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MINING LANDS SECTION

GEOLOGICAL REPORTS

ON

P. I. R. P. HOLDINGS INC.

MINE CENTRE AREA MINING CLAIMS

KENORA MINING DIVISION, ONTARIO

By

G. F. ENNIS

Mining Engineer, P.Eng.

January 28, 1983

Toronto, Ontario

G. F. ENNIS
MINING ENGINEER



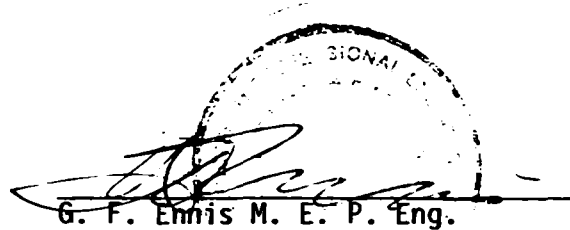
For
Report On Golden Star Mine Claims

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ENGINEER'S CERTIFICATE

I. George F. Ennis, of the City of Toronto, Province of Ontario, do hereby certify:

1. That I am a graduate of the Michigan College Of Mines, Houghton Michigan, 1938, with a BSc degree in Mining Engineering.
2. That I am a member in good standing of the Association Of Professional Engineers Of The Province Of Ontario.
3. That I examined geology and geophysical anomalies on the Golden Star Mine Claims and the Shoal Lake Road Claims during the period from August 14, 1982 to September 14, 1982 and periodically explored and supervised exploration on the above properties from 1974 to the above dates.
4. That I have no interest in the properties, shares or securities of P. I. R. P. Holdings Inc.



A circular professional seal for the Association of Professional Engineers of the Province of Ontario is partially visible behind a handwritten signature. Below the signature, the text "G. F. Ennis M. E. P. Eng." is printed.

Dated at Toronto:
January 28, 1983

63-213

G. F. ENNIS
MINING ENGINEER

REFERENCES

1. Preliminary Report on the Mine Centre Area, Ontario, by T. L. Tanton, Bureau of Economic Geology, Department of Mines, Ottawa, Canada, January, 1935.
2. Geological Map NO. 334A, Mine Centre Area, Rainey River District, Ontario, Bureau of Economic Geology, Geological Survey, by T. L. Tanton, 1934. Scale: one-half mile to the inch.
3. Reports on Orelia Mine Limited by Colin A. Campbell and G. R. McLaren, November 17, 1949, covering the Golden Star Mine property.

MAPS

NO. 1. Surface Plan showing the geology, veins and geophysical anomalies on the Golden Star Mine Claims and the Shoal Lake Road Claims, by G. F. Ennis, November 5, 1982. Scale, 500 feet to the inch.

Appendix A: Plans of electro-magnetic and magnetometer surveys on the Golden Star Mine Claims to accompany the geophysical report by Dr. Michael Lappin, PhD. Geophysics, Dated January 1983. Scale, 200 feet to the inch.

Appendix C: Plans of Maxmin II geophysical surveys to accompany the report by A. J. Lambert, dated October, 1982. Scales, 200 feet to the inch.

INTRODUCTION

The information contained in the following reports covers examinations by the writer related to geophysical surveys and surface prospecting on the P. I. R. P. Holdings Inc. mining claims during the period from August 12, 1982 to September 4, 1982. Also incorporated are the results of previous examinations and surface exploration conducted under the writer' supervision periodically from 1974 to the above dates. Additional information was obtained from the reports listed under references on page 2.

PROPERTY AND LOCATION

The property consists of 38 contiguous mining claims located south and east of Bad Vermillion Lake in the Mine Centre Area approximately 40 miles east along Highway 11 from Ft. Frances, Kenora Mining Division, Ontario.

For convenience of exploration the claims were divided into two groups, the Golden Star Mine 16 Claims and the Shoal Lake Road 22 Claims, and are covered by separate reports.

REPORT ON
GOLDEN STAR MINE CLAIMS

By

G. F. Ennis
Mining Engineer, P. Eng.

PROPERTY AND LOCATION Map NO. 1

The Golden Star Mine claim group is located south of Bad Vermillion Lake and west of the Shoal Lake road. It consists of 16 contiguous mining claims having the following numbers:

Patented claims

AD2	FF570
AD3	FF371
AD4	FF572
K237	

Leased claims

K202521 ✓ K44632 ✓

Leases pending

K349062 ✓ K349064 ✓

K349062 K349064

K349063 ✓ K349065 ✓

Assessment work due July 31, 1983

K629055 ✓

K629056 ✓

K629057 ✓

ACCESS Map NO. 1

The claims are easily accessible from Highway 11 south along the Shoal Lake road for one mile then west on the Golden Star Mine road.

TOPOGRAPHY

The claim group occupies an area of relatively low relief, typical of the Pre-Cambrian in most of Ontario. Elevations rarely exceed 50 feet above the level of Bad Vermillion Lake except along the Keewatin lava-quartz porphyry contact in the south part where the porphyry ridge rises abruptly to 100 feet above the bordering lowland.

Much of the claims are covered by swamp and heavily overgrown by alders, cedar and second growth spruce. Most of the outcrop areas are

covered by a thin mantle of overburden and a heavy growth of spruce, poplar and birch.

GEOLOGY (Map NO. 1)

All of the claims except 349065, 349055, 349056, 349057 and parts of AD2 and AD 3 are underlain by Keewatin lavas consisting of undifferentiated basalt and andesite flows with associated carbonate and chlorite schists. The lava flows have a general trend of about N70E and are intensely folded. Flow contacts are difficult to trace for any distance because of the folding and lack of rock exposures.

Undifferentiated gabbro and anorthosite underly claims 349065, 349055, 349056, and 349057. The contact with the Keewatin lavas strikes about N30E. Where examined by the writer they are massive, medium to coarse grained and show very little structure besides local fracturing.

No mineralization of economic importance has been found in the gabbros and anorthosites to date but part of the area they occupy is under deep swamp which should be investigated by a Maximin II geophysical survey as part of a future exploration program.

The southeast margin of the Keewatin lavas is in contact with a high ridge of Quartz porphyry which occupies all of claim AD4 and parts of claims AD2 and AD3. The porphyry is considered the source of most, if not all, of the gold-quartz veins in the area. It contains many auriferous quartz veins which have been explored over the years since the late 1800's. Some have produced small tonnages of rich gold ore.

A small stock of lightly sericitized quartz porphyry exists a few hundred feet north of the Golden Star Mine and probably influenced the formation of the Golden Star NO. 1 orebody.

STRUCTURAL GEOLOGY

There are a few sharp surface depressions on the claims that may be indicators of underlying fault structures. The most prominent one is about 300 feet north of the Golden Star Mine shaft. It coincides with the surface projection of a strong fault intersected in the NO. 4 diamond drill hole 100 feet north of the NO. 1 shaft. The strike of the depression is about N40W and fades into deep swamp about 400 feet northwest of the NO. 1 shaft. The diamond drill logs of the NO. 4 hole and other holes drilled on the Golden Star Mine claims in 1974 were filed

for assessment credits with the Ontario Department of Mines in 1974. The fault in the drill hole intersection consisted of chlorite schist, quartz stringers and some graphite across a horizontal width of eight feet.

The general shear-fracture pattern in the Keewatin lavas ranges from north-south to northwest-southeast. One exception is a shear along the NO. 9 Vein (Map NO. 1) on claim 439063 which strikes east-west.

QUARTZ VEINS Map NO. 1

A total of 12 gold bearing quartz veins were discovered and explored on the Golden Star Mine claims in the late 1800's and early 1900's. The veins on which shafts were sunk are listed in the index in the margin of Map NO. 1.

Golden Star Mine NO. 1 Vein

The Golden Star Mine has a history of intermittent production from 1895 to 1928 during which time the reported production was \$168,768 from 15,262 tons of ore, gold at \$20.67 per ounce. Much free gold was believed to have been highgraded so the recovery could have been much higher.

The shaft on the NO. 1 Vein was sunk to a depth of 530 feet and seven levels established. All of the production was above the sixth or 420 foot level. The vein was drifted on the sixth level for 560 feet before mining ceased. A drift started on the 530 foot (seventh) level showed the vein continuing to that depth.

When mining ceased, the ore in place above the 530 foot (seventh) level was estimated to be about 20,000 tons having a grade of 0.50 ounces per ton, gold at \$20.67 per ounce. The writer estimates the potential ore reserves above the sixth level are 43,732 tons grading 0.40 ounces per ton. That is about 16,490 ounces. At \$500 Canadian per ounce (current market about \$500 U.S. per ounce) the gross value of the 43,732 tons of potential ore is about \$8,200,000.

A feasibility study is required to determine the economics of mining and milling the ore in place. Such study should include examination of the present underground workings to the seventh (530 foot) level including the ore potential between the sixth and seventh levels.

Golden Star Mine NO. 2 Vein

This vein is located near the southeast corner of claim FF570. It strikes N50W and dips nearly vertical. The shaft is reported to be 106 feet deep with some drifting at the bottom. Both the collar of the shaft and a trench on the vein are too badly caved to be sampled. Vein width is reported to be from 10 to 14 inches with mineralization consisting of pyrite, bornite and chalcopyrite. A diamond drill hole (NO. 3) put down in 1974 cut the vein at a vertical depth of 125 feet. The vein material consisted of 1.8 feet of white quartz carrying sparse pyrite which assayed 0.005 ounces gold per ton.

Golden Star NO. 3 Vein

This vein is located near the south boundary of claim 44632. It strikes N20W and dips vertically. The shaft is about 50 feet deep. Where the vein is exposed for a length of about 50 feet it ranges from a few inches to two feet wide and carries small amounts of chalcopyrite and pyrite. Gold values from grab samples taken in 1974 were below commercial grade. It requires stripping and blasting to secure comprehensive samples.

Isabella NO. 1 Vein

Located in the north central part of claim 202521 the Isabella NO. 1 vein strikes N-S and dips vertically. It has one shaft sunk to a depth of 128 feet and was exposed by trenches for a length of 400 feet. The southern 200 feet of the vein was sampled by the writer in 1974. Gold values were low. Free gold was reported underground and in the shaft.

Isabella NO. 2 Vein

The Isabella NO. 2 Vein is located near the southwest corner of claim 202521 (AL113). When I examined the vein in 1974 and 1982 the shaft collar was caved in and the trenches were filled and grown over. Some barren white quartz was found on the shaft dump. T. L. Tanton in his 1934 report gave the following description:

"On the Isabella property, the No. 2 vein occurs near the southwest corner of claim AL113 and lies in Keewatin schist. It is exposed over a length of 300 feet, has an average breadth of 2 feet, strikes E60S to E85S and dips southwest at angles of 60 to 65 degrees. According to a report by Hawley (Ontario Department of Mines, Vol. 38, Part 6, 1929) the vein at the

northwest end is divided by a 3 foot horse of carbonated schist impregnated with quartz veinlets. The quartz on the footwall side is 18 inches wide. On the hangingwall side the vein widens from 1 to 4 feet in a depth of 12 feet and consists of quartz with lenses of ankerite both mineralized with cobalt-bearing mispickel and coarse grains of free gold. A pocket of this richly mineralized matter was removed in 1928 from a pit 10 feet long and 7 feet deep. Adjacent vein material is said to hold only low values in gold. Another gold-rich pocket of the same mineral character was found 100 feet southwest from the first and between 20 and 24 feet underground. It was mined out in 1930. A third gold-rich pocket was removed in 1934. It outcropped about 30 feet southwest of the first discovered pocket and consisted of a seam one-quarter inch wide and less than one foot long lying within the quartz vein where it was two feet."

The airborne and ground geophysical anomalies shown on Map NO. 1 are in the vicinity of the Isabella NO. 2 Vein, over it or very close to it. Golden Crescent, Moose and Gem Veins (Map NO. 1)

When I examined the Golden Crescent, Moose and Gem Veins in 1974 only the shaft dumps were accessible for sampling. The Golden Crescent vein is completely overgrown and most of the Moose and Gem veins are covered by a beaver swamp: However they were described in T. L. Tanton's 1934 report as follows:

"Golden Crescent: The Golden Crescent property consists of claims AD2, 3, and 4, and 237. It lies about 2½ miles south-southwest of Mine Centre. The property was staked in 1894 and in 1895 was known as the Campbell property. Prior to 1900, four shafts and two adits (Moose and Gem veins) were made and for a brief period ore was treated in a 2-stamp mill. The property then lay idle for many years. In August, 1934 Golden Crescent Syndicate took an option on the property and commenced clearing the workings. The property extends across the northern contact of the quartz porphyry body lying southeast of Bad Vermillion Lake. The northwest part of the ground is low, mainly drift covered and the outcrops there are of Keewatin greenstones and small masses of intrusive anorthosite. The southwest part is a rough, rocky upland whose northwestern edge is an escarpment that rises 100 feet above the bordering lowland. The upland is underlain by quartz porphyry, with granitic phases, and the contact with the Keewatin on the north follows the escarpment. Five veins are known on

the property. The principal workings are on three veins known respectively as the Contact. Gem and Moose veins. Gem and Moose veins. The Contact vein is on claim AD3. It cuts quartz porphyry, strikes east, is vertical, and over a length of 100 feet has an average width of 2 feet. It consists of quartz with, in places, pyrrhotite. The Gem vein is on claim AD2. The principal workings are on this vein. It cuts quartz porphyry and extends a short distance into Keewatin rocks where it follows a zone of fissile schist. The vein strikes east-southeast, is vertical and over a length of 300 feet has an average width of 2½ feet. It consists of quartz with some ferruginous carbonate and small amounts of pyrite. The Moose Vein is also on claim AD2 and is of the same general type as the Gem vein. It strikes southeast, is vertical, has been traced for 700 feet, and over a length of 154 feet has an average width of 3½ feet." The Contact vein in said report is the same vein referred to in this report as the Golden Crescent vein.

NO. 9 Vein (Map NO. 1)

The NO. 9 vein on claim 349062, was located and examined during re-cutting the claim lines in 1979. It is exposed in three trenches over a length of 500 feet. Both ends of the vein are open. Where the west end dips into overburden it is 3 feet wide. The east end dips sharply into deep overburden on the side of a 15 foot cliff. At this point it is 12 feet wide. A grab sample from the pit face assayed 0.04 ounces gold per ton. The walls of the vein are well sheared. Mineralization consists of pyrite, chalcocite, pyrrhotite and small amounts of bornite. The vein warrants stripping and reblasting for accurate sampling.

NO. 10 Vein (Map NO. 1)

The NO. 10 vein was located but no samples were taken. It is only exposed for a few feet and is less than one foot wide.

CONCLUSIONS

The surface veins described above, except for the Golden Star NO. 1 vein, require re-mapping, stripping and blasting before accurate sampling can be done. This program was started in 1974 but was curtailed. The Golden Star Mine warrants dewatering and a re-study of the present ore reserves, also surface and underground diamond drilling to explore the ore zones below the 420 foot horizon.

GEOPHYSICAL SURVEYS

In 1980 an airborne electro-magnetic survey conducted by the Ontario Government outlined a number of anomalies, some of high intensity, on the Golden Star Mine claims (Map NO. 1). On the advice of Ontario Government resident geologists at Kenora and Thunder Bay ground geophysical surveys were conducted for P. I. R.P. Holdings Inc. to investigate the sources of the airborne anomalies. The ground surveys included magnetometer, electro-magnetic and Maxmin II horizontal loop geophysical methods. Reports on the magnetic and electro-magnetic surveys, with maps, are contained in Appendix A. The Maxmin II survey, with maps, is contained in Appendix C.

There were numerous chainage errors in the line cutting that were responsible for lack of coincidence in some of the geophysical anomalies.
Magnetometer Survey Map NO. 1

The magnetic anomalies located in outcrop areas were examined by the writer. Except for two short anomalies, one over the pit on the NO. 9 vein and the other on a branch of the Isabella NO. 1 vein, no sulphide mineralization was present to substantiate the source of the anomalies. The MB anomaly coincides with the airborne E-M anomaly and Maxmin II anomaly, overlying, or very close to the Isabella NO. 2 vein in the southwest corner of claim 202521.

Another significant magnetic anomaly occurs on claims 349063 and AD3. With an adjustment of chainage errors, it corresponds to the Mamin II BH anomaly and probably represents the presence of pyrrhotite mineralization.
Electro-Magnetic Survey Map NO. 1 and Appendix A

A total of 9 electro-magnetic anomalies were located. Of these, Anomalies 2 and 9 on claim 349063, and 4 on claims 349063 and AD3, appear to be related to Maxmin II anomalies.

In his report Dr. Leppin concluded that the electro-magnetic anomalies were the result of overburden features and did not represent sulphide mineralization. Pockets of disseminated sulphides could be masked by conductive overburden. He recommended other geophysical methods such as self potential or induced polarization be employed.

At a meeting in Mine Centre with resident geologist from the Ontario Department of Mines it was unanimously agreed that the airborne electro-magnetic anomalies are authentic. A horizontal loop Maxmin II ground survey was recommended. It was conducted by Northwest Geophysics Limited. The field work was done by A. J. Lambert.

MAXMIN II GEOPHYSICAL SURVEY Map NO. 1 and Appendix C

Four bedrock anomalies were outlined in the Maxmin II survey. They are all well covered in the report by A. J. Lambert (Appendix C). The A and B anomalies correspond with magnetic and electro-magnetic anomalies. The C anomaly appears to be related to electro-magnetic anomalies 2 and 9. The D anomaly could be representative of extensions of the NO. 9 vein and the fault north of the Golden Star Mine.

CONCLUSIONS

The geophysical surveys outlined four zones on the Golden Star Mine claims that represent the presence of sulphide mineralization. All of the zones warrant investigation by diamond drilling. In A. J. Lambert's report he recommends diamond drilling with some expanded Maxmin II surveying. His recommendation should be complied with.

RECOMMENDATIONS

The following preliminary exploration program is recommended:

1. Expand the Maxmin II geophysical survey to comply with A. J. Lambert's recommendations, in his report, to cover AH and CH zones. This should be done preferably before the spring thaw so the swamp area on claims 349063, 349064, 629056 and 629057 can be covered.

2. Conduct a preliminary diamond drilling program to probe the Maxmin II anomalies as follows:

AH Anomaly:- 1,000 feet consisting of two 400 to 500 foot holes near the south boundary of claim 202521.

BH Anomaly:- Three 250 foot holes totalling 750 feet.

CH Anomaly:- Three 250 foot holes totalling 750 feet.

DH Anomaly:- Three 250 foot holes totalling 750 feet.

COSTS

Estimated costs of the preliminary exploration program are approximate.

1.	3100 feet of diamond drilling at \$18.00 per foot.	\$55,800.00
2.	Assaying	1,000.00
3.	Portable core house	1,000.00
4.	Transportation: Engineer, prospector, truck, gas etc.	1,500.00
5.	Engineer's fees, four weeks at \$800. per week	3,200.00
6.	Prospector's fees, four weeks at \$600. per week	2,400.00
7.	Labor	1,000.00
8.	Camp rental at \$200 per week for four weeks	800.00
9.	Groceries at \$125.00 per week for four weeks	500.00
10.	Geophysical survey	<u>3,500.00</u>
	Total	\$68,800.00
	Add 10%	<u>6,880.00</u>
	TOTAL	<u><u>\$76,780.00</u></u>

Respectfully submitted


G. F. ENNIS, M. E., P.Eng.

January 28, 1983
Toronto, Ontario

APPENDIX A

GEOPHYSICS

Golden Star Mine Claims

Reports On

Electro-magnetic and Magnetic Surveys

EXCHANGE MINING HOLDINGS LIMITED

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TELEPHONE (514) 683-8558

P. I. R. P. HOLDINGS INC. *GOLDEN STAR MINE PROPERTY

MINE CENTRE, ONTARIO.

GEOPHYSICAL REPORT - V L F (EM-16) AND MAGNETOMETER SURVEYS.

1- INTRODUCTION:

The area of investigation is located approximately 0.5 mile Southeast of Bad Vermillion Lake, Mine Centre, Ontario. The survey grid is underlain by volcanic rocks (basalt and andesite lavas) which are in contact with intrusive gabbros and quartz feldspar porphyries. The regional magnetic data also indicates the presence of an iron formation to the North of the area of investigation. The general area is known for gold and sulphide occurrences.

A total of 12.23 miles were cut, chained and picketed. The separation between the lines is 200 feet and between stations is 50 feet. Approximately 11.5 line miles were surveyed applying the V L F (EM-16) electromagnetic method and ground magnetics on the following claims: 349062, 63, 64, 65, F.F. 571, A.L. 113 and A. D. 3.

2- V L F (EM-16) SURVEY RESULTS:

The transmitter used for the survey was NAA Cutler, Maine, operating at a frequency of 17.8 kHz. In the area of investigation, the inducing magnetic field is directed at approximately N 15 E whereas the geological stike is about N E. The survey was conducted with a Geonics EM-16 receiver. Readings of the dip and ellipticity (a measure for the inphase and quadrature components of the vertical magnetic field) of the polarization ellipse were taken at 50 foot station intervals, facing North.

GEOPHYSICAL SURVEYS — LINE CUTTING — STAKING

EXCHANGE MINING HOLDINGS LIMITED

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P. I. R. P. -2

A total of 9 groups of significant anomalies were outlined. All of them represent the contact type of anomaly and occur at the boundary between regions of different electrical conductivity. The width of the anomaly is a measure for the conductivity contrast. (An anomaly is narrow for a strong contrast.)

ANOMALIES 1, 2, 3 and 8:

Negative, bay shaped inphase anomalies, positive quadrature component with its minimum above the inphase peak. These anomalies indicate an area of high conductivity to the South of the contact and outline the Northern boundary of a large swamp (wet ground, possibly clay minerals present.)

ANOMALIES 4, 5 and 6:

Positive, bay shaped inphase anomalies, negative quadrature date having a minimum over the inphase peak. Anomalies 4 and 6 flank higher conductive areas to the North. Anomaly 6 occurs at the Northern boundary of an outcrop area and outlines the Southern boundary of the main swamp.

ANOMALY 7:

Negative, bay shaped inphase anomaly, positive quadrature component with its minimum above the inphase peak. It occurs at the Southern boundary of an outcrop area located within a conductive swamp.

ANOMALY 9:

Positive, bay shaped narrow inphase anomaly, the negative quadrature date having a minimum over the inphase peak. Anomalies 8 and 9 flank a less conductive ridga (dry overburden, outcrop) within the swamp.

As a result of the survey, all the significant anomalies seem to be caused by overburden features. None of the observed anomalies indicate the presence of massive sulphides within the area of investigation.

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P. I. R. P. -3

However, it is believed that if any anomalies due to pockets of disseminated sulphides were present, they could possibly have been masked by signals from the conductive overburden material. It is therefore recommended that other electrical methods (induced polarization, self potential) should be applied to outline any sulphides.

3- VERTICAL COMPONENT MAGNETIC SURVEY RESULTS:

The intensity of the vertical component of the earth's magnetic field was measured with a fluxgate magnetometer from Scintrex. Readings were taken at 50 foot intervals. Besides corrections for diurnal variations (based on readings which were repeatedly taken at control stations established on the grid), no other corrections were applied to the data.

In the area of investigation, gabbros and quartz porphyries are in contact with andesites. Although in the basalts and in the andesites, the magnetic response is increased locally, the magnetic field does not change significantly due to a change of the rock's lithology. Three zones of increased magnetism were outlined. Two of them are located in the close vicinity of known gold occurrences.

ANOMALY A:

Three anomalies of about 1600 gammas were outlined. They seem to be caused by dike shaped bodies, trending W N W.

ANOMALY B:

This anomaly of up to 7400 gammas seems to be caused by a dike shaped body trending N N W. It occurs in the close vicinity of some gold showings.

ANOMALY C:

In this area, several local anomalies occur and do not line up. They

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P. I. R. P. -4

are located in the close vicinity of known gold and copper occurrences.

According to the regional magnetic data, anomalies B and C seem to originate in the iron formation to the North of the property. Anomaly A seems to be of particular interest, because of its similarity to anomalies B and C and because it was never investigated in detail before.

4- CONCLUSIONS:

Electromagnetic and magnetic surveys were conducted in the vicinity of known gold and sulphide showings. None of the VLF anomalies is believed to be caused by a metallic type of conductor but rather by overburden features. It seems that this method is not well adapted to outline weak metallic conductors in this particular area. It is therefore recommended that an induced polarization or self potential survey should be carried out to locate disseminated sulphides.

Significant magnetic anomalies were outlined in three areas located within the andesite complex in the vicinity of the quartz porphyries. Anomalies B and C occur in the vicinity of gold and copper showings and seem to be related to the iron formation to the North. Anomaly A is of interest because of its similarity to anomalies B and C and it was never investigated in detail before.

5- RECOMMENDATIONS:

Stripping, geological mapping and prospecting is recommended for areas A, B, and C, to study the cause of the magnetic anomalies and their relationship to the known metal occurrences.

Respectfully submitted,

MICHAEL LEPPIN,
PhD, Geophysics.

Michael Leppin 18/03/1982



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REPORT ON
SHOAL LAKE ROAD CLAIMS

By

G.F. ENNIS
Mining Engineer
P. Eng.

January 28, 1983
Toronto, Ontario

G. F. ENNIS
MINING ENGINEER



SECTION 0074 2.5442 BAD VERMILION LAKE

020C

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APPENDIX B Electro-magnetic and magnetometer survey reports with maps.

APPENDIX C Maxmin II geophysical survey report with maps.

G. F. ENNIS
MINING ENGINEER

MAPS

1. Surface Plan, showing the geology and locations of the Magnetic, electro-magnetic, Maxmin II geophysical anomalies and the year 1974 diamond drill holes on the Shoal Lake Road Claims and the Golden Star Mine Claims. Scale:- 500 feet to the inch. By G. F. Ennis, M.E.,P.Eng., dated November 5, 1982.

2. Surface Plan showing the locations of the "A" Vein on claim 349059 and the "57" Vein on claim 349058. Scale:- 300 feet to the inch. By G. F. Ennis, M.E., dated September 17, 1982.

3. Detail sketch of the "A" Vein. Scale as shown. Dated September 17, 1982, by G. F. Ennis, M.E.

4. Detail sketch of the "57" Vein. Scale as shown. Dated September 17, 1982, by G. F. Ennis, M.E.

PROPERTY AND LOCATION

The Shoal Lake Road claim group consists of 22 claims located along the east of the Shoal Lake road. Claim numbers are:

Patented

FF607

Leases Pending

K349055 ✓	K349059 ✓
K349056 ✓	K349060 ✓
K349057 ✓	K349061 ✓
K349058 ✓	

Assessment Work Due In August, 1983

K532134 ✓	K532139 ✓
K532135 ✓	K532140 ✓
K532136 ✓	K532141 ✓
K532137 ✓	K532142 ✓
K532138 ✓	K532143 ✓

Assessment Work Due July 31, 1983

K629042 ✓	K629046 ✓
K629044 ✓	K629048 ✓

ACCESS

The claims are easily accessible along the Shoal Lake road less than one mile south from Highway 11. Another truck road runs east from the shoal Lake road through the center of the claims.

TOPOGRAPHY

The highest point in the Mine Center area is the conglomerate ridge on claim 532141 which reaches an elevation of over 200 feet above the level of Bad Vermillion Lake. It is part of a series of conglomerate ridges that lie along the west boundary of the claims as far north as the center of claim FF607. The eastern slopes of the ridges drop abruptly into deep swamp which occupies all of the southeast claims except for a low rock outcrop on claim 532139.

The northern claims are of moderately low relief. A low rugged ridge of outcrops runs slightly north of east through claims FF607, 348058, 348059 and 532134. The greater parts of claims 349061 and 532135 are covered by sand

and gravel ridges. All of the claims, except on the high conglomerate ridges, are heavily over grown with spruce, poplar, birch and dense underbrush.

GEOLOGY Map NO. 1

Laurentian conglomerates, overlying Keewatin volcanics occupy a broad synclinal fold which strikes N45E through the central and northeast part of the claims and terminates on claim 629042. The conglomerates form high ridges along the western boundary of the property where their west limits are in contact with Keewatin lavas and quartz porphyry. The southern conglomerate - Keewatin lava contact is under overburden. However, the rock outcrop on claim 532139 is composed of siliceous tuff, is of Keewatin age, and related to the Keewatin volcanics underlying the south and east claims, and should be close to the contact.

The Keewatin rocks north of the conglomerates, on claims FF607, 349057, 349058, 348059 and 532134, are intensely folded and altered basalts and andesites with chlorite schists. Most of the outcrop areas are covered by shallow overburden and heavily overgrown which prevents tracing flow contacts and shear structures for any distance.

Two small quartz porphyry stocks occur, one on claim 349058 and the other on claim 349059. Most or all of the auriferous quartz veins are in the immediate vicinity and closely related to these porphyry bodies.

Heavy shearing occurs along the north conglomerate - Keewatin lava contact created the cross fractures, shearing and drag folding which controlled the implacement of the auriferous quartz veins.

QUARTZ VEINS Map NO. 1

A total of 12 gold bearing quartz veins were located, mapped and sampled during the exploration program conducted in 1974. Two more veins were mapped and sampled during the period from August 14th to September 4th, 1982. The mapping and sampling done during 1974 was restricted because of the lack of fresh vein material and the caved condition of the pits and trenches. A program of cleaning out the pits and trenches and blasting fresh vein material for sampling was planned but was curtailed before the work began.

Four diamond drill holes were put down to test two quartz veins on claim 349058. Hole NO. 6 (see Map NO. 1) probed a 2 foot quartz vein which assayed 0.57 ounces gold per ton from a channel sample. Hole NO. 7 cut the same vein and another vein to the north. Holes 8 and 9 probed extensions of the north vein. The assays from the core samples across the intersected veins were below economic grades.

G. F. ENNIS
MINING ENGINEER

The two veins examined and sampled during the period from August 14th to September 4, 1982 were the "A" Vein and the "57" Vein.

"A" VEIN (Maps 1, 2 and 3)

The "A" Vein is located on claim 349059, 300 feet south of the NO. 1 post and within 40 feet of the boundary with claim 532134. It is exposed intermittently in an old trench and a 12 foot deep pit over a length of 50 feet. It strikes N55E, dips vertically and ranges in width from 8 feet in the west wall of the pit to four feet in the most easterly exposure. Vein material consists of white milky quartz and white crystalline quartz. Where the vein was blasted for fresh samples the mineralization consisted of heavy disseminated chalcopryite, some pyrite and a little bornite. The following samples were taken:

<u>SAMPLE NO.</u>	<u>oz/ton GOLD</u>	<u>oz/ton SILVER</u>	<u>% COPPER</u>	
204	0.02	0.88	1.09	Chips across 4' of quartz
205	0.04	0.60	1.24	Grabs from dump at 12' pit
208	trace	----	----	Chips across 2' of milky quartz
209	0.012	0.28	4.64	Chips across 4' after blasting

Both the east and west extensions of the vein are under overburden. The eastern extension is in line with geophysical magnetic anomaly M-2 which is under heavy overburden.

"57"VEIN (Maps 1, 2 and 4)

Located 60 feet north of the claim line and 800 feet east of the NO. 3 post on claim 349058, the "57" Vein was first exposed by a bulldozer in 1974 when the existing diamond drilling program was being finished. No further work on it was done until August, 1982. It has now been exposed for a length of 10 feet and shows a width of five feet. It strikes N45E and dips vertically but indications are that it may be folded toward the east with a more easterly strike.

The vein is composed of blue and white crystalline quartz and carries uniformly heavy disseminated chalcopryite, bornite and massive pyrite. The following assays are from preliminary samples.

<u>SAMPLE NO.</u>	<u>oz/ton GOLD</u>	<u>oz/ton SILVER</u>	<u>% COPPER</u>	
203	nil	not	assayed	Rusty quartz with pyrite
206	0.23	1.58	1.58	Chips across 5', Heavy chalco. pyrite
207	0.08	1.69	0.61	" " 2', " " "
210	0.03	0.06	2.50	" " 2', " " "
211	0.016	0.17	1.62	Grabs, heavy chalco, pyrite

CONCLUSIONS

Except for NO. "57", all of the veins on the Shoal Lake Road claims were explored during the early days of prospecting in the Mine Centre areas and, over a period of 80 years, have been badly caved and overgrown. No estimate of their economic value can be made until an extensive program of stripping, cleaning out the pits and trenches and re-blasting the veins to expose fresh material for sampling is completed.

Sampling of the "A" Vein was limited to a ten foot section on the east end and on the dump of the 12 foot pit. Stripping with a back hoe and additional drilling and blasting will be required to clean out the trench and remove overburden from the east and west extensions of the vein before conclusive sampling can be done. Although gold values from the preliminary samples were low, the walls of the vein are well sheared and the mineralization is strong. These factors are sufficiently encouraging to warrant further work to determine the vein's potential.

The "57" Vein was cleaned off and blasted open for a length of only 10 feet (map NO. 4). The extensions along the strike are under four or more feet of overburden. Mineralization exceeds 15% of the vein matter and values are encouraging considering the limited amount of sampling that could be done. This is one of the most favourable appearing veins on the Shoal Lake Road Claims and warrants further exploration.

GEOPHYSICAL SURVEYS

Electro-magnetic and magnetic geophysical surveys were conducted over 10 of the Shoal Lake Road Claims in December, 1981 (see Map NO. 1). A Maxmin II geophysical survey was done in October 1982 to check some of the electro-magnetic and magnetic anomalies. Geophysical reports, with maps, are contained in APPENDIX B and APPENDIX C.

ELECTRO-MAGNETIC SURVEY (Map NO. 1 and Appendix B)

The elctro-magnetic VLF survey outlined 10 Conductors, two of which, C-5 and C-10, were considered sufficiently important to warrant diamond drilling. The others were believed to be the result of variations in conductive overburden over which they all occur.

MAGNETOMETER SURVEY (Map NO. 1 and Appendix B)

Four magnetic anomalies were outlined. M-1 on claim 532141 is on exposed rock but no evidence of its source could be found by the writer. The others are in areas covered with overburden. Anomaly M-2 on claim 532134 is on the strike of the "A" Vein and could be significant.

MAXMIN II SURVEY (Map NO. 1 and Appendix C)

The Maxmin II geophysical survey was conducted as a check on E-M anomaly C-5 on claim 532139 and the magnetometer and E-M anomalies on claim 532134. With a correction in chainage errors, of which there were many when the picket lines were cut for the E-M surveys, the Maxmin II survey located an anomaly coincident with the C-5 E-M conductor and is reported to represent a sulphide bearing structure.

The Maxmin II checks on the magnetometer and E-M anomalies on claim 532134 failed to show any evidence of sulphides.

CONCLUSIONS

The coincidence of the C-5 E-M and Maxmin II anomalies on claim 532139 appear to present conclusive evidence of the occurrence of a sulphide bearing structure over 800 feet in length.

E-M anomalies C-1, C-2 and C-7 are over heavily overburdened Keewatin lavas. Although reported to be due to variations in the overburden conductivity, they warrant check surveys by the Maxmin II geophysical method.

RECOMMENDATIONS

1. Continue stripping and blasting the "57" and "A" veins on claims 349058 and 349059.
2. When weather permits, re-map and clean out all known pits and trenches and blast open the quartz veins for fresh samples.
3. Where the results of the sampling warrants, conduct a program of diamond drilling on the above veins.

Note:- Programs 1, 2 and 3 will have to be conducted when the snow is off the ground.

4. Diamond drill three 300 foot exploratory holes on the Maxmin II anomaly on claim 532139.
5. Conduct a Maxmin II check survey on E-M anomalies, C-1, C-2 and C-7.
6. If the results of the Maxmin II check survey on C-1, C-2 and C-7 indicate bedrock anomalies, cut and chain additional lines and extend it through claims 629044, 629046 and 629048.

Continued exploration on the Shoal Lake Claims will depend upon the results of the above programs.

COSTS

The following cost estimates are approximate. A collective estimate is made for exploration programs 1, 2 and 3.

1.	Programs 1, 2 and 3 of the recommendations	\$35,000.00
2.	900 feet of diamond drilling on the Maxmin II anomaly on claim 532139 at \$18.00 per foot	16,200.00
3.	Assaying	300.00
4.	Transportation, truck, snowmobile rental, gas, etc.	300.00
5.	Engineer's fee, two weeks at \$800.00 per week	1,600.00
6.	Prospector assistant fee, two weeks at \$600.00 per week	1,200.00
7.	Labor	600.00
8.	Camp rental at \$200.00 per week for two weeks	400.00
9.	Grub at \$125.00 per week for two weeks	250.00
10.	Geophysical survey (Maxmin II)	<u>3,000.00</u>
		\$58,885.00
	Add 10%	<u>5,888.00</u>
	TOTAL	<u>\$64,773.00</u>

Respectfully submitted


G. F. ENNIS, M. E., P. Eng.

January 28, 1983
Toronto, Ontario

APPENDIX B

GEOPHYSICS

Shoal Lake Road Claims

Reports On

Electro-magnetic And Magnetic Surveys

EXCHANGE MINING HOLDINGS LIMITED

35 ALLENBROOKE • DOLLARD DES ORMEAUX, QUE. • H9A 2S7
TELEPHONE (514) 683-8558

P. I. R. P. HOLDINGS INC. - GOLDEN STAR MINE PROPERTY.

MINE CENTRE, ONTARIO.

GEOPHYSICAL REPORT - MAGNETOMETER AND V L F (EM-16) SURVEYS.

1- INTRODUCTION:

The area of investigation is located approximately 1.5 miles East of Bad Vermillion Lake, Mine Centre, Ontario.

The Eastern part of the grid is underlain by volcanic rocks (basalts and andesite lavas), which are in contact with conglomerates. To the West and North of the grid, intrusive gabbros and quartz feldspar porphyries occur.

The regional magnetic data also indicates the presence of an iron formation to the North of the area of investigation. The general area is known for gold and sulphide occurrences.

A total of 19.72 miles of lines were cut, chained and picketed. The separation between the lines is 200 feet and between the stations 50 feet. Approximately 13.1 line miles were surveyed, applying the V L F (EM-16) electromagnetic method and ground magnetics.

2 - V L F (EM-16) SURVEY RESULTS:

The transmitter used for the survey was H A A Cutler, Maine. It operates at a frequency of 17.8 khz. In the area of investigation, the inducing magnetic field is directed at approximately N 15°E , whereas the geological strike is about N E.

The survey was conducted with a Geonics EM-16 receiver. Readings of the dip and the ellipticity (a measure for the inphase and the quadrature component of the vertical magnetic field) of the polarization ellipse were taken at 50 foot station intervals,

GEOPHYSICAL SURVEYS — LINE CUTTING — STAKING

EXCHANGE MINING HOLDINGS LIMITED

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P. I. R. P. -2-

facing North all the time. The area South of the baseline is covered by a swamp.

A total of 10 significant anomalies were outlined. All of them represent the contact type of anomaly. The width of the anomaly is a measure for the conductivity contrast. (The anomaly is narrow for a strong contrast.)

ANOMALY 1- Negative, bay shaped narrow inphase anomaly, positive quadrature component with its minimum above the inphase peak. The anomaly most likely is caused by a variation of the conductivity of the overburden. The area of the higher conductivity is located to the South of the contact.

ANOMALY 2- Negative, broad bay shaped inphase anomaly, positive quadrature data. The anomaly correlates well with the mapped Northern boundary of the main swamp.

ANOMALY 3- Negative, narrow bay shaped inphase anomaly. (the quadrature component crosses over probably because of a contact of the opposite type nearby.) The anomaly is correlated with the mapped boundary of an outcrop and seems to be caused by the edge of a conductive overburden.

ANOMALY 4- Positive, bay shaped inphase anomaly, partially negative quadrature data with its minimum just over the impulse peak. The anomaly is caused by a conductive area in the North, in contact with a less conductive part of the swamp.

ANOMALY 5- Very significant negative bay shaped inphase anomaly, the quadrature (positive) data having a minimum over the inphase peak. The anomaly occurs at the Southern boundary of an outcrop

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P. I. R. P. -3-

area located within a conductive swamp. The Northern contact of the outcrop is indicated by a positive inphase anomaly.

ANOMALY 6- Very similar to anomaly 5. Here, the area around the beaver pond seems to be more conductive than the swamp further to the North.

ANOMALY 7- Positive, narrow bay shaped inphase anomaly, the negative quadrature data having a minimum over the inphase peak. Anomalies 6 and 7 flank a less conductive ridge (dry overburden, outcrop ?) within the swamp.

ANOMALY 8- Positive bay shaped inphase anomaly, the negative quadrature data having a peak over the inphase maximum. The anomaly is probably due to a change in the overburden's conductivity. However, since the anomaly is correlated with a magnetic contact, it may also represent a change of the bedrock lithology.

ANOMALIES 9 and 10- The anomalies outline an area of low conductivity, most likely an outcrop, which is magnetically anomalous. The magnetic dikes, however, do not cause any significant EM anomalies and hence are not sulphides.

3 - MAGNETOMETER SURVEY RESULTS:

The intensity of the earth's vertical magnetic field was measured with a fluxgate magnetometer from Scintrex. Readings were taken at 50 foot station intervals.

Besides corrections for diurnal variations (based on readings which were repeatedly taken at control stations on the property) no other corrections were applied to the data.

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P. I. R. P. -4-

In the area of investigation, sedimentary rocks are in contact with volcanics. Although, in the basalts, the magnetic response is locally increased, the magnetic field does not change significantly due to a change of rock lithology. Four anomalies were outlined which seem to be caused by dike shaped bodies, all of them trending roughly N 60° E. Anomalies 1 and 2 to 4 appear to be lined up and according to the regional magnetic data originate in the iron formation to the north of the property. All anomalies are weak and do not exceed 300 gammas above background.

However, anomalies 2 and 3 may be of some interest, because of their vicinity to a quartz feldspar porphyry intrusive and the known relationship between the gold and the iron formation in that particular area.

4 - CONCLUSIONS:

A V L F and magnetometer surveys were conducted in the vicinity of known gold and sulphide showings. None of the outlined V L F anomalies is believed to be caused by a metallic type of conductor but rather by overburden features. The magnetic relief is quite smooth. The only significant anomaly seems to be a dike that originates in the iron formation to the north of the property. It is recommended that this dike should be investigated in detail by stripping or drilling.

Michael Leppin
Dr. Michael Leppin,
PhD. Geophysics.

JANUARY, 1982.

APPENDIX C

Reports On

MAXMIN II GEOPHYSICAL SURVEYS

ON

Golden Star Mine Claims

AND

Shoal Lake Road Claims

NORTHWEST GEOPHYSICS LTD.
GEOPHYSICAL REPORT
P. I. R. P. HOLDING INC. MINE CENTER ONT.

INTRODUCTION: Geophysical surveys were carried out in the Mine Center area of Ontario, on two claim groups held by P.I.R.P. Holdings Inc. of Toronto Ontario. The purpose of the surveys were to determine if anomalies detected by a previous VLF survey were caused by metallic sulphides or other sources. Our surveys were conducted between October 12 and 16, 1982.

SURVEY PROCEDURE: The surveys were conducted with an Apex Parametric Maxmin 11 unit (Sn 1045). Potentiometer settings were 5.0 inphase and 5.0 out of phase. Coil spacing was 400 feet and the operating frequency used was 1777 hz. The instrument was operated by A.J.Lambert, who was assisted by S.Dimitroff, both are employees of Northwest Geophysics Ltd., Thunder Bay Ontario.

SUMMARY OF RESULTS: Shoal Lake Road Claims- A weak and narrow continuous EM conductor is indicated approximately 900 feet south of BL 0 between lines 30E and 40E. This area is overlain by a cedar swamp. No other conductors were indicated by the surveys on this grid.

Golden Star Mine Claims- Four conductive zones were located.

(A) This zone consists of two parallel moderately strong conductors, approximately 100 feet apart. These conductors have a coincident airborne EM expression. They are located in a hilly area with little or no overburden in places. The strike of these conductors is inconsistent with the rest of the area, however.

(B) This conductor is weak, narrow and continuous. It is in a swamp covered area and strikes off to the west into a beaver pond, which cannot be surveyed until the pond is frozen.

(2)

(C) This response is very weak and may not be a legitimate bedrock conductor. This area is covered by a swamp.

(D) This conductor is quite weak and very narrow. It is continuous over four lines and strikes off the grid lines. This area is also swamp covered.

CONCLUSIONS: It is important to note at this time, that the grid lines have been improperly and irregularly chained. Note that the conductors on line 22W south of BL 0 and line 14W north of BL 0 have been offset because of the chaining.

As I have indicated, all the anomalies detected, except for zone A on the Golden Star claims are in areas of deep overburden cover and therefore, diamond drilling would be the next logical step in exploring these conductive areas. Further prospecting of zone A may satisfactorily explain the source of these conductors. If not, one 400 foot drill hole would be sufficient to intersect both conductors.

Prior to drilling, it might be advantageous to cut two or three new lines across this zone and resurvey with a 200 foot coil spacing to better establish the strike of these conductors. Due to the roughness of the terrain in this area, the secant chaining method should be used.

Zone C is not recommended at this time, as a viable drill target. However, surveying this conductor at a longer coil spacing might enhance it's potential as a target.

It would be reasonable to conclude that the anomalies detected by the Maxmin surveys are legitimate bedrock conductors and the most conclusive way of explaining them would be by diamond drilling.

A. J. LAMBERT


NORTHWEST GEOPHYSICS LTD.

October 21, 1957

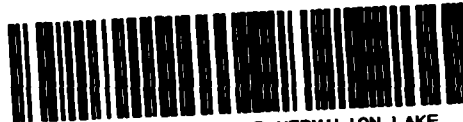


Ministry of
Natural
Resources
Ontario

FWM

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

2:



52C10NE0074 2.5442 BAD VERMILION LAKE

900

W 12-1-26

The N

Type of Survey(s) GEOPHYSICAL Township or Area MINE CENTRE, ON
 Claim Holder(s) P.L.R.P. Holdings Inc. Claim Map M 2479 + M 2433
 Address 3rd Floor, 166 Adelaide St. West, Toronto, Ont. M5H 1S2 Prospector's Licence No. A37837
 Survey Company _____ Date of Survey (from & to) 12 Aug 82 to 4 Sept 82 Total Miles of line Cut NE NE
 Name and Address of Author (of Geo-Technical report) G. F. ENNIS P. Eng. 40 Apt 302, 263 Russell Hill Rd. Toronto, Ont. M4V 2T4

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
For each additional survey: using the same grid: Enter 20 days (for each)	Geological	40
	Geochemical	
Man Days Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	
Airborne Credits Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	Days per Claim
	Magnetometer	
	Radiometric	

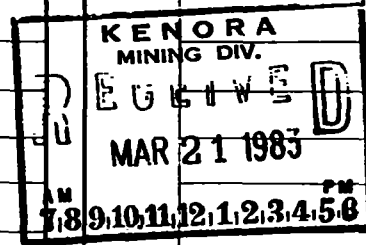
Mining Claims Traversed (List in numerical sequence)

Prefix	Mining Claim Number	Expend. Days Cr.	Prefix	Mining Claim Number	Expend. Days Cr.
K	532134				
	532135				
	532136				
	532137				
	532138				
	532139				
	532140				
	532141				
	532142				
	532143				
	629042				
	629044				
	629046				
	629048				
	629055				
	629056				
	629057				

RECEIVED

MAR 23 1983

MINING LANDS SECTION



532134

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

17

Expenditures (excludes power stripping)

Type of Work Performed Geophysical Survey
 Performed on Claim(s) _____
 Calculation of Expenditure Days Credits
 Total Expenditures \$ _____ ÷ 15 = Total Days Credits _____
 Instructions
 Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Date March 17, 1983 Recorded by or Agent (Signature) [Signature]

For Office Use Only
 Total Days Cr. Recorded 680 Date Recorded Mar. 21/83 Mining Recorder [Signature]
 Date approved as Recorded July 28/83 Branch Director [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 G. F. ENNIS 40 Apt 302, 263 Russell Hill Rd. Toronto, Ont. M4V 2T4
 Date Certified 17 March 17, 1983 Certified by (Signature) [Signature]



May 24/83

Mining Lands Comments

In a technical summary of the material
 please extract information

Some of

To: Geophysics

Comments

Approved Wish to see again with corrections

Date Signature

To: Geology - Expenditures *Mr. Kustra.*

Comments

Approved Wish to see again with corrections

Date *June 21/83* Signature *Kustra*

To: Geochemistry

Comments

LD

Approved Wish to see again with corrections

Date Signature

To: Mining Lands Section, Room 6462, Whitney Block. (Tel: 5-1380)

1983 03 28

2.5442

Wade S. Mathew
Mining Recorder
Ministry of Natural Resources
808 Robertson Street
Box 5160
Kenora, Ontario
P9N 3X9

Dear Sir:

We have received reports and maps for a Geological survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims K 532134 et al in the area of Bad Vermillion Lake.

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

We do not have a copy of the report of work which is normally filed with you prior to the submission of this technical data. Please forward a copy as soon as possible.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1380

A. Barr:mc

cc: P.I.R.P. Holdings Inc.,
Toronto, Ontario

cc: Mr. G.F. Ennis
Toronto, Ontario

LITTLE TURTLE LAKE - M.2433

AREA OF
BAD VERMILION LAKE
DISTRICT OF RAINY RIVER
KENORA MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

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

NOTES

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

- Sand & Gravel
- Ⓟ MTC Pit No 1212
 - Ⓟ " " 1213
 - Ⓟ " " 1214
 - Ⓟ MTC Gravel Pit 1016
 - Ⓟ Gravel File 170703
 - Ⓟ " " 23798
 - Ⓟ " " 170756
 - Ⓟ Gravel Pit No 988
 - Ⓟ MNR Gravel Reserve No 239
 - Ⓟ QUARRY PERMIT

DATE OF ISSUE
JUL 2, 1903
Ministry of Natural Resources
TORONTO

NATIONAL TOPOGRAPHIC SERIES 52 C10

PLAN NO. **M.2474**

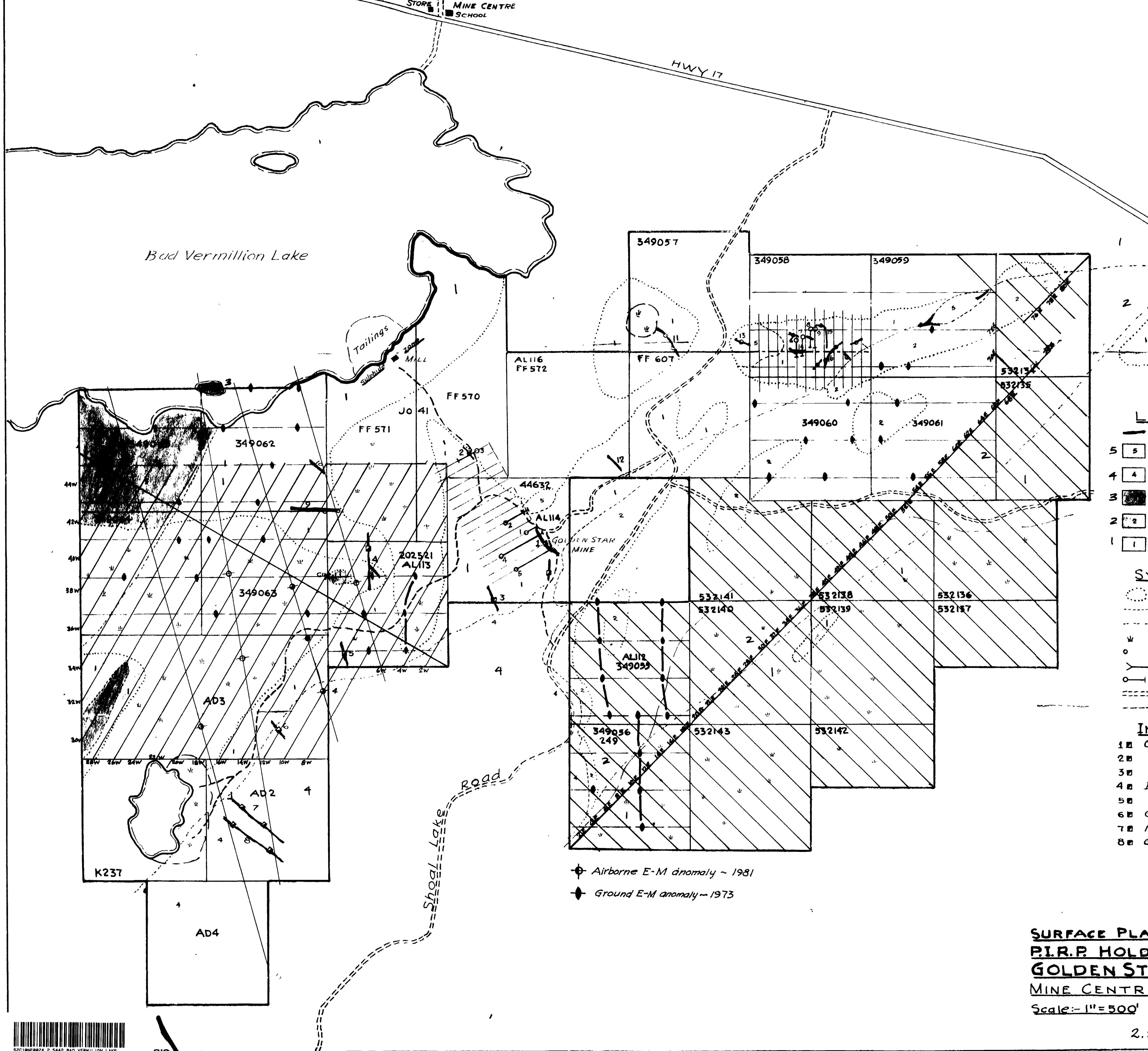
ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

BLISS LAKE - M.2467

WILD POTATO LAKE - M.2397

MELIN LAKE - M.2465





LEGEND

- Quartz vein
- 5 Algonian qtz-feldspar porphyry
- 4 Laurentian qtz-feldspar porphyry
- 3 Anorthosite gabbro etc
- 2 Conglomerate
- 1 Keewatin basalts and andesite lavas

SYMBOLS

- Edge of outcrop
- - - Geological contact
- - - Geological contact assumed
- swamp
- o Pit
- Tunnel
- o Diamond drill hole
- Motor road
- Minor road

INDEX

- 1 Golden Star Mine - Main Shaft
- 2 " " " No.2 Shaft
- 3 " " " No.3 Vein
- 4 Isabella No.1 Shaft
- 5 " " " No.2 Shaft
- 6 Golden Crescent Vein
- 7 Moose Vein Shaft and tunnel
- 8 Gem Vein

- ⊕ Airborne E-M anomaly ~ 1981
- ⊕ Ground E-M anomaly ~ 1973

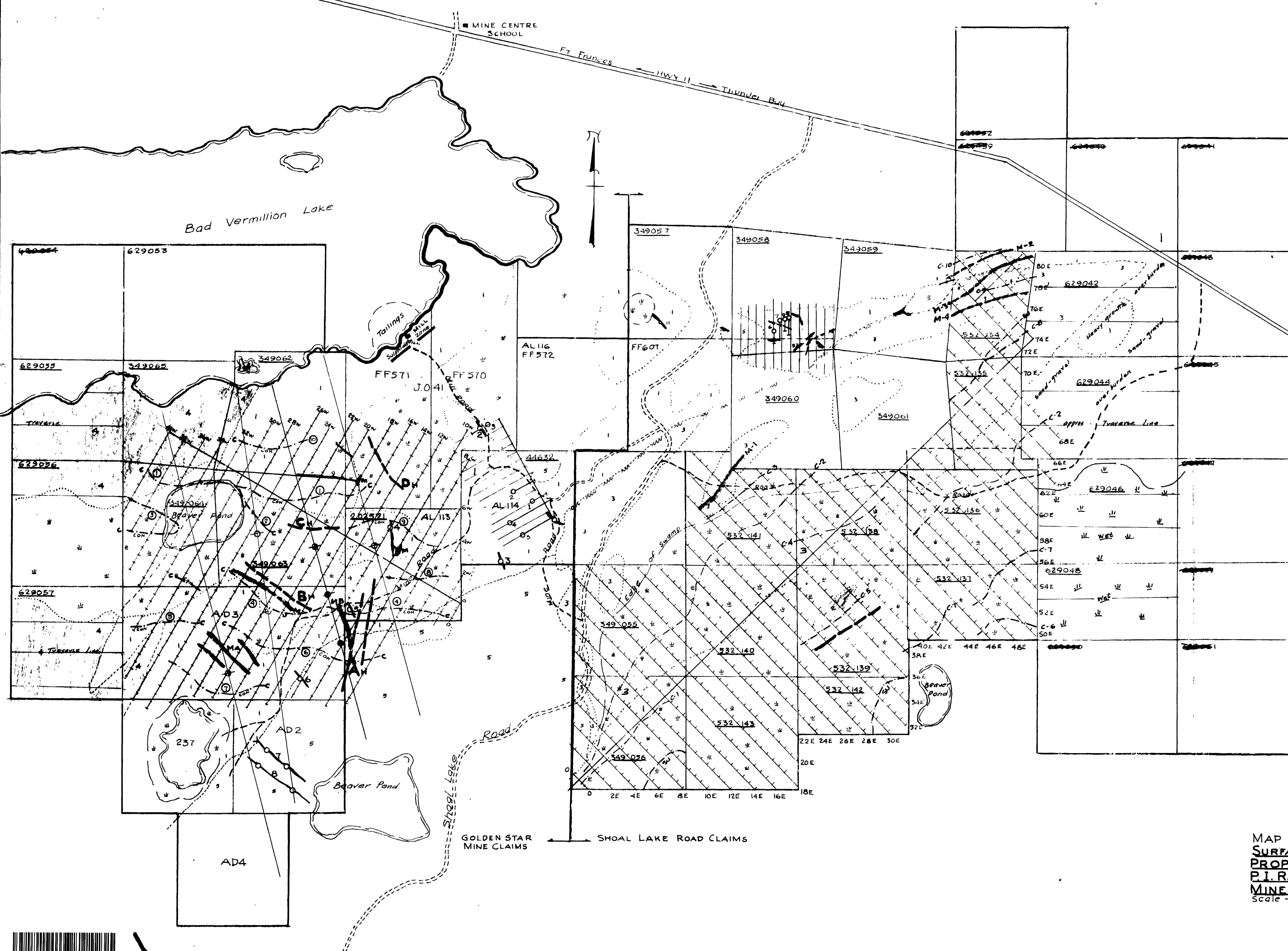


SURFACE PLAN
P.I.R.P. HOLDINGS INC.
GOLDEN STAR MINE PROPERTY
MINE CENTRE, ONTARIO
 Scale: - 1" = 500' Nov. 1, 1981

2.5442 *G.F. Ennis M.E.*

OMG P81-3 - C. 136





- LEGEND**
- Auriferous quartz vein
 - Quartz porphyry
 - Anorthosite and associated metamorphic rocks
 - Conglomerate
 - Tuff
 - Keewatin andesite, basalt, etc.

- SYMBOLS**
- Edge of outcrop
 - Fault - assumed
 - Geological contact
 - Geological contact assumed
 - Diamond drill hole
 - Pit or trench
 - Swamp
 - Geophysical anomaly
 - AH** Instrument - Max/min II
Cable length - 400'
Frequency - 1777 Hz

- SHAFTS**
- 1 Golden Star Mine No. 1
 - 2 " " " No. 2
 - 3 " " " No. 3
 - 4 Isabella No. 1 Vein
 - 5 " " No. 2 vein
 - 6 Golden Crescent vein
 - 7 Moose Vein - shaft & tunnel
 - 8 Gem vein

CLAIM MAP - Bad Vermillion Lake Area No M2474 KENORA M.D.

- M** --- Magnetic anomaly
- C** --- E-M anomaly
- SU** --- Contact between areas of different susceptibilities



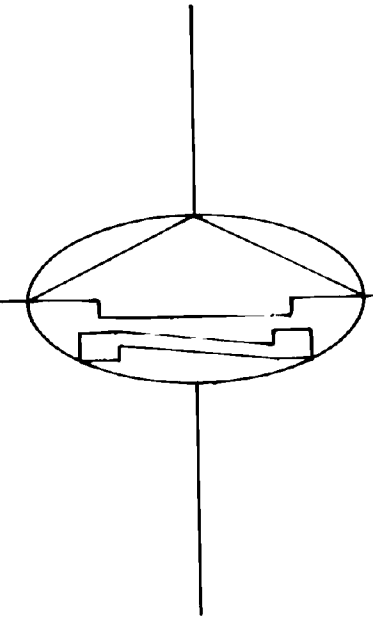
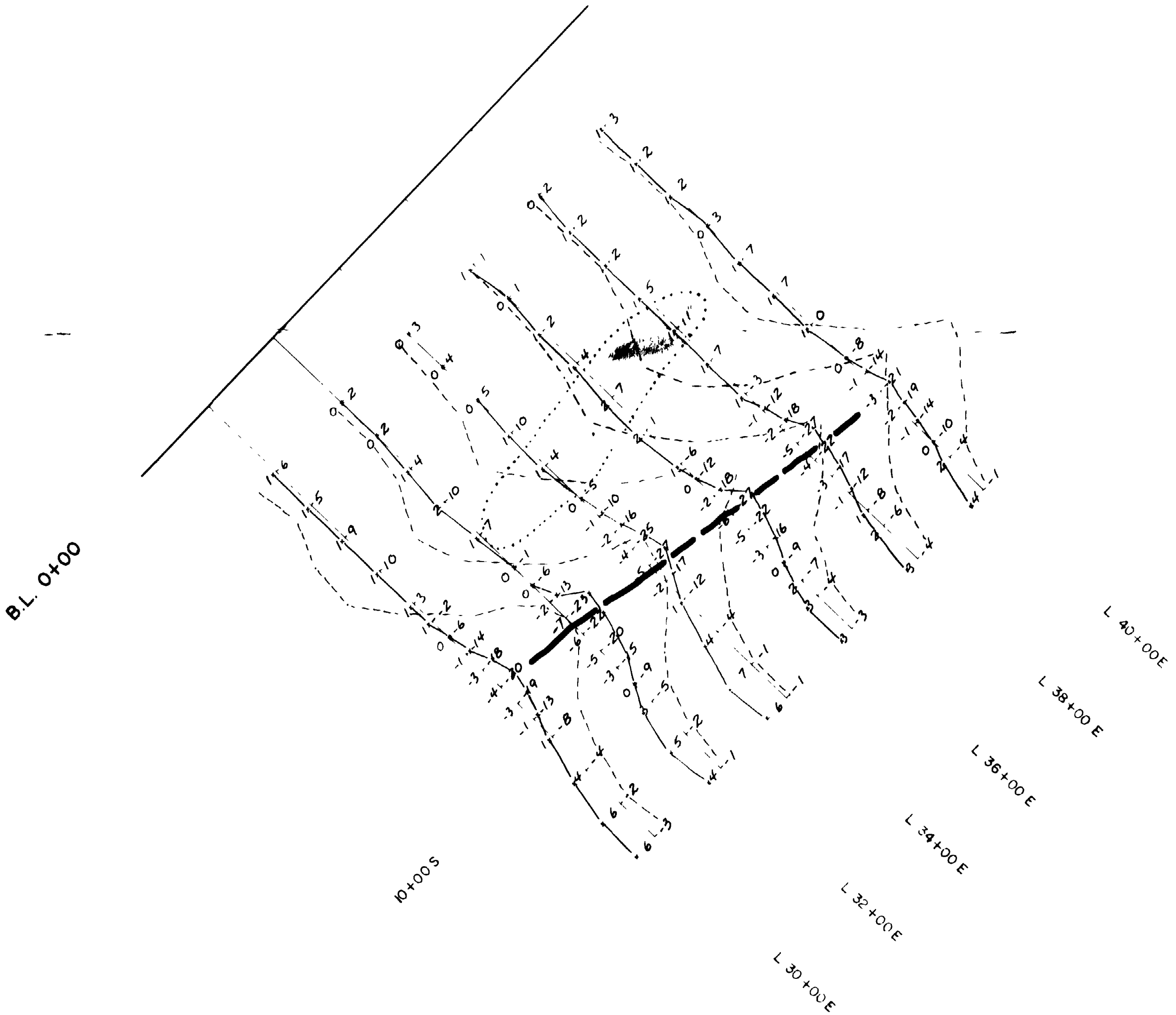
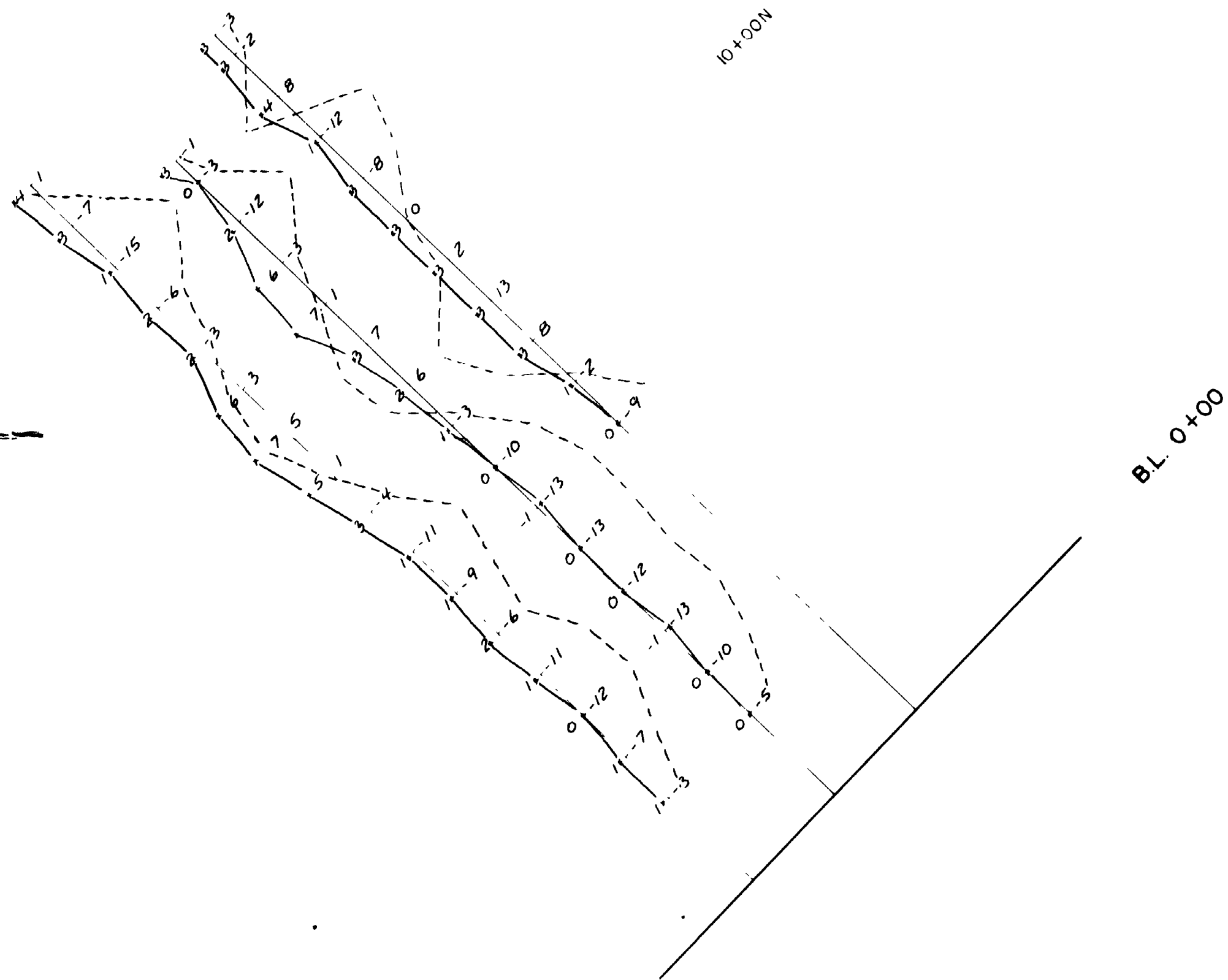
MAP No. 1
SURFACE PLAN
PROPERTIES OF
P.I.R.P. HOLDINGS INC.
MINE CENTRE AREA, ONT.
 Scale - 1" = 500' November 5, 1982

G. F. ENNIS M.E.
[Signature]

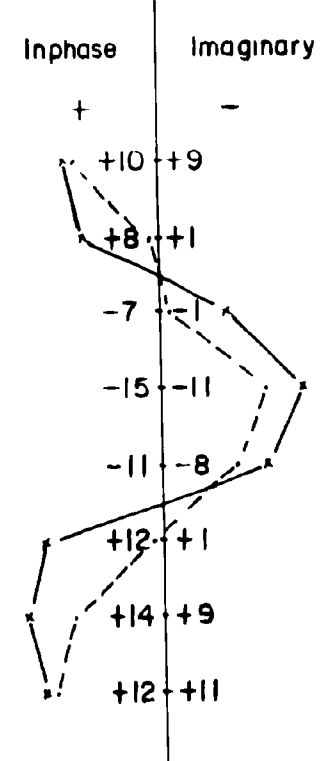
25442



L 76+00 E
L 74+00 E
L 72+00 E



NOTES:
Instrument MAXMIN II
Cable length 400'
Frequency 1777 hz



--- Conductor Axis

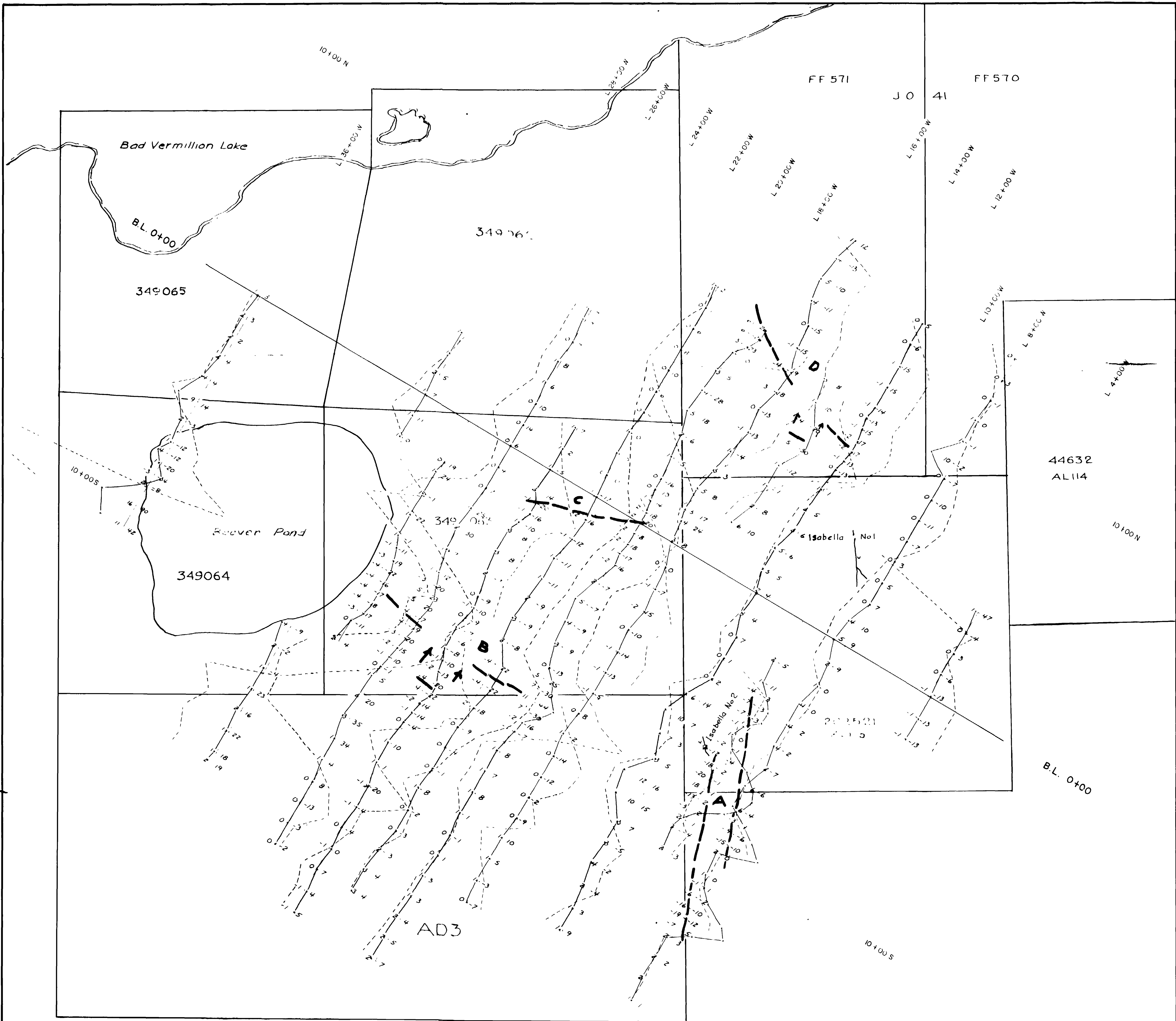
NORTHWEST GEOPHYSICS LTD.
THUNDER BAY, ONT.

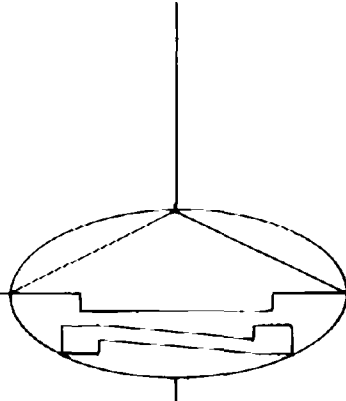
GEOPHYSICAL SURVEY
SHOAL LAKE ROAD CLAIMS

P.I.R.P. HOLDINGS INC.
MINE CENTRE AREA, ONT.

DATE	SCALE	DRAWN BY	CHECKED BY
OCTOBER, 1982	1" = 200' = 20%	GEO - DRAFT	







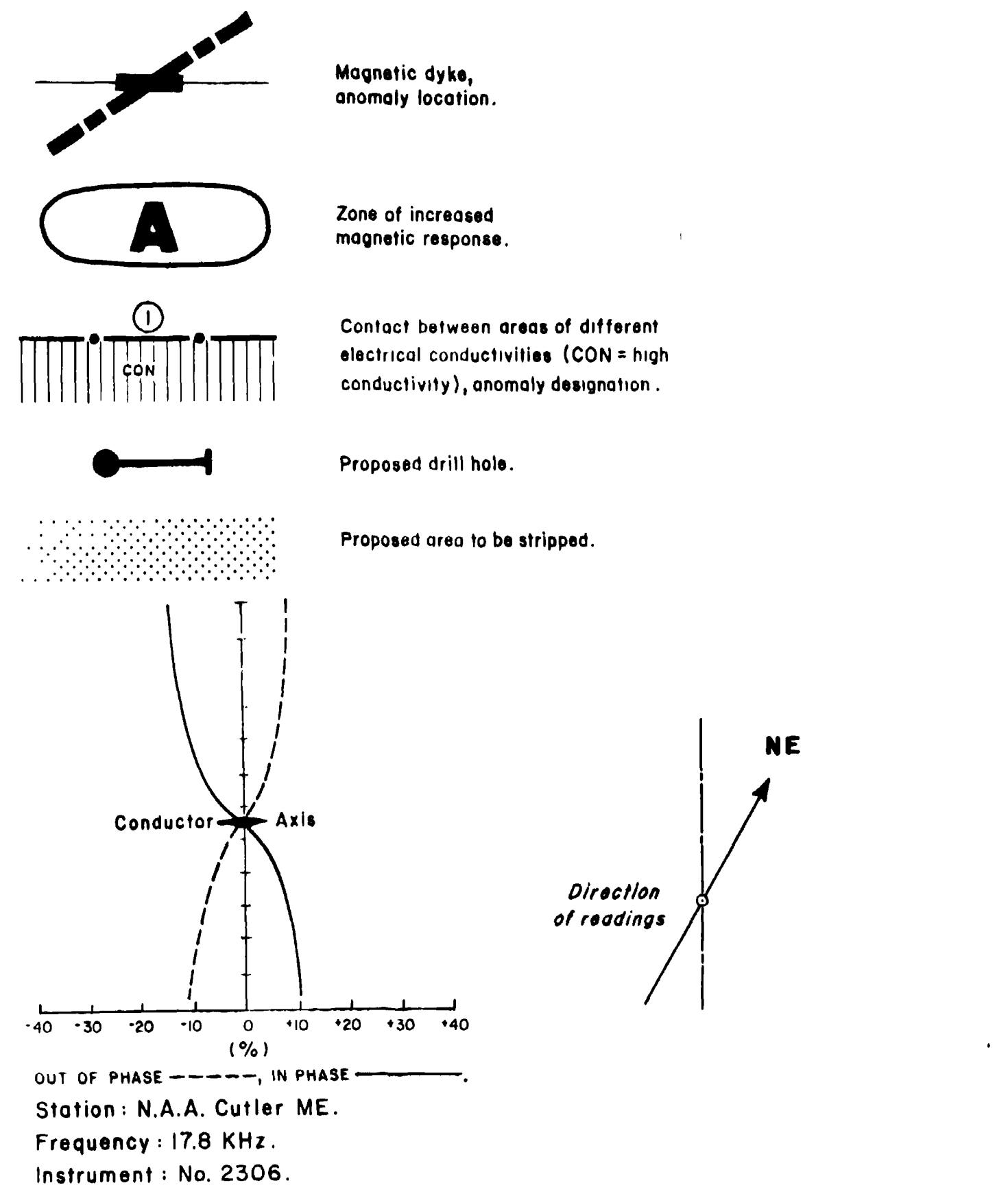
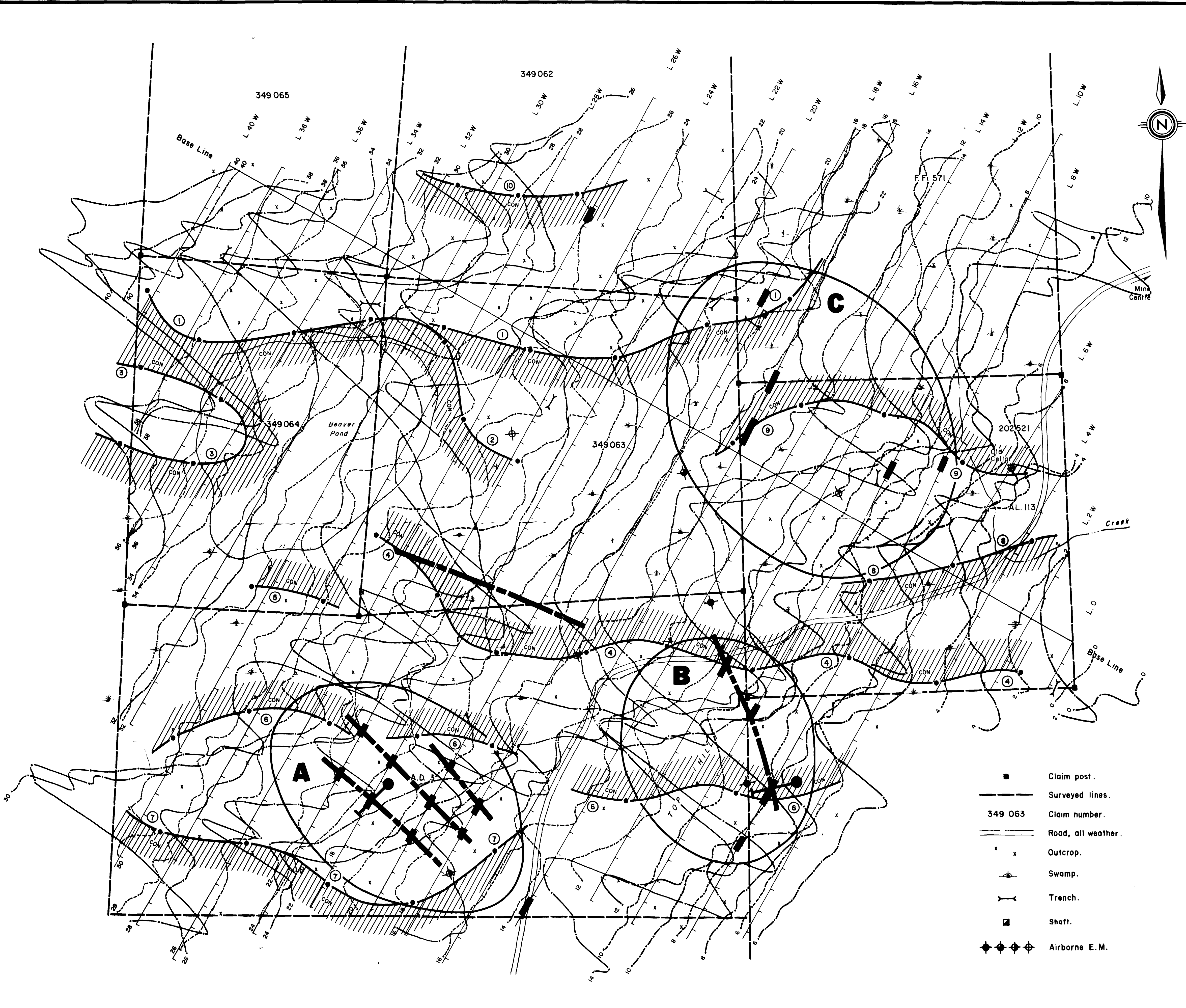
NOTES
 Instrument MAXMIN II
 Cable length 400'
 Frequency 1777 hz

Inphase	Imaginary
+	-
+10	+9
+8	+1
-7	-1
-15	-11
-11	-8
+12	+1
+14	+9
+12	+11

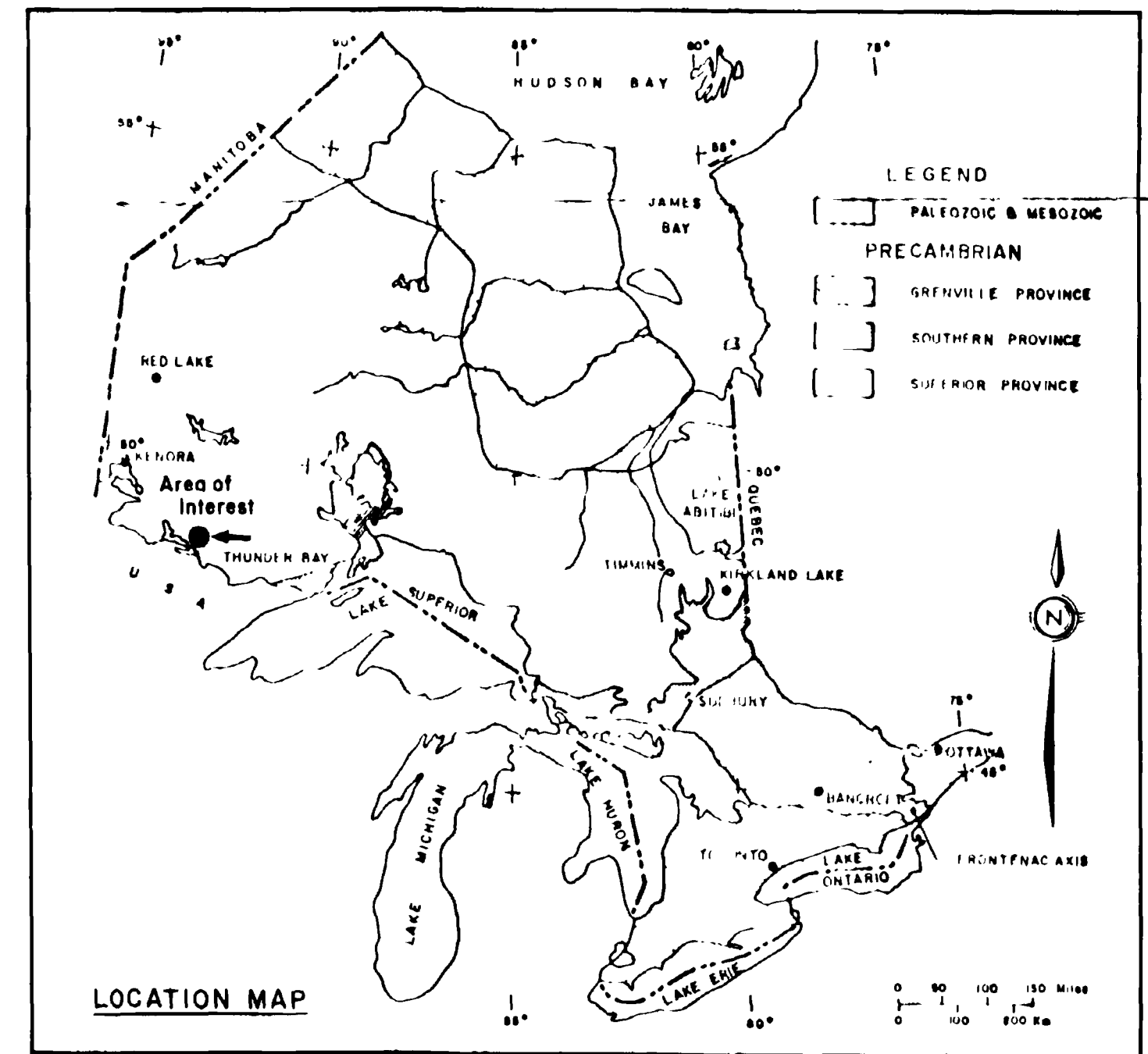
Conductor Axis

NORTHWEST GEOPHYSICS LTD. THUNDER BAY, ONT			
GEOPHYSICAL SURVEY GOLDEN STAR MINE CLAIMS			
P.I.R.P. HOLDINGS INC. MINE CENTRE AREA, ONT.			
DATE	SCALE	DRAWN BY	CHECKED BY
OCTOBER, 1982	1" = 200' ± 10%	GEO. DRAFT	





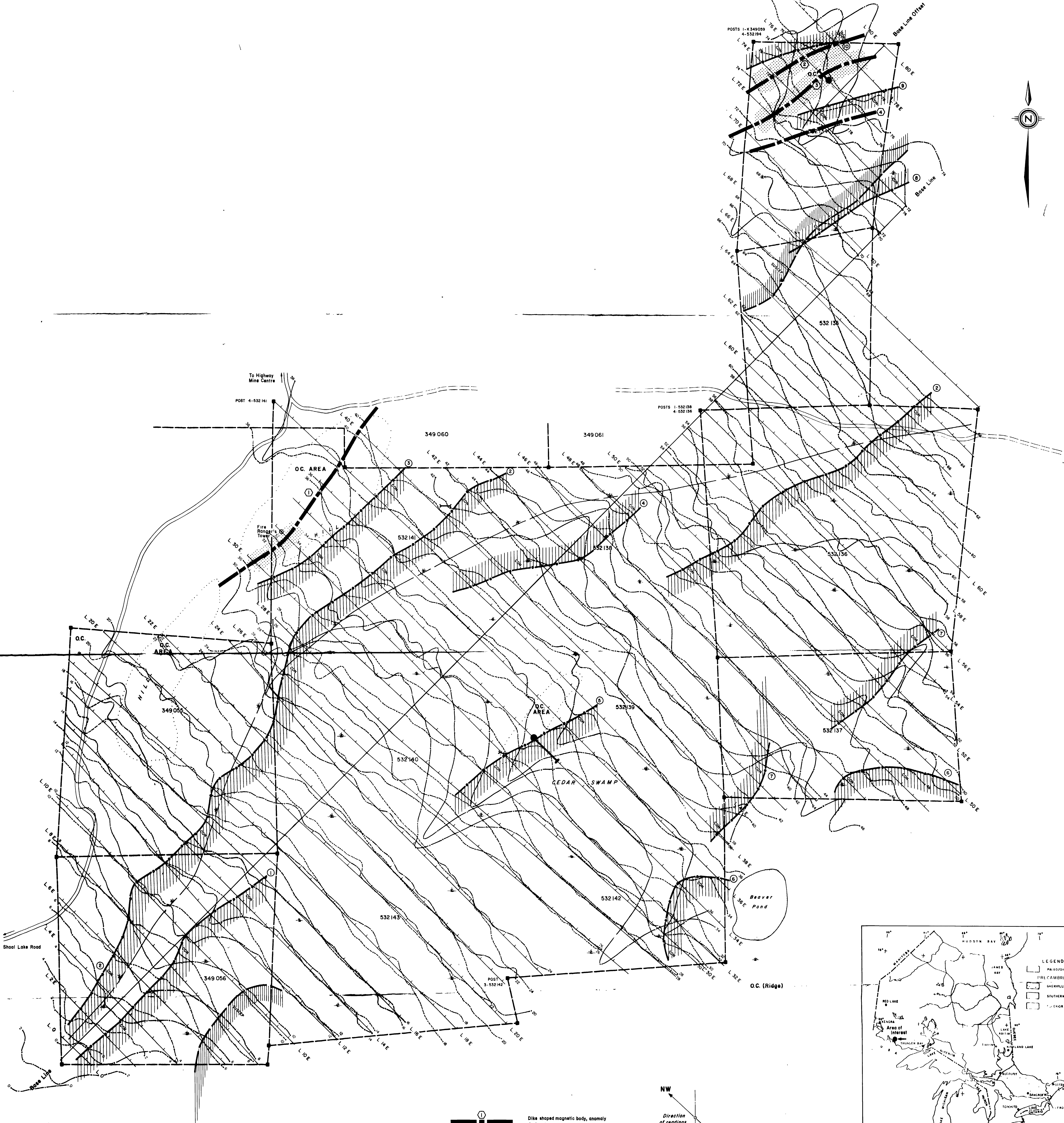
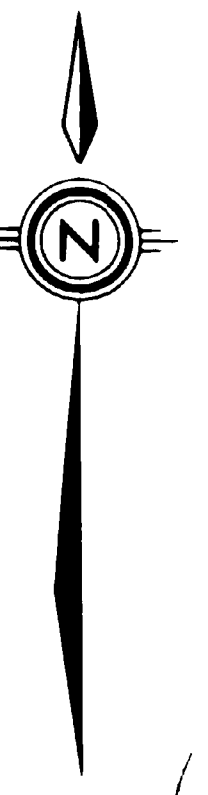
- Claim post.
- Surveyed lines.
- 349 063 Claim number.
- Road, all weather.
- x x Outcrop.
- Swamp.
- Trench.
- Shaft.
- ◆◆◆◆ Airborne E.M.



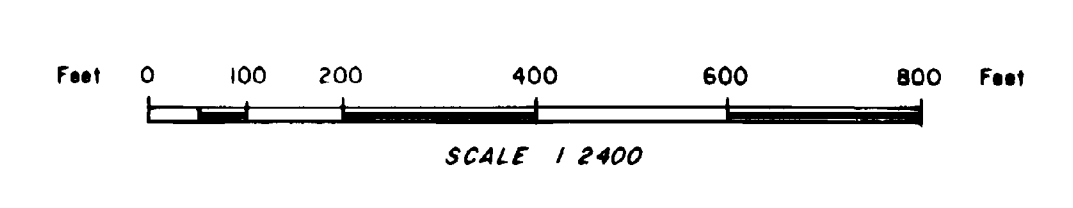
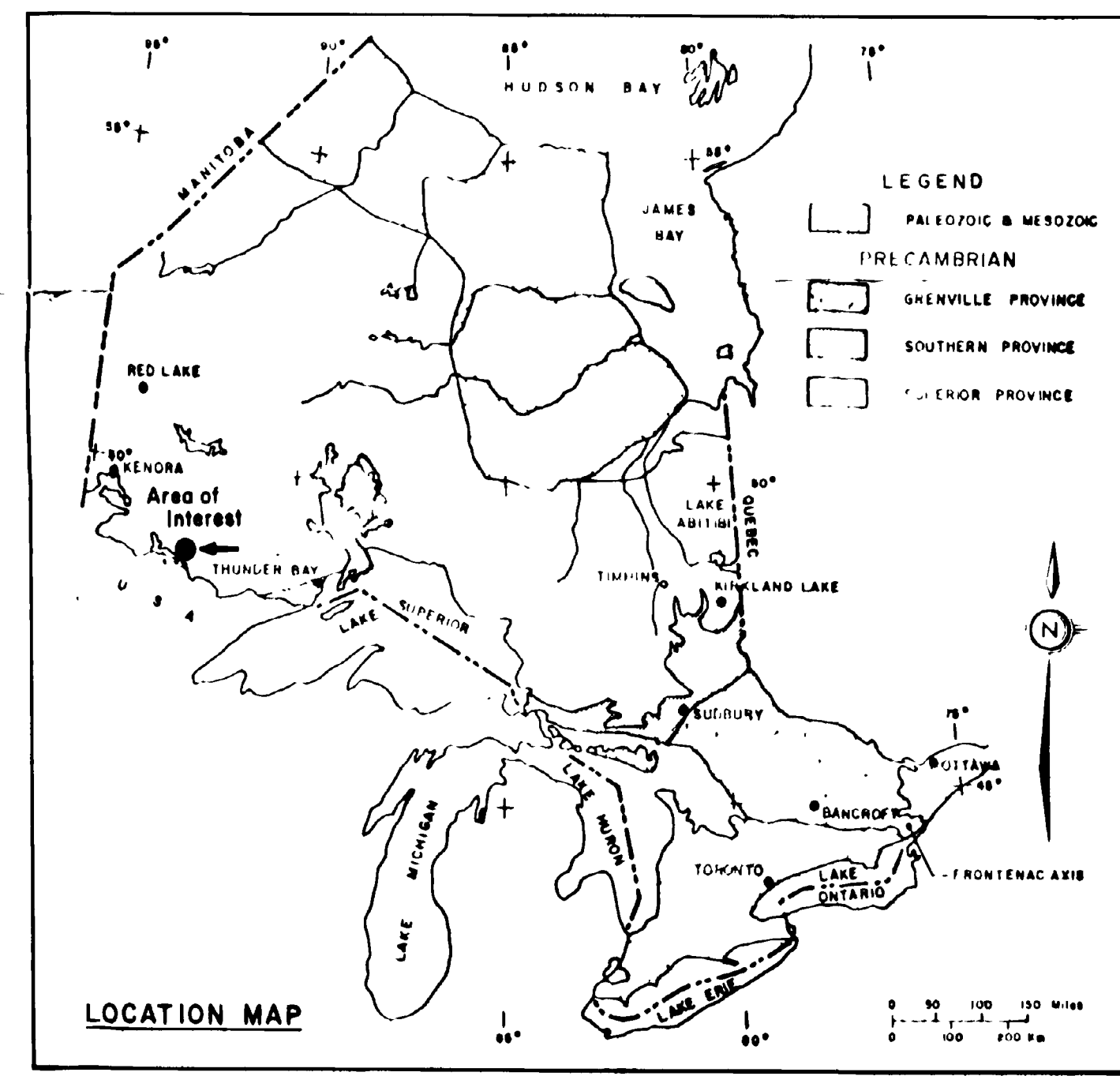
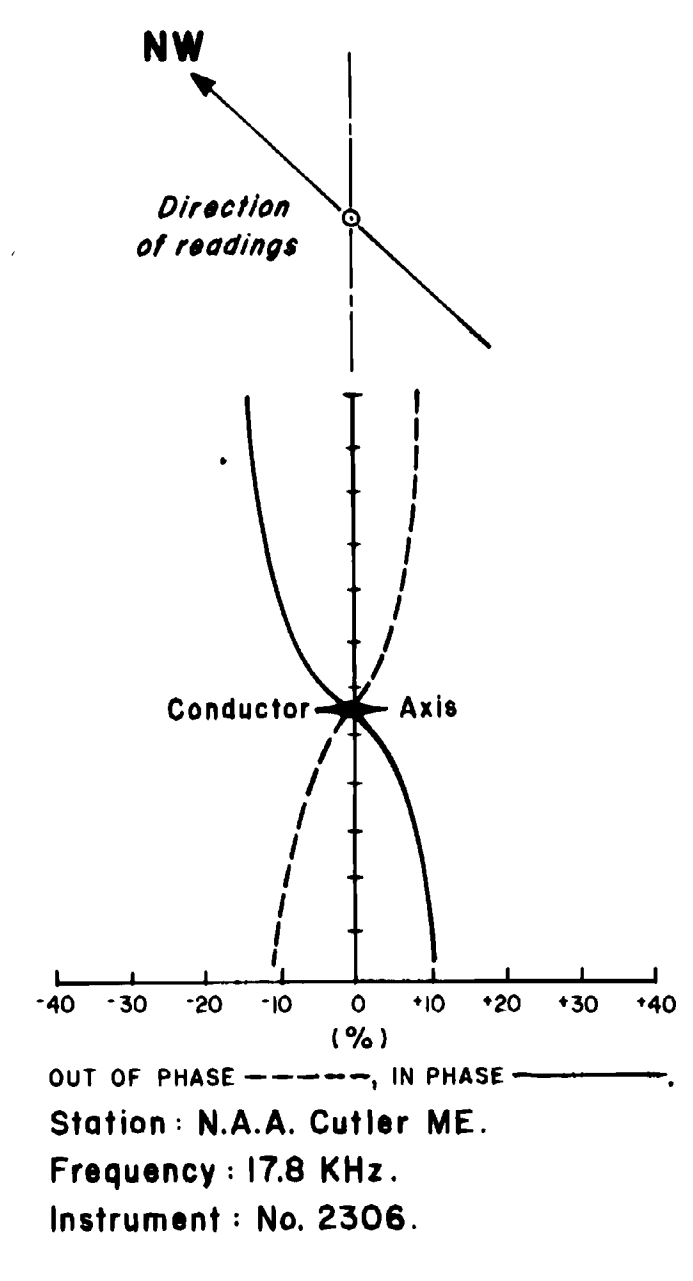
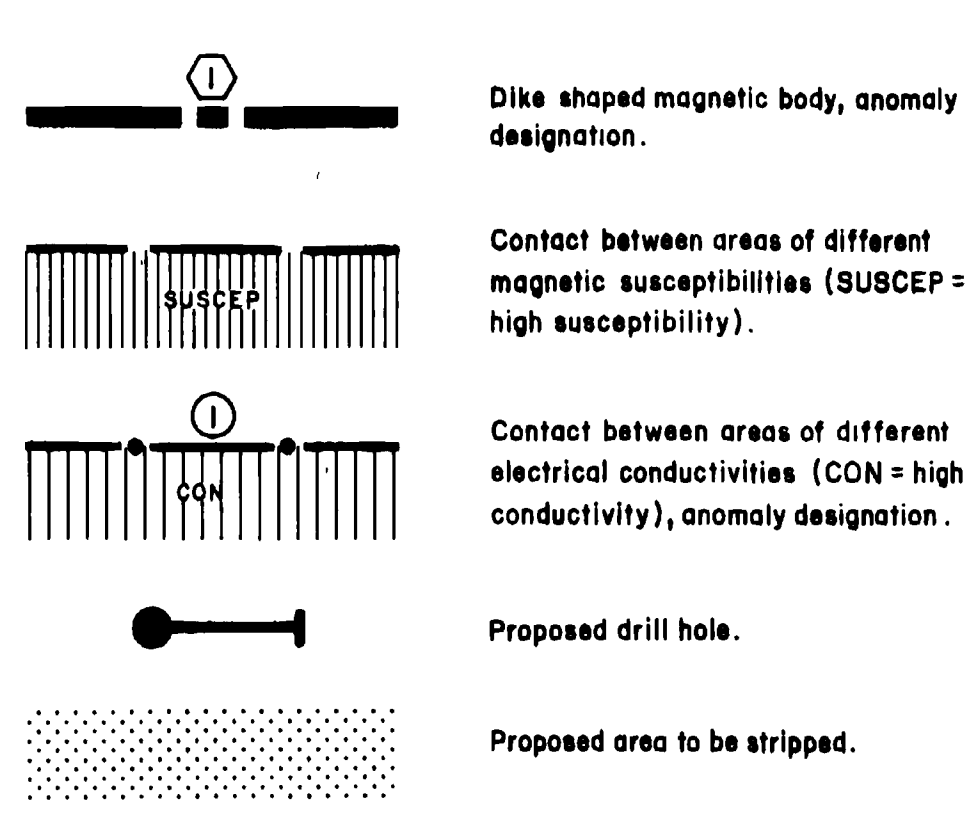
P.I.R.P. HOLDINGS INCORPORATED

GOLDEN STAR MINE CLAIMS
 Bad Vermillion Lake Area, Mine Centre-Ontario
V.L.F. (E.M.-16) SURVEY

Compilation: Paul Martin	Date: 12/1981	Project No:
Drawing: Yves Baucher, Dessinateur Ltée	Date: 01/1982	Report No:
Reference:		Map No:



- Claim post.
- Surveyed lines.
- 349 056 Claim number.
- Road, all weather.
- Bush road.
- Swamp boundary.
- Trench.
- O.C. Outcrop.
- O.C. Area of Outcrop.

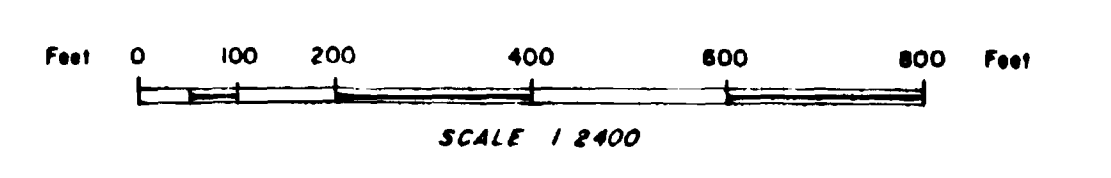
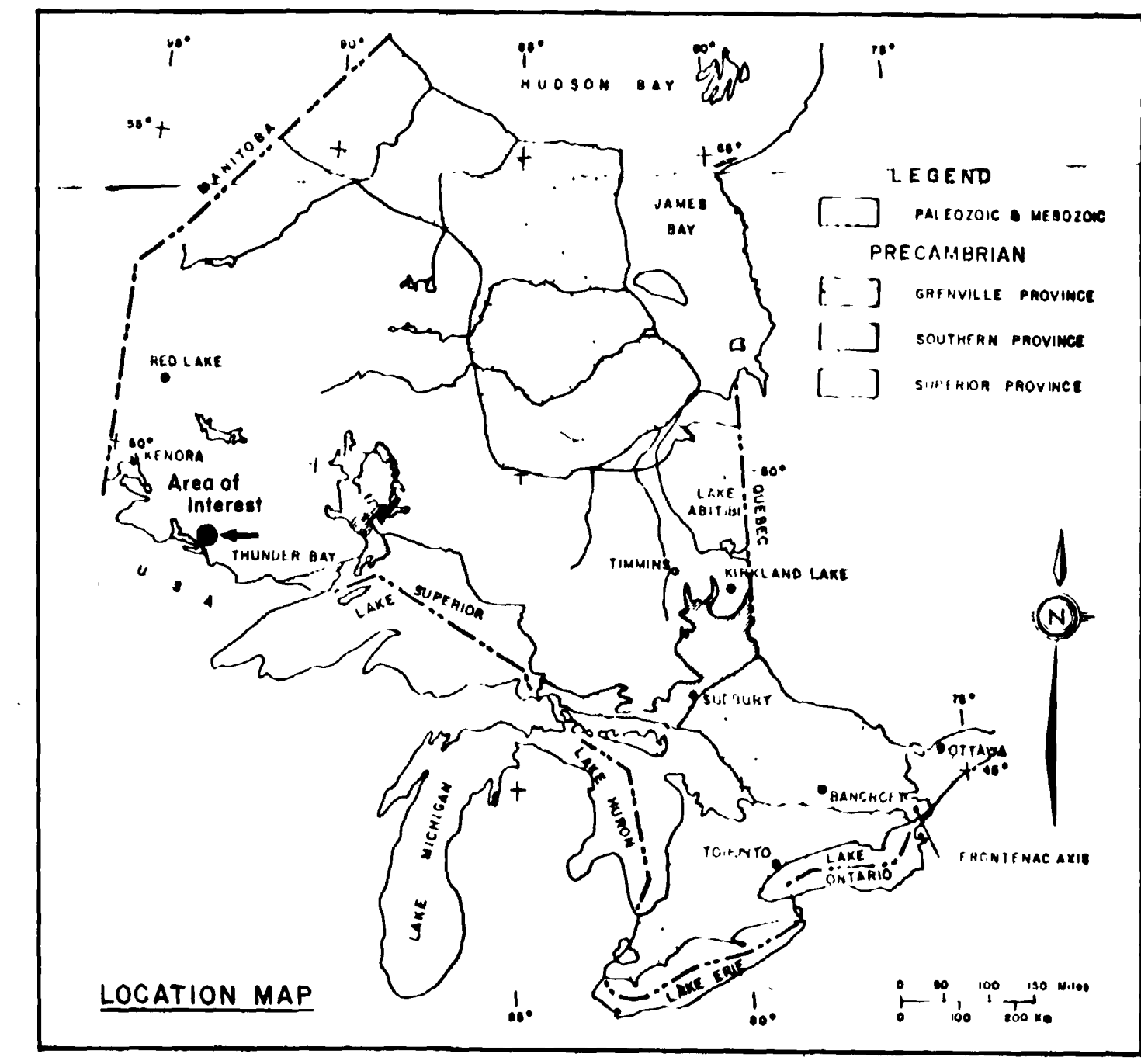
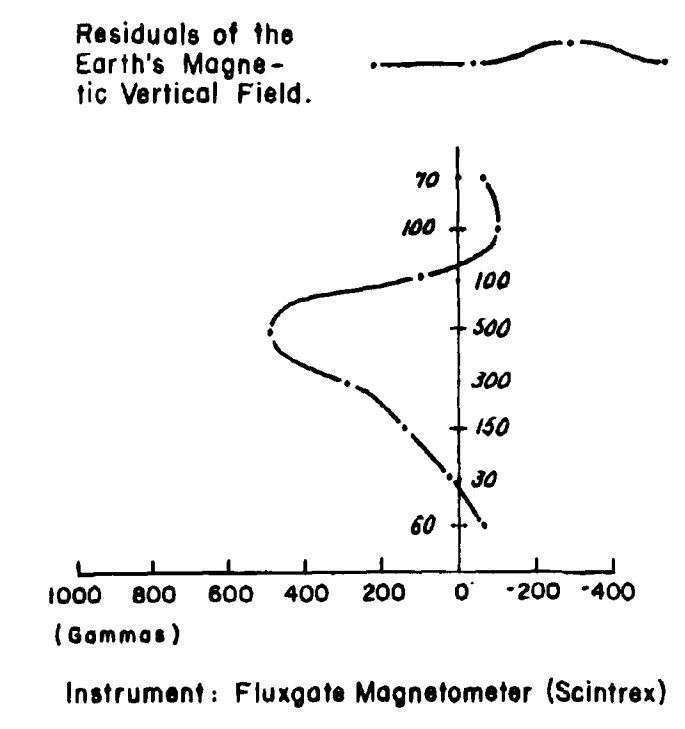
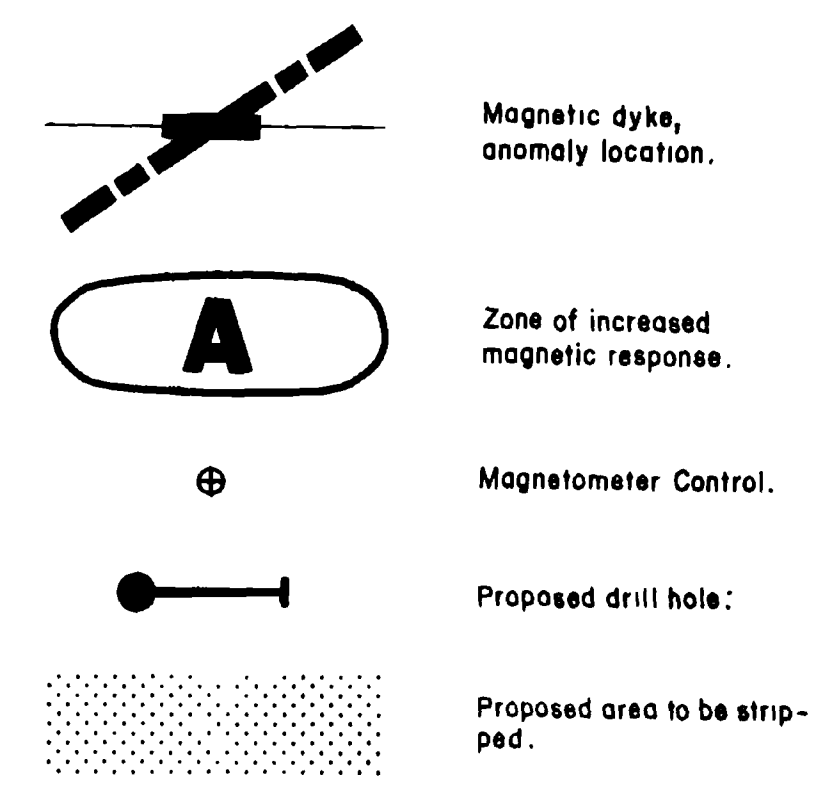


P.I.R.P. HOLDINGS INCORPORATED

SHOAL LAKE ROAD CLAIMS
 Bad Vermillion Lake Area, Mine Centre-Ontario
 V.L.F. (E.M.-16) SURVEY

Compilation: Paul Martin	Date: 11/1981	Project No:
Drawing: Yves Boucher, Dessinateur Libre	Date: 12/1981	Report No:
Reference:		Map No:

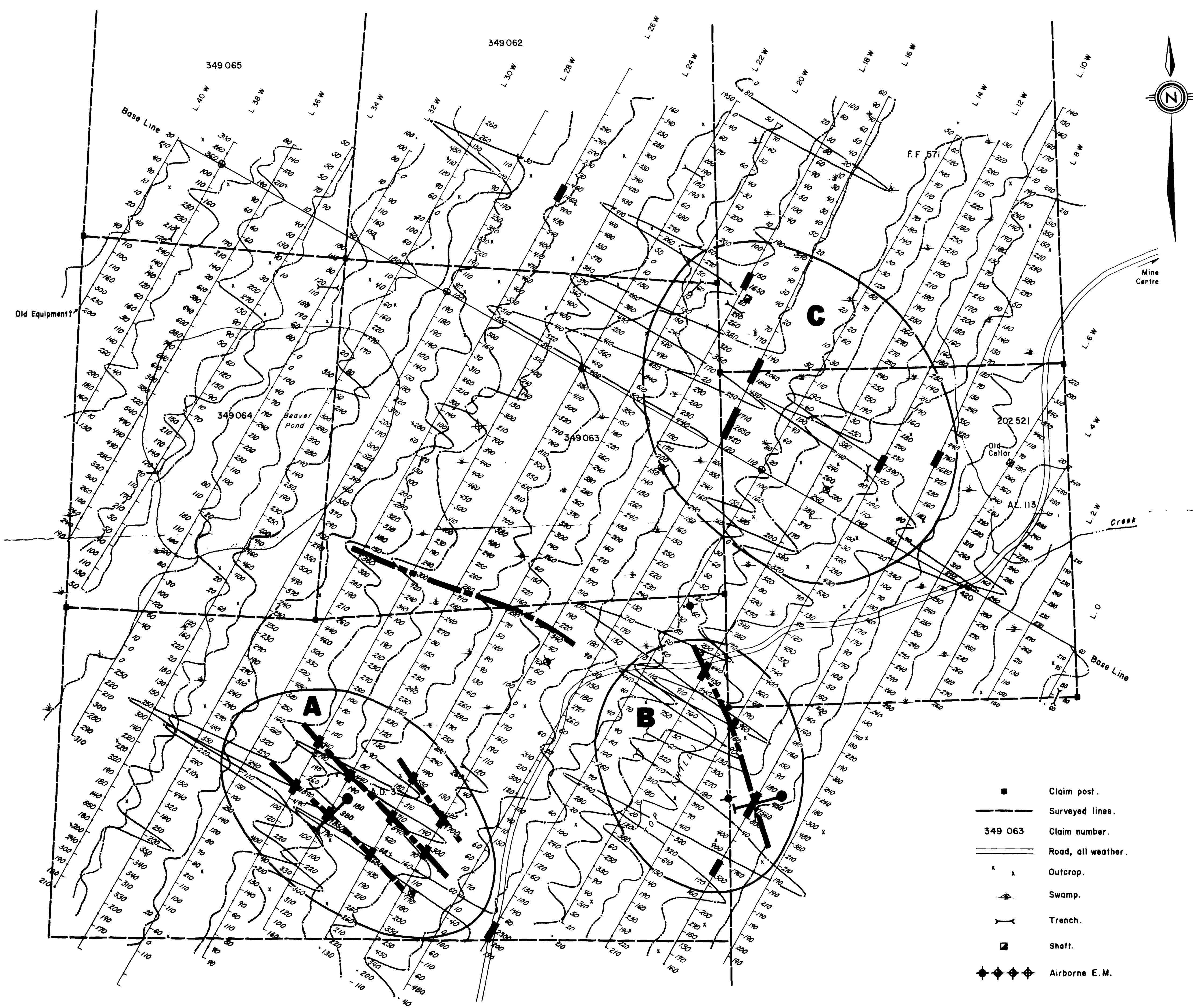




P.I.R.P. HOLDINGS INCORPORATED

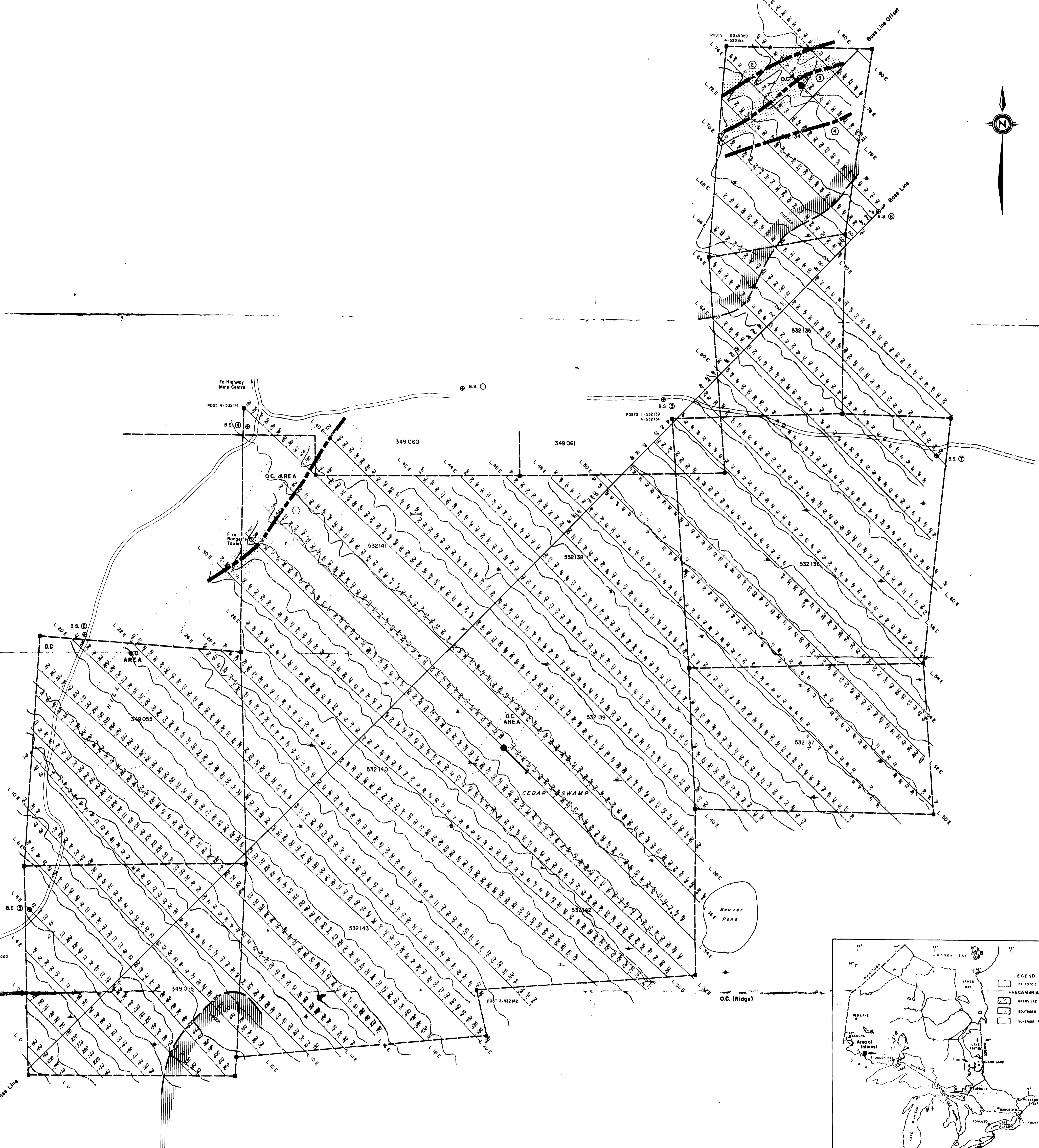
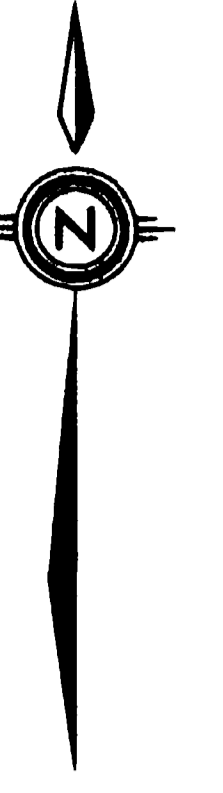
GOLDEN STAR MINE CLAIMS
Bad Vermillion Lake Area, Mine Centre-Ontario
MAGNETOMETER SURVEY

Compilation: Paul Martin	Date: 12/1981	Project No:
Drawing: Yves Boucher, Dessinateur Ltée.	Date: 01/1982	Report No:
Reference:		Map No:

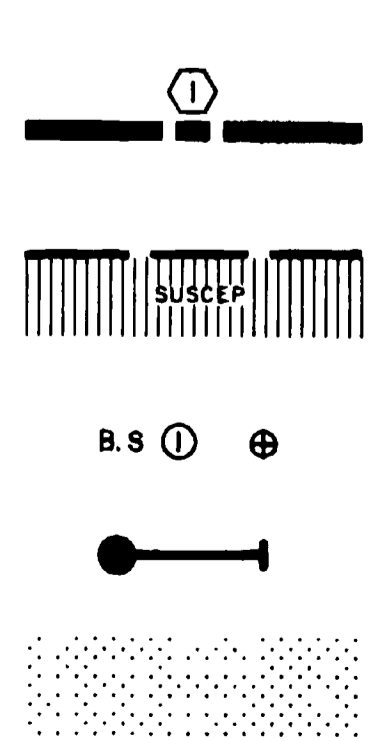


- Claim post.
- Surveyed lines.
- 349 063 Claim number.
- Road, all weather.
- x x Outcrop.
- Swamp.
- Trench.
- Shaft.
- ◆◆◆◆ Airborne E.M.



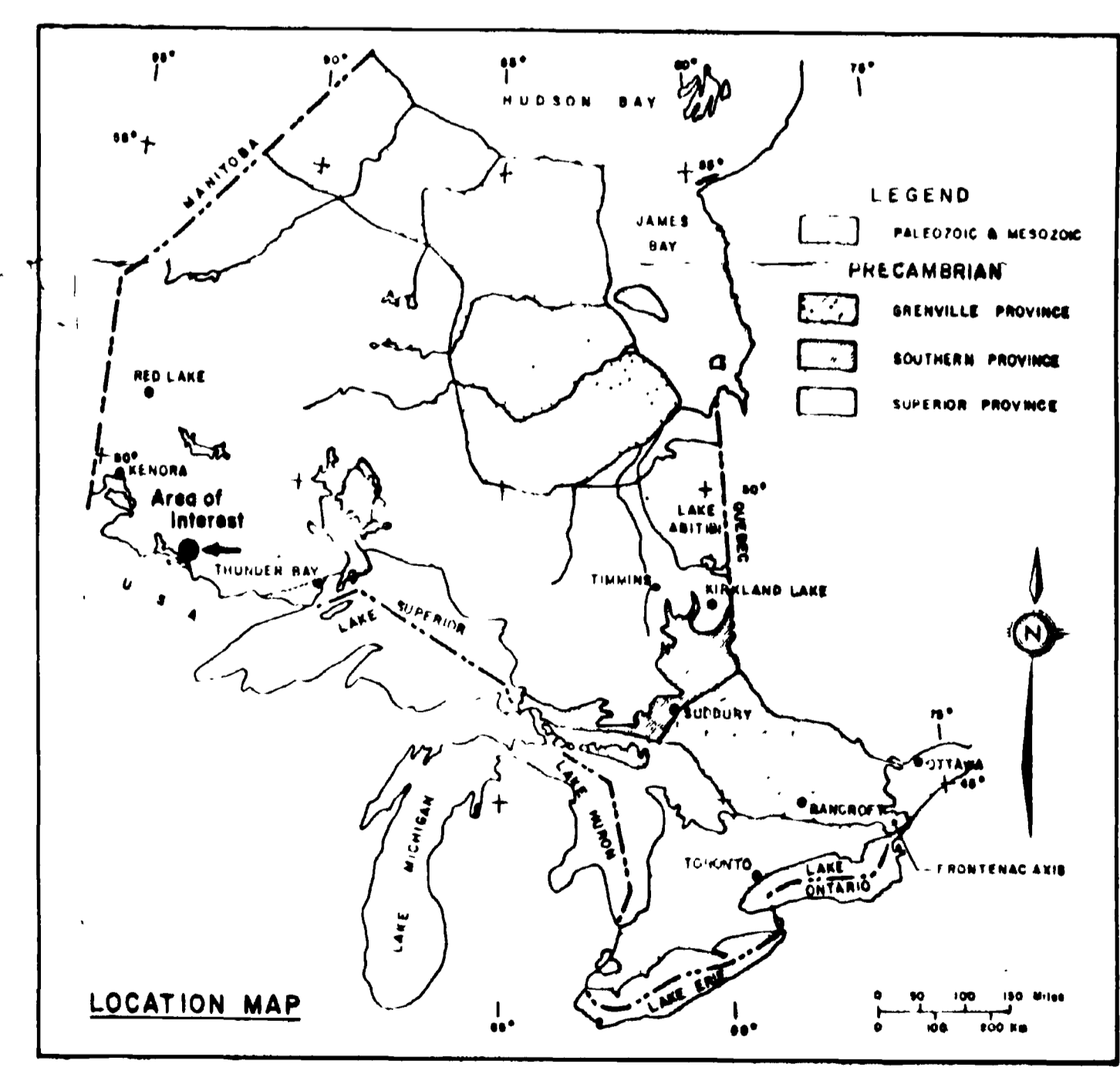


- Claim post
- Surveyed lines
- 349 056 Claim number
- Road, all weather
- Bush road
- Swamp
- Trench
- O.C. Outcrop
- O.C. Area of Outcrop



Residuals of the Earth's Magnetic Field Vertical.

Instrument: Fluxgate Magnetometer (Scintrex)

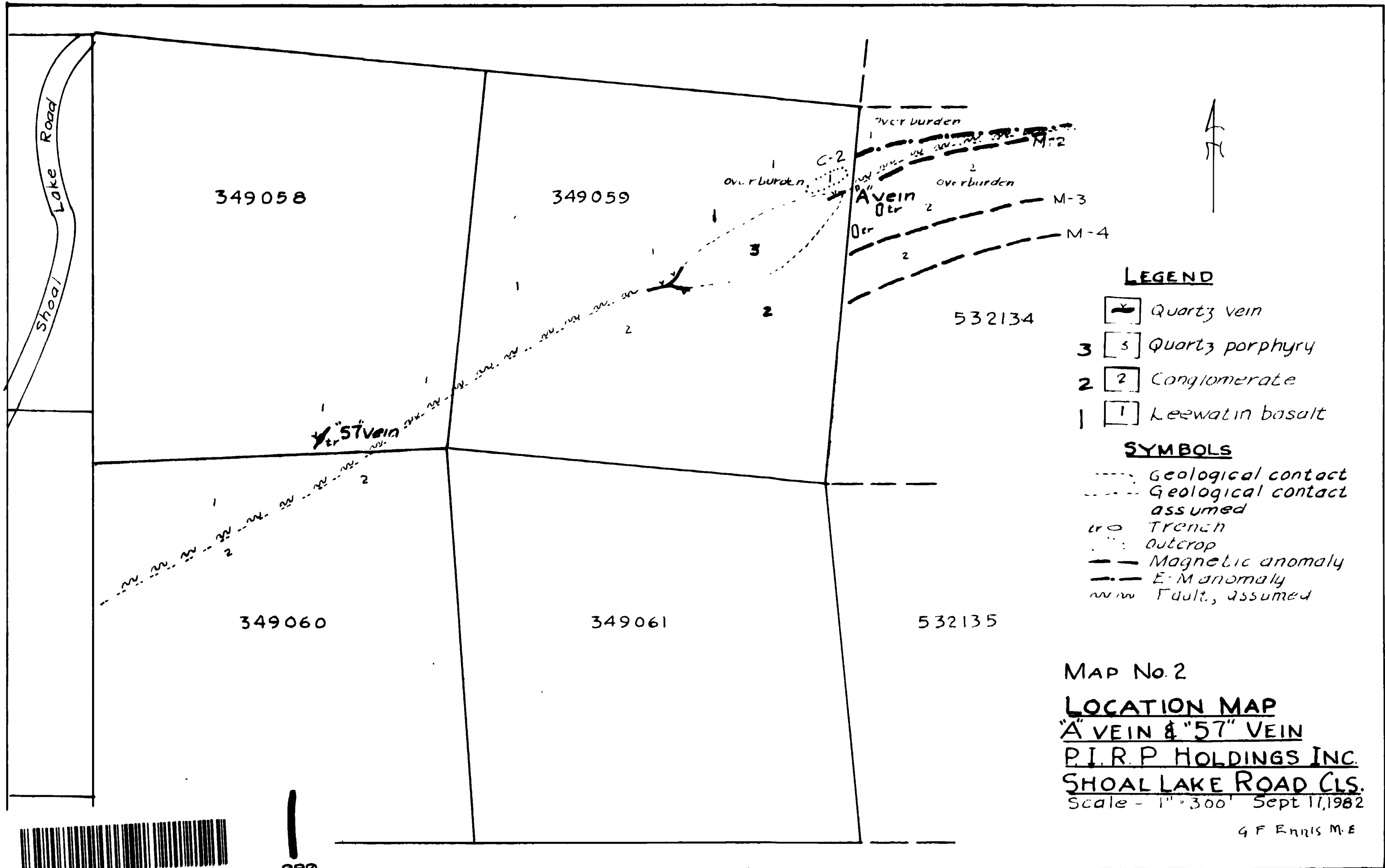


P.I.R.P. HOLDINGS INCORPORATED

SHOAL LAKE ROAD CLAIMS
Bad Vermillion Lake Area, Mine Centre-Ontario
MAGNETOMETER SURVEY

Compilation: Paul Martin	Date: 11/1981	Project No:
Drawing: Yves Boucher, Desmarre L&E	Date: 12/1981	Report No:
Reference:		Map No:

2.5442
016781-3-0-136



LEGEND

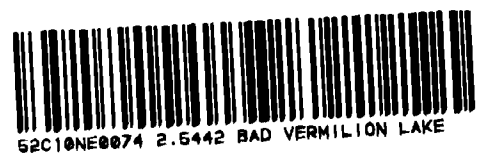
- Quartz vein
- Quartz porphyry
- Conglomerate
- Leewatin basalt

SYMBOLS

- Geological contact
- Geological contact assumed
- Trench
- Outcrop
- Magnetic anomaly
- E-M anomaly
- Fault, assumed

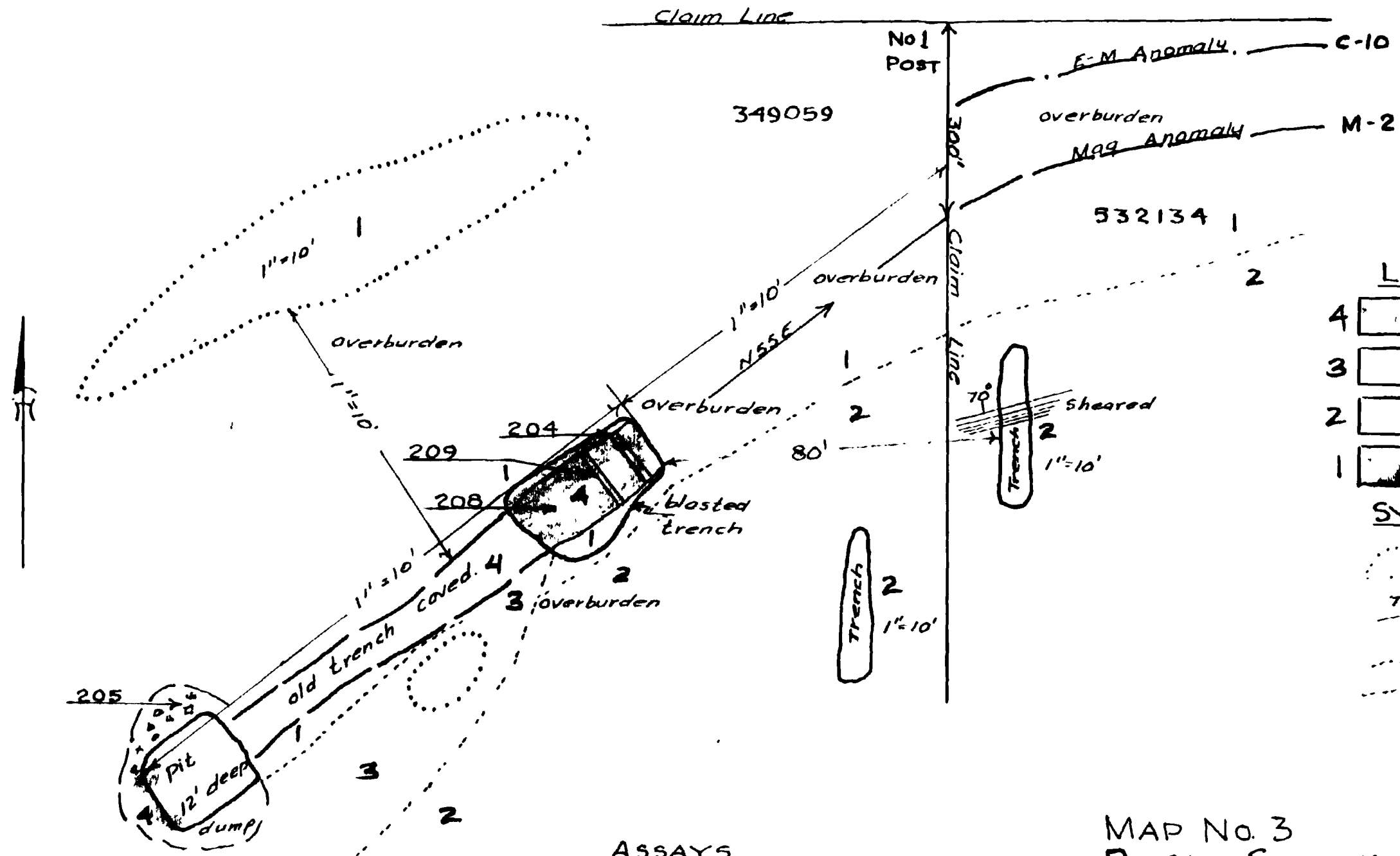
MAP No. 2
LOCATION MAP
"A" VEIN & "57" VEIN
P.I.R.P HOLDINGS INC.
SHOAL LAKE ROAD CLS.
 Scale - 1" = 300' Sept 17, 1982

G F ENNIS M.E



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25442



- LEGEND**
- 4 Mineralized quartz
 - 3 Porphyry
 - 2 Conglomerate
 - 1 Keewatin basalt

- SYMBOLS**
- Outcrop
 - 70° Strike and dip of shearing
 - Geological Contact
 - Assumed contact

ASSAYS

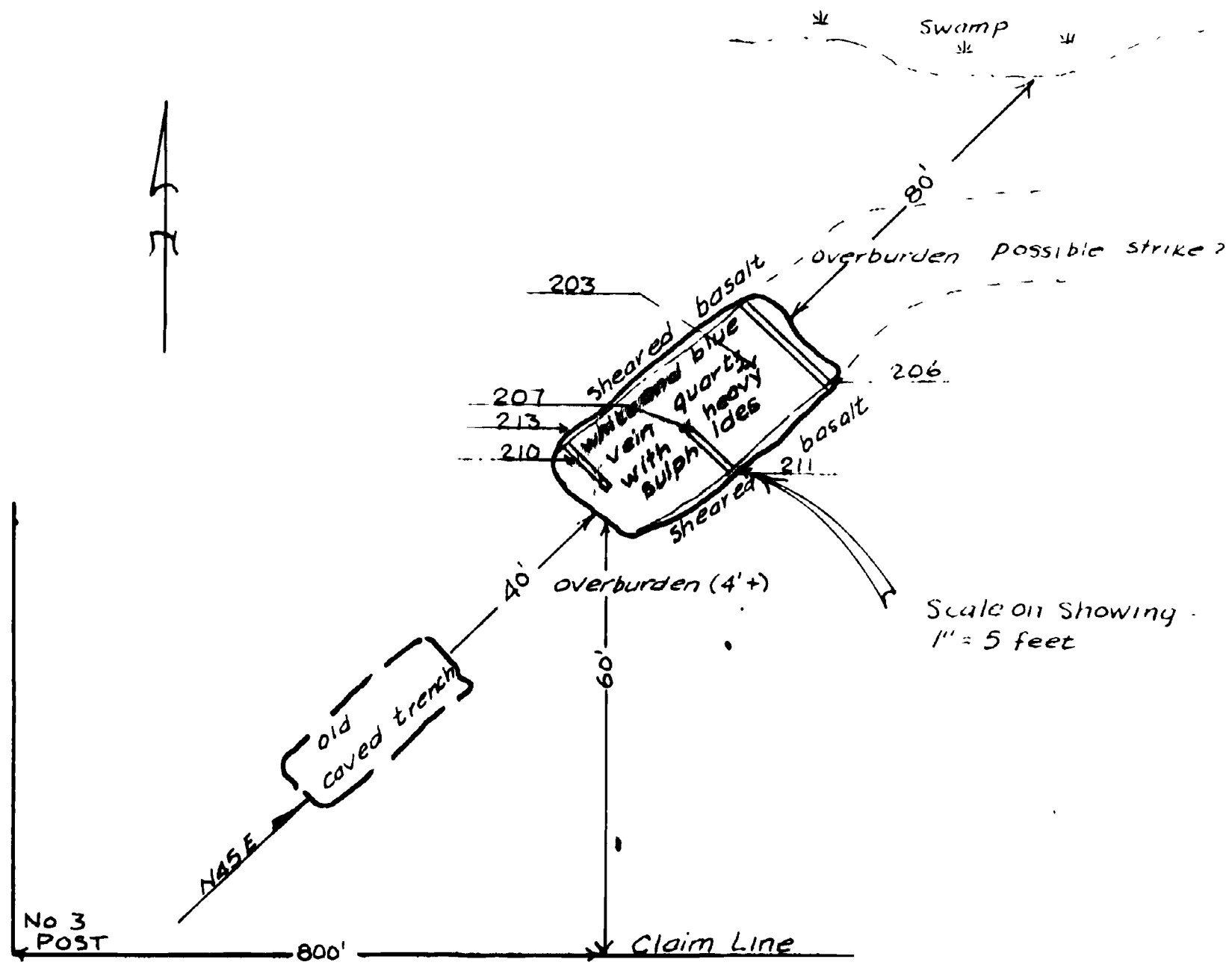
SAMPLE	oz/ton Gold	oz/ton Silver	g/a Copper
204	0.02	0.88	1.89
205	0.04	0.60	1.24
208	Tr.	NIL	—
209	0.015	0.28	4.64

MAP No. 3
DETAIL SKETCH
"A" VEIN - CLAIM 349059
P.I.R.P. HOLDINGS INC.
SHOAL LAKE ROAD CLAIMS
 Scale: - As shown Sept. 17, 1982



1
300

G F Ennis



No. SAMPLE	oz /Ton GOLD	oz /Ton SILVER	olo COPPER	WIDTH
203	NIL	-	-	Grab
206	0.23	1.57	1.89	5'
207	0.08	1.69	0.61	2'
210	0.05	0.06	2.50	2'
211	0.016	0.17	1.62	5' Grabs
213	NIL	-	-	schist wall

(see report)

MAP No 4
 DETAIL SKETCH
 No. "57" VEIN ~ CLAIM 349058
 P.I.R.P HOLDINGS INC.
 SHOAL LAKE ROAD CLAIMS
 Scale as shown Sept 17, 1982
 G F Ennis M E



310

35442