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52M01SE0005 63.4310 HAMMELL LAKE

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PIPESTONE BAY RESOURCES, LTD.

TODD TOWNSHIP, ONTARIO

REPORT ON DIAMOND DRILLING

PHASE I

5 October, 1983

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SUMMARY

The first phase of exploration on the Pipestone Bay property is finished with the completion of 1066.4 m. diamond drilling. Three geophysical anomalies were tested, as recommended in the earlier reports on electromagnetic and magnetic surveys. The anomalies were confirmed as conductive sulphide mineralization with traces or low values of gold. The deep exploration confirmed the northerly dip of the favourable rock types and the northwardly dip of the auriferous structure known from the neighbouring Goldquest property. Gold values of significant magnitude were found in volcanic rocks associated with quartz veins and minor sulphides. Quartz veins found were of random orientations, some with gold values, others barren.

The program is concluded as a success and recommendations are given for an additional 2650 m. drilling along the south boundary to test the auriferous structure on strike east and west of the present intersections.

PROPERTY, LOCATION AND ACCESS

The property consists of eleven contiguous Patented Claims and two recently staked claims in the north half of Todd Township which is located in the Red Lake Mining Division of the District of Kenora (Patricia Portion). The claims are approximately $\frac{1}{2}$ mile north of Rowan Lake and are numbered as follows:

KRL 11067	KRL 11072
11068	12993
11069	12994
11070	13418
11071	13419
	13420

The claims staked for the project are numbered as KRL 681106 and KRL 681107.

The claims are located 1½ miles east of the east shore of Pipestone Bay of Red Lake and roughly 2½ miles north of the mouth of the "Golden Arm" of the same lake.

A bush road has been established between the above mentioned two locations in the early days. It was improved at the time the Lake Rowan property was reactivated (1952) and more recently by Keeley Frontier Mines Ltd (1983). At the present it can be utilized as a means of transportation using pick-up trucks and larger vehicles. This road touches on the southwest corner of the Pipestone Bay property. Access to the landings on either end of the road can be gained by water or float-equipped aircraft from the town of Red Lake. This community is serviced by air from Winnipeg or Dryden, Ontario, or by Highway 125.

PAST HISTORY

The files of the Ministry of Natural Resources were searched, both at Queens Park in Toronto and in the office of the Regional Geologist in Red Lake. In addition, the author checked the files of Golden Arm Mines Ltd., the predecessor of Pipestone Bay Resources. Very little information was obtained. While the claims were patented a long time ago, suggesting that considerable work was done to satisfy the patent requirements, now very little is known from the early work. It appears that since the mid-thirties, no work has been done short of geological and airborne geophysical surveys conducted by the Geological Survey of Ontario.

Trenching and sampling constituted most of the work on the property. A sketch map dated 1936 shows a series of trenches on the south half of the property. Most of these

are north-south cut and appear to be in the sedimentary units.

Some of these trenches were located during the season by the author. They are narrow at times, 2-3 feet deep cuts, all are caved-in and completely overgrown, visible only from a very short distance. Judged by the size of trees growing from the sides of the trenches, they are likely fifty years old.

Geological and airborne geophysical maps done recently by the Ontario Geological Survey show the property. These maps were used as a basis for the present work.

GENERAL GEOLOGY

The region was mapped twice by the Ontario Department of Mines (Ontario Geological Survey). The earlier work (1940) being outdated, we will only refer to the more recent maps. According to these, the area of Todd Township is underlain by a series of volcanic flows where the mafic types of flows do predominate. These rocks strike in a horseshoe shape with Pipestone Bay being at the open base of the "horseshoe". Intervolcanic sediments also follow this trend along with narrow but highly magnetic iron formations. The reason for this strike is structural; a major anticline strikes southwest-northeast. On Riley's map (1978) it is identified as the "Rowan Lake Anticline" and it is shown to be in the vicinity of Rowan Lake.

A major ultrabasic intrusion lies under the waters of Pipestone Bay in the neighbouring Ball Township. Associated with the intrusion are several smaller ultrabasic bodies varying between sill-like features and irregular plugs.

Several smaller acid intrusions were mapped. They are found in various places called feldspar porphyries and quartz diorites; they are often associated with anomalous or significant gold values along their contacts. It has been believed

that such intrusives are genetically related to the gold deposition, though we have known of some such mineralized bodies without any known intrusive close by.

The bulk of the Pipestone Bay property is underlain by clastic and chemical sediments. The volcanic rocks are represented by intermediate flows, a narrow band at the center of the property and a thick pile of volcanic rocks underlying the south boundary. A minor intrusion (Hornblende trondhjemite) was found on the south side of the property (KRL 12992). Dips to the north and the south have been recorded on the property; all dips tend to be steep. The writer counted more northerly dips in this vicinity on the regional geological maps than to the south.

ECONOMIC GEOLOGY

Gold occurs in Todd Township in a variety of geological conditions. R. A. Riley in his "Marginal Notes" on his preliminary map states:

Gold occurs with quartz in shear zones and tension fractures with or without sulphide mineralization. Its most common associations include quartz veins in tension fractures along or near contacts, tension fractures in gabbro, tension fractures in felsic flows, with iron formation and felsic tuff and in quartz veins in carbonate.

(Property identifications in brackets were deleted from the original text by the author of this report.)

Two gold deposits are found adjoining the Pipestone property, both have proven reserves and both have just been reactivated. The property on the west, Keeley Frontier Mines Ltd. (formerly; Red Poplar, Frontier, New Dimensions, Mount Jamie), has reported average values of 0.45 ounces of gold per

ton (No. 2 shaft, Harwood 1945). The author has not found any data regarding published reserves from this property. The No. 1 shaft has been dewatered this year. Surface and underground drilling is currently in progress. News releases indicate confirmation of earlier results. No. 1 shaft is less than 0.5 miles west of the Pipestone boundary.

The second deposit with possible commercial potential lies just south of the Pipestone Bay boundary. Here Goldquest Explorations (formerly Rowan Lake, Consolidated Rowan), announced their new figures for reserves taken from three levels of their mine as 89,160 tons of 0.289 ounces of gold per ton.

The Goldquest shaft lies approximately 600-700 feet south of the boundary. Gold occurs here in quartz veins along tension fractures striking east-west. Minor sulphides accompany the mineralization, which is near the contact between intermediate and mafic metavolcanics. The vein is quoted to average 10 inches (25 cm.) in width. This structure does seem to weaken below 250 feet. However, it still can be found on the 400 foot level. Besides this major vein system, several parallel veins have been located. Riley takes note of a surface exposure and subsequent diamond drilling on claim 8167 where drilling "indicated several narrow gold bearing zones, primarily quartz veins in or along contacts between intermediate and felsic metavolcanics. The best intersection reported from this drilling assayed 1.25 ounces gold/ton over 1.4 feet (0.42 m.)." This showing is approximately 300-400 feet south of the boundary.

Dip of the quartz veins on the Goldquest property was given as north at 75°.

Other surface exposures such as claim 9999 west and south have also shown gold mineralizations dipping to the north. The west showing is approximately 1400-1500 feet from the southwest corner of the Pipestone Bay prospect. Here Harwood reports 1.207 ounces gold/ton across 1.4 feet (0.42 m.)

DESCRIPTION OF PROGRAM

Pipestone Bay Resources, upon the completion of a geophysical survey, undertook a diamond drilling program to test some of the geophysical anomalies located by the recent surveys. It was also decided that one of the drill holes be continued to a greater depth after both anomalies have been successfully explained.

Benoit Diamond Drilling of Val d'Or, Quebec, was contracted to drill a total of 3500 feet of NQ core. A Boyles 38 hydraulic diamond drill was moved by barge to the property on 10 July, 1983. Drilling continued without interruption until 27 August, 1983, when the contracted footage of 3500 feet was reached.

During the program three holes were completed: P-1 on 2+00W, 1+60N of Baseline 2 at 50° to a depth of 130.4 m; P-2 on 0+00, 1+60S of Baseline 1 at 55° to a depth of 387. m.; P-3 on 9+50E, 2+00S of Baseline 1 at 65° to a depth of 549 m. Total depth of the three holes was 1066.4 m (3499 feet).

Drilling was done using NQ equipment to obtain bigger samples. The core was logged at the Pipestone Bay Camp. All siliceous material, quartz veins, sulphide mineralization was split in the field and half of the material was sent for fire assay to Baurlamaque Assay Laboratories in Val d'Or, Quebec.

A total of 317 samples were taken from the drill core. The rejects and pulps were saved and are currently stored at the laboratory.

All three drill holes were aimed to test three geophysical anomalies which were attributed to conductive and magnetic iron formations. Hole P-2 was also aimed to test the contact zone between the sediments and volcanic rocks at the south edge of the property.

Hole P-3 was also to intersect two geophysical anomalies and to continue at depth to explore for parallel quartz veins hosting gold values which were known from the surface and underground work on the Goldquest (Rowan) property.

CONCLUSIONS

After all drill logs are completed and assay results have been received, we have to conclude that the drilling has successfully proven that the conductivity found by geophysical means was caused by electrically conductive sulphide zones associated with cherty chemical sediments.

While several of these zones indicated highly anomalous gold values (0.01 - 0.06 ounces/ton range), none of the sulphide zones have returned any economical grades, though such occurrences are reported on one of the adjoining properties.

Hole 2 explored the contact zone at depth on the southeast portion of the property. An extensive quartz carbonate body was located, with some sulphide mineralization and quartz stringers. Though several samples were taken, no encouraging results were obtained. The volcanic unit was located at a depth of 337.2 m. with a few quartz veinlets and stringers; again, no significant values were found.

Hole P-3 was the most encouraging of all three drill holes. It again intersected the geophysical targets. The first such intersection was high in the hole which was almost collared in the anomaly. 5.5 m. of anomalous material was found between 9.9 and 15.4 m. Values here ranged between 0.01 ounces of gold/ton and 0.03 ounces /ton. The second geophysical anomaly was located at 267 m. Gold here was represented by traces only.

Deeper in the hole, already within the volcanic rocks, three intersections of commercial grade were found. These have been described as quartz stringers and veinlets with sulphide mineralizations. Each is a single high value taken over a 40 cm. sample in the commercial range such as 419.6-420 m., 0.48 ounces of gold/ton; 440.4-440.8 m., 0.52 ounces and 476.1-476.5 m., 0.31 ounces/ton. This type of intersections and values resemble the ones reported by Harwood (Riley) from the early surface work on Rowan.

It is a very important fact that three gold intersections were found which are at a relatively short distance from one another. This signifies that the auriferous structure, well-explored on the surface and underground on the neighbouring Goldquest ground, follows the dip assumed by the author and will cross over to the Pipestone Bay property.

This auriferous structure has been traced along several miles to the west as far as the western boundary of the Keeley Frontier property. The major characteristics of the mineralized bodies or shoots are: that they are not large in size; they follow the regional strike and can be found in subparallel positions in an area which is up to 200-300 m. in width. Economic considerations therefore lie not only with the size of a shoot, but with the frequency and geometry with which they occur. The numbers of the shoots and total tonnage and the waste material between the shoots will be just as important as the size of the shoots, if and when a production decision on any of these properties is made.

The past drilling clearly indicates the possibility of a major auriferous structure appearing on the Pipestone Bay property, below the depth of 300 m. vertical. The possibility of a Malartic Hygrade situation is very strong, which necessitates further exploration efforts along the auriferous structure.

We also have to conclude that hole P-3 was found to deviate strongly in the vertical plane. Because of the high magnetic susceptibility of the rocks, the downhole survey for deviation along the horizontal plane could not be completed. The results of such a survey under these conditions may be erroneous or are always subject to doubt. A further complicating factor is that the surveyed line separating the Pipestone and Goldquest properties was destroyed by a forest fire many years ago. Therefore, the exact location of the boundary line between the two properties is at the present not established. Efforts to find some of the

steel pins along the line were fruitless, though field crews of both Goldquest and Pipestone were at times conducting a search.

As we have suggested before, the property has definite potential to present a Malartic Hygrade type deposit. In that situation, a mining property with not too encouraging results near the surface became a producer by having the neighbouring Camflo orebody crossing the property boundary at depth.

The exploration and development of such a deposit does require special goals and methods. It also presents special hurdles during the exploration and definition drilling.

Consequently, the future drilling should be aimed to define the following:

- a) A definite indication that the structural assumption our work is based on is correct.
- b) The presence of the auriferous structure on the property boundary and/or its continuation on the Pipestone at depth.
- c) The horizontal extension or a definite indication of such an extension with a reserve potential.
- d) The correlation between individual drill intersections along the auriferous structure.

None of the above goals are to establish any reserves, nor to make a decision regarding the economy of the deposit. It is certain that an orebody found at such depth would have to be of a considerable size to support development on its own merits. Therefore, at least for the present time, one has to aim for a joint development venture with the neighbouring Goldquest Explorations Ltd., providing there is enough information to create an interest in the other party. This is in essence what our proposed program would have to achieve.

Besides the above listed goals, some specific methods will have to be employed to assure the required results. Considering deep targets,

the drill footage should be used to provide optimum results. Therefore, while the unit cost of drilling will exceed the past costs, the possibility of losing holes to deviation could be significantly decreased.

In our judgment, the present work has sufficiently indicated that the auriferous structure known from the Keeley Frontier and Goldquest properties indicates a northerly dip south of the Pipestone boundary.

Narrow quartz veins with significant gold values were found and the favourable rock types definitely occur at depth on the Pipestone Bay property, though these rocks are not found on surface in the same area. It is suggested that further work be done over the four claims on the south side, aiming to further define the position, extent and geometry of the auriferous structure.

RECOMMENDATIONS

To achieve the goals set out in the previous chapter, we are suggesting to drill a series of holes which are deeper than the usual exploration holes but significantly less than the depth of P-3.

In order to maximize our drill footage, we will have to employ methods which will eventually increase our unit costs, but will safeguard against serious losses to extreme deviation.

Since we are now in the position to aim more directly at certain areas, we can decrease our required footage by stepping closer to the targets while increasing the drilling angle.

The following methods to assure straight drilling will be suggested:

a) Controlled drilling (rotation, head pressures) for the first 100 or 150 metres of drilling.

b) Increased testing for deviation, dip testing and compass testing if the conditions allow. Optical fibre type testing if compass cannot be used.

c) Deviation preventive devices to be used during the entire program.

d) Wedging to be considered whenever such measures are required.

The work proposed is to cover an area between lines 8+00E and 10+50E. Our hole is to be sunk on every line (50 m. separation). The first hole to be drilled on 9+00E should be recessed approximately 150 metres from the property boundary. It should be collared at 80° with an allowable deviation of 12-14° in the horizontal plane. The inter-sections are to be made before reaching the depth of 510 metres.

While the coordinates and depths for the subsequent holes will depend on the results of the first drill hole, estimated average depth is 530 m. giving 2650 m. as a total depth for the program.

Further follow-up alone, or in a joint venture with Goldquest or involvement of others should be considered after full assessment of the results is made.

COST ESTIMATE

Mobilization and demobilization (includes barging)	\$ 12,000.
Diamond drilling (\$90./m.)	239,109.
Deviation control	15,000.
Sampling	5,000.
Assays	25,000.
Supervision	15,000.
Camp costs	5,000.
Office overhead (5%)	15,805.
Contingencies (10%)	<u>33,191.</u>
Total	\$365,105.

Red. J. D.

REFERENCES

- Ontario Department of Mines, Forty-ninth Annual Report. Vol. XLVIV, Part II, 1940. H. C. Harwood. Geology and Mineral Deposits of the Red Lake Area.
- Ontario Division of Mines, Preliminary Map P. 1052 Geological Series. Todd Township, by R. A. Riley, 1975. Geology-1971.
- Ontario Geological Survey, Map 2406. Todd Township, by R. A. Riley, 1977. Geology-1971.
- Ontario Geological Survey, Preliminary Map 1577. Red Lake Area, Airborne Electromagnetic Survey, 1978.
- Golden Arm Mines Ltd. - files.
- Pipestone Bay Resources, Ltd. Report on Electromagnetic surveys, P. J. Vamos, P. Eng., 1983.

DIAMOND DRILL RECORD

NAME OF PROPERTY Pipestone Bay
 HOLE NO. P-1 LENGTH 130.4 m.
 LOCATION _____
 LATITUDE 2+00W DEPARTURE 1+60N of BL-2
 ELEVATION _____ AZIMUTH South (180°) DIP -50°
 STARTED 20 July 1983 FINISHED 23 July 1983

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
75 m.	49°				
130m	48°				

HOLE NO. P-1 SHEET NO. 1

REMARKS _____

LOGGED BY P. Vamos *PV*

FOOTAGE		DESCRIPTION	SAMPLE				ASSAYS				
FROM	TO		NO.	% SULPHIDES	FOOTAGE			%	%	Au/TON	OZ/TON
					FROM	TO	TOTAL				
0	22.55	Casing.									
22.55	30.40	Acid volcanics. light greenish grey to darker grey, very fine grained matrix, medium grained feldspar phenocrysts with rounded edges. Very siliceous, hard and massive. 29.60 - 29.80 Chloritic. Lower 60 cm coarser and slightly foliated.	1001		29.7	30.4	0.70			Tr	
30.40	30.90	Intermediate dyke? fine grained greenish grey, chloritic.	1002		30.4	30.9	0.50			Tr	
30.90	31.10	Acid volcanic, as above.	1003		30.9	31.4	0.50			Tr	
31.10	31.70	Intermediate dyke, as before, chloritic.									
31.70	33.90	Intermediate volcanic, with occasional chloritic sections. Lower contact transitional.									
33.90	99.40	Sediments. generally fine grained, dark to greenish grey with occasional garnetiferous, also some feldspathic sections. Occasional foliation at 65° to C.A. Generally silicified with fine quartz veinlets also interstitially. Minor epidotisation. Massive and hard. 51-57 Increased alteration. 53.30-54.90 Minor sulphides, also approximately 40% lost core.	1004		53.30	53.80	0.50			Tr	
			1005		53.80	54.80	1.00			Tr	
			1006		54.80	55.50	0.70			Tr	

EM. 6 - 1168

LANGRIDGE LIMITED,

DIAMOND DRILL RECORD

NAME OF PROPERTY Pipestone Bay
 HOLE NO. P-2 LENGTH 387 m
 LOCATION _____
 LATITUDE 0+00 DEPARTURE 1+60S of BL-1
 ELEVATION _____ AZIMUTH South DIP 55°
 STARTED 25 July 1983 FINISHED 3 August 1983

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
150m	50°				
240m	46°				
387m	44°				

HOLE NO. P-2 SHEET NO. 1

REMARKS _____

LOGGED BY P. Vamos *PJV*

EM. 6-1168

LANGRIDGE LIMITED,

FOOTAGE		DESCRIPTION	SAMPLE				ASSAYS				
FROM	TO		NO.	% SULPHIDES	FOOTAGE			%	%	Au OZ/TON	OZ/TON
					FROM	TO	TOTAL				
0	3.8	Casing.									
3.8	8.3	Sediments. greywacke type, greenish grey, fine grained matrix with chloritised fragments up to 1 cm. 7.3 Minor quartz veinlet.									
8.3	37.0	Sediments, undifferentiated, generally fine grained, greenish grey, chloritic at top 40 cm sheared at 40-45° to CA. 9.25-13.8 Siliceous with occasional enrichment of disseminated sulphides. 18.3 Sulphides, thinly banded approximately 5% over core length. Occasional short sections of heavy sulphides (70-90%). 20.3-20.4 Massive sulphides, pyrite-pyrrhotite (nodular) 90% 23.6-23.7 Massive sulphides 60% 24.4-24.5 Massive sulphides 75%	1019		8.3	8.8	0.50			Tr	
			1020		8.8	9.3	0.50			Tr	
			1021		9.3	9.8	0.50			Tr	
			1022		9.8	10.3	0.50			Tr	
			1023		10.3	10.8	0.50			Tr	
			1024		10.8	11.3	0.50			Tr	
			1025		11.3	11.8	0.50			Tr	
			1026		11.8	12.3	0.50			Tr	
			1027		12.3	12.8	0.50			Tr	
			1028		18.5	19.0	0.50			Tr	
			1029		19.0	19.5	0.50			Tr	
			1030		19.5	20.0	0.50			Tr	
			1031		20.0	20.5	0.50			Tr	
			1032		20.5	21.0	0.50			Tr	
			1033		21.0	21.5	0.50			Tr	
			1034		21.5	22.0	0.50			Tr	
			1035		22.0	22.5	0.50			Tr	
			1036		22.5	23.0	0.50			Tr	
			1037		23.0	23.5	0.50			Tr	
			1038		23.5	24.0	0.50			Tr	
			1039		24.0	24.5	0.50			Tr	
			1040		24.5	25.0	0.50			Tr	
			1041		25.0	25.5	0.50			Tr	

DIAMOND DRILL RECORD

 NAME OF PROPERTY Pipestone Bay

 HOLE NO. P-2 SHEET NO. 2

FOOTAGE		DESCRIPTION	SAMPLE				ASSAYS					
FROM	TO		NO.	% SULPHIDES	FOOTAGE			%	%	Au OZ/TON	OZ/TON	
					FROM	TO	TOTAL					
		25.9-26.1	Massive sulphides	90%	1042	25.50	26.10	0.60			Tr	
		27.0-27.1	Massive sulphides	60%	1043	27.15	27.65	0.50			Tr	
		28.20	Massive sulphides	5 cm 90%	1044	27.65	28.15	0.50			Tr	
		28.7-31.0	Increasingly siliceous, quartz patches		1045	28.15	28.65	0.50			0.01	
			minor epidote and occasional sulphides		1046	28.65	29.15	0.50			0.01	
					1047	29.15	30.15	1.00			0.01	
					1048	30.15	30.65	0.50			0.01	
37.00	40.42	Feldspar porphyry dyke, fine grained medium grey matrix with fine to medium grained feldspar phenocrysts, rounded. Upper contact 80° to CA, lower 60-70° (not sharp).										
40.42	167.5	Sediments (undifferentiated) fine to medium grained darker grey with greywacke type intersections										
		79.7-80.1	Feldspar porphyry dyke.									
		83.8-84.3	Few quartz veinlets less than 1 cm.		1049	83.8	84.3	0.50			Tr	
		90.3-91.3	Silicified.		1050	90.3	91.3	1.00			Tr	
		106 - 107	Silicified.		1051	106	107	1.00			Tr	
		108.0	Minor porphyry dyke.									
		108.1-108.8	Minor sulphides (disseminated pyrite).		1052	108.1	108.8	0.70			Tr	
		108.8-109.6	Minor quartz stringers.		1053	108.8	109.6	0.80			Tr	
		121.93-123.4	Silicified with minor brecciation.		1054	121.93	122.73	0.80			Tr	
					1055	122.73	123.4	0.67			Tr	
		131.92	Quartz veinlet 1 cm. at 50° to CA.		1056	131.6	132.	0.40			Tr	
		147.6	Silicified over 1.6 m.		1057	147.6	148.4	0.80			Tr	
					1058	148.4	149.2	0.80			Tr	
167.5	216.7	Sediments (predominantly banded). grey fine grained. Top contact transitional, banding 1-2 cm. about 55-60° to CA. Occasional micro-faulting. Core massive and hard.										
		170.6-172.5	Very siliceous with banded sulphides, top 1.2 m approximately 70% sulphides, mainly pyrrhotite with pyrite.		059	170.6	171.1	0.50			Tr	
					060	171.1	171.6	0.50			Tr	
					061	171.6	172.1	0.50			Tr	
					062	172.1	172.5	0.40			Tr	

DIAMOND DRILL RECORD

 NAME OF PROPERTY Pipestone Bay

 HOLE NO. P-2 SHEET NO. 3

FOOTAGE		DESCRIPTION	SAMPLE				ASSAYS					
FROM	TO		NO.	% SULPHIDES	FOOTAGE			%	%	Au oz/TON	oz/TON	
					FROM	TO	TOTAL					
		172.5-176.7	Darker, more massive, less banded, less silica and less sulphides (10%)	1063		173.2	173.7	0.50			0.01	
				1064		173.7	174.2	0.50			Tr	
				1065		174.2	174.7	0.50			Tr	
				1066		174.7	175.2	0.50			Tr	
		176.7-176.9	Minor feldspar porphyry dyke, upper contact sharp approximately 55° to CA.									
		176.9-180.9	Less banded, less sulphides.									
		180.9-181.3	Argillaceous with approximately 50% pyrrhotite.	1067		180.9	181.3	0.40			Tr	
		181.3-185.9	Clastic material, occasionally banded few sulphide bands, minor argillaceous with section (185.3-15 cm.) with 80% sulphides.	1068		183.5	184.0	0.50			Tr	
				1069		184.0	184.5	0.50			Tr	
				1070		184.5	185.0	0.50			Tr	
				1071		185.0	185.5	0.50			Tr	
		185.9-191.1	Wacke type, coarser.	1072		191.0	191.5	0.50			Tr	
		191.1-195.7	Argillaceous, dark with banded sulphides (60%), banding shows contortion	1073		191.5	192.0	0.50			Tr	
				1074		192.0	192.5	0.50			Tr	
				1075		192.5	193.0	0.50			Tr	
				1076		193.0	193.5	0.50			Tr	
				1077		193.5	194.0	0.50			Tr	
				1078		194.0	194.5	0.50			Tr	
				1079		194.5	195.0	0.50			Tr	
		195.7-196.6	Silicified section.	1080		195.0	195.7	0.70			Tr	
				1081		195.7	196.6	0.90			Tr	
		196.6	More massive greywacke type material, minor and occasional argillaceous sections with sulphides.									
		200.45	Minor quartz veinlet 1 cm.	1082		200.0	200.5	0.50			Tr	
		205.9-206.7	Argillaceous with sulphides (20%) and minor quartz.	1083		205.9	206.7	0.80			Tr	
		214.4	Quartz vein 5cm.	1084		214.0	214.5	0.50			Tr	
				1085		214.5	215.0	0.50			Tr	
				1086		215.0	215.5	0.50			Tr	
		215.65	Quartz vein 6cm.	1087		215.5	216.0	0.50			Tr	
				1088		216.0	216.7	0.70			Tr	

DIAMOND DRILL RECORD

 NAME OF PROPERTY Pipestone Bay

 HOLE NO. P-2 SHEET NO. 4

FOOTAGE		DESCRIPTION	SAMPLE				ASSAYS				
FROM	TO		NO.	% SULPH IDES	FOOTAGE			%	%	AU OZ/TON	OZ/TON
					FROM	TO	TOTAL				
216.7	234.0	Sediment C (?) light green to light grey, very fine grained, possibly highly altered, chemical sediment. Very chloritic with high proportions of quartz as bands and/or veinlets. Carbonate as patches and stringers occasionally as high as 30-40%. Minor sulphides as stringers or disseminated, mainly pyrite and pyrrhotite.	1089		216.7	217.2	0.50			Tr	
			1090		217.2	217.7	0.50			Tr	
			1091		217.7	218.2	0.50			Tr	
			1092		218.2	218.7	0.50			Tr	
			1093		218.7	219.2	0.50			Tr	
			1094		219.2	219.7	0.50			Tr	
			1095		219.7	220.2	0.50			Tr	
			1096		220.2	220.7	0.50			Tr	
			1097		220.7	221.2	0.50			Tr	
			1098		221.2	221.7	0.50			Tr	
			1099		221.7	222.2	0.50			Tr	
			1100		222.2	222.7	0.50			Tr	
			1101		222.7	223.2	0.50			Tr	
			1102		223.2	223.7	0.50			Tr	
			1103		223.7	224.2	0.50			Tr	
			1104		224.2	224.7	0.50			Tr	
			1105		224.7	225.2	0.50			Tr	
			1106		225.5	225.7	0.50			Tr	
			1107		225.7	226.2	0.50			Tr	
			1108		226.2	226.7	0.50			Tr	
			1109		226.7	227.2	0.50			Tr	
			1110		227.2	227.7	0.50			Tr	
1111		227.7	228.2	0.50			Tr				
1112		228.2	228.7	0.50			Tr				
1113		228.7	229.2	0.50			Tr				
1114		229.2	229.7	0.50			Tr				
1115		229.7	230.2	0.50			Tr				
1116		230.2	230.7	0.50			Tr				
1117		230.7	231.2	0.50			Tr				
1118		231.2	231.7	0.50			Tr				
1119		231.7	232.2	0.50			Tr				
1120		232.2	232.7	0.50			Tr				
1121		232.7	233.2	0.50			Tr				
1122		233.2	233.7	0.50			Tr				
1123		233.7	234.2	0.50			Tr				
1124		234.2	234.8	0.60			Tr				
1125		234.8	235.3	0.50			Nil				
1126		235.3	235.8	0.50			Nil				
1127		235.8	236.3	0.50			Nil				
		224.7-225.2 Dark grey massive, no quartz.									
		232.6-233.9 Minor disseminated sulphides, mainly pyrite in very siliceous matrix.									
234.0	234.8	Banded sediments, darker grey medium grained banding at 50° to CA.	123		233.7	234.2	0.50			Tr	
234.8	337.2	Siliceous chemical sediments, as before.	125		234.8	235.3	0.50			Nil	
			126		235.3	235.8	0.50			Nil	
			127		235.8	236.3	0.50			Nil	

DIAMOND DRILL RECORD

NAME OF PROPERTY Pipestone Bay

HOLE NO. P-2 SHEET NO. 5

FOOTAGE		DESCRIPTION	SAMPLE				ASSAYS				
FROM	TO		NO.	% SULPH IDES	FOOTAGE			%	%	Au OZ/TON	OZ/TON
					FROM	TO	TOTAL				
			1128		236.3	236.8	0.50			Tr	
			1129		236.8	237.3	0.50			Nil	
			1130		237.3	237.8	0.50			Tr	
			1131		237.8	238.3	0.50			Tr	
		238.3	1132		238.3	239.0	0.70			Tr	
		239.0-239.4	1273		239.0	239.4	0.40			Tr	
		239.6	1274		239.4	239.9	0.50			Nil	
		239.0-247.6	1275		239.9	240.4	0.50			Nil	
			1276		240.4	240.9	0.50			Nil	
			1277		240.9	241.4	0.50			Nil	
			1278		241.4	242.0	0.60			Nil	
		253.0-254.1									
		256.61-257.76	1279		256.6	257.1	0.50			Tr	
			1280		257.1	257.76	0.66			Tr	
		257.76-263.75									
		262.75	1281		262.7	263.2	0.50			Nil	
			1282		263.2	263.7	0.50			Tr	
		263.75-269.8									
		266.									
		269.8-300.									
		274.3-275.05	1283		274.2	274.7	0.50			Tr	
		275.05	1284		274.7	275.4	0.70			Tr	
		275.6-276.9									
		276.9-279.0									
		283.65	1285		283.45	283.85	0.40			0.01	

DIAMOND DRILL RECORD

NAME OF PROPERTY Pipestone Bay

HOLE NO. P-2 SHEET NO. 6

FOOTAGE		DESCRIPTION	SAMPLE				ASSAYS					
FROM	TO		NO.	% SULPHIDES	FOOTAGE			%	%	Au		
					FROM	TO	TOTAL			OZ/TON	OZ/TON	
		292.85	Quartz veinlet 1.5 cm.	1286		292.6	293.1	0.50			Tr	
				1287		293.1	293.9	0.80			Tr	
		294.1	Quartz veinlet--low angle.	1288		293.9	294.4	0.50			Tr	
		295.7-295.95	Quartz veinlet and irregular patches of quartz.	1289		295.55	296.15	0.60			Nil	
		298.3-298.4	Irregular quartz veinlet	1290		298.2	298.6	0.40			Tr	
		300.	Clastic sediments predominate.									
		302.65	Quartz carbonate veinlet 3 cm.	1291		302.45	302.85	0.40			Nil	
		305.7	Quartz veinlet--low angle.	1292		305.5	305.9	0.40			Tr	
		310-313	Quartz and carbonate stringers and veinlets, also some irregular patchy quartz carbonate.	1293		310.0	310.5	0.50			Tr	
				1294		310.5	311.0	0.50			Tr	
				1295		311.0	311.5	0.50			Tr	
				1296		312.1	312.5	0.40			Tr	
				1297		313.4	314.0	0.60			Tr	
		317.5-318.	Minor quartz veinlets.	1298		317.5	318.0	0.50			Tr	
		319.	Very minor quartz stringers.	1299		320.2	320.6	0.40			Tr	
		326.	Increasing chloritisation, also minor epidote in coarser sediments. Frequent carbonate stringers.									
		330.25	Quartz and carbonate over 25 cm.	1300		330.0	330.5	0.50			Tr	
337.2	387.0	Intermediate volcanic ? fine to medium grained darker grey, more uniform, massive and less altered.										
		333.10 and 333.25	Quartz veinlets 1 cm each, approximately 30° to CA.									
		335.6	Quartz veinlet approximately 1 cm. at 55° to CA.	1301		335.4	335.8	0.40			Tr	
		336.8-341.	Coarser grained foliated at 40° to CA.									
		342.7	Increasing alteration and silica mainly as quartz eyes and patches.									
		348.	Increasing amounts of sulphides, first as disseminations, later as stringers.	1302		347.4	348.15	0.75			0.01	

DIAMOND DRILL RECORD

NAME OF PROPERTY Pipestone Bay

HOLE NO. P-2 SHEET NO. 7

FOOTAGE		DESCRIPTION	SAMPLE				ASSAYS				
FROM	TO		NO.	% SULPHIDES	FOOTAGE			%	%	Au OZ/TON	OZ/TON
					FROM	TO	TOTAL				
	348.69-350.80	Epidotised with sulphides as fracture fillings.	1303		348.69	349.19	0.50			Tr	
			1304		349.19	349.69	0.50			Tr	
			1305		349.69	350.19	0.50			Tr	
			1306		350.19	350.8	0.61			0.01	
	350.8-351.67	Dioritic dyke, coarse grained.	1307		350.8	351.67	0.87			Tr	
	351.67	Intermediate volcanic as before, with minor sedimentary bands.	1308		351.67	352.17	0.50			Tr	
	-371.	Same alteration as previously described.	1309		352.17	352.67	0.50			Tr	
	362.	Occasional quartz and carbonate stringers and veinlets .5 cm. (2-3/m).									
	376.1	Quartz veinlet, microfaulted (1-1.5cm)	1310		375.8	376.3	0.50			Tr	
	387.	End of hole.	1311		385.66	386.46	0.80			Tr	

DIAMOND DRILL RECORD

NAME OF PROPERTY Pipestone Bay
 HOLE NO. P-3 LENGTH 549 m.
 LOCATION _____
 LATITUDE 9+50E of BL-1 DEPARTURE 2+00S
 ELEVATION _____ AZIMUTH South DIP -65°
 STARTED 5 August 1983 FINISHED 22 August 1983

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
150m	41.5°				
300m	35°				
450m	32°				
549m	25°				

HOLE NO. P-3 SHEET NO. 1

REMARKS _____

LOGGED BY P. Vamos PJV

FOOTAGE		DESCRIPTION	SAMPLE				ASSAYS				
FROM	TO		NO.	% SULPHIDES	FOOTAGE			%	%	Au OZ/TON	OZ/TON
					FROM	TO	TOTAL				
0	7	Casing.									
7.	17.5	Sediments, fine grained, darker grey, occasionally well banded at 50-60° to CA. Occasional banded sulphides, mainly pyrite with minor pyrrhotite.									
		9.80 -10.40 Occasional bands of massive sulphides 10-15 cm and siliceous sections.	1133		9.4	9.9	0.50			Tr	
			1134		9.9	10.4	0.50			0.01	
			1135		10.4	10.9	0.50			0.01	
			1136		10.9	11.4	0.50			0.02	
			1137		11.4	11.9	0.50			0.02	
			1138		11.9	12.4	0.50			0.01	
			1139		12.4	12.9	0.50			0.01	
			1140		12.9	13.4	0.50			Tr	
			1141		13.4	13.9	0.50			Tr	
		14.30 Microfaulting.	1142		13.9	14.4	0.50			0.02	
		14.8-15.1 Increased silica.	1143		14.4	14.9	0.50			0.03	
			1144		14.9	15.4	0.50			0.01	
			1145		15.4	15.9	0.50			Nil	
		16.3-16.6 Increased silica.	1146		15.9	16.4	0.50			0.01	
17.5	160.8	Sediments, fine to medium grained, lighter grey, more massive wacke type sediments, with some banded sections.	1147		16.4	16.9	0.50			Tr	
			1148		16.9	17.4	0.50			Tr	
			1149		23.0	23.4	0.40			Tr	
		23.-23.18 Quartz veinlet.									
		25. Weak shearing appears at 30° to CA.									
		39. Fine grained matrix with medium grained chloritised "fragments" (some rounded, some cubic) sericitised.									
		41.8 Minor quartz veinlet.	1150		41.75	42.25	0.50			Nil	

EM. 6-1168

LANGRIDGE LIMITED,

DIAMOND DRILL RECORD

NAME OF PROPERTY Pipestone Bay

HOLE NO. P-3 SHEET NO. 5

FOOTAGE		DESCRIPTION	SAMPLE				ASSAYS					
FROM	TO		NO.	% SULPHIDES	FOOTAGE		%	%	Au			
					FROM	TO			TOTAL	OZ/TON	OZ/TON	
		306.4-306.63	Quartz veinlets.	1205		306.4	306.8	0.40			Nil	
		306.63-306.9	Irregular quartz veinlets.	1206		306.8	307.2	0.40			Nil	
		313.47-315.47	Stringers of sulphides, mainly pyrrhotite 3-5%.	1207		313.47	313.97	0.50			Tr	
				1208		313.97	314.47	0.50			Nil	
				1209		314.47	314.97	0.50			Nil	
				1210		314.97	315.47	0.50			Tr	
		341.2-341.5	Thin stringers of pyrrhotite.	1211		341.2	341.6	0.40			Tr	
343.8	352.44	Sediments, medium grained, darker grey with few chloritic fragments siliceous and hard.										
352.44	375.	Sediments, light fine grained carbonate rich										
		354.3-354.9	Stringer and disseminated sulphides.	1212		354.3	354.8	0.50			Tr	
				1213		354.8	355.6	0.80			Tr	
		355.6 & 356	Minor quartz veinlets.	1214		355.6	356.0	0.40			Tr	
		355.7-356	Intermediate dyke fine grained, dark.									
		360.-360.4	Intermediate dyke, as above.									
		372.-372.45	Quartz vein (concordant with faint banding).	1215		372.0	372.45	0.45			Nil	
		374.-375.	Epidotised bands.									
375.	381.	Sediments, more uniform, fine to medium grained, granular. Faintly banded 80° to CA. Chloritised, massive. Upper contact transitional.										
381.	414.12	Intermediate volcanics, fine grained, darker grey, massive, with light grey vesicule fillings. Occasional disseminated fine grained euhedral pyrite.										
		383.26	2 cm. quartz with minor sulphides.									
		383.-386.	Minor siliceous fracture filling 4-5/m. with pyrite and pyrrhotite.	1216		383.1	383.5	0.40			Nil	
				1217		383.5	384.0	0.50			Tr	
				1218		384.0	384.5	0.50			Tr	
				1219		384.5	385.0	0.50			Tr	

DIAMOND DRILL RECORD

 NAME OF PROPERTY Pipestone Bay

 HOLE NO. P-3 SHEET NO. 6

FOOTAGE		DESCRIPTION	SAMPLE				ASSAYS					
FROM	TO		NO.	% SULPHIDES	FOOTAGE		%	%	AU			
					FROM	TO			TOTAL	OZ/TON	OZ/TON	
		388.23	Minor quartz veinlet 2 cm. with pyrite, pyrrhotite and arsenopyrite.	1220		388.0	388.4	0.40			Tr	
				1221		388.4	388.8	0.40			Tr	
				1222		388.8	389.3	0.50			Tr	
		408.22	Quartz veinlet (2 cm) faulted.	1223		407.9	408.3	0.40			Tr	
414.12	424.72	Felsic volcanic finer grained lighter grey, with chloritic remnants. appears to be quite siliceous. May be an altered acid intrusion.										
		419.7-419.8	Quartz veinlet with 10% sulphides. Pyrrhotite-pyrite, sphalerite, very minor chalcopyrite.	1312		419.1	419.6	0.50			Tr	
				1224		419.6	420.0	0.40			0.48	
				1313		420.0	420.5	0.50			Tr	
424.72	427.46	Intermediate volcanics, same colour, slightly coarser grained with few short of the above described rock.										
427.46	439.4	"Felsic" volcanic or acid intrusive, as before.										
		435.5-439.4	Very minor shearing at 60° to CA.									
439.4	516.6	Sediments fine to medium grained, darker slightly greenish grey, occasional sections chloritised with fractured garnets. Top 4 m. with fine sulphide dissemination and fine stringers of quartz.										
		441.43	Quartz veinlet 2 cm.	1227		441.2	441.6	0.40			0.06	
				1228		441.6	442.0	0.40			0.03	
				1229		442.0	442.7	0.70			Tr	
		442.75-443.38	Irregular quartz.	1230		442.7	443.15	0.45			Tr	
				1231		443.15	443.55	0.40			Tr	
		443.68	Quartz veinlet 2 cm.	1232		443.55	443.95	0.40			0.01	
		444.6-445.1	Minor banded pyrrhotite.	1233		444.6	445.1	0.50			Tr	
		446.62-451	Minor chlorite healed brecciation.									
		454.45-455.	Slight increase in quartz stringer 7-8/m.	1234		454.45	455.0	0.55			Tr	
		454.9-457.3	Quartz stringers (occasionally contorted).	1235		454.8	455.2	0.40			Tr	
				1236		455.2	455.6	0.40			Tr	
				1237		455.6	457.3	0.70			Tr	



DM 83-1-C-84

THIS SUBMITTAL CONSISTED OF VARIOUS REPORTS, SOME OF WHICH HAVE BEEN CULLED FROM THIS FILE. THE CULLED MATERIAL HAD BEEN PREVIOUSLY SUBMITTED UNDER THE FOLLOWING RECORD SERIES (THE DOCUMENTS CAN BE VIEWED IN THESE SERIES):

THE FOLLOWING REPORTS HAVE BEEN PREVIOUSLY SUBMITTED:

1. REPORT ON MAGNETIC → SEE: 2.6877

SURVEY, P. VAMOS,

OCT/83

MINING RECORDER, REPORT

OF WORK #8-1984

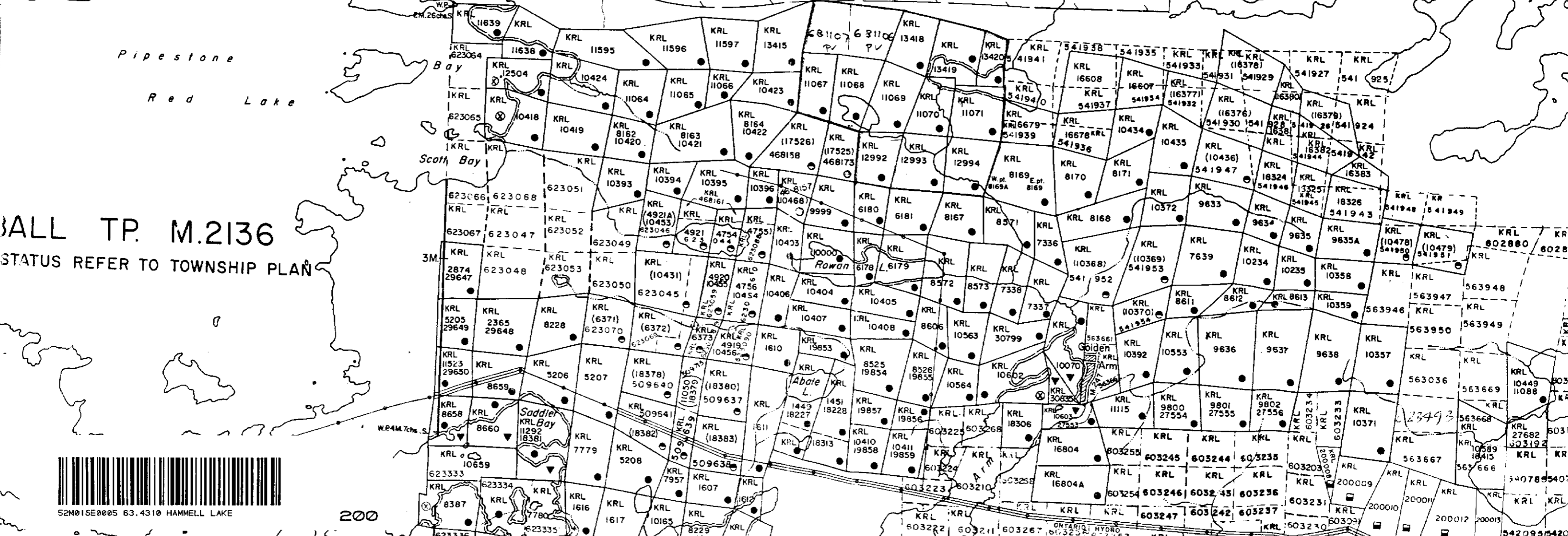
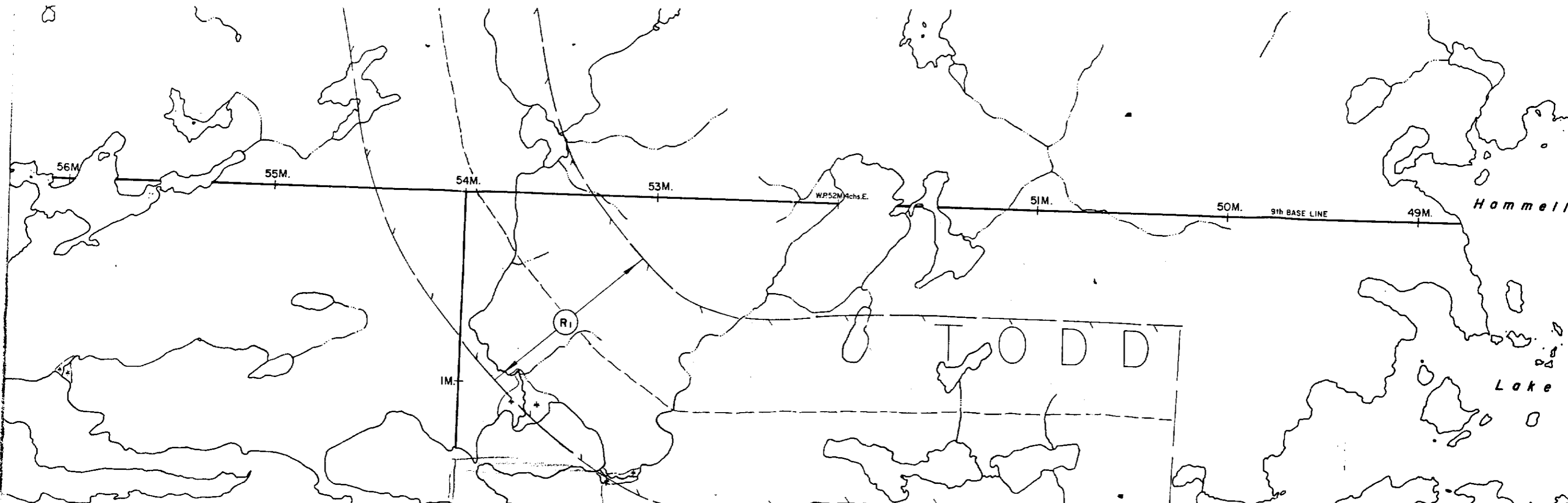
2. REPORT ON ELECTROMAGNETIC → SEE: 2.6877

SURVEY, P. VAMOS,

JUNE/83

MINING RECORDER, REPORT

OF WORK #8-1984

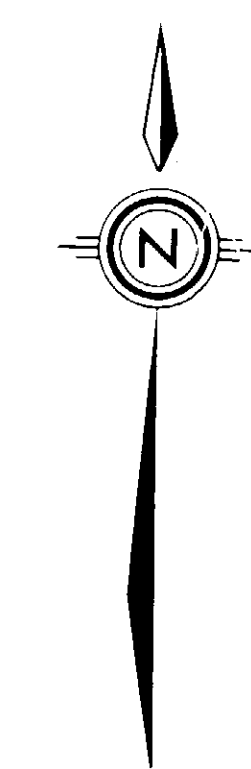
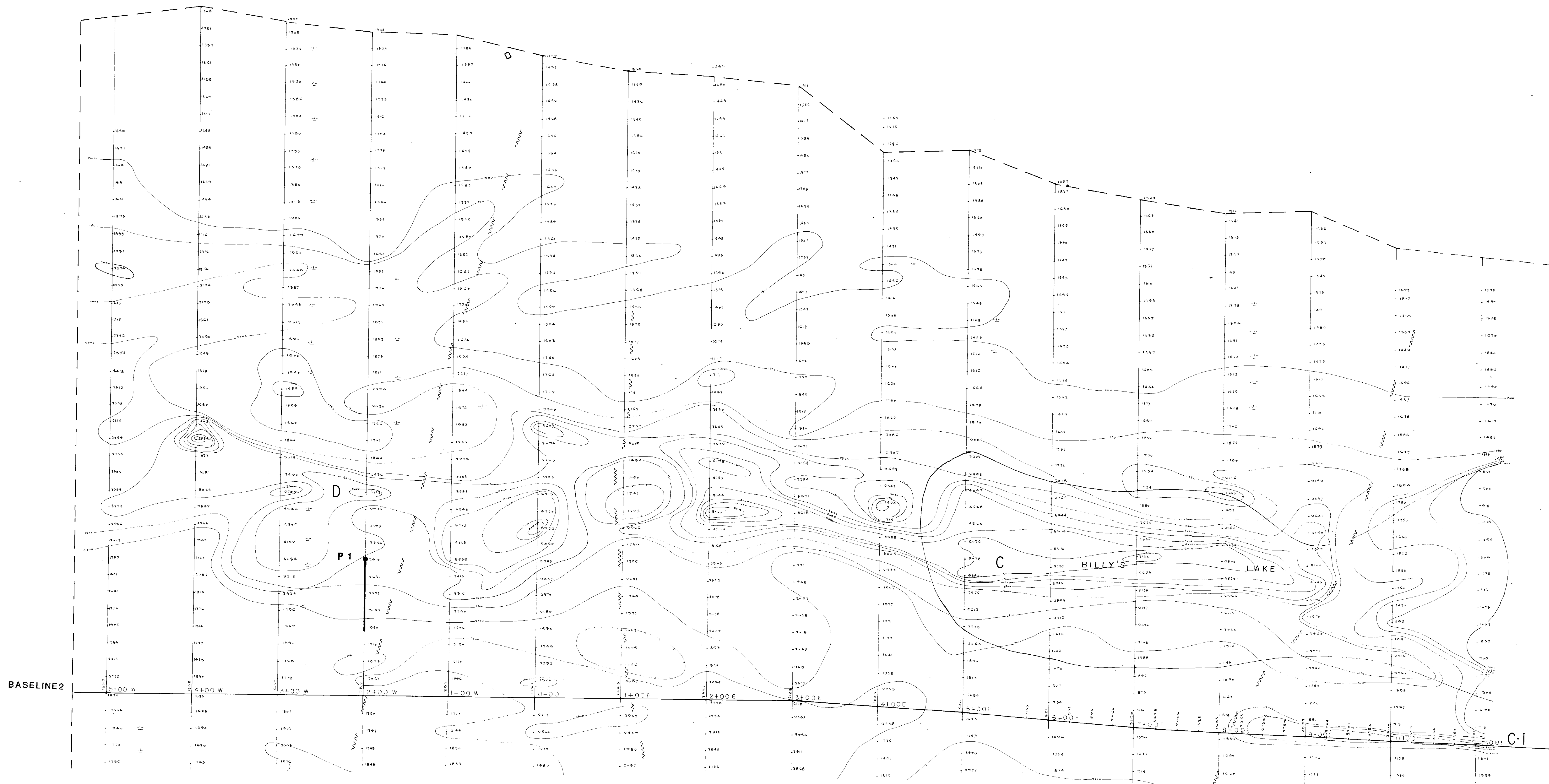


BALL TP. M.2136
 STATUS REFER TO TOWNSHIP PLAN



PIPESTONE BAY RESOURCES LTD.

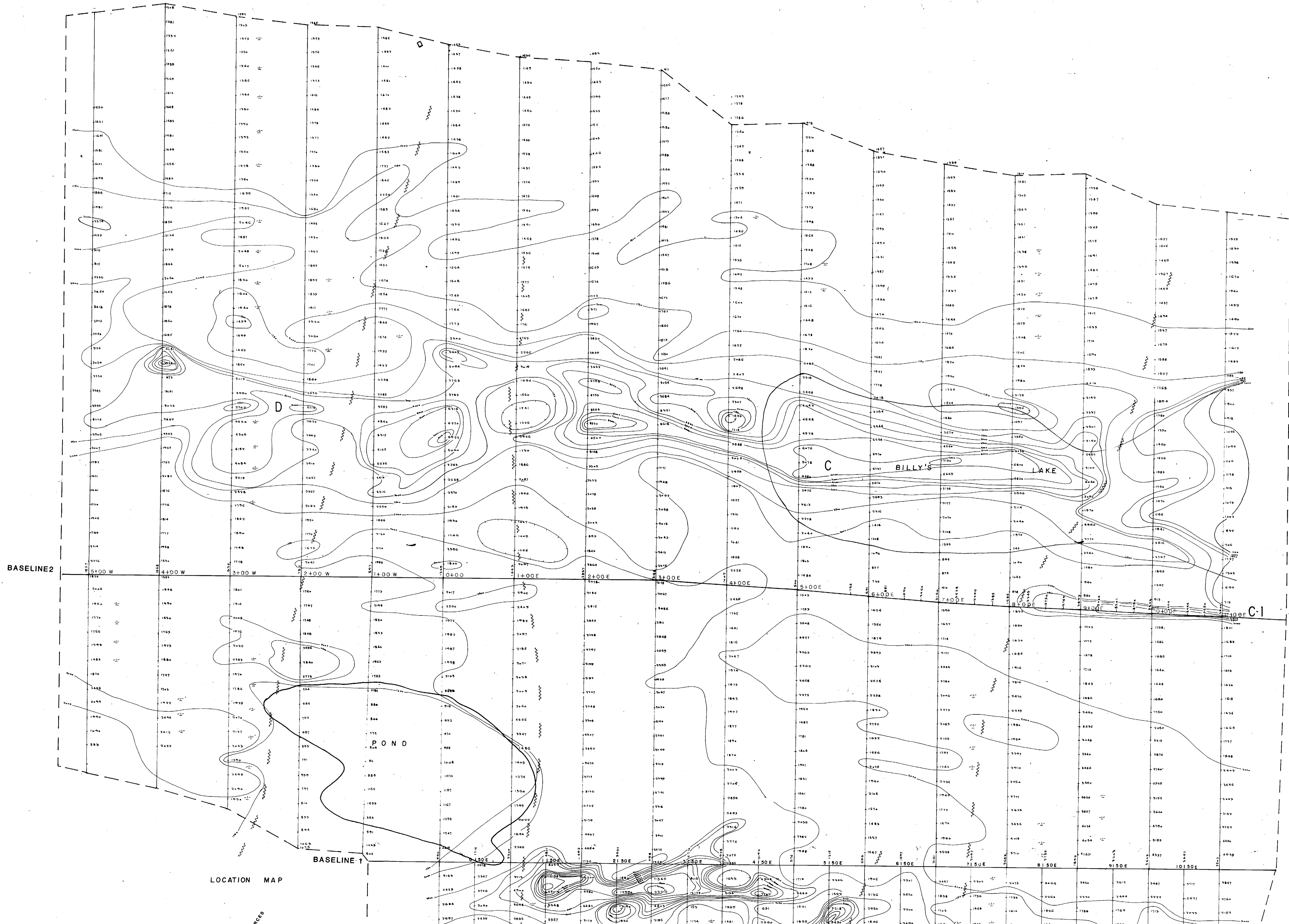
TODD TOWNSHIP CLAIMS



LEGEND

PIPESTONE BAY RESOURCES LTD.

TODD TOWNSHIP CLAIMS



LEGEND

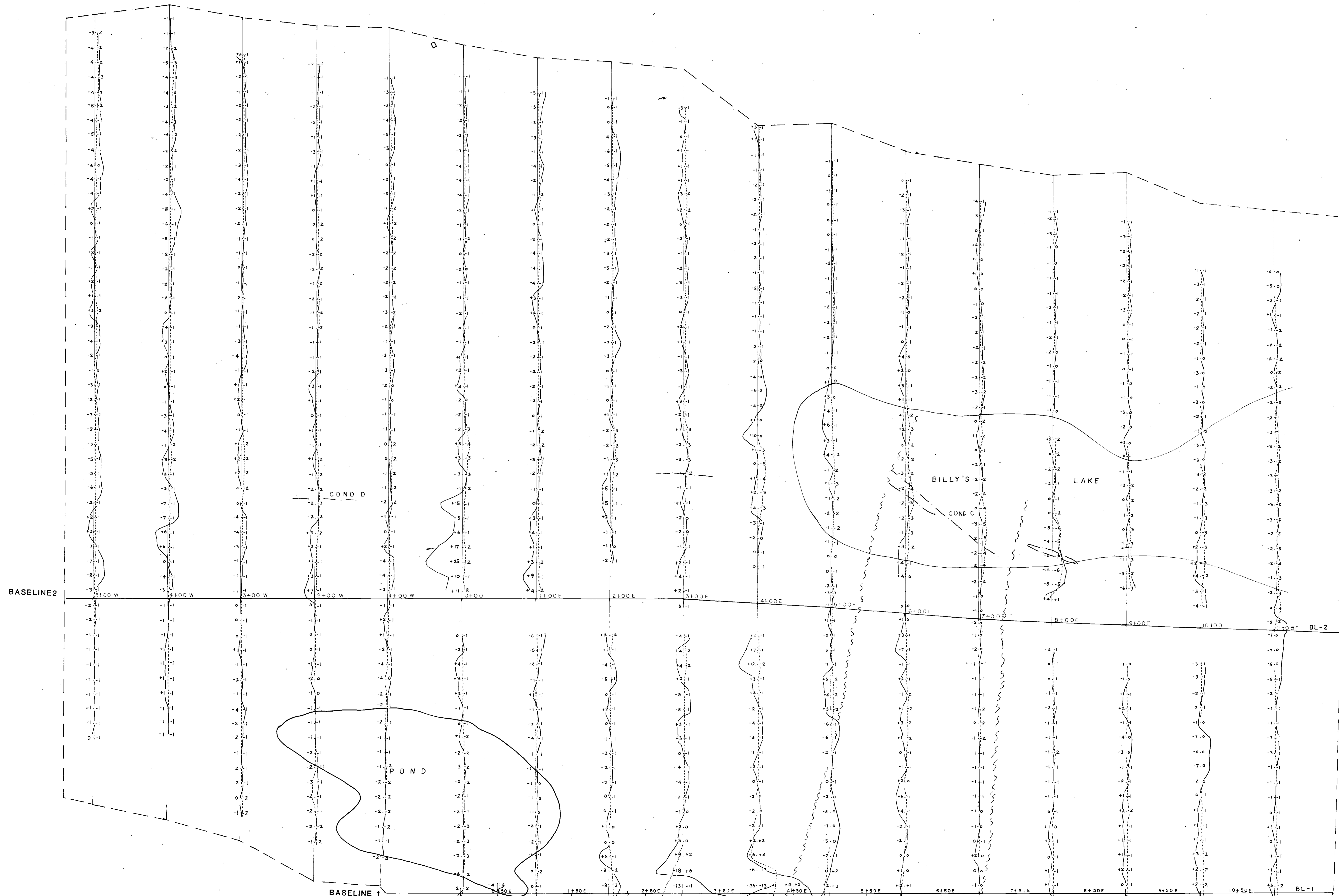
- ◊ CLAIM POSTS-LINES
- PROPERTY BOUNDARY

LOCATION MAP

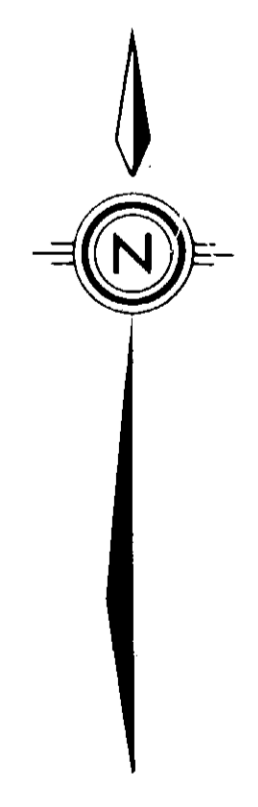
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PIPESTONE BAY RESOURCES LTD.

TODD TOWNSHIP CLAIMS

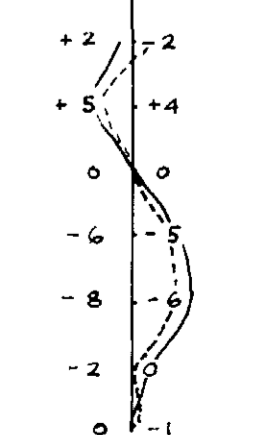


LOCATION MAP



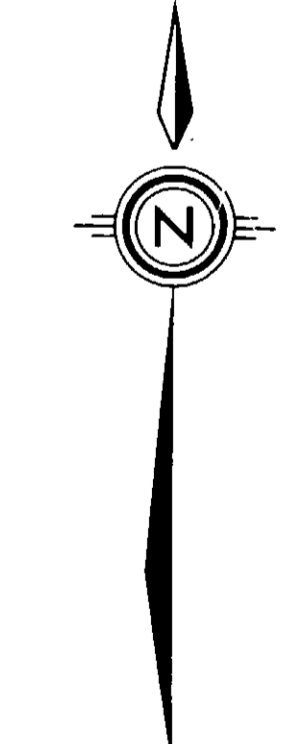
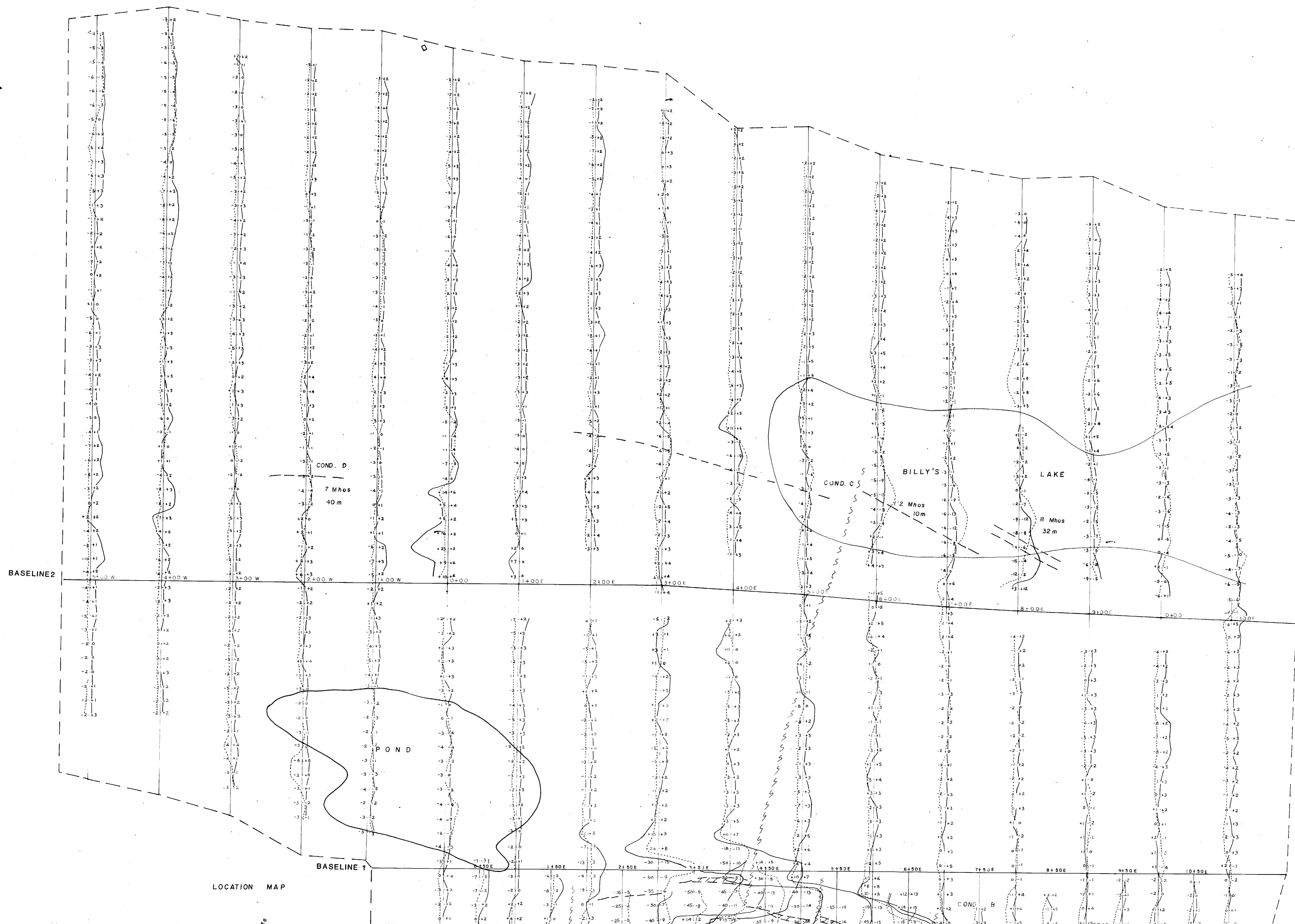
LEGEND

- CLAIM POSTS-LINES
- PROPERTY BOUNDARY
- In Phase
- Out of Phase



PIPESTONE BAY RESOURCES LTD.

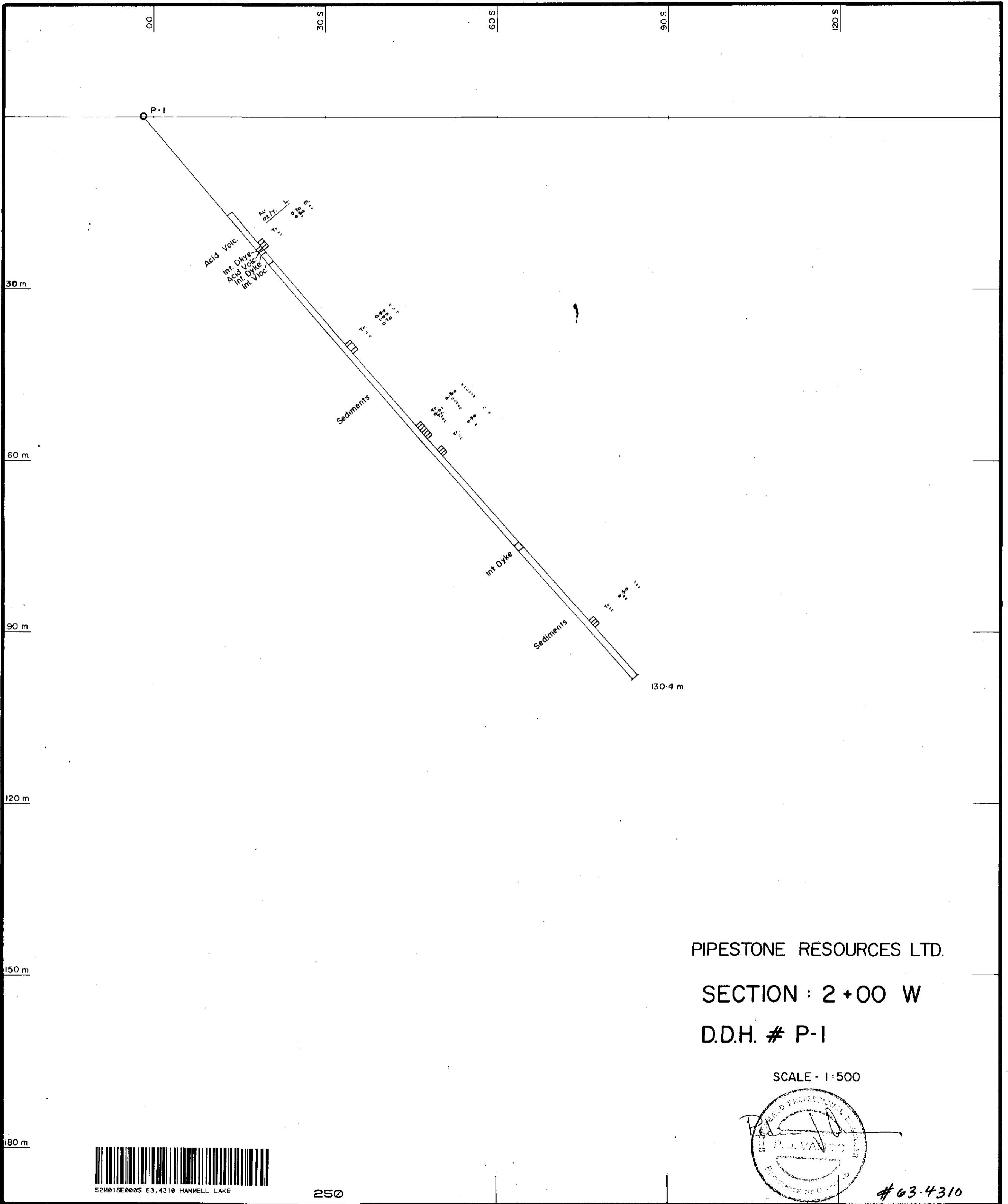
TODD TOWNSHIP CLAIMS



LEGEND

- CLAIM POSTS-LINES
- PROPERTY BOUNDARY
- FAULT
- In Phase Out Phase

LOCATION MAP



PIPESTONE RESOURCES LTD.

SECTION : 2 + 00 W

D.D.H. # P-1

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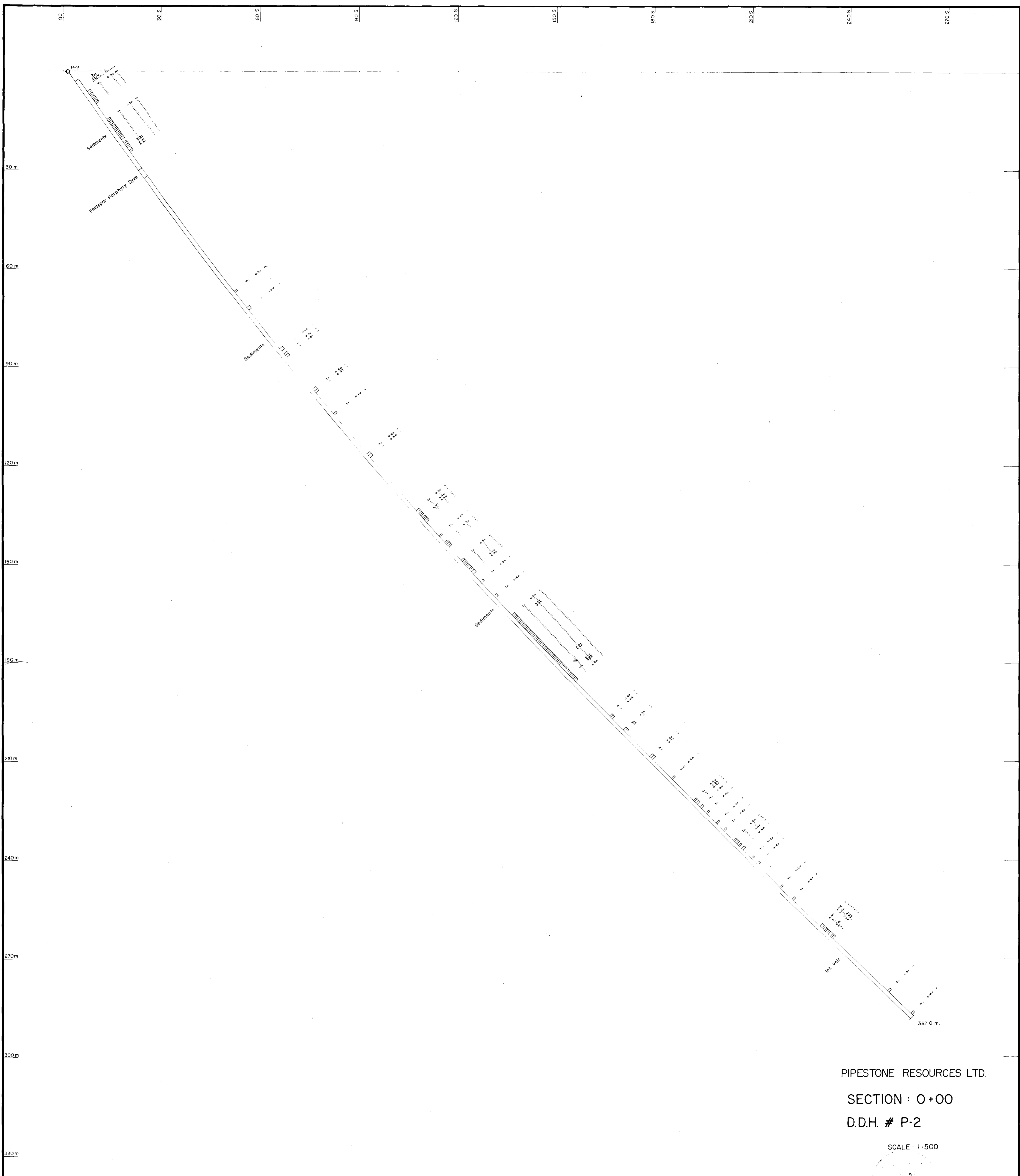


#03.4310



52M01SE0005 63.4310 HAMMELL LAKE

250



PIPESTONE RESOURCES LTD.
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 D.D.H. # P-2

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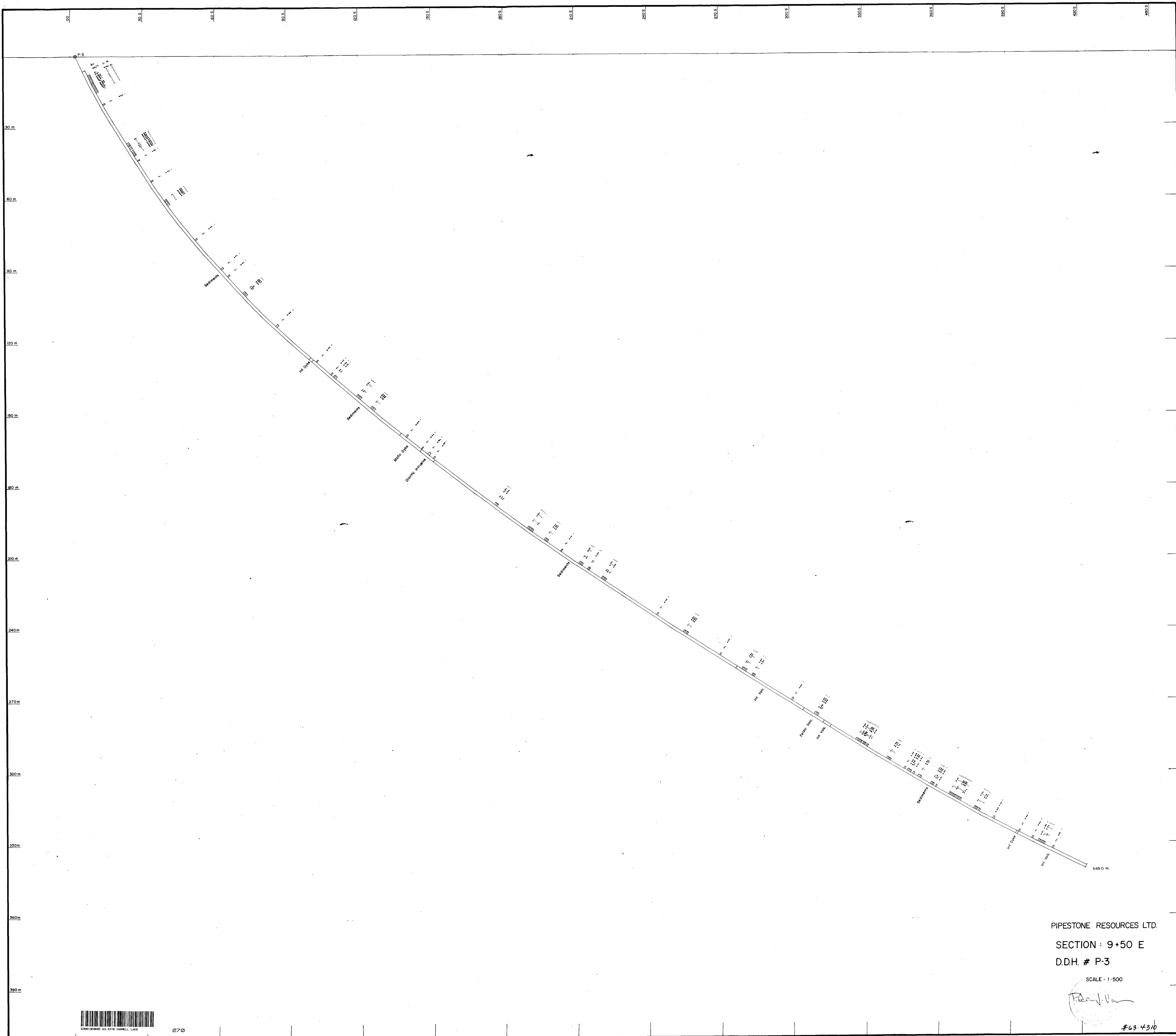
Pat. J. D.



524815E9665 63.4316 HAMELL LAKE

260

#03-4310



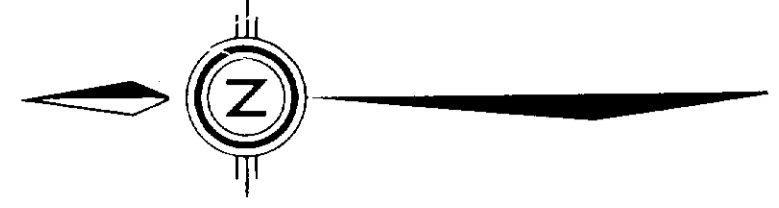
PIPESTONE RESOURCES LTD.
SECTION : 9+50 E
D.D.H. # P-3

SCALE = 1:500

[Handwritten Signature]

#63-4310

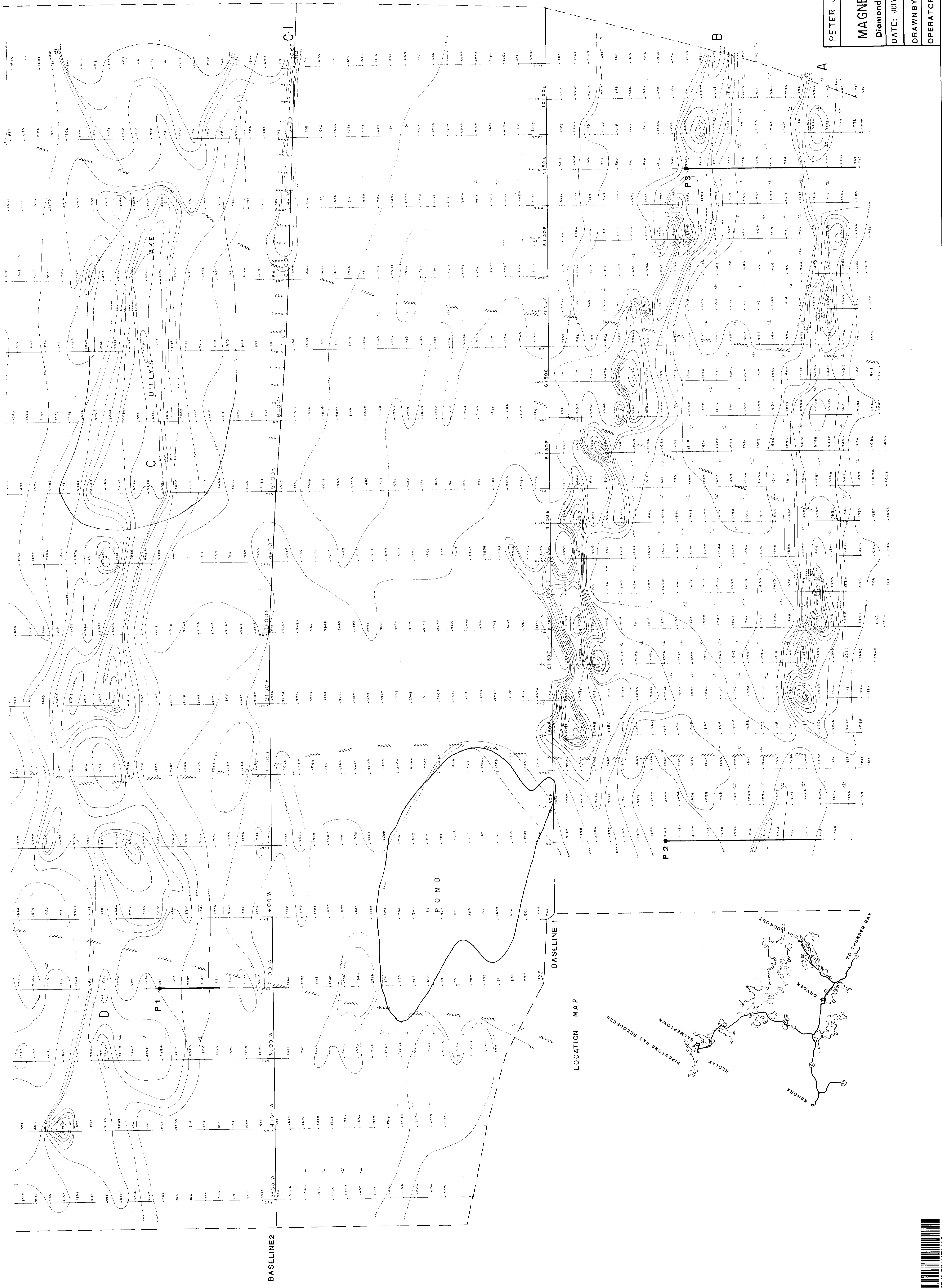




LEGEND
--- CLAIM POSTS-
LINES
--- PROPERTY
BOUNDARY

Fault
Contour Interval: 1250, 1500, 1750,
2000, 2500, 3000
in Gammets, 4000, 5000 etc

PETER J. VAMOS CONSULTANTS	
MAGNETOMETER SURVEY	
Diamond Drill Locations	
DATE: JULY, 1983	SCALE: 1"=2000'
DRAWN BY: # 63-4310	
OPERATOR: M. HALL & P. VAMOS	



LEGEND

- - - CLAIM POSTS - LINES
- - - PROPERTY BOUNDARY

0000 00000 Fault

Contour Interval: 1250, 1500, 1750, 2000, 2500, 3000 in Gamma.

#63-4310

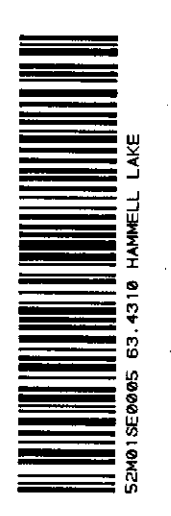
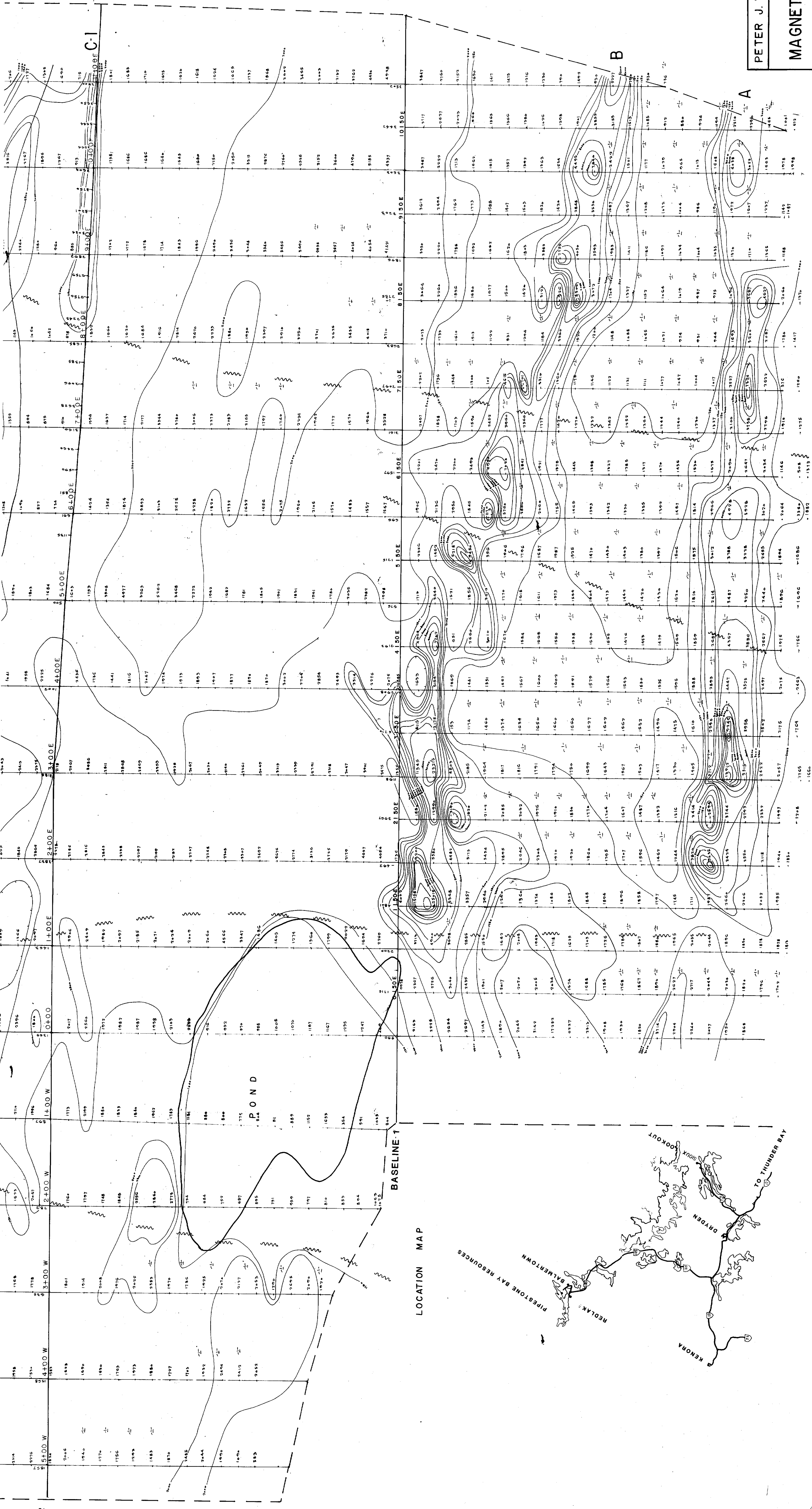
PETER J. VAMOS CONSULTANTS

MAGNETOMETER SURVEY

DATE: JULY, 1983 SCALE: Hor. 1:2000

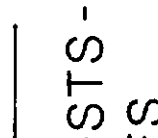
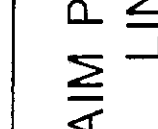
DRAWN BY: _____

OPERATOR: M. HALL & P. VAMOS

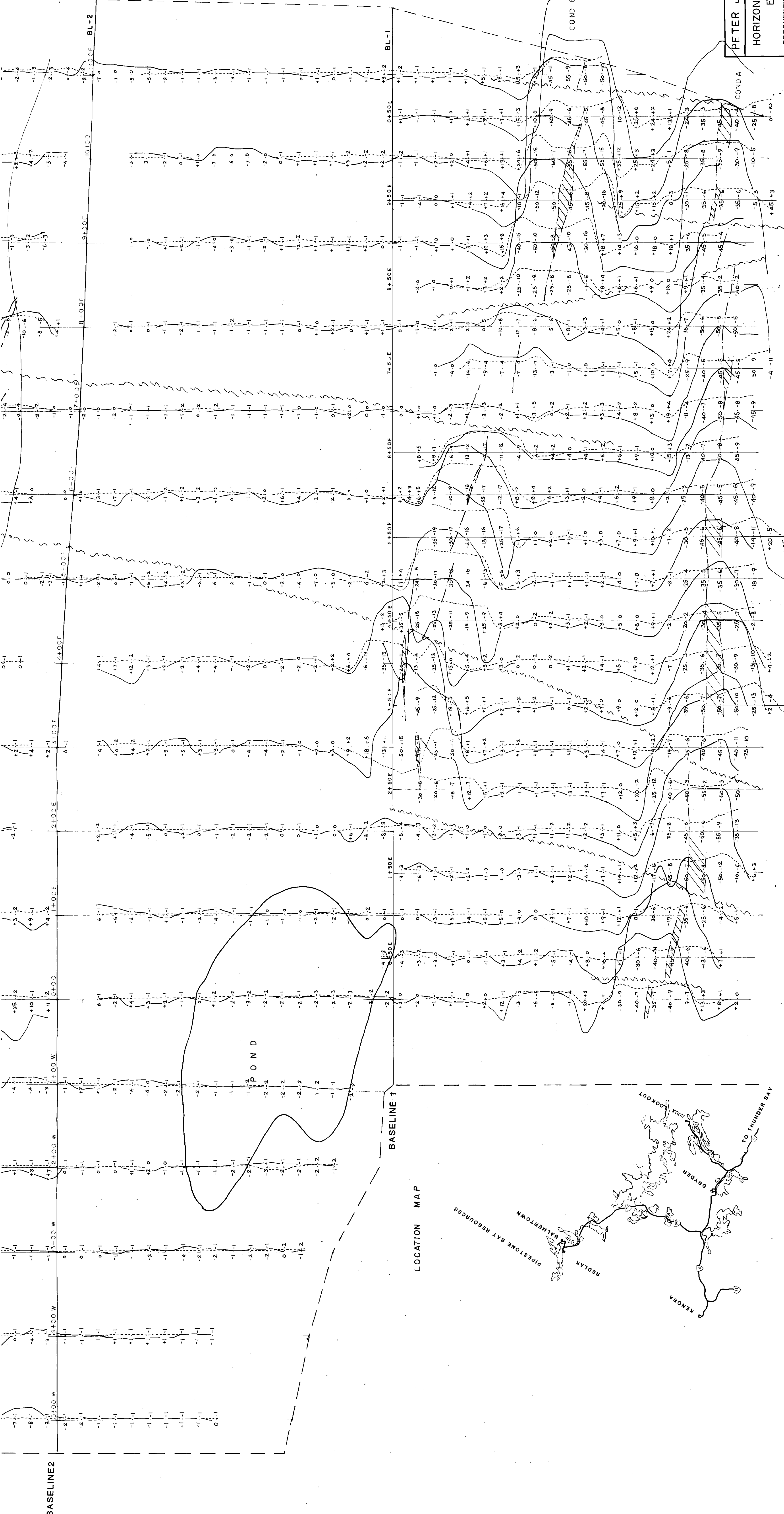
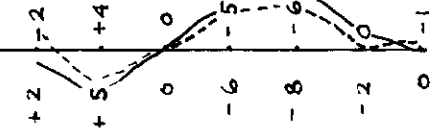


220

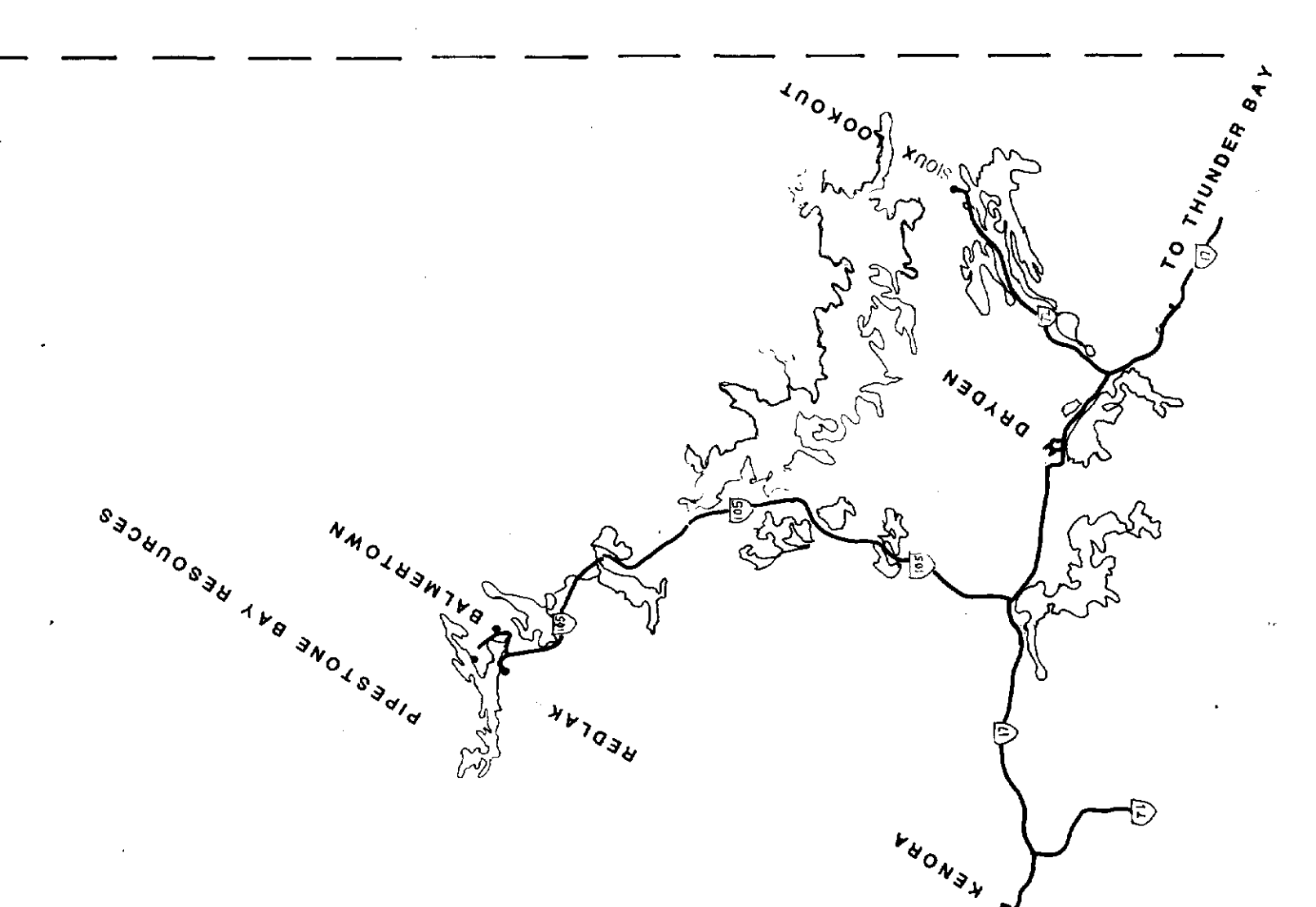
LEGEND

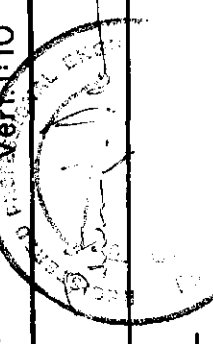
-  CLAIM POSTS - LINES
-  PROPERTY BOUNDARY

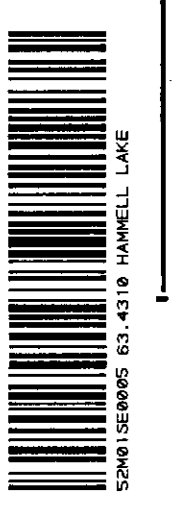
In Phase Out of Phase



LOCATION MAP



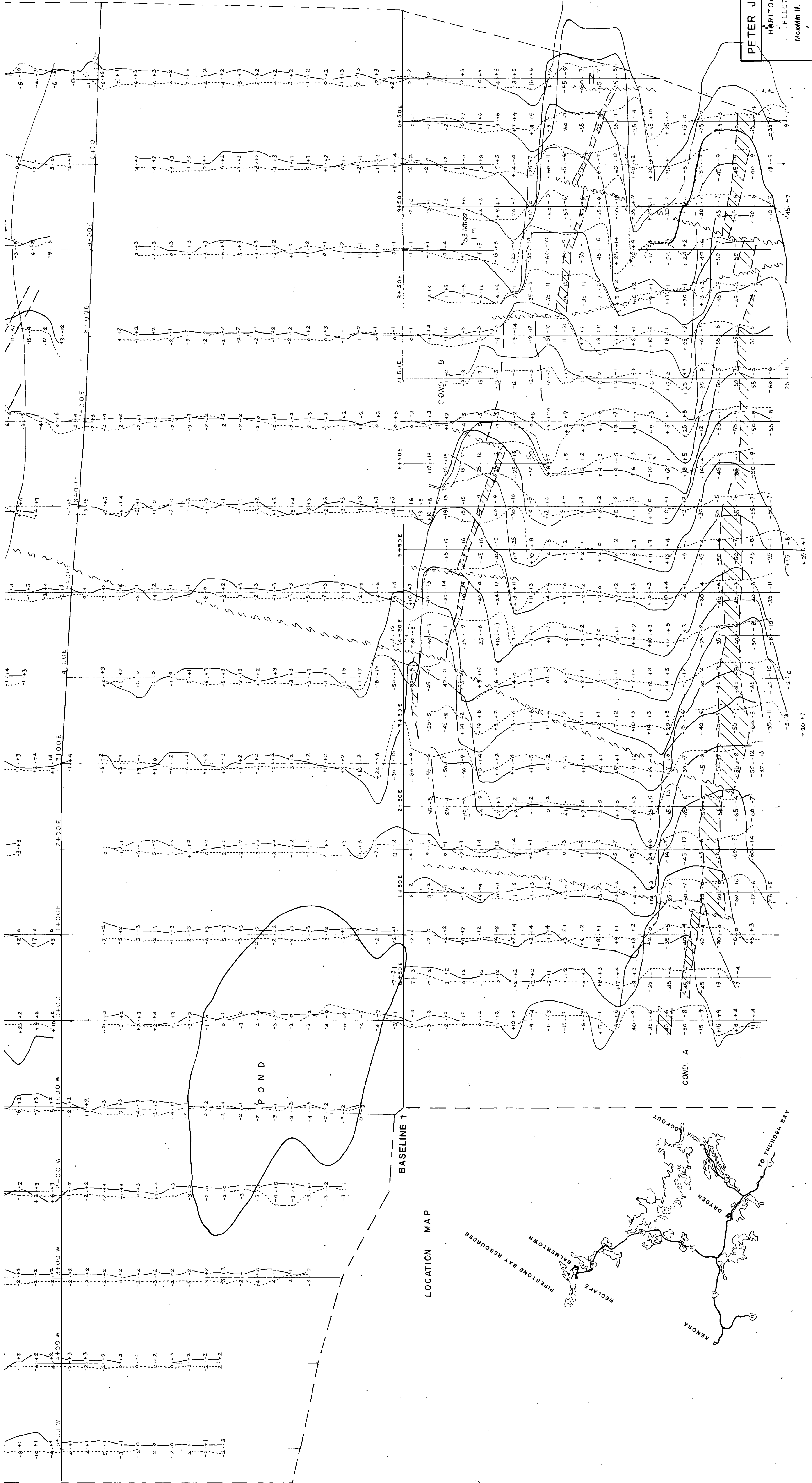
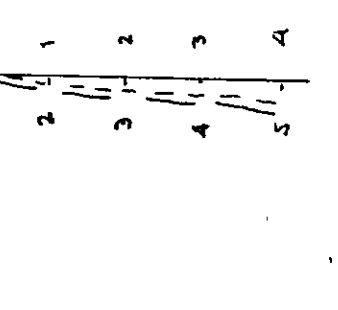
PETER J. VAMOS CONSULTANTS # 63-4310	
HORIZONTAL LOOP ELECTROMAGNETIC SURVEY	
FREQUENCY: 444 HZ COIL SEPARATION: 100 m	
DATE: 15 MAY 1983	SCALE: 1:1000 Max. 1:2000
DRAWN BY: M. V.	
OPERATOR: M. HALL	



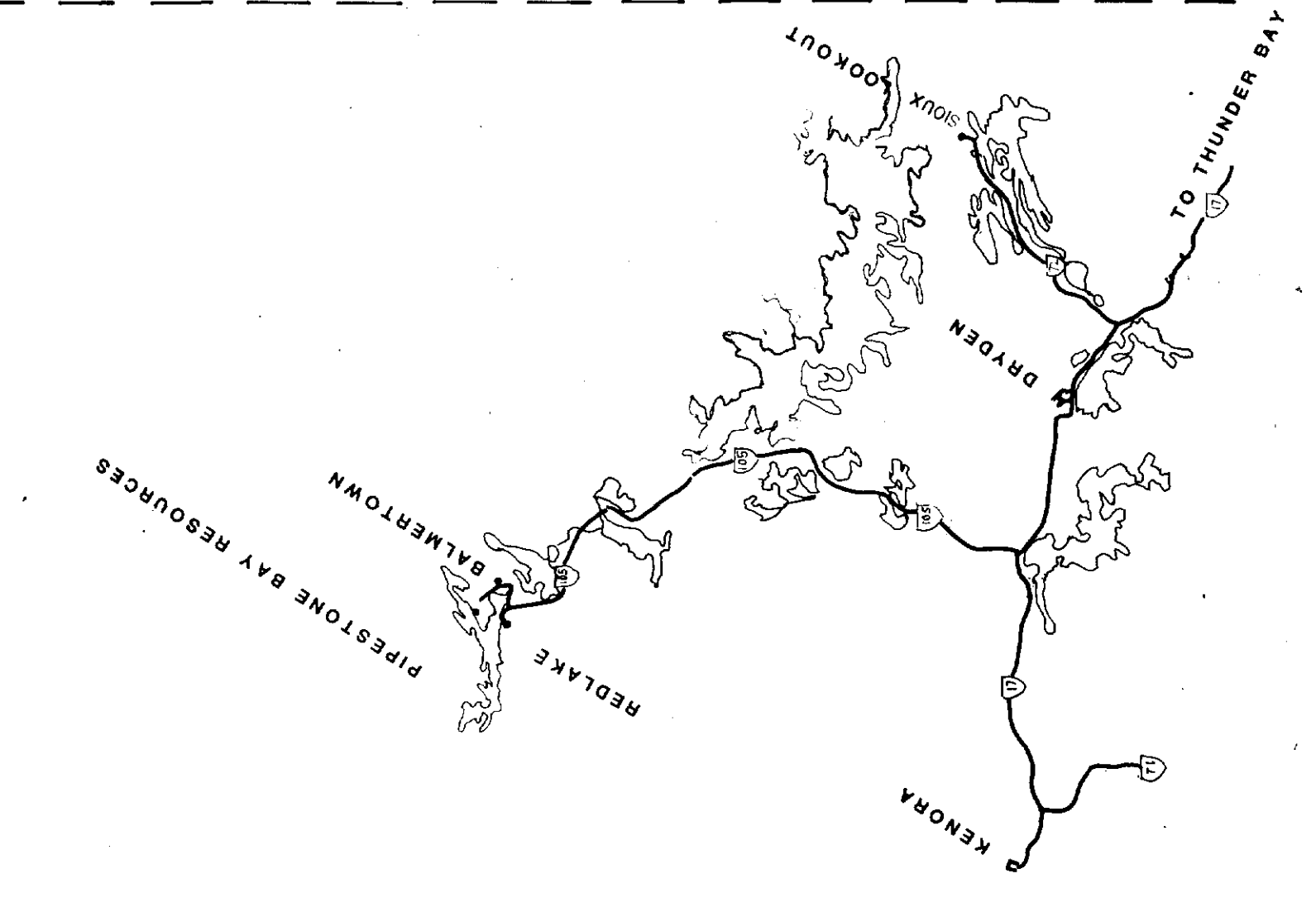
LEGEND

- CLAIM POSTS - LINES
- - - PROPERTY BOUNDARY
- SSSSSS FAULT

In Phase Out Phase



LOCATION MAP



PETER J. VAMOS CONSULTANTS
 # 63-4310

HORIZONTAL LOOP
 FLUCTUOMAGNETIC SURVEY
 Max Min II. 1777 Hz. Frequency.

DATE: 1983 May 20. SCALE: Hor. 1:2000
 VERT. 1:2000 = 1%

DRAWN BY: M.V.
 OPERATOR: M. Hall.

