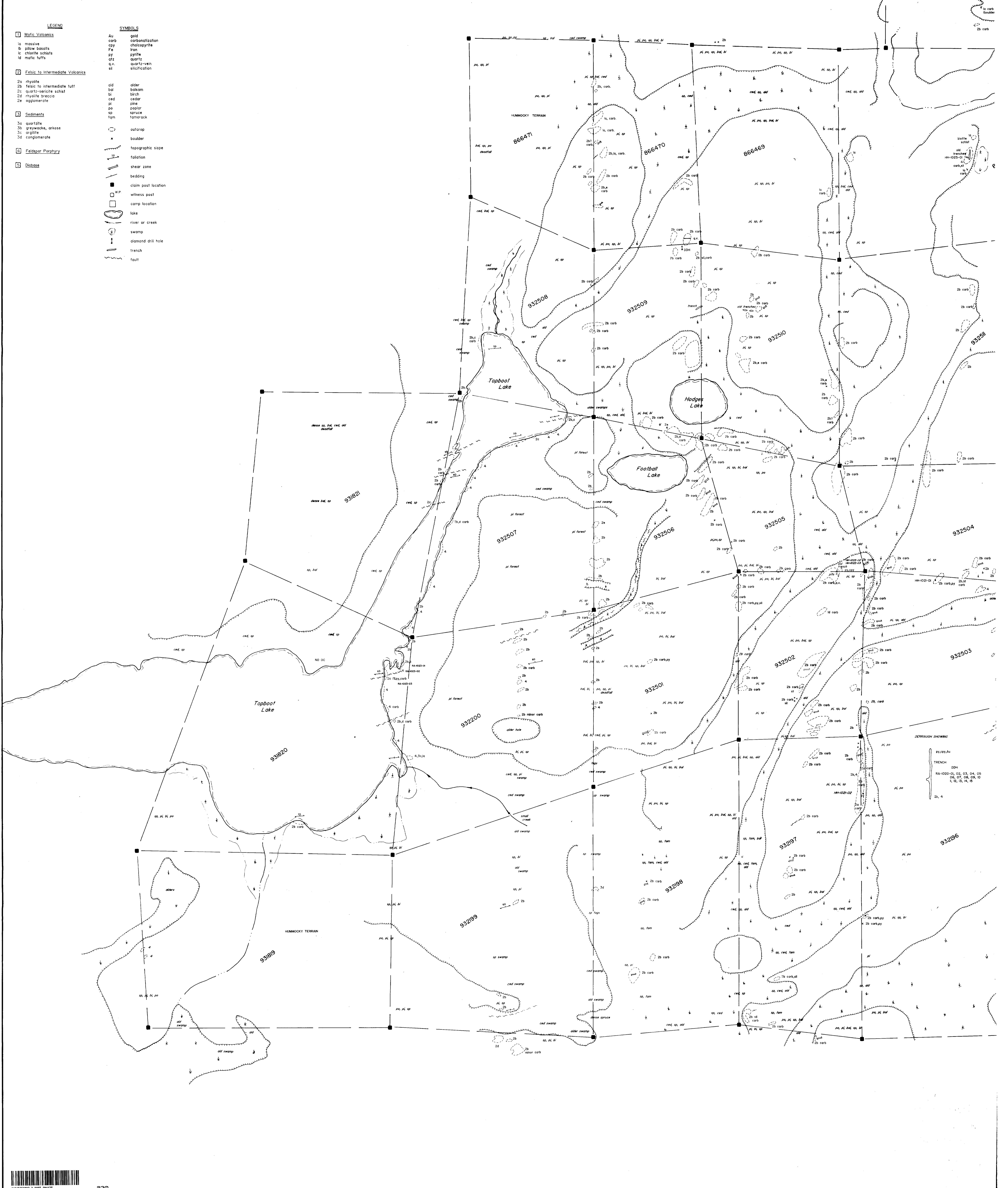
REVISIONS		
	for	<b>ROBERT S. MIDDLETON EXPLORATION SERVICES INC.</b>
	Title	<b>GLEN AUDEN RESOURCES LTD.</b>
		Swayze & Denyes Townships
		<b>GEOLOGY MAP</b> 29965
Date: Jan. 1987	Scale: 1 : 2500	N.T.S.:
Drawn: R.A./C.G.	Approved:	File: M-202

**LEGEND**

- 1 Mafic Volcanics
  - 1a massive
  - 1b pillow basalts
  - 1c chlorite schists
  - 1d mafic tuffs
- 2 Felsic to Intermediate Volcanics
  - 2a rhyolite
  - 2b felsic to intermediate tuff
  - 2c quartz-sericite schist
  - 2d rhyolite breccia
  - 2e agglomerate
- 3 Sediments
  - 3a quartzite
  - 3b greywacke, arkose
  - 3c argillite
  - 3d conglomerate
- 4 Feldspar Porphyry
- 5 Diabase

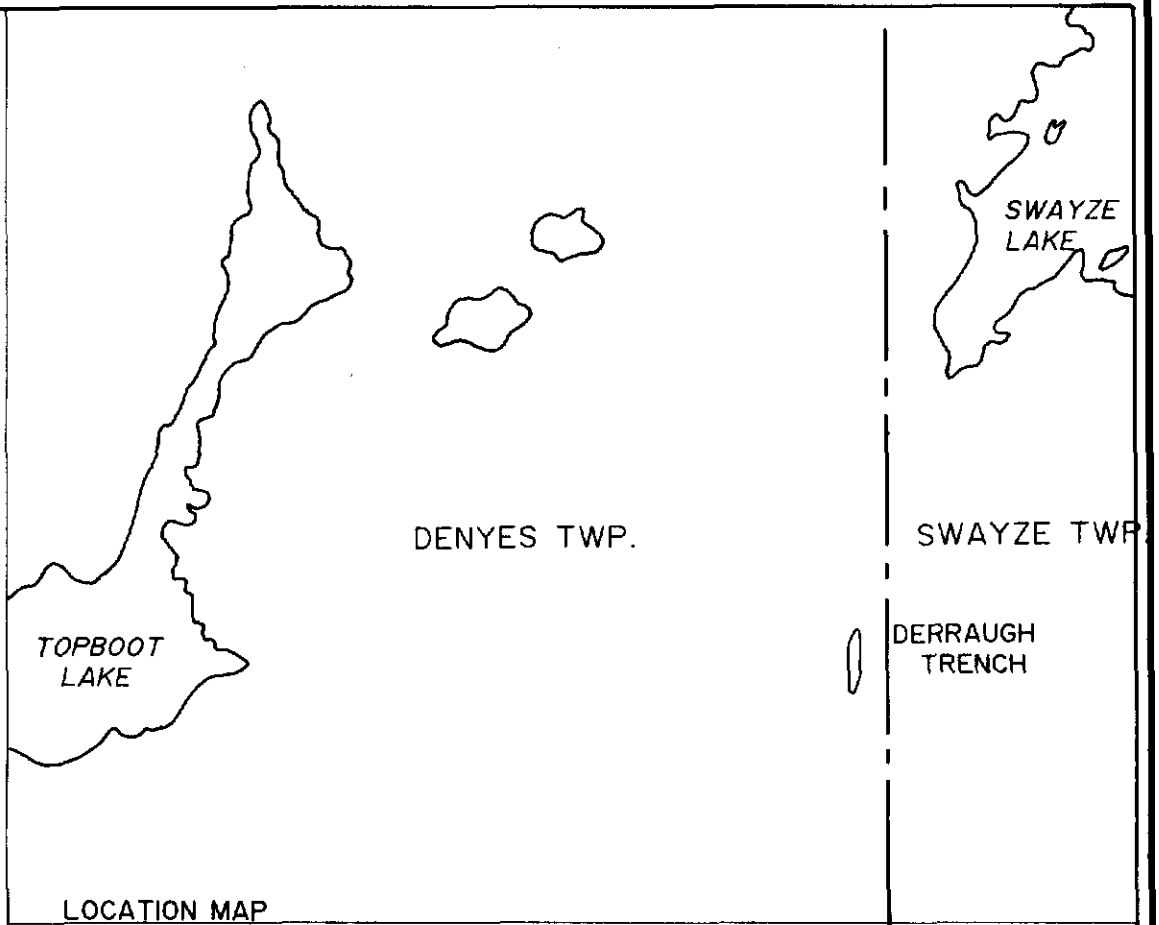
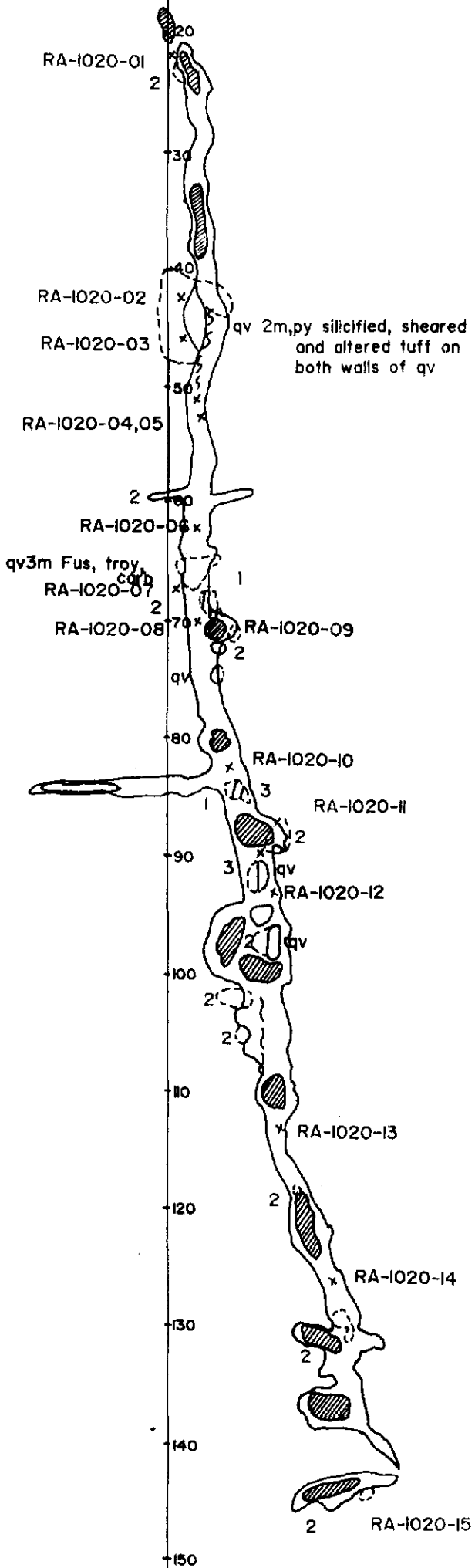
**SYMBOLS**

- Au gold
- carb carbonatization
- cpy chloropyrite
- Fe iron
- py pyrite
- qtz quartz
- q.v. quartz-vein
- sil silicification
- old alder
- bal balsam
- bir birch
- ced cedar
- pl pine
- psr poplar
- sp spruce
- fam tamarack
- outcrop
- boulder
- topographic slope
- foliation
- shear zone
- bedding
- claim post location
- witness post
- camp location
- lake
- river or creek
- swamp
- diamond drill hole
- trench
- fault





Claim Line 20W 10 N 10 20E



**LEGEND**

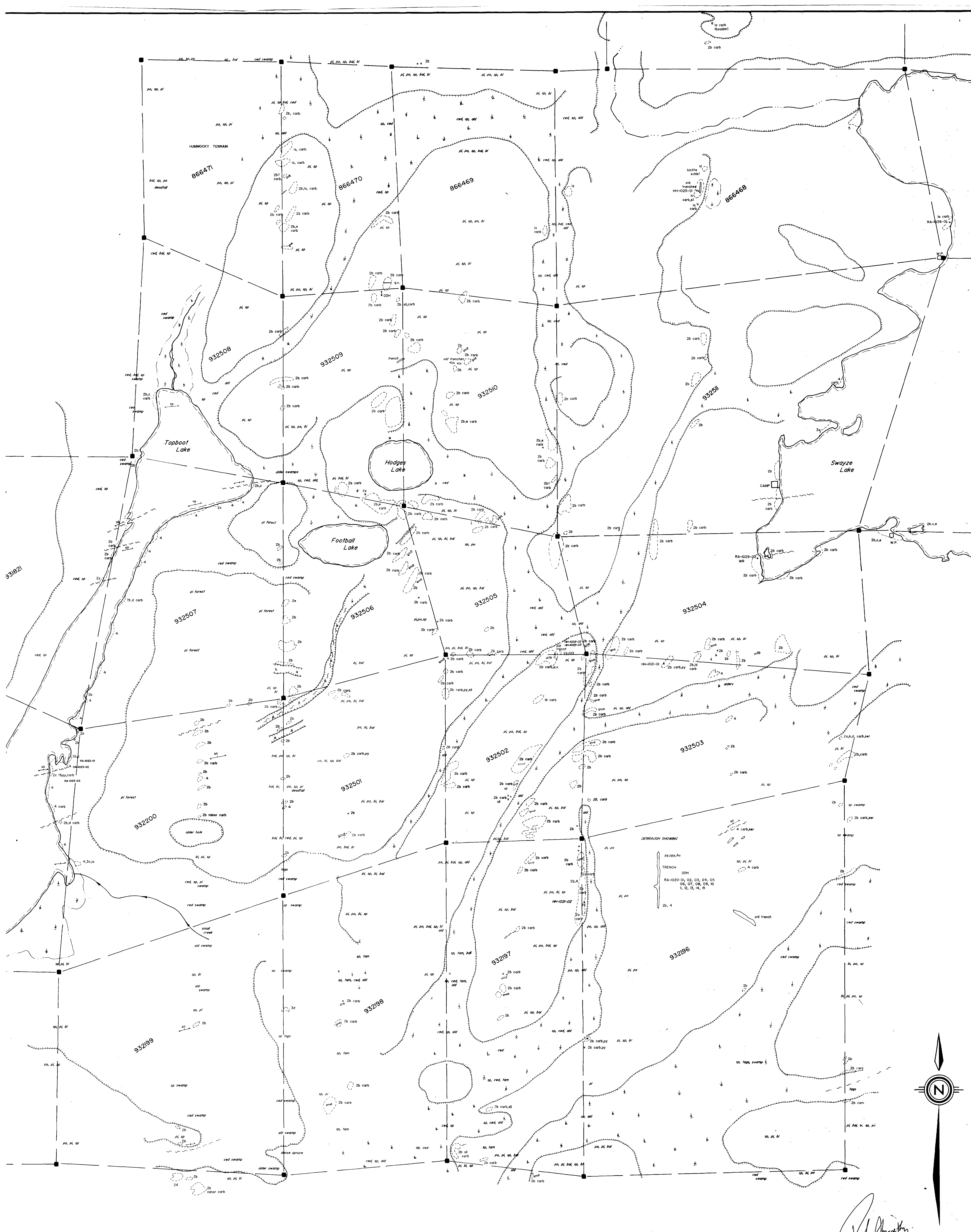
- 1. Highly Altered Chlorite± Biotite Schist
- 2. Intermediate To Felsic Tuffs
- 3. Feldspar Porphyry
- qv Quartz Veins
- Water
- Shear Zones

29965



410156E9093 2.9965 SWAYZE

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for	GLEN AUDEN RESOURCES LTD.	
	Title	TRENCH MAP	
	Date: Feb/87	Scale: 1:500	N.T.S.:
	Drawn: CG PG	Approved:	File: M-202



REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for	GLEN AUDEN RESOURCES INC.	
	Title	Swayze & Denyes Townships.	
		GEOLOGY MAP 29965	
	Date: Jan. 1987	Scale: 1 : 2500	N.T.S.:
	Drawn: R.A./C.G.	Approved:	File: M-202