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MINING LANDS SECTION

REPORT ON PAMOUR MINES

NIGHTHAWK LAKE CLAIMS

October 16, 1980

Ed van Hees

quest on this file

INTRODUCTION

A group of claims located in the south eastern part of the northeast bay of Nighthawk Lake as well as the strait between this bay and the rest of the lake were staked for or purchased by Pamour Exploration.

This area has been previously investigated by several different groups. Their work is recorded in the Ontario Geological files for the most part. The most significant results appear to be that obtained by a magnetic survey carried out on the ice. This enabled the location of several magnetic highs that were attributed to the presence of ultramafic rocks.

Due to the development of more accurate magnetic equipment and the need for better control of a magnetic survey it was decided to complete a magnetic survey on the claims held by Pamour Exploration in the Nighthawk Lake area. This was done after a test grid was run over Gold Island where a mineralized porphyry body is known to exist from past diamond drilling.

PROPERTY LOCATION

The Pavour ground consists of 19, contiguous, unpatented claims (as listed in table 1) in Macklem Township of the Porcupine Mining Division. These are all staked on Nighthawk Lake, a lake which constitutes approximately 40 percent of the township's area.

The claims have an overall shape approximating a "L" and are located north of the east peninsula in Nighthawk Lake and in the strait between the north east bay and the rest of Nighthawk Lake.

TABLE 1

Pamour claims covered by this report

546619	532104	555233
546620	532105	
546621	532106	
546622	532107	
546623	532108	
546624	532109	
546625	532110	
546626	532111	
546627	532112	

PROPERTY ACCESS

Access to the claim group was attained by truck through the use of secondary highway 803 and then the Goldhawk mine road. The highway, a gravel surface road is not normally open during the winter. The exploration of a small mineralized zone on the Goldhawk property during February, March and April 1980 by Pamour's exploration department, however, necessitated the opening of this highway ^{and} ~~as~~ the mine road. This therefore enables the access by truck to the extreme east end of the north peninsula immediately adjacent to Gold Island. The nearby claims were easy to reach on foot (with snowshoes) from there, while a ski-doo was used for the more distal claims.

WORK STATISTICS AND CONDITIONS

The surveying of reference points, grid layout and magnetic survey were carried out by Clint Woon of Timmins and Brian Williamson of Schumacher, Ontario during the last 3 weeks of February, March and the first week of April 1980. Assistance on a part time basis was given by Ed van Hees, at that time from Schumacher, Ontario.

The surveying of reference points was carried out using an infra red tacheometre borrowed from Northern College campus in South Porcupine. This instrument has an accuracy of $\pm .01$ inches.

Grid layout was accomplished with the use of a 100 foot plastic tape, sylvia compass, and 2 foot high slats measuring $\frac{1}{4}$ " by $\frac{3}{4}$ ". The latter were used to mark stations and were recovered by ski-doo upon completion of the survey if they were not buried in snowdrifts.

Weather during this period of time was quite variable. During the early part of the survey, the weather was good except for high wind conditions which combined with fine drifting snow often obscured the horizon. During March, a number of large snow storms buried the pickets and required the re-establishment of part of our grids. Fresh deep snow also made work conditions much slower. In late March and early April, an early spring thaw produced very wet snow conditions and therefore very slow work conditions.

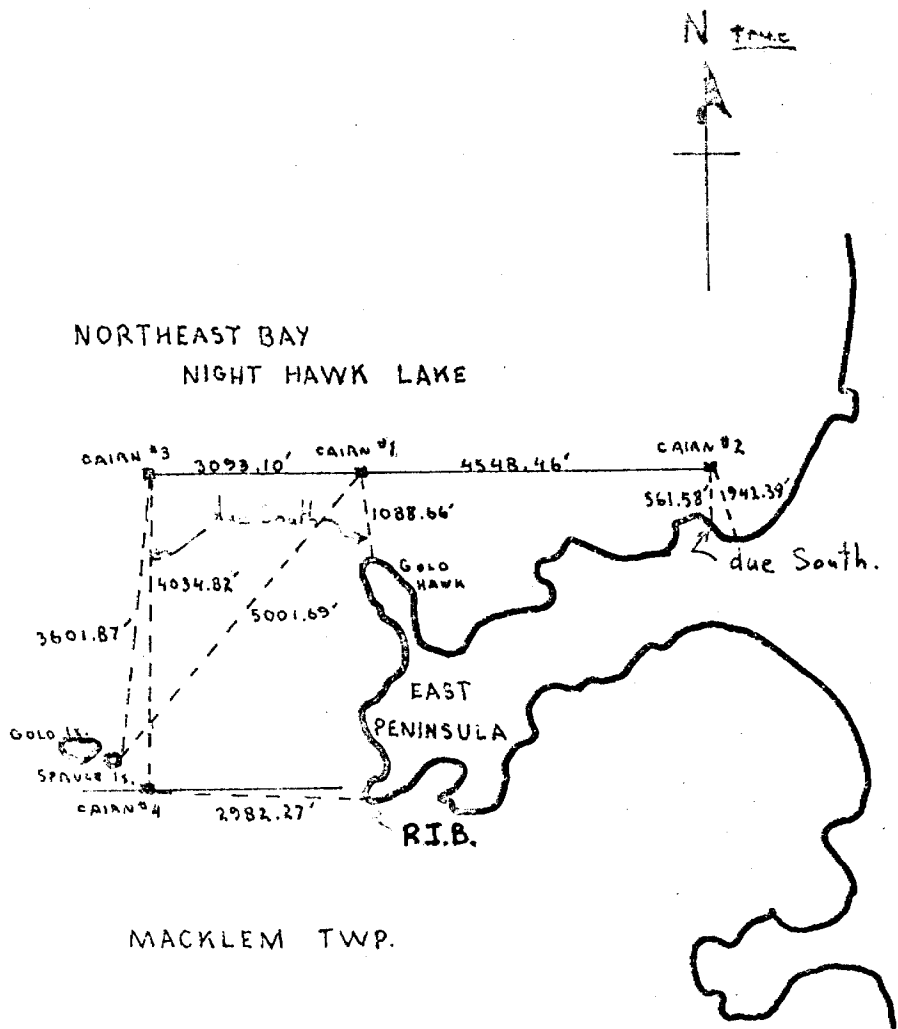
Magnetic conditions during the winter of 1980 were generally very poor with large magnetic storms occurring at least every 2 weeks and lasting at times up to 10 days at one time.

REFERENCE POINT SURVEY

A survey using an infra red tachemetre was completed to locate 4 reference cairns on the ice using fixed and easily relocatable features (figure 1). This was done so that the same grid can be re-established in subsequent years to enable the carrying out of other surveys, the accurate tying in of other similar surveys and the accurate location of diamond drill holes.

The reference points used, were prominent, geomorphological features, ie. the north west tip of the east peninsula in Nighthawk Lake. The points were always located at the shoreline which was located by looking for plates of ice frozen to the shore some distance above the lake surface. Nighthawk Lake being a hydro controlled lake has a drop of about 11 feet each year between December and the end of April due to water being drawn off for hydro generation. The plates of ice and therefore fall lake level were located at the maximum elevation allowed by the licence of occupation held by Ontario Hydro. The elevations are measured on the T.N.O scale which does not coincide with feet above sea level. The quoting of these numbers is therefore pointless but they can be acquired from Ontario Hydro who keep a daily log of water elevation at the Fredrick House River Bridge (the exit point for water from Nighthawk Lake).

Nighthawk Lake
Reference Point Survey



SURVEY GRID

Once the cairns were in place an east-west baseline was laid out using cairns 1, 2 and 3, the measuring tape and pickets. Similarly a north-south tie line was laid out between cairns 3 and 4. A second baseline was then laid out using cairn 4 as a starting point. A compass line was claimed to the east and west. From these base lines, lines were claimed 400 feet apart at 100 foot intervals. Between the base lines large black tripods located on each baseline were used to keep the lines straight. Outside the base lines the grid was laid in using a silva compass, chain and pickets.

MAGNETIC SURVEY PROCEDURE

The magnetic survey was carried out by all three persons listed previously using Pamour Exploration's proton procession magnetometer, a Geometrics G816/826 using a 7½ foot aluminum staff.

The baselines were read first by reading 20 stations 100 feet apart and then going back to the first station for a check reading. The last 3 stations would be read again before continuing on with the next 20 stations (ie. stations 18, 19 and 20). This was done in each case, that is when station 40 was read, 20 would be used to check the drift and then 38, 39 and 40 were read before stations 41-60 were read. In this way the values for both baselines were acquired and corrected using the numerous tie in points. This enabled the continuous reading of the rest of the grid by using an S shaped traverse along the length of the baselines. The points where the traverse crossed a baseline were used to calculate the corrected magnetic reading.

Magnetic readings were all corrected to the first magnetic reading taken at cairn #1. This reading was the average of 4 readings taken about 1 hour apart on a "quiet" magnetic day. This initial reading was not tied into a known magnetic survey station.

INTERPRETATION OF RESULTS

The corrected magnetic results are plotted on the two maps at the appropriate stations. The value recorded is the number of gammas above an arbitrary background set at 58,000 gammas. Therefore, a value of 1,015 gammas is actually the corrected value of 59,015 gammas.

The low values have been shaded in deep blue (>5008) and the high values in orange-red (>20008). This has produced a very prominent group of 3 positive anomalies trending north east across the north half of the south grid. This was previously interpreted as a group of ultramafic rocks, known to exist elsewhere in the area. This would appear to be the case again in this study except that the 3 anomalies may be one large ultramafic body that has been broken up by north-south trending faults. The associated magnetic lows appear to be directly associated with and due to the interpreted ultramafic bodies.

A number of other magnetic lows are present. The ones south of Cold Island are the only two that can probably be directly attributed to quartz feldspar porphyry bodies.

The magnetic lows occurring at the extreme east end of the north grid are probably all due to very deep overburden. The clay banks at the shoreline are at times up to 50 feet high. This would appear to confirm in part at least the interpretation that the overburden is very deep. Along strike and to the east one mile the Aquarius mine shaft was sunk about 240 feet before hitting bedrock and recent overburden drilling in the same area by Asarco attained depths of up to 380 feet before reaching bedrock.

RECOMMENDATIONS FOR FURTHER WORK

The two anomalies south of Gold Island, as well as Gold Island itself, appear to be good candidates for overburden drilling through the ice. This would be an orientation type survey to see if glacial fans from low grade zones are detectable in the lake bottom. Should the answer be affirmative it is suggested that a series of east-west lines be drilled south of the large positive anomalies on the south map sheet as well as the magnetic lows at the east end of the north sheet.

COST ESTIMATE

This is only an estimate as all employees used on this project were staff members and all equipment used is owned by Pamour Exploration.

Field Operations:


<u>Labor</u>	2 men @ 5 days/week X 8 weeks = 4 man months of work at \$1,400/month	= \$5,600.00
<u>Supplies</u>	20 bundles of pickets @ \$7.50 ea.	= 150.00
	2 boxes of lumber crayons @ \$2.50 ea.	= 5.00
<u>Equipment</u>	Truck rental and gas \$25/day, 40 days	= 1,000.00
	Ski-doo and gas \$25/day, 20 days	= 500.00
	Magnetometer \$35/day, 20 days	= 700.00
<u>Field Cost Estimate</u>		= \$7,955.00
<u>Office Costs</u>	Supervision @ 10% of field costs	= \$795.00
	Drafting 3 days @ \$150/day	= 450.00
	Report writing 2 days @ \$150/day	= <u>300.00</u>
	Sub Total	<u>\$1,545.00</u>
	Total Project Cost	\$9,500.00
	or \$500 per claim	







I verify that all data and estimates presented within this report are accurate to the best of my knowledge.

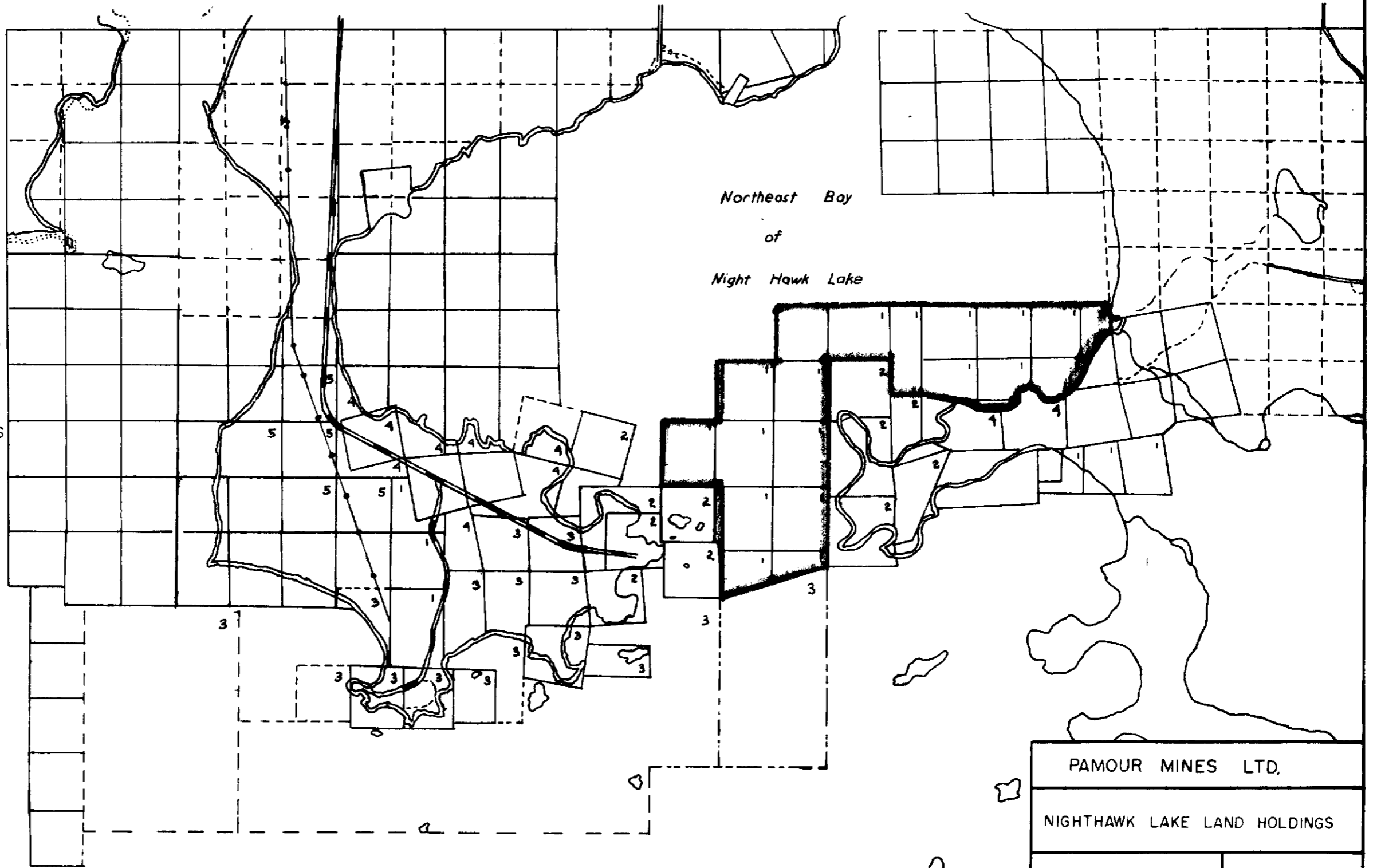


Ed van Hees M. Sc.
Exploration Manager

LEGEND

- 1. PAMOUR EX. 
- 2. GOLDHAWK
- 3. HYDRO-PORC. PENN.
- 4. RONNOCO
- 5. RIO ALGOM

-  MINERALIZED ZONES
-  FAULTS
-  VOLCANICS
-  CARBONATE SCHISTS
-  RHYOLITE
-  SEDIMENTS



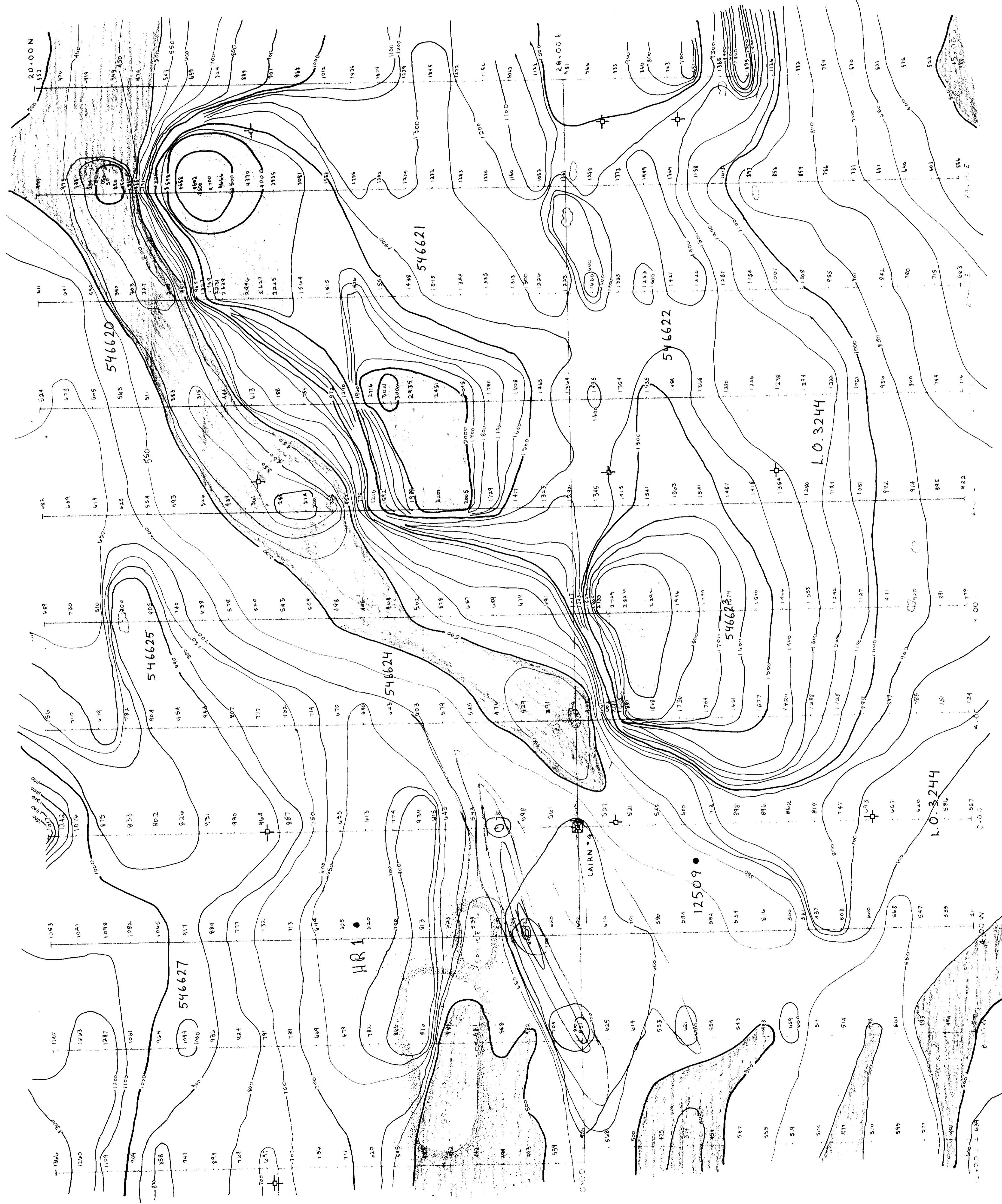
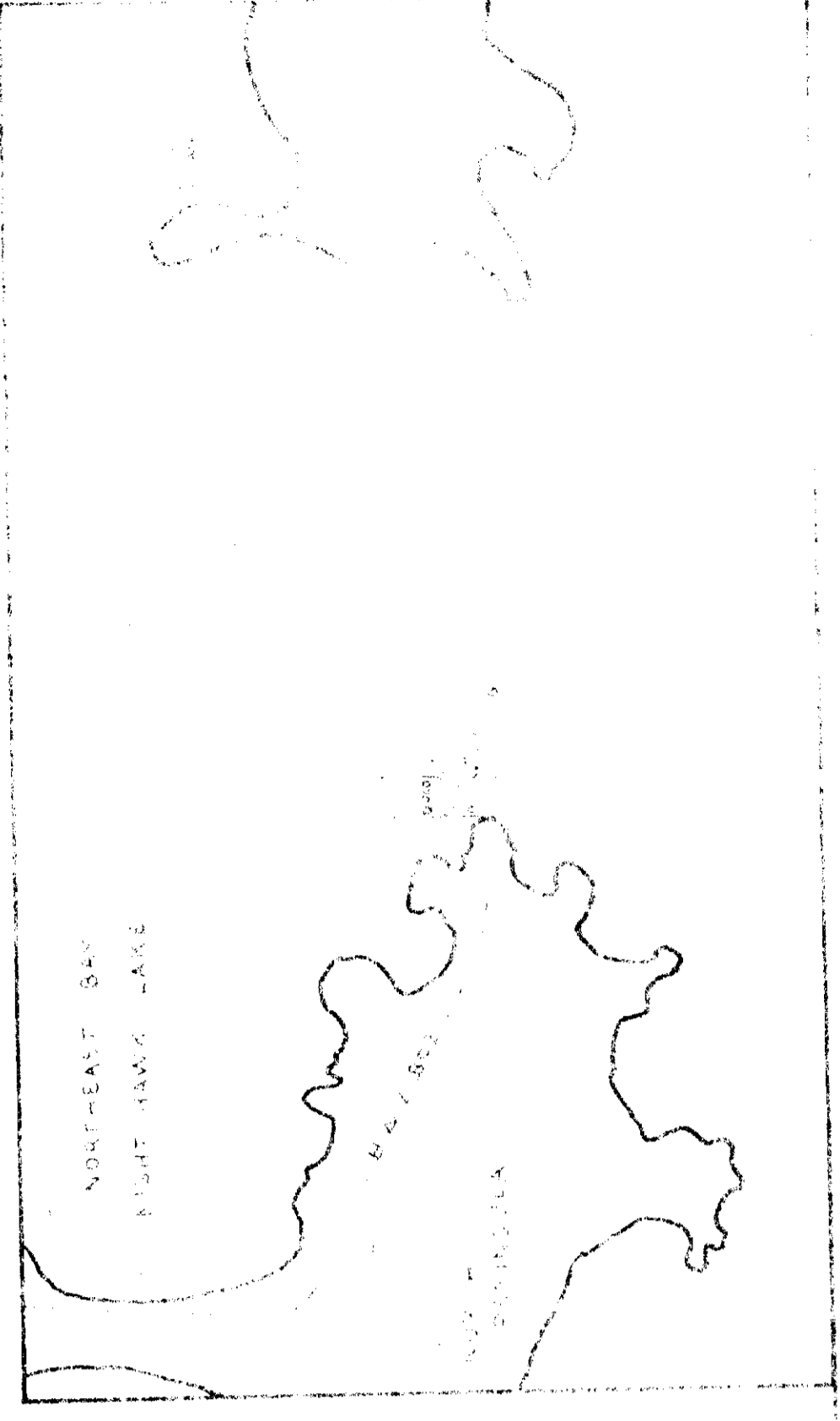
Northeast Bay
of
Nighthawk Lake

PAMOUR MINES LTD.	
NIGHTHAWK LAKE LAND HOLDINGS	
SCALE: 1" = 1/2 MILE	DWG BY. B.B.
DATE: APRIL 10, 1980	APP. BY.

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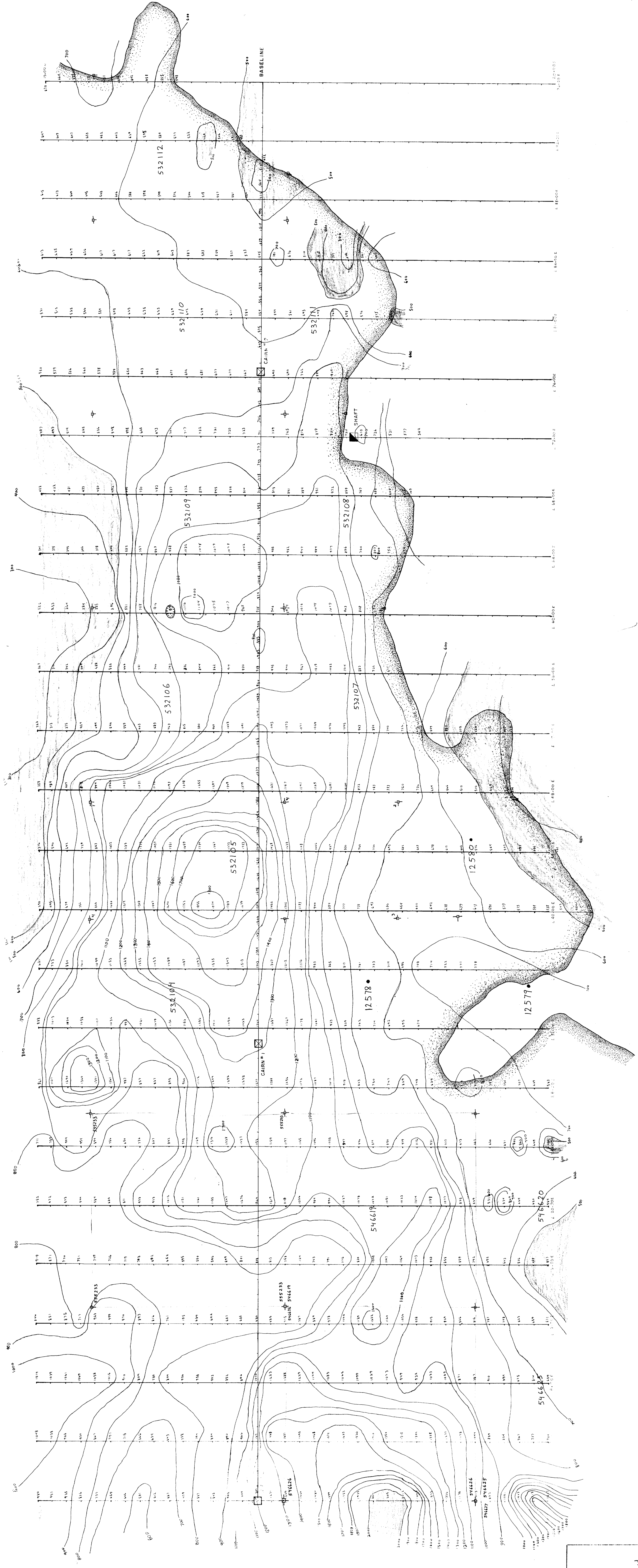
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BRUNNEN INSTRUMENTS (PVT) LTD.
EARTHQUAKE DEPARTMENT
GOLD HAWK PROPERTY
DETAILED MAGNETIC SURVEY, South G-4
SCALE 1:1000 DRAWN BY
DATE JULY 28, 1998 APPROVED BY
CHECKED BY

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PAMOUR PORCUPINE MINES LTD.
 EXPLORATION DEPARTMENT
 GOLD HAWK PROPERTY
 MAGNETIC SURVEY North Grid
 SCALE: 1:200
 DATE: JULY 10, 1980
 DRAWN BY: [Signature]
 APPROVED BY: [Signature]

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