



52J02NE0039 52J02NE003881 BECKINGTON LAKE

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Candore Explorations Limited

Geological Mapping
of the
Sturgeon Lake Property
Area of Beckington Lake
Patricia Mining Division
Ontario

by: Wayne Holmstead, FGAC
December, 1983

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MINING LANDS SECTION

*Beckington Lake
525/02 NE #60 File*

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52J02NE0039 52J02NE0038B1 BECKINGTON LAKE

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1) Introduction

In 1982, Mr. B. A. Edmond submitted a report for the Sturgeon Lake Property of Candore Explorations Ltd. and Mid-North Engineering Services Ltd. The report was a summary of previous work, geophysical surveys and a property examination. Mr. Edmond concluded that the property possessed a geological setting "conducive to the development of stratabound gold mineralization".

The purpose of the work, completed in the Fall, 1983, was to geologically map the property in detail and to assess it's potential for stratabound and other types of gold mineralization.

The Sturgeon Lake property consists of a roughly rectangular block of 23 contiguous, unpatented mining claims numbered;

PA 611973 to 611990

PA 611993 to 611997.

The claim group is situated in the Patricia Mining Division, about 10 kilometers southeast of the town of Savant Lake. Access is gained by travelling south from Savant Lake on Highway 599 and then 10 kilometers east on the Beckington Lake Road to a creek flowing south to Sturgeon Lake. From here, travel is by foot or skidoo in winter along old logging roads for about 2.5 kilometers to the southwest.

2) Regional Geology and Mineralization

The regional geology of the area is covered in the Ontario Geological Survey Report 200 (Trowell, 1981).

The Sturgeon Lake property is located on a northerly striking band of metavolcanics in the Savant Lake-Crow Lake greenstone belt within the Wabigoon Subprovince of the Superior Province. The property lies on a portion of the belt comprised of an easterly facing, steeply dipping succession, that grades from high Mg, tholeiitic, mafic to intermediate volcanics in the west (Unit C), to calc-alkaline, mafic to felsic flows with pyroclastics, tuffs and subvolcanic intrusives in the east (Unit D). The present geological mapping reported on later in this report has indicated that the property exhibits more characteristics of Unit D which Trowell (1981) has specified as the most likely unit to carry gold and sulphide mineralization.

The property appears to lie on the axis of a cross-fold as evidenced by OGS Map 2431 (Trowell, 1981) and aeromagnetic data (Map 1118). Edmond (1982) suggested that the fold developed around a local volcanic centre, the site of a cluster of conductive anomalies, likely attributable to exhalative sulphide mineralization.

Theoretically, the area has all the characteristics necessary for economic gold mineralization. A low grade source rock was available in the exhalite sulphides and abundant tectonic and hydrothermal activity through time could have concentrated the mineralization to form economic size and grade deposits.

Intense exploration for gold took place sporadically in the first half of the century. Numerous discoveries were made, the most successful of which was the St. Anthony mine on the North Arm of Sturgeon Lake, where 330,000 tons of ore were mined yielding 0.19 oz./ton gold and 0.05 oz./ton silver. Despite all of this activity, the Sturgeon Lake area is primarily known for the zinc-lead-copper-silver, massive sulphide deposits found there.

3) Previous Work on the Property

A comprehensive report on the past work on the Sturgeon Lake property was given by Edmond (1982) and is summarized in Table I below.

Table I- Summary of Previous Exploration Work

<u>Year</u>	<u>Company</u>	<u>Exploration Work</u>	<u>Results</u>
pre-1934	?	prospecting	-large number of prospects discovered around Ouillette Lake (Moore, 1911)
1934-37	Supreme Gold Mines	trenching shaft sinking	-several vein systems investigated Stewart- 0.53 oz/5 ft. Contact- 0.39 oz/3 ft. Centre- 0.177 oz/10 ft.
1945-58	Ouillette Gold Mines	diamond drilling (4 holes)	-narrow, very low gold values on Main Shaft Zone
1969	Selco Exploration	magnetometer survey conductivity survey diamond drilling (773 feet)	-no gold assays reported -favourable lithologies for stratabound gold (Edmond, 1982)
1982	Candore Exploration	magnetometer survey VLF-EM survey property examination rock sampling	-49 rock samples gold- tr.-0.02 oz/ton silver- nil-0.72 oz/ton

4) Present Work

4a) Geological Mapping

From September 25 to 28, 1983, the property was geologically mapped at a scale of 1:2500. Grid lines on the property had been previously cut at 100 meter spacing with stations chained at 20 meter intervals. The total length of the grid was about 42 kilometers. Assistance was provided by Lorne Burden, Eddy Canova and Harald Wolf, all B.Sc. graduate geologists.

A large number of character samples were taken of which 59 were submitted to Assayers Ltd. of Toronto for fire assays.

The mapping revealed that the property covered several volcanic cycles grading from subvolcanic gabbros or coarse grained mafic flows through pillowed and flow basalts to intermediate to felsic flows and tuffaceous rocks. The sequence of the units indicated that the stratigraphic top was to the east. Top determination on several pillowed basalts confirmed this observation.

The average foliation of the rocks was generally in a north-south direction. In the northern part of the map area it trended more to the northwest and in the southern part the foliation trended more towards the northeast. The foliation in the map area conforms with the regional trend and somewhat confirms that the property is close to the nose of a regional fold structure.

Three general fault directions could be recognized; northeast, northwest and north-south. By far the most prominent direction was found to be north-south, especially along zones of stratigraphic weakness such as the stratabound sulphide mineralization. The sulphide zones were invariably accompanied by shearing of the host rocks, formation of slickensides and occasionally formation of graphite mineralization.

The regional metamorphism was found to be greenschist with slightly higher grades found outside the contacts of intrusive rocks.

In one locality, (L1+OOS, 1+6OE) glacial striae were noted which indicated an ice direction of 192 degrees.

Generally, three types of rocks were encountered on the property. They were from youngest to oldest; intermediate to mafic volcanic rocks, felsic volcanic rocks and mafic to felsic intrusive rocks.

Intermediate to Mafic Volcanic Rocks

Metabasalts were by far the most common rock type in the map area. They were various shades of green and gray in both weathered and fresh surface. The rocks of this type usually formed in massive flows or pillows. Near the centres of thick flows, the rock was porphyritic or contained acicular lathes of amphibole up to 1 centimeter in length.

The basalts were found to have undergone varying degrees of shearing and alteration, usually chloritization. Where the basalts were sheared, quartz-carbonate veining was prevalent especially parallel to the shearing and foliation.

The basalts were found to be mineralized with disseminated pyrite up to 10% and rarely traces of pyrrhotite. Fine grained sometimes formed up to 20% of the rock, forming magnetic bands in the basaltic flows.

Pillow basalts were common with oval shaped pillows up to 1 by $\frac{1}{2}$ meter in size. The pillow rims were $\frac{1}{2}$ -1 centimeter thick and were sometimes found to contain fine veinlets of quartz-carbonate. In pillows where the orientation could be determined, the stratigraphic tops were found to the east in all cases.

Contacts of the basalts with the felsic units were found to be quite sharp with some interbedding of the two units. This was not the case with the contacts between the basalts and the gabbros which were found to be quite gradational. This may have been caused by some recrystallization of the basalts on intrusion of the gabbroic rocks. Towards the centres of some of the thicker basaltic flows, the grain size increased until there was some difficulty in determining if the rock was a fine grained gabbro or a coarse grained basalt. This problem could usually be resolved by examining surrounding outcrops.

Felsic Volcanic Rocks

The felsic volcanic rocks occur at several stratigraphic horizons within the property. The composition is generally rhyolitic and the form of the rocks varies from subvolcanic quartz-feldspar porphyry to extrusive, rhyolitic flows, tuffs and agglomerates. The fresh and weathered surfaces are various shades of pink, green, grey, yellow and brown.

The felsic units had undergone varying degrees of shearing and alteration, the extreme case appeared as a mylonitic quartz-sericite schist. Quartz-carbonate veining was common usually parallel to the foliation of the rock.

It was the felsic rocks that were found to host the massive sulphide mineralization that was found in the Main Shaft Zone. The sulphide content varied from trace to massive and consisted of pyrite, pyrrhotite, chalcopyrite, bornite and traces of arsenopyrite. Graphite was observed in some trenches indicating that perhaps movement had taken place along the structurally weak sulphide zones. In some places, octahedral crystals of magnetite were found to make up about 1% of the rock, making it quite magnetic.

The quartz-feldspar porphyry consisted of up to 5% subhedral quartz eyes, 5-10 mm. in diameter and up to 1% feldspar eyes, 2-3 mm. in diameter in a very fine grained matrix. In most cases the quartz eyes showed a blue colouration common in this type of rock.

Thin, finely laminated, tuffaceous units and felsic agglomerates with rounded fragments 5-10 cm. in size, were commonly seen interbedded with the rhyolitic flow rocks. The agglomeratic fragments were usually flattened parallel to the foliation.

Mafic to Felsic Intrusive Rocks

The majority of the intrusive rocks in the area were found to be of gabbroic to dioritic composition. They were found to occur as dykes and irregular masses that had intruded into the metavolcanic rocks. These rocks were found to weather to a salt and pepper texture and colouration and were commonly found to contain xenoliths of basalt.

As mentioned in the previous section, contacts were usually not sharp, therefore the interpretation as intrusive rocks was made based largely on grain size and texture. This does not rule out, however, that the intrusives could actually be coarse grained flow rocks.

Intrusive rocks of granitic composition were only rarely seen and were likely only small dikes.

4b) Mineralization and Rock Samples

There appears to be at least two types of gold mineralization on the Sturgeon Lake property.

The first type is gold associated with a sheared sulphide zone (eg. the Main Shaft Zone). The Main Shaft Zone is likely an exhalite that consists mainly of pyrite, minor pyrrhotite, chalcopyrite and traces of sphalerite and galena. It can be traced from L10S, 2+00E to L00, 3+00E where it appears to be displaced to the south or possibly faulted off. There is trenching located around L01N, 4+00E which may possibly be the same zone or another parallel zone.

During tectonization of the area, the sulphide zone likely provided an available site for shearing to take place and finally quartz-carbonate injection. The gold mineralization was likely remobilized and concentrated during the introduction of the quartz-carbonate veining.

Sampling of the zone did not reveal any significant mineralization (see Table II). The best gold value (sample 2424) was 743 ppb (0.02 oz./ton) and the same sample also gave the best silver value of 5.9 ppm (0.17 oz./ton). The average values for copper, zinc and nickel were 198 ppm, 54 ppm, and 84 ppm.

The second type of gold mineralization detected was associated with the contacts of gabbroic intrusions with the meta-volcanics (eg. the Contact and Stewart Zones). The Contact Zone, striking north-south from the Contact shaft, at L02N, 0+35W, was not very well exposed except for waste rock around the shaft. Two samples (2416 and 2417) collected here did not reveal any significant mineralization.

The Stewart Zone afforded better exposure through old trenching and pitting. One pit on L00, 5+20W yielded 3 samples (2429, 30 and 31) with gold values of 0.56, 0.20 and 0.81 oz./ton. The average values for silver, copper, zinc and nickel were 3.7 ppm (0.11 oz./ton), 390 ppm, 10 ppm and 62 ppm. The trenches here were dug to expose strongly gossaned, green basalts with 20% pyrite, graphite and quartz veining. Mapping in the area revealed gabbroic rocks to the north and metabasalts to the south.

The localization of gold mineralization here could be possibly due to the intrusion of the gabbro into the metabasalts. Injection of the magma could fracture and shear the metabasalts and drive hydrothermal, silica and carbonate rich solutions through the fractured rock to pick up metallic mineralization and deposit it around the margins of the intrusion.

The dimensions of the Stewart Zone could not be reliably determined in the field, however, Huycke (1946) indicated that it may be about 400 meters long.

Table II- Rock Samples from the Sturgeon Lake Property

<u>Sample</u>	<u>Location</u>	<u>Au(ppb)</u>	<u>Ag(ppm)</u>	<u>Sample type/Lithology</u>
2401	L06S, 1+10W	L5		grab/shd. int. volc.
2402	L07S, 2+40E	L5		grab/QFP, 2-4% Py.
2403	" "	L5		grab/QFP, goss.
2404	" "	L5		grab/basalt
2405	L07S, 3+40E	L5		grab/sericite schist
2406	L06S, 5+00E	L5		grab/qtz. in basalt
2407	L06S, 3+20E	L5		grab/qtz. in QFP
2408	L06S, 3+00E	L5		grab/sericite schist
2409	L02N, 4+65E	6	0.4	grab/qtz. in ser. sch.
2410	L01N, 4+00E	6		grab/qtz. in gabbro
2411	L01N, 4+30E	L5		grab/qtz. in QFP
2412	" "	L5	3.7	grab/massive sulph.
2413	" "	L5	2.1	grab/QFP, 15% pyrr.
2414	L01N, 4+35E	L5	0.3	grab/qtz. in chlor. sch.
2415	L01N, 5+30W	291		grab/qtz. in bas., py.
2416	L02N, 6+35W	L5	0.7	grab/quartz vein
2417	" "	L5	2.6	grab/qtz., tr. py.
2418	L02N, 5+70W	L5	2.9	grab/qtz., py., cpy.
2419	1075S 1+80W	148		grab/qtz., gab.-bas. con.
2420	L01S, 4+55E	382	2.4	grab/rhyolite, qtz. veins

Table II cont'd

<u>Sample</u>	<u>Location</u>	<u>Au(ppb)</u>	<u>Ag(ppm)</u>	<u>Sample type/Lithology</u>
2421	L01S, 4+55E	C	1.8	grab/biotite schist
2422	" "	166	1.8	grab/basalt, 1% py.
2423	" "	148	2.2	grab/gossan, 5-7% py.
2424	" "	743	5.9	grab/rhyolite, 2% py.
2425	150S, 3+20E	39	3.9	grab/ser. sch., 50% py.
2426	" "	L5	1.9	grab/quantz, py., cpy.
2427	L01S, 3+20E	14	0.4	grab/shd. rhy., 7-8% py.
2428	L01S, 2+20E	207	4.1	grab/qtz. in basalt
2429	L00, 5+20W	0.50*	1.5	grab/goss. bas., graph.
2430	" "	0.30*	4.8	grab/ " " , qtz. vns.
2431	" "	0.81*	4.8	grab/rhy. goss., 20% py.
2432	L03S, 2+60E	195	3.4	chip/gossan
2433	L02S, 0+80E	90		grab/qtz. in rhy.
2434	250S, 3+20E	180	3.4	grab/massive py.
2435	1000S 3+00E	114		grab/qtz. in boulder
2436	1000S 1+80E	L5	0.9	grab/gossan rhyolite
2437	L02S, 3+20E	51	1.3	grab/gossan rhyolite
2438	L08S, 2+40E	L5	1.1	grab/gossan QFP
2439	L09S, 2+20E	253		grab/goss. rhy., 12% py.
2440	L01S, 0+60E	L5	1.2	grab/granodiorite
2441	ETL, 0+90S	L5		grab/gossan rhyolite
2442	L04N, 1+80E	51		grab/qtz. in basalt
2443	L00, 5+30W	23		grab/qtz. in basalt, py.
2444	L05S, 2+60E	6	0.9	grab/gossan basalt
2445	L04S, 4+60W	24		grab/qtz. in gabbro
2446	L04S, 0+20W	20		grab/qtz. in basalt
2447	L05S, 3+00E	L5		grab/rhy., sulph.
2448	" "	57	1.8	" " "
2449	L05S, 4+60E	L5	1.6	grab/qtz., sulph.
2450	L04S, 7+20W	L5	0.5	grab/rhyolite, sulph.

Table II cont'd

<u>Sample</u>	<u>Location</u>	<u>Au(oz./ton)</u>	<u>Sample type/Lithology</u>
2451	L08S, 2+35E	10.001	gab/QFP, 4-5% py.
2452	" "	10.001	gab/felsic tuff
2453	1000S 3+30E	10.001	gab/rhyolite
2454	L02S, 3+20E	10.001	gab/rhyolite
2455	" "	10.001	gab/rhyolite
2456	L03S, 2+60E	10.001	gab/rhyolite
2457	1000S 1+10E	10.001	gab/int. gossan, mag.
2458	L02S, 6+00W	0.008	gab/shd. QFP
2459	L02S, 6+40W	10.001	gab/qtz. in QFP

Abbreviations

* oz./ton gold	pyrr.	pyrrhotite
bas. basalt	QFP	quartz feldspar porphyry
chlor. chlorite	qtz.	quartz
con. contact	rhy.	rhyolite
cpy. chalcopyrite	sch.	schist
gab. gabbro	ser.	sericite
goss. gossan	shd.	sheared
int. intermediate	sulph.	sulphides
mag. magnetite	tr.	trace
py. pyrite	volc.	volcanic

4 d) Correlation of Geological Mapping with Geophysics

The total field magnetic survey on the property completed in 1982, revealed a generally higher magnetic background on the east half of the property than on the west side. Geological mapping confirmed that all of the volcanic rocks to the east contained higher concentrations of disseminated magnetite. The Main Sulphide Zone appeared to be truncated by the west edge of an area of higher magnetic background. This edge may be the site of an unconformity or pause in the volcanic activity.

The Stewart and Contact Zones are marked by a slight, north-northwest trending high, which may be due to the gabbroic intrusion found there. The magnetite of the volcanics here appeared to be quite low.

The VLF-EM survey delineated four sets of north-south trending conductors.

The first set is located on the west side of the grid and consists of three separate anomalies from L10+75S to L6+00N. From L10+75S to L6+00S, the anomaly lies in swampy ground. From L5+00S to 6+00N, the anomaly appears to be marking the contact between gabbro to the east and felsic volcanics to the west.

The second set of anomalies runs through Ouillette Lake and is picked up discontinuously to L5+00N. This anomaly may be related to conductive lake bottom or a major north-south fault zone that is thought to pass through Ouillette Lake. Around lines 2+00S, 2+00N and 3+00N the anomaly may correspond with a contact between felsic volcanics to the west and mafic volcanics to the east.

The third set of anomalies occurs between the Baseline and the East Tie Line from L10+75S discontinuously to L7+00N and possibly farther. From L10+75S to the Main Shaft, the anomaly is probably due to the Main Sulphide Zone that is extensively trenched. The next two anomalies from L1+00N to L4+00N may be due to conductive lake bottom in Mine Lake. The last anomaly from L5+00N to L7+00N may be due to a contact between gabbro to the east and basalt to the west.

The last set of two parallel anomalies occurs east of the East Tie Line from L10+00S to L4+00S and possibly farther. The conductors here may be due to another fault zone parallel to the one running through Ouillette Lake.

5) Conclusions

- 1) The Sturgeon Lake property lies on a portion of the Savant Lake-Crow Lake greenstone belt that, according to regional mapping (Trowell, 1981), is most likely to carry gold and sulphide mineralization.
- 2) Previous work on the property had revealed several north-south striking vein systems that carried gold mineralization.
- 3) Detailed geological mapping of the property revealed several volcanic cycles that hosted atleast two types of gold mineralization.
- 4) Two areas of mineralization were outlined by geological mapping; the Main Sulphide Zone and the Stewart-Contact Zone. Three rock samples from a trench on the Stewart Zone gave economic grade gold values (0.30 to 0.81 oz./ton gold).
- 5) Geological mapping showed that the magnetometer survey was useful in differentiating different lithologies based on the magnetite content and the VLF-EM survey was useful in detecting the Main Sulphide Zone but not the Stewart-Contact Zone.
- 6) The possible presence of stratabound gold mineralization on the property as suggested by Mr. Edmond (1982) cannot be ruled out at this time, however, geological mapping of the property did not produce any evidence to support this hypothesis.

6) Recommendations

It is therefore recommended that the mineralized zones that gave favourable results be mechanically stripped of overburden in preparation for a systematic sampling program and a detailed study of the mechanism of gold emplacement. Favourable results from the systematic sampling program would warrant a diamond drilling campaign. A successful study of the mechanism of gold emplacement would suggest other areas on the property to be investigated in finer detail for similar type gold mineralization

6a) Cost Estimates

Mechanical Stripping, 5 days @ \$500/day	\$2500.00
Detailed Mapping and Sampling, 14 days @ \$250/day	3500.00
Board and Lodging, 14 days @ \$45/day	630.00
Assaying, 200 samples @ \$11/sample	2200.00
Transportation	1000.00
Report and Drafting	1500.00
Equipment Rental	<u>670.00</u>
Total	\$12000.00

Respectfully submitted,



Wayne E. Holmstead, FGAC

References

Edmond, B. A.

1982: Summary of 1982 Field Surveys, Sturgeon Lake Project Property, unpublished.

Huycke, W. D.

1946: Surveyed Map-Development to Date, Ouillette Mines, Ont. Geol. Surv. Assessment Files.

Moore, E. S.

1911: The Sturgeon Lake Gold Field, Ont. Bur. Mines, V. 20, pt. 1.

Trowell, N. F.

1981: Geology of the Beckington Lake Area, District of Thunder Bay, Ont. Geol. Surv., Rept. 200.

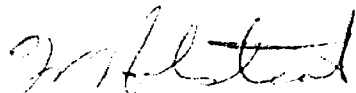
Certificate

I, Wayne E. Holmstead, resident at 4324 Marlin Crescent in the City of Pierrefonds, Province of Quebec; Do Certify That:

1. I am a graduate of the University of Toronto and hold a Bachelor of Science Degree in Geology
2. I am a Fellow of the Geological Association of Canada
3. I have continuously practiced my profession as an Exploration Geologist since 1976
4. I participated in the geological mapping of the Sturgeon Lake Property.

Dated at Pierrefonds, Quebec, this 9th day of December, 1982.

W. E. Holmstead, FGAC





ASSAYERS (ONTARIO) LIMITED

33 CHAUNCEY AVENUE TORONTO, ONTARIO M4Z 2Z2 · TELEPHONE (416) 239-3527

Certificate of Analysis

Certificate No. **MI-423/ #2526** Date: **October 19, 1983**

Received **50** Samples of **Rock**

Submitted by **Mid-North Engineering** Att'n: **Mr. T. Miller**
c.c. **Mr. W.E. Holmstead**
c.c. **Mr. L. Burden**

Sample No.	Au ppb	Ag ppm	Cu ppm	Zn ppm	Ni ppm
2401	<5				
2402	<5				
2403	<5				
2404	<5				
2405	<5				
2406	<5				
2407	<5				
2408	<5				
2409	6	.4			
2410	6				
2411	<5				
2412	<5	3.7	600	38	133
2413	<5	2.1	193	175	62
2414	<5	.3			
2415	291				
2416	<5	.7	136	9	
2417	<5	2.6			
2418	<5	2.9			
2419	148				
2420	382	2.4	170	72	97

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33 CHAUNCEY AVENUE TORONTO, ONTARIO M8Z 2Z2 · TELEPHONE (416) 239 3527

Certificate of Analysis

Certificate No. **MI-423/ #2526**

Date: **October 19, 1983**

Received **50** Samples of **Rock**

Submitted by **Mid-North Engineering**

Att'n: **Mr. T. Miller**
c.c. **Mr. W.E. Holmstead**
c.c. **Mr. L. Burden**

Sample No.	Au ppb	Ag ppm	Cu ppm	Zn ppm	Ni ppm	Pb ppm
2421	6	1.8	129	51	63	
2422	166	1.8	184	51	80	
2423	148	2.2	113	88	79	
2424	743	5.9	79	87	57	
2425	39	3.9	163	15	71	
2426	<5	1.9	122	20	95	
2427	14	.4	139	6	75	
2428	207	4.1	434	8	119	
2429	oz/ton- .56	1.5	138	10	71	
2430	" - .30	4.8	520	10	53	
2431	" - .81	4.8	513	9	62	
2432	195	3.4	178	31	115	
2433	90					
2434	180	3.4	66	97	50	59
2435	114					
2426	<5	.9		16		
2437	51	1.3				
2438	<5	1.1				
2429	253					
2440	<5	1.2				

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Per 



ASSAYERS (ONTARIO) LIMITED

130 CHANCELLERY AVENUE TORONTO, ONTARIO M1Z 2Z2 TELEPHONE (416) 239 3527

Certificate of Analysis

Certificate No. MI-423/ # 2526

Date October 19, 1983

Received 50 Samples of Rock

Submitted by Mid-North Engineering

Att'n: Mr. T. Miller
c.c. Mr. W.E. Holmstead
c.c. Mr. L. Burden

Sample No.	Au ppb	Ag ppm	Cu ppm	Zn ppm	Ni ppm
2441	<5				
2442	51				
2443	23				
2444	6	.9	334	25	
2445	24				
2446	20				
2447	<5				
2448	37	1.8		21	
2449	<5	1.6		39	
2450	<5	.5			

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Per 



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Certificate of Analysis

Certificate No. **MI-439/#2547**

Date **October 26, 1983**

Received

9

Samples of

Rock

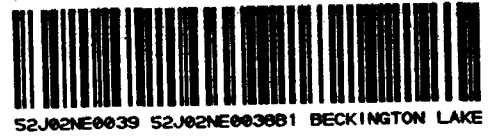
Submitted by **Mid-North Engineering Limited**

Att'n: **Mr. Tony Miller**
c.c. **Mr. W. E. Holmstead**
c.c. **Mr. L. Burden**

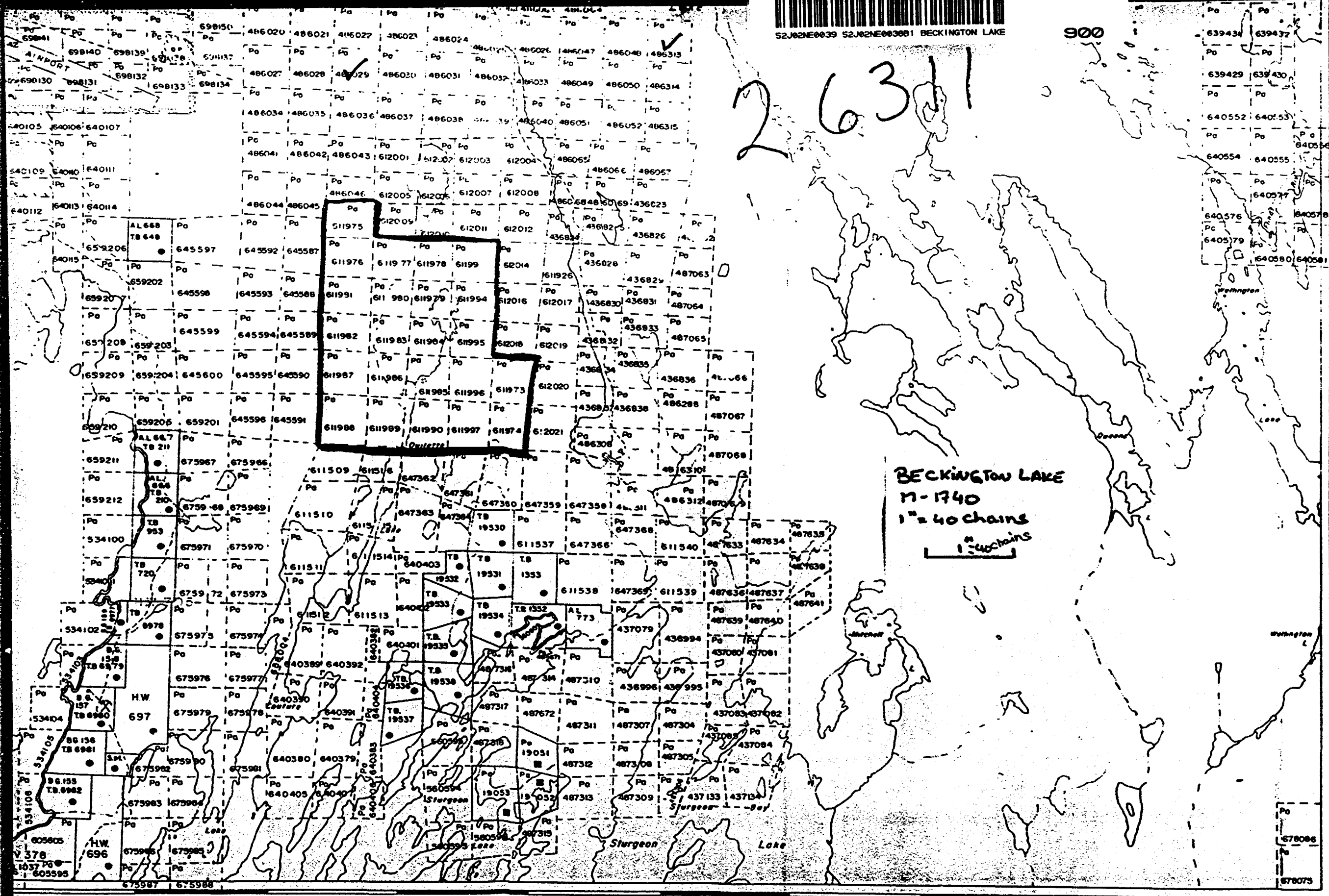
Sample No.	Au oz/ton
2451	<.001
2452	<.001
2453	<.001
2454	<.001
2455	<.001
2456	<.001
2457	<.001
2458	.008
2459	<.001

ASSAYERS (ONTARIO) LIMITED

Per



26311



BECKINGTON LAKE
M-1740
1" = 40 chains
1/4 chains

Fog Lake & Manion Twp. G-25

Squaw Lake Area - G-2274

50°0'30"
90°30'



Report of Work
(Geophysical, Geological,
Geochemical and Expenditures)

83-129

Instructions: Please take print
of this report of work from the
Ontario Federation of Mining Engineers
Note: This report is prepared in the
English language. Sections may be prepared
in the "Expend Days Cr" columns
- Do not use shaded areas below

Mining ends

The Mining Act

Type of Survey	Geological Mapping	Location of Area	Section 114 M-1740
Claim Holder(s)	Mid-North Engineering Services Ltd.	Province of Ontario No.	422041
Address	1205-45 Richmond Street ..., Toronto, Ontario. M5H 1Z2		
Survey Company	Wayne Holmstead, Geologist	Date of Survey (from & to)	Total Miles of Line Cut
		25 09 83 28 09 83	42 km.
Name and Address of Author (of Geo Technical report)		Wayne Holmstead, 4604 Marlin Cres., Pierrefonds, Que. H9H 2K7	

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	
	Radiometric	
For each additional survey using the same grid Enter 20 days (for each)	Other	
	Geological	20
	Geochemical	
Min. 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 Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
PA	611973	20			
	611974	20			
	611975	20			
	611976	20			
	611977	20			
	611978	20			
	611979	20			
	611980	20			
	611981	20			
	611982	20			
	611983	20			
	611984	20			
	611985	20			
	611986	20			
	611987	20			
	611988	20			
	611989	20			
	611990	20			
	611993	20			
	611994	20			
	611995	20			
	611996	20			
	611997	20			

Report to follow shortly

PATRICIA JAMNICKI
RECEIVED
NOV 28 1983
M. 8, 9, 10, 11, 12, 13, 14, 15

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.

Pa. 611973

Total number of mining claims covered by this report of work. 23

For Office Use Only

Total Days Cr. Recorded 460

Date Recorded Nov. 28, 1983

Mining Recorder *[Signature]*

Date NOV 15 / 83

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 Wayne Holmstead, as above

Date Certified NOV 15 / 83

Certified by (Signature) *[Signature]*

REPORT OF WORK

Geotechnical Land Expenditures

The Mining Act

Note: - Do not use stamped areas if possible

Type of Survey: **Geological Mapping** Township or Area: **Beckington Lake**

Claim Holder(s): **Mid-North Engineering Services Ltd.** Press. Claim License No: **A620-1**

Address: **1205-45 Richmond Street W., Toronto, Ontario. M5H 1Z2**

Survey Company: **Wayne Holmstead, Geologist** Date of Survey (from & to): **25 09 83** Total Miles of line cut: **42 Km.**

Name and Address of Author (of Geo-Technical report): **Wayne Holmstead, 4364 Marlton Cres., Pierre-Ronde, Que. H9B 2M7**

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

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

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

Mining Claim Prefix	Mining Claim Number	Expend Days Cr	Mining Claim Prefix	Mining Claim Number	Expend Days Cr
PA	611872	20			
	611874	20			
	611875	20			
	611876	20			
	611877	20			
	611878	20			
	611879	20			
	611880	20			
	611881	20			
	611882	20			
	611883	20			
	611884	20			
	611885	20			
	611886	20			
	611887	20			
	611888	20			
	611889	20			
	611890	20			
	611891	20			
	611892	20			
	611893	20			
	611894	20			
	611895	20			
	611896	20			
	611897	20			
	611898	20			

Report to follow shortly

RECEIVED

DEC 1 1983 23

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures: **540** + **15** = **555** 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.

For Office **MINING LANDS SECTION**

Total Days Cr. Recorded: Date Recorded: Mining Recorder:

Date Approved or Recorded: Branch Director:

Date: **Nov 15/83** 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 supervised same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying: **Wayne Holmstead, as above**

Date Certified: **NOV 15/83** Certified by (Signature): *[Signature]*



Ministry of
Natural
Resources

Geotechnical
Report
Approval

File
2.6661

Mining Lands Comments

- geological map not coloured.

To: Geophysics

Comments

Approved Wish to see again with corrections

Date

Signature

To: Geology - Expenditures *Mr. C. Krusta*

Comments

Approved Wish to see again with corrections

Date

Jan 3 / 84

Signature

C. Krusta

To: Geochemistry

Comments
L.D.

Approved Wish to see again with corrections

Date

Signature

To: Mining Lands Section, Room 6462, Whitney Block.

(Tel: 5-1380)

1983 12 20

Our File: 2.6161

Mr. Albert Hanson
Mining Recorder
Ministry of Natural Resources
P.O. Box 669
Stouffville, Ontario
POV 2T0

Dear Sir:

We have received reports and maps for a Geological Survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims PA 611973 et al in the Area of Beckington Lake.

This material will be examined and assessed and a statement of assessment work credits will be issued.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: (416) 965-1380

A. Darr:mc

cc: Mid-North Engineering Services Ltd
Suite 1205
45 Richmond Street West
Toronto, Ontario
M5H 1Z2

cc: Wayne Holmstead
4334 Marlin Crescent
Pierrefonds, Quebec
H9H 2K7

Initial Check

December 28, 1983 M. Anderson.

Assessed

Approved Reports of Work
sent out

Notice of Intent filed

Approval after Notice of Intent
sent out

Duplicate sent to Resident
Geologist

Duplicate sent to A.F.k.O.

January 13, 1984

Our File: 2.6161

Mid-North Engineering Services Ltd
Suite 1205
45 Richmond Street West
Toronto, Ontario
M5H 1Z2

Dear Sirs:

RE: Geological Survey submitted on Mining Claims
PA 611973 et al in the Area of Beckington Lake

Enclosed are the plans, in duplicate, for the above-mentioned surveys. Please colour code the outlined geological outcrops and return all maps to this office as soon as possible.

For further information, please contact Mr. F.W. Matthews at (416)965-1380.

Yours very truly,

J.R. Morton
Acting Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1H3
Phone: (416)965-1380

M. E. Anderson:mc

cc: Mining Recorder
Sioux Lookout, Ontario

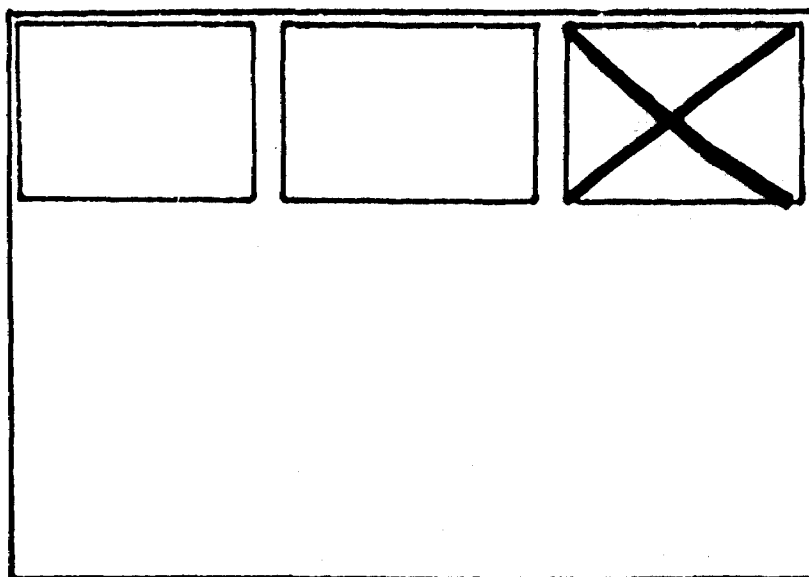
Encl.

SEE ACCOMPANYING
MAP(S) IDENTIFIED AS

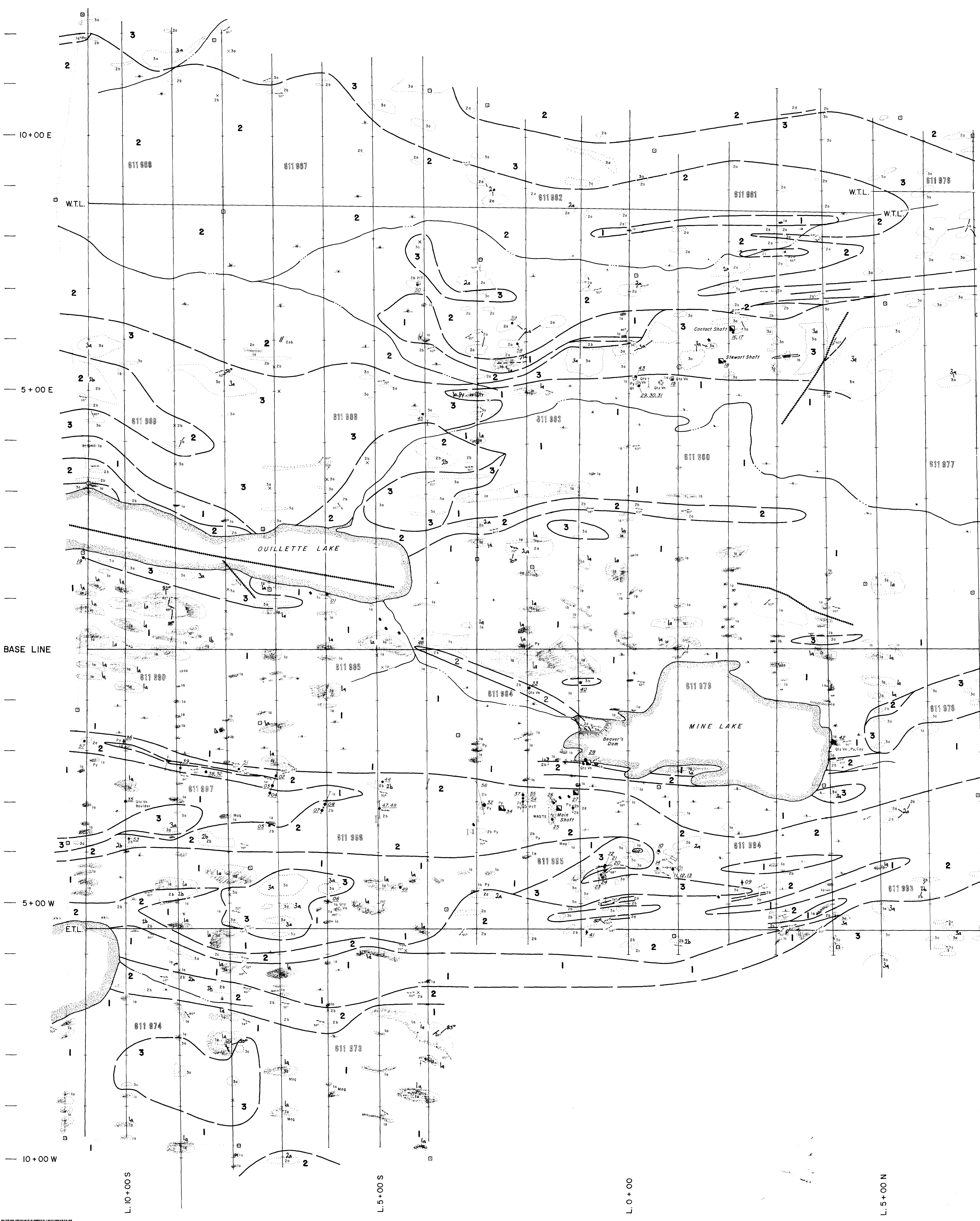
525/02NE-0038-B1# 1

LOCATED IN THE MAP
CHANNEL IN THE
FOLLOWING SEQUENCE

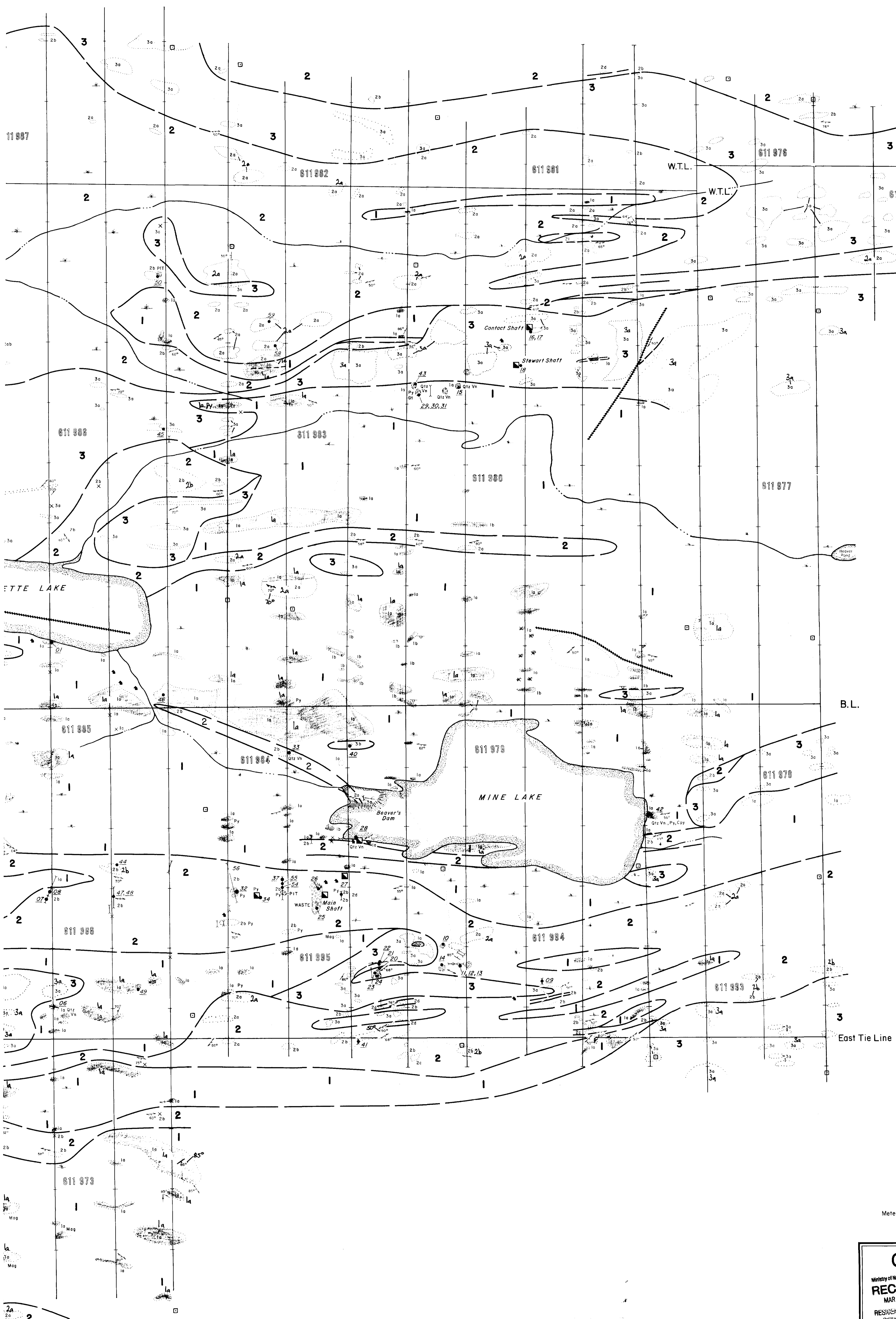
(X)



L. 10+75 S
L. 10+00 S
L. 9+00 S
L. 8+00 S
L. 7+00 S
L. 6+00 S
L. 5+00 S
L. 4+00 S
L. 3+00 S
L. 2+00 S
L. 1+00 S
L. 0+00
L. 1+00 N
L. 2+00 N
L. 3+00 N
L. 4+00 N
L. 5+00 N
L. 6+00 N
L. 7+00 N



L. 6+00 S L. 5+00 S L. 4+00 S L. 3+00 S L. 2+00 S L. 1+00 S L. 0+00 L. 1+00 N L. 2+00 N L. 3+00 N L. 4+00 N L. 5+00 N L. 6+00 N L. 7+00 N L. 8+00 N L. 9+00 N L. 10+00 N L. 10+75 N



LEGEND

GEOLOGY

3 Felsic to Mafic Intrusives. 3a Gabbro 3b Granodiorite 3c Granite.

2 Felsic Volcanics. 2a Quartz Feldspar Porphyry. 2b Rhyolite Flows. 2c Tuff. 2d Felsic Agglomerates.

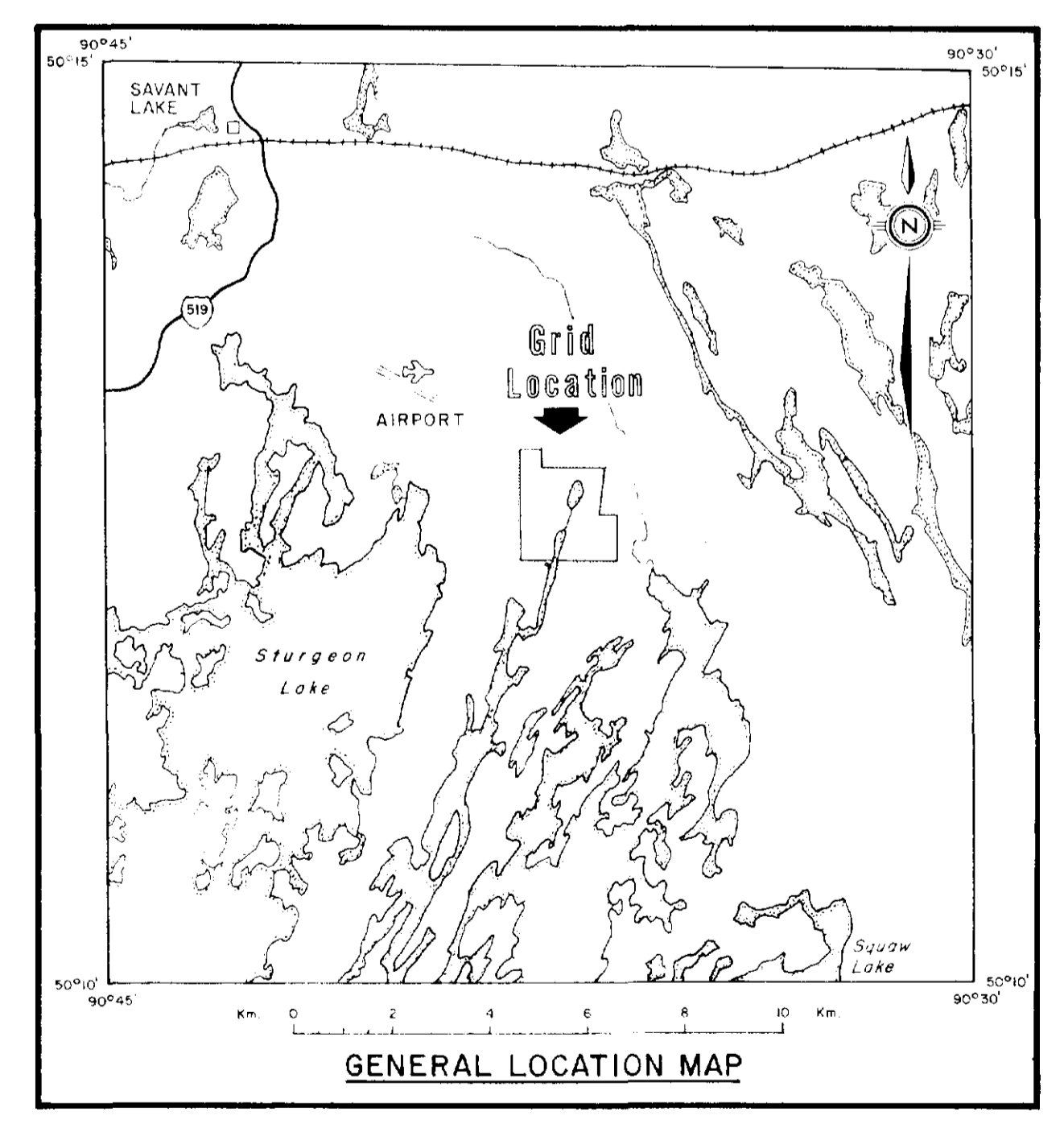
1 Intermediate to Mafic Volcanics. 1a Flow Basalts. 1b Pillow Basalts. 1c Mafic Agglomerates.

MINERALS

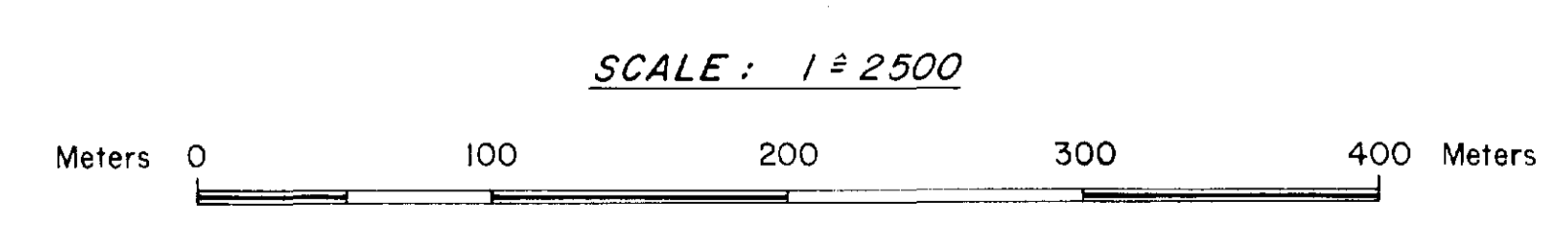
Pyrite.....Py Pyrrhotite.....Po Chalcocopyrite.....Cpy
 Magnetite.....Mag Graphite.....Gt Quartz vein.....Qtz Vn

SYMBOLS

X Outcrop @ Area of outcrop. Pits or Tailings.
 Geological Contact: Confirmed @ Interpreted. Shafts.
 Fault. Cobins (Collapsed).
 Foliation. Swamp.
 Fracture. Claim Post.
 Joint. Claim Boundary.
 Pillows (Orientation of tops). 611 981 Claim Number.
 Glacial Stree.
 Trench.
 Rock Sample No. 2408.



523/02NE -0038-B1, #1



CANDORE EXPLORATIONS LTD.
 Sturgeon Lake Project
 AREA OF BECKINGTON LAKE
GEOLOGICAL MAP

Ministry of Natural Resources
RECEIVED
 MAR 3 0 1984
 RESIDENT GEOLOGIST
 SIGNATURE LOOKOUT

COMPILATION: Wayne Holmstead, - Fall 1983 PROJECT: 2408
 DRAWING: Yves Boucher, - " " REPORT: dup
 REFERENCE: 2408 MAP NO.: -1-

L. 5+00 S

L. 0+00

L. 5+00 N