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32D12SW0061 63.5005 HARKER

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SUMMARY OF 1986
EXPLORATION ACTIVITIES
AS CONDUCTED ON THE
HARKER TOWNSHIP PROPERTY OF
MISSION HARKER EXPLORATION LTD.
PROJECT #6256

Timmins, Ontario
October 3, 1986

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Geological Services Inc.

OM86-6-P-142



320125W0061 63.5005 HARKER

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6256-86-5-12	IP Pseudo Sections Line 28+00W
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6256-86-5-14	IP Pseudo Sections Line 29+00W
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6256-86-5-16	IP Pseudo Sections Line 30+00W
6256-86-5-17	IP Pseudo Sections Line 30+50W
6256-86-5-18	IP Pseudo Sections Line 31+00W

0 SUMMARY

In October 1985, Mission-Harker Exploration Ltd. acquired an option on four patented mining claims in Harker Township, Larder Lake Mining Division, Ontario. This property is underlain by what is believed to be the westerly strike extension of the American Barrick Resources, Holt-McDermott gold mine.

The firm of David R. Bell Geological Services Inc. was contracted to initiate preliminary examinations of these four claims, through geophysical and diamond drilling programmes. As a result of these programmes (November 1985 to February 1986) a distinct and exciting gold bearing structure was located with further work being recommended.

The first two of these phases were completed during late 1986. The results of the induced polarization and geological surveys have reconfirmed the presence of this gold bearing structure such that the previously proposed drill programme is again recommended along with prospecting, trenching and surface sampling.

The estimated cost of this two phase programme is \$495,000.00.

0 INTRODUCTION

In September, 1986 the firm of David R. Bell Geological Services Inc. was contracted to initiate the first two, of a recommended three phase exploration programme.

Accordingly, a baseline and drill hole delineation survey, an IP survey and a geological mapping programme were completed during late 1986. The intention of these programmes was to further delineate the auriferous horizon as was first outlined by the drilling. From the results of the previous work it was seen that the portion of this rather extensive gold structure, as found within the boundaries of the Mission-Harker property has the potential to host an economic gold deposit.

PROPERTY AND OWNERSHIP

On October 10, 1985, Mission Harker Exploration Ltd. acquired an option on four contiguous patent mining claims in Harker Township, Larder Lake Mining Division, Ontario.

Under the terms of this agreement, the company is to expend on this property a minimum of \$150,000.00 on mining exploration by October 27, 1986. See Table 1 for claim numbers and Figure 2 for claim configuration.

4.0 LOCATION AND ACCESS

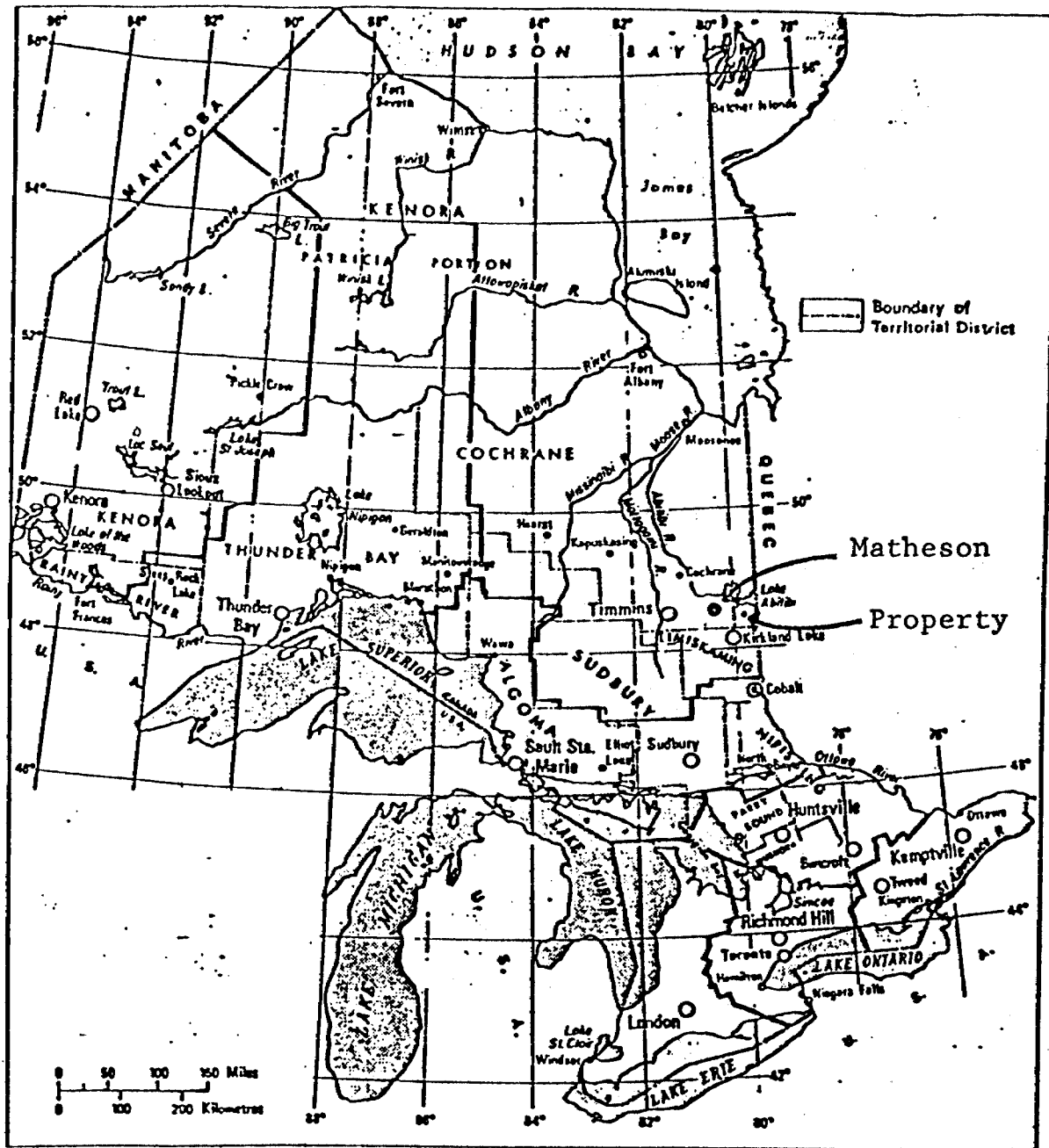
Matheson, a small community on Highway 101, is located 55km east of the property which in turn lies 17.5km west of the Ontario-Quebec border.

At this point, direct access to the property can be gained by turning south off of Highway 101 onto a dry-weather road. At a distance of approximately 2.4km this road is intersected from the south by a drill road. This road leads directly into the property but, in summer its use would be restricted to muskeg machine. See Figure 1 and Figure 3.

5.0 PHYSIOGRAPHY

The northernmost claim of the property is transected by the Madawasaga River. Here the relief is low and most of the area is covered by a thick spruce swamp. A gradual increase in elevation is noted in a southward direction, to a point where a south-westerly trending ridge truncates this lower ground. The southern side of the ridge is gently sloped and decreases slowly in elevation to the property boundary.

The vegetation present, somewhat characterizes these features in the relief. Spruce, alder and some cedar exist in the lower more swampy sections, while birch and poplar have grown among the spruce in higher, drier areas.



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MISSION-HARKER EXPLORATION LTD.

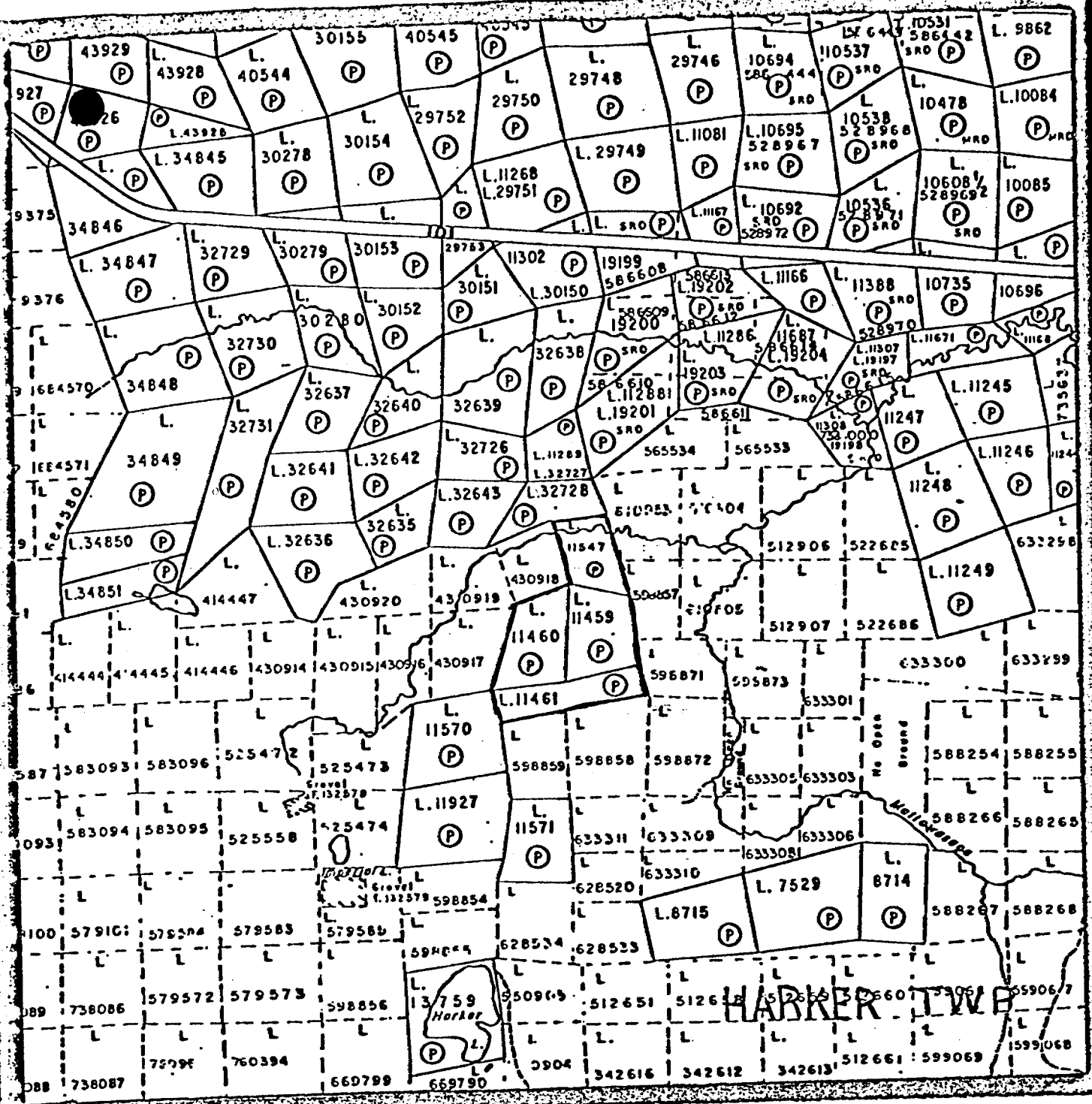
GENERAL LOCATION MAP

October 3, 1986

Figure 1

TABLE 1
LIST OF CLAIMS

<u>Claim Number</u>	<u>Claim Status</u>	<u>Location</u>
L11547	Patent	Harker Township, Larder Lake Mining Division
L11549	Patent	Harker Township, Larder Lake Mining Division
L11460	Patent	Harker Township, Larder Lake Mining Division
L11461	Patent	Harker Township, Larder Lake Mining Division



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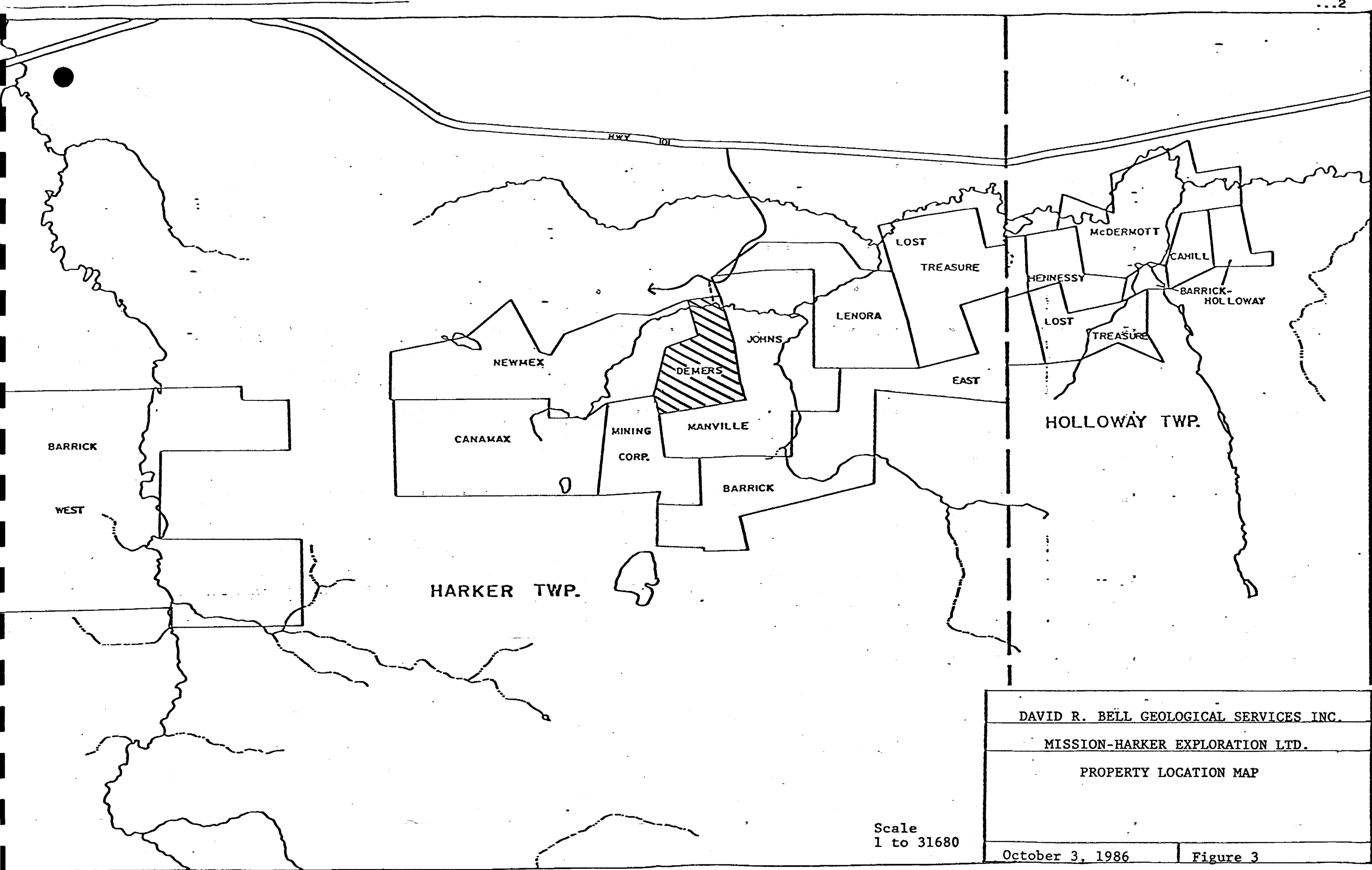
MISSION-HARKER EXPLORATION LTD.

CLAIMS CONFIGURATION

Scale
1 to 31680

October 3, 1986

Figure 2



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PROPERTY LOCATION MAP

Scale
1 to 31680

October 3, 1986

Figure 3

Overburden noted during the drill programme was thin to moderate, and consisted predominantly of sand and gravel. The thickest section encountered was approximately 18 metres (drill width) with the narrowest being 3 metres. It is suspected that drilling further to the north would encounter a substantial increase in overburden.

Winters here are usually long and cold with abundant snowfall, while summers are hot, humid and relatively short.

6.0 POWER AND WATER

The nearest power line is located approximately 25km to the west, at Perry Lake Wilderness Lodge. A new hydro line is being constructed to supply power for the Holt-McDermott Mine. Therefore this transmission line will eventually be the most suitable for any future requirements.

Water could be obtained from the Mattawasaga River which traverses the northernmost claim.

7.0 ANCILLARY SERVICES

Matheson, which lies approximately 55km to the west, could supply small goods and services but, larger materials would have to be obtained in Timmins or Kirkland Lake.

8.0 PREVIOUS WORK

Although the claims are patent, record of the work which enabled the claims to be brought to patent could not be found in the Toronto Assessment Files.

8.1 Regional Activities

The term "Harker-Holloway Area" loosely defines a group of twelve townships that are centered about the townships of Harker and Holloway. The eastern boundary is marked by the Ontario-Quebec border, while the western boundary is defined by the Michaud-Garrison Township line.

The Harker-Holloway area has been the focus of sporadic exploration activity since early 1983. The most notable exploration programmes have been carried out by American Barrick Resources (exploring and developing the Holt-McDermott property), Canamax Resources (exploring and developing the Mattawassaga and East Zones) and Kerr-Addison Mines Ltd. (removed approximately 35,000 tons of gold bearing ore from an open pit in Garrison Township). As can be seen these regional programmes have met with a high degree of success.

8.2 Property Exploration

In light of the fact that the four claims that comprise the Mission Harker option property have been patented, some degree of exploration had to have been completed. Record of the work which enabled this property to be brought to patent could not be found in the Assessment files of the Ministry of Northern Development and Mines in Toronto.

Prior to the activities as discussed in this report (surveying, IP and mapping), a programme of ground geophysics and diamond drilling had been completed.

The geophysics, which was completed across the entire property, consisted of magnetometer and VLF-EM surveys. These surveys served to outline several interesting "anomalous" zones, of which one is believed to be the physical manifestation of the gold bearing zone that was intersected during the diamond drilling.

A total of 1449.22 meters (4754.66 feet) of BQ core was recovered from eight holes. This drill programme located two alteration zones of which the lower one hosts the highest and most consistent gold values.

It was from these results that further exploration was recommended and this current work was completed.

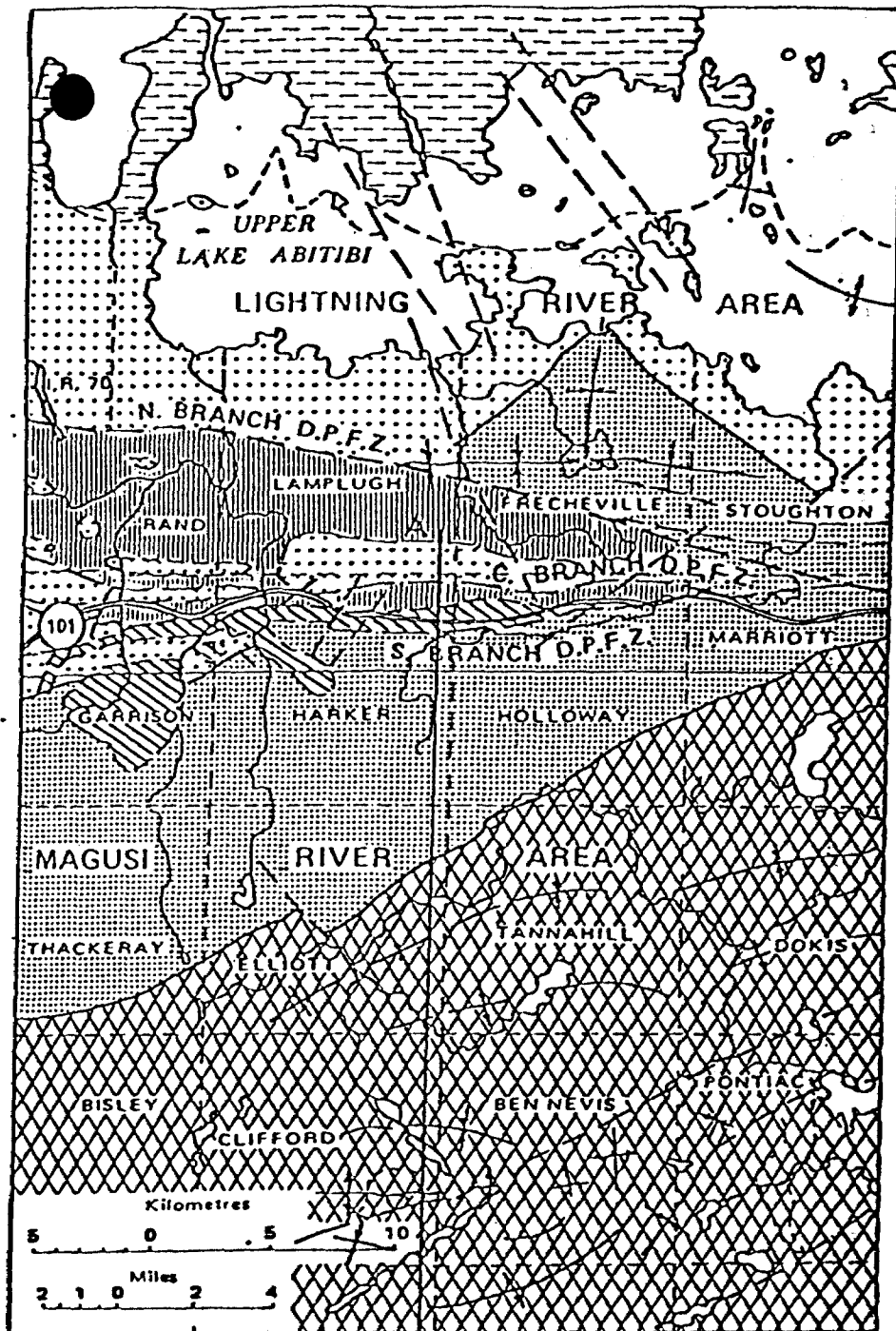
REGIONAL GEOLOGY













The geology of the region is described in a report written by L.S. Jensen, 1982, "Geology of the Lightning River Area."

"Except for Keweenaw diabase dikes, all the bedrock is of Early Precambrian (Archean) age. A map of the stratigraphy and a table of stratigraphic units are shown in Figures 4 & 5, Table 2 and 3.

The oldest rocks are calc-alkalic basalts, andesites, dacites, and rhyolites called the Hunter Mine Group. These rocks occur at the west end of Upper Lake Abitibi, south parts of Indian Reserve No. 70, Rand, Lamplugh, and Frecheville Townships and in Quebec, east of the map-area where they have been named. The Hunter Mine Group is characterized by "rhyolite complexes" composed by breccias cut by numerous subvolcanic dikes of andesite, dacite, and rhyolite composition. These rocks contain feldspar and quartz phenocrysts. The complexes grade into bedded tuffs and tuff-breccias which in turn grade into cherts, iron formations, and in places, wacke. The facies changes in the Hunter Mine Group suggest a large calc-alkalic pile once existed in the vicinity of the Lake Abitibi Batholith. The rhyolite complex in Rand Township is surrounded by calc-alkalic basalt and andesite flows interlayered with tuff breccias of the same composition as well as dacite and rhyolite.

Overlying the Hunter Mine Group are komatiitic and tholeiitic lavas of the Stoughton-Roquemaure Group which is more than 10km thick in its type-section. In the type-section it overlies the Hunter Mine Group in Roquemaure Township and forms a steeply southeast-dipping monoclinial succession, the upper part of which forms the bedrock in the northeast half of Stoughton Township. The upper part of which forms the bedrock in the northeast half of Stoughton Township. The upper part of this succession can be traced westward across Lake Abitibi where again, the lavas can be seen to overlie the Hunter Mine Group. Elsewhere, the Stoughton-Roquemaure Group is intruded by the Lake Abitibi Batholith toward its base.



-  Fault
-  Syncline
-  Anticline
-  Conformable contact
-  Unconformable contact
-  Intrusive contact
-  Abitibi Batholith
-  Destor - Porcupine Complex
-  Blake River Group
-  Kinojevis Group
-  Stoughton - Roquemare Group
-  Hunter Mine Group

B

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REGIONAL GEOLOGY AND STRUCTURE	
October 3, 1986	Figure 4

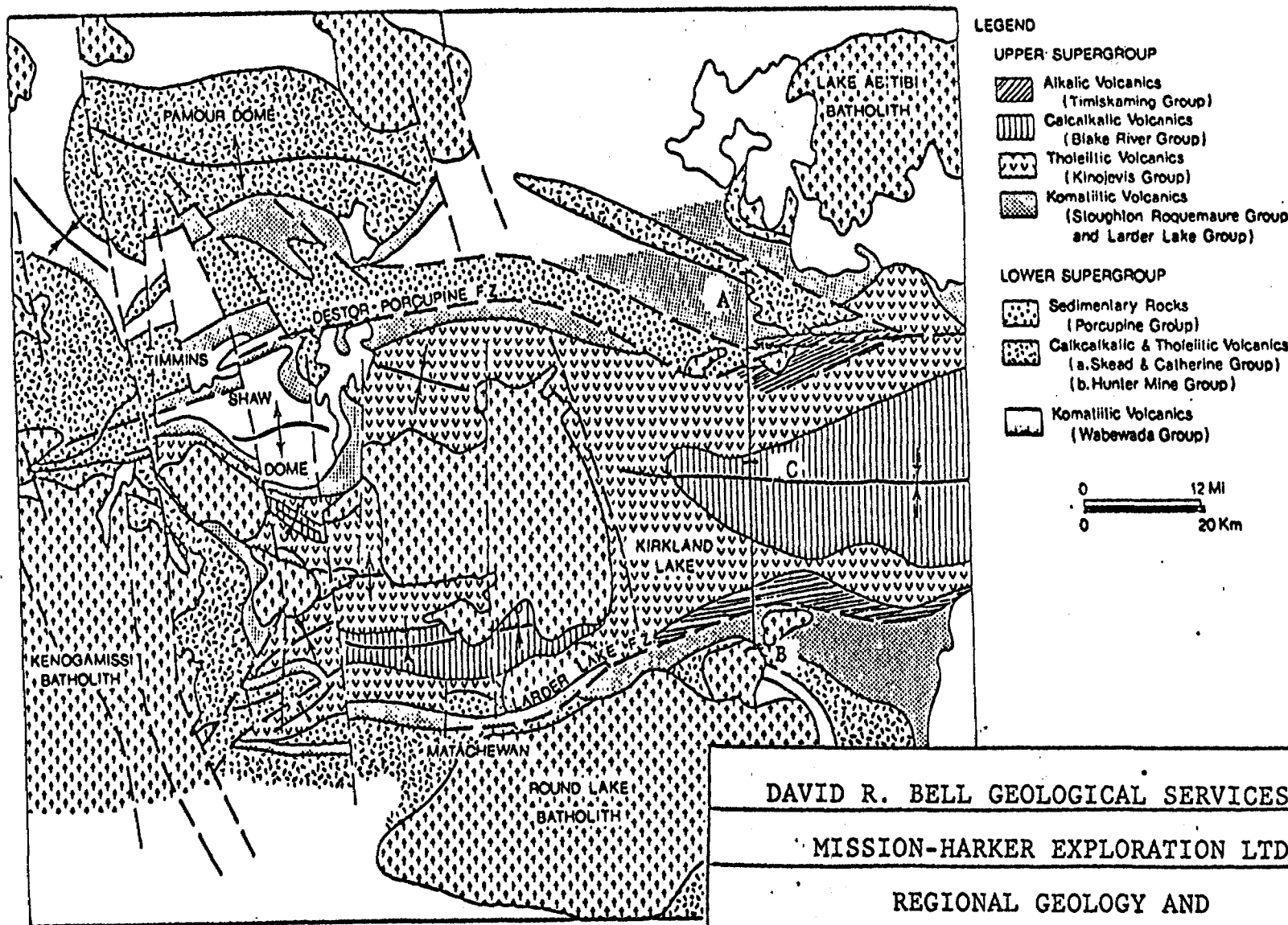


Figure 5 - Stratigraphy and structural geology of the Timmins-Kirkland Lake area.

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REGIONAL GEOLOGY AND
STRUCTURE

October 3, 1986

Figure 5

● BLE 2 Table of lithological units for the Lightning River
- Magusi River Areas (after Jensen, 1982)

PHANEROZOIC

CENOZOIC

QUATERNARY

PLEISTOCENE AND RECENT

Till, reworked till, esker sand and gravel, varved clay,
dune sand, alluvium, and peat.

UNCONFORMITY

PRECAMBRIAN

MIDDLE TO LATE PRECAMBRIAN (PROTEROZOIC)

MAFIC INTRUSIVE ROCKS

18. Diabase, quartz diabase (Keweenawan)

INTRUSIVE CONTACT

EARLY PRECAMBRIAN (ARCHEAN)

MAFIC INTRUSIVE ROCKS

17. Diabase (Matachewan)

INTRUSIVE CONTACT

FELSIC INTRUSIVE ROCKS

16. Equigranular and Porphyritic syenodiorite, monzonite,
feldspar porphyry, pegmatite, lamprophyre.

INTRUSIVE CONTACT

ALKALIC METAVOLCANICS

FELSIC METAVOLCANICS

15. Sodic trachyte, benmorite, alkalic dacite, rhyolite

MAFIC METAVOLCANICS

14. Hawaiite, alkali basalt, mugearite, nephelinite.

METASEDIMENTS

13. Conglomerate, wacke, arkose, argillite, sandstone,
iron stone.

TABLE 2 cont'd

UNCONFORMITY

FELSIC INTRUSIVE ROCKS

12. Trondhjemite, quartz diorite, diorite

INTRUSIVE CONTACT

MAFIC INTRUSIVE ROCKS

11. Gabbro, quartz gabbro, hornblende gabbro, granophyre

INTRUSIVE CONTACT

ULTRAMAFIC INTRUSIVE ROCKS

10. Peridotite, dunite, pyroxenite, redingite

INTRUSIVE CONTACT

UPPER CALC-ALKALIC METAVOLCANICS

Felsic Metavolcanics

9. Massive flow breccia, tuff breccia, crystal tuff, feldspar and quartz feldspar porphyritic rhyolitic and dacitic rocks

MAFIC AND INTERMEDIATE METAVOLCANICS

8. Massive and pillowed flows, pillow-breccia, pyroclastic breccia volcanoclastic tuff, lapilli-tuff, amygdaloidal, porphyritic feldspar, basaltic and andesitic rocks.

THOLEIITIC METAVOLCANICS

Felsic Metavolcanics

7. Spherulitic and granular tuff, tuff-breccia, cherty tuff, dacite and rhyolite.

IRON-RICH MAFIC METAVOLCANICS

6. Black to dark green, massive pillowed, pillow-breccia, hyaloclastic, variolitic, amygdaloidal basalt, andesite rocks, and interflow sediments.

MAGNESIUM-RICH METAVOLCANICS

5. Grey to green, massive, pillowed, pillow breccia, hyaloclastic, variolitic, porphyritic feldspar, amygdaloidal basaltic rocks and interflow sediments.

BLE 2 cont'd

KOMATIITIC METAVOLCANICS

Basaltic Metavolcanics

4. Massive, pillowed, pillow-breccia, hyaloclastic, variolitic, spinifex-textured basaltic rocks.

ULTRAMAFIC METAVOLCANICS

3. Massive, pillowed, polysutured, spinifex-textured ultramafic rocks.

UNCONFORMITY

LOWER CALC-ALKALIC METAVOLCANICS

Felsic Metavolcanics

2. Tuff-breccia, crystal tuff, tuff, quartz and feldspar porphyritic rhyolitic and dacitic rocks, argillite, chert, and ironstone.

MAFIC AND INTERMEDIATE METAVOLCANICS

1. Massive, pillowed, pillow-breccia, pyroclastic breccia, tuff, amygdaloidal basaltic and andesitic rocks.

TABLE 3

Lithological Units Comprising Rock Groups (After Jensen, 1982) refer to Table 2

	<u>GROUP NAMES</u>	<u>LITHOLOGIC UNITS</u>
Upper Supergroup	Destor-Porcupine Complex	Felsic Intrusives (16) + Alkalic Metavolcanics (14, 15) Metasediments (13).
	Abitibi Batholith	Felsic Intrusives (12 when north of L. Abitibi)
	Black River Group	Upper Calc-Alkalic Metavolcanics (8+9) Mafic Intrusives (11) + Minor Felsic Intrusives (12)
	Kinojevis Group	Tholeiitic (5-7) + Komatiitic Metavolcanics (4).
	Stoughton - Roquemaure	Tholeiitic + Komatiitic Metavolcanics (3-6) Ultramafic Intrusives (10).
Lower Supergroup	Hunter Mine Group	Lower Calc-Alkalic Metavolcanics (1-2).

The calc-alkalic metavolcanics of the Hunter Mine Group in the Lamplugh area are cut by stocks and sills of peridotite which may have been feeders for the komatiitic lavas. In the south part of Lamplugh Township, the calc-alkalic rocks are overlain by a thick, flat-lying fractionated komatiitic lava flow which may have been ponded on the irregular calc-alkalic metavolcanic topography. The flow consists of a massive basal peridotite layer overlain by pyroxenite and gabbro similar in composition to magnesium-rich tholeiitic basalt. At higher elevations, the flow is capped by a finely bedded, 30cm thick unit of calc-alkalic dacite tuff overlain by thick massive flows of iron-rich tholeiitic basalt. A similar group of rocks occur in the north part of Garrison Township, except, here they are tipped steeply on their side to the north.

Fault-bounded wedges of komatiitic lava are also found along the Destor Porcupine Fault Zone and are considered as well, to be part of the Stoughton-Roquemaure Group.

Komatiitic volcanism forming the Stoughton-Roquemaure Group appears to have begun in the basin to the south and spread northward engulfing the calc-alkalic volcanic pile represented by the Hunter Mine Group.

The Stoughton-Roquemaure Group is conformably overlain by iron-enriched tholeiitic lavas referred to as the Kinojevis Group. At the top of the 10km thick type-section of the Stoughton-Roquemaure Group, numerous layers of finely bedded calc-alkalic felsic tuff-breccias, tuffs, cherts, argillites, graphitic sediments, and ironstone appear in the metavolcanic succession with the tholeiitic lavas. Komatiitic lavas disappear from the succession and the lavas show a pronounced iron-enrichment in the upper 5km thick metavolcanic succession of the 15km thick southwest facing monoclinical succession forming the northeast side of the triangular syncline in Frecheville Township. Upward in the Kinojevis Group, the bedded tuffs and sediments decrease toward the centre of the triangular syncline.

The tholeiitic lavas of the Kinojevis Group can be traced into the south part of Stoughton Township where they cross the Destor-Porcupine Fault Zone and can be followed westward south of the Destor-Porcupine Fault Zone. South of the fault zone, the Kinojevis Group attains a thickness greater than 10km and is overlain by calc-alkalic metavolcanics belonging to the Blake River Group.

Along the south part of the main Destor-Porcupine Fault Zone, stocks and dikes of syenite, syenodiorite, and quartz-monzonite intrude the Kinojevis Group and the fault-bounded wedges of metasediments, alkalic and komatiitic metavolcanics. These intrusive rocks are absent north of the Destor-Porcupine Fault Zone as are the alkalic metavolcanics."

10.0 REGIONAL STRUCTURE

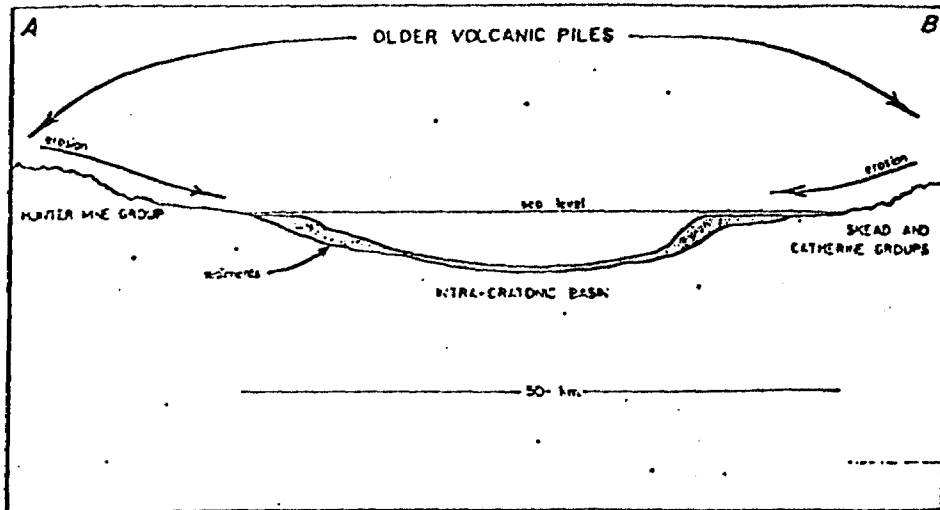
A comprehensive interpretation of the structural geology, from the Lightning River Area to the Kirkland Lake-Larder Lake district, has been developed by L.S. Jensen (1981, 1982), a synthesis of his work is presented below:

"Major fault zones such as the Destor-Porcupine Fault zone and the Kirkland Lake-Larder Lake Fault zone evolved during the deposition of volcanic and sedimentary rocks of the Upper Supergroup along the margins of the older volcanic piles represented by the Lower Supergroup. (see Figure 5)

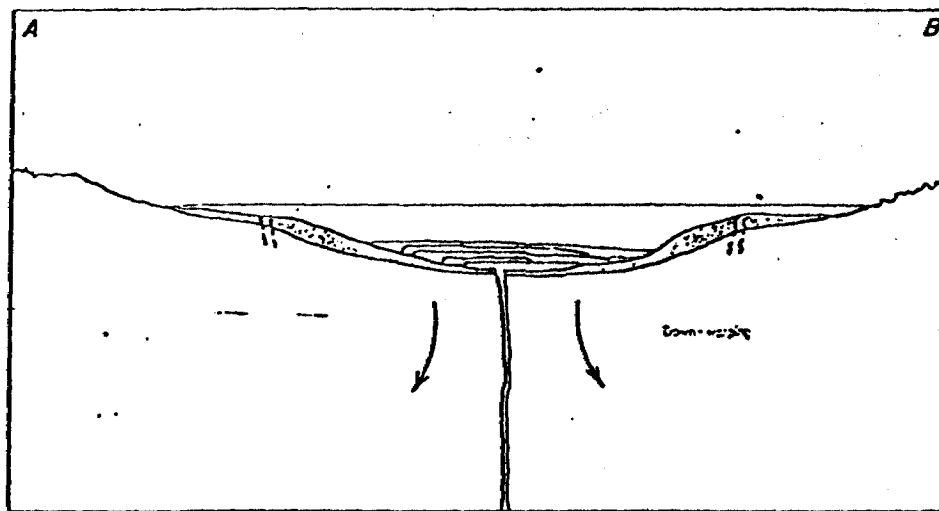
Stage 1: Prior to the deposition of the Upper Supergroup, the older volcanic piles consisted of calc-alkalic cone-like volcanoes surrounded by a shallow water shelf that extended outward toward a deeper water ocean basin (Figure 6). Turbidites and chemical sediments and tuff were probably deposited on the shelf and nearby ocean basin by currents eroding the older volcanic pile.

Stage II: At the onset of the next volcanic cycle, ultramafic flows were emplaced on the floor of the ocean basin and the sedimentary and calc-alkalic volcanic rocks marginal to the older volcanic piles (Figure 7). Ultramafic to mafic lava began to fill the basin and engulf the older felsic volcanics and associated sediments...

.....as the ultramafic lava accumulated, the weight probably depressed the floor of the basin and initiated fracturing (early expressions of the Destor-Porcupine and Kirkland Lake-Larder Lake fault zones) and slumping along the margins of the older volcanic piles.....



STAGE I: Deposition of Porcupine Group Sediments Within
 FIG. 6 an Intra-cratonic Basin



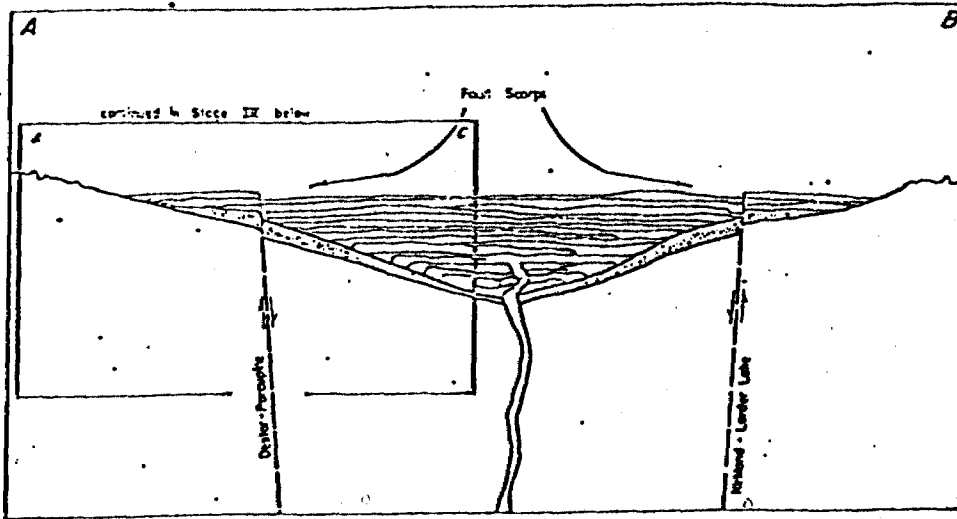
STAGE II: Extrusion of Stoughton Roquemoure Komatiitic
 FIG. 7 Volcanics From Deep Crystal Fractures, initiation
 of Basinal Subsidence

.....the fractures probably provided channelways for hydrothermal brines rising to the surface.

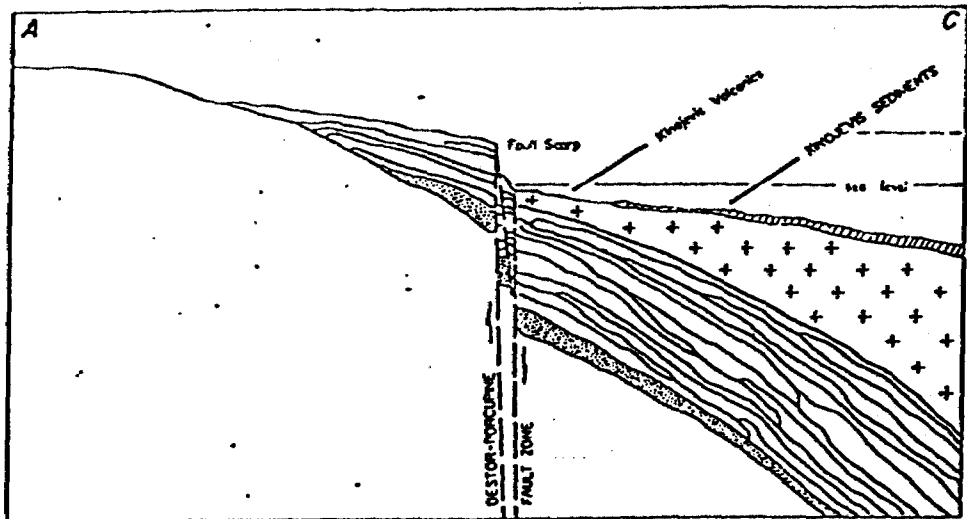
Stage III: As the basin filled with komatiitic rocks and sedimentary rocks and ultimately tholeiitic rocks, the weight of the accumulating rocks continued to depress the floor of the basin. Much of this movement probably occurred in the komatiites and sediments near the margin of the shelf (Figure 8) resulting in the serpentinization of the komatiites and the formation of the talc-chlorite schist. The movement produced downward displacement of the rocks on the basin-side of the fault zone relative to the same rocks resting on the shelf of the older volcanic pile. In the Kirkland Lake area, this displacement is estimated to be 20 to 30km, while an estimated displacement of 10-20km for the Lightning River Area is proposed.

Stage IV: At this stage, the emplacement of calc-alkalic volcanic rocks, towards the core of the newly formed volcanic pile was probably associated with an inward collapse of the older volcanic rocks towards the centre of the original basin (Figure 9). Melting of the down-dropped sedimentary and volcanic rocks at the base of the volcanic pile may have produced felsic magma and hydrothermal solutions which penetrated upward along the fault zones resulting in extensive carbonatization, silicification, and deposition of gold in fracture zones of the younger rocks. Such a mechanism would explain the presence of gold in felsic intrusive rocks of the Kirkland Lake area, and gold in quartz-carbonate veins of tholeiitic and komatiitic flow-rocks in other mining camps.

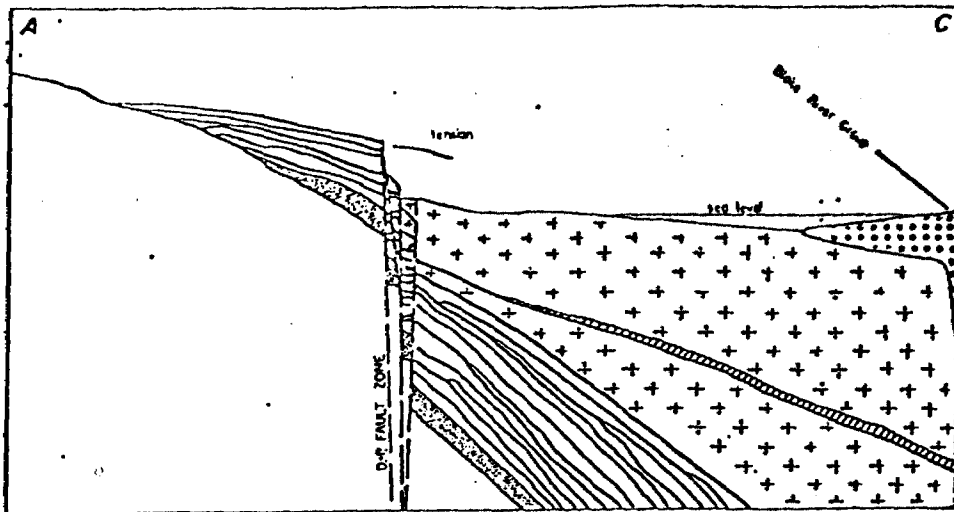
Stage V: The final event was the compression of the fracture zone, possibly associated with the intrusion of granitic batholiths on either side of the fault zone. This caused tight folding and additional fracturing along the fault zones. Migration of the gold into the hinge zones of folds and other dilation zones probably occurred at this stage." (see Figures 10 and 11)



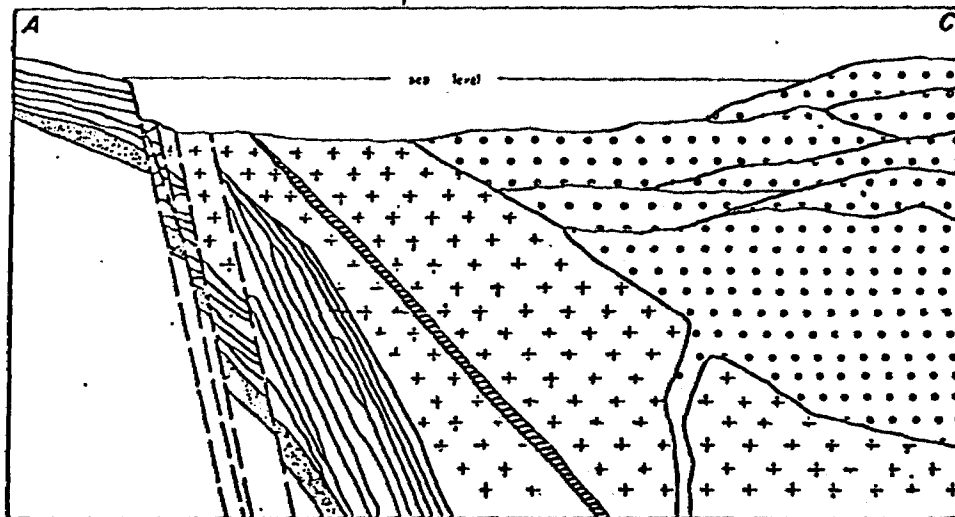
STAGE III: Continuing Komatiitic Volcanism and Crustal Depression Creates a Rapidly Subsiding Graben.
FIG. 8 The flanks of the Synclorium (Jensen, 1981), are bounded on the north and south of the Destor-Porcupine and the Kirkland Lake-Larder Lake Fault Zone, respectively.



STAGE IV: Transition from komatiitic to tholeiitic volcanism - deposition of the Kinojevis Group. Thick (100m) sequences of sediments are deposited during breaks in eruptive activity. With constant reworking of sediments, gold is concentrated in fluvial and deltaic environments, and eventually, in local basins. Graben subsidence continues.



STAGE V-I: Accelerating subsidence applies tension to the
 FIG. 10 Destor-Porcupine Fault Zone. Burial of the
 Kinojevis Sediments by Kinojevis Volcanics and
 high crustal heat flow produces local carbona-
 tization and silicification. Gold undergoes
 limited redistribution under locally produced
 hydrothermal conditions "offshore", island-arc
 calc-alkaline volcanism (Blake River Group),
 begins from a rising magma chamber.



STAGE V-II: With continued extrusion of the Blake River Group,
 FIG. 11 inward collapse of the graben produces dilation of
 the Destor-Porcupine Fault Zone. A second basin
 forms to the north of the growing island-arc vol-
 canic piles. The collapse is a time of hydro-
 thermal and granitic intrusive activity.

11.0 EXPLORATION PROGRAM

This current phase of exploration consisted of three parts.

First, a drill hole delineation and baseline survey was completed. The object of this work was to properly locate the baseline and all of the drill hole collars with respect to the eastern and western property boundaries. This information can then be used to ensure that the previously completed program, as well as all future work will be confined to the Mission Harker option property.

Second, an induced polarization geophysical survey was performed. This type of survey was recommended due to the extent and nature of the auriferous horizon that was investigated by the previous drilling.

Third, geological mapping was conducted. The intent of the mapping program was to further examine the surface geology on a property scale. This information would then be used in conjunction with the geophysically and drill acquired data, so as to facilitate future program planning.

11.1 Drill Hole Delineation and Baseline Survey

This survey was subcontracted to and completed by H. Sutcliffe Ltd. of New Liskeard, Ontario.

The survey was completed using reference point 1001 (found round iron bar) located at the intersection of L24+50W and the baseline. This point is part of the grid and survey system that was installed by American Barrick Resources on their adjoining property. The collars of all eight drill holes as well as the baseline (with two control points) have been located. In addition to this information the following exterior claim posts have been surveyed, P2-11459, P3-11460, P4-11460, common posts P1-11459 and P2-11547 and common posts P1-11460, P3-11547 and P4-11459. Consult Table 4 and Map 6256-86-1-1 for the aforementioned survey information.

TABLE 4
BASELINE AND DRILL HOLE LOCATION SURVEY
MISSION HARKER EXPLORATION INC.
PROJECT 6256

COORDINATE LIST

<u>DRILL HOLE</u>	<u>NORTHING</u>	<u>EASTING</u>	<u>ELEVATION TOP OF CASING</u>	<u>ELEVATION GROUND</u>
85-1	10100.036	6529.635	284.37	284.11
85-2	10039.745	6469.225	299.27	298.72
85-3	10096.870	6382.203	290.20	289.87
86-4	10165.863	6380.083	289.45	288.87
86-5	10091.725	6331.991	292.47	291.82
86-6	10040.292	6432.080	302.45	301.71
86-7	10039.753	6432.112	302.42	
86-8	10019.445	6384.421	303.89	303.29

	<u>POINT</u>	<u>NORTHING</u>	<u>EASTING</u>	<u>ELEVATION</u>
ADDITIONAL	100	9926.183	6585.111	
STATIONS	101	9958.233	6679.829	
	102	9923.997	6521.617	290.97 (Top SIB)
	103	9920.723	6436.287	298.45 (Top SSIB)
	104	9913.986	6223.881	
	105	9912.164	6187.148	
	106	9959.722	5991.276	
	107	10063.059	6271.510	
	108	9985.430	6583.123	
	109	9625.302	6627.270	
	110	9506.147	5869.741	
	111	9907.503	5977.280	

2 Induced Polarization Survey

The gold bearing host is a variably silicified and mineralized unit that has been developed due to, at least one deformation-alteration event.

Due to the presence of the alteration and mineralization it is known that the induced polarization technique will outline the auriferous zone through both, the frequency effect and the resistivity parameters. The data sets as generated by these survey segments will present two interdependent geophysically determined expressions of the zone that will facilitate further program planning.

The resistivity portion of this survey will give an anomalous response due to the well developed silicification, which when best developed was found across core lengths of up to 19 meters (hole 6256-86-8). Anomalous frequency effect values will be generated due to the presence of pyrite which is found in concentrations of from 4% to 20% within the alteration zones.

The induced polarization survey was subcontracted to and completed by Remy Belanger Engineering of Evain, Quebec.

The data for resistivity, frequency effect and metal factor was presented in pseudo section format. These sections show the geophysically measured and derived properties of the surrounding rocks as a two dimensional pattern that, is developed by conducting the survey along the previously cut grid lines.

From the results of this survey it can be seen that the alteration zones are best highlighted by plots of the frequency effect and the metal factor. The resistivity plots show a variety of values, but the high values cannot immediately be identified as representing the silicified gold zone or a more resistive zone within the basalts. The frequency effect in places even differentiates between the weakly developed "Lower Zone" and the more interesting and better mineralized "Upper Zone" (Conquer-Simunovic 1986). See Maps 6256-86-5-6 through to -17 in back pocket.

Upon examination of the IP results, as presented in the pseudo sections, it can be seen that a high degree of correlation between the frequency effect, metal factor and the degree of mineralization and alteration is present. The zones of best alteration and mineralization show a virtually identical correlation to the zones of the highest frequency effect and metal factor. This correlation is best shown in holes 6256-86-6, -7 and -8.

Analysis and comparison of the results of the IP survey and the diamond drilling suggest to the authors that any future programmes can in part be planned using these results.

11.3 Geological Mapping

The geological mapping portion of the programme was completed by this firm, with Mike Simunovic as the geologist and Andrew Markov as assistant.

Bedrock exposure was found to be confined to two northeasterly trending areas. The most northerly of these areas which was examined is located on lines 26+00W to 27+50W at approximately 2+25N to 3+25N. Although the geophysics suggests that these rocks could be part of the "Lower Zone", appropriate exposures that might have confirmed this were not located. The mapped outcrops were all found to be composed of massive basaltic to andesitic flows, one exposure might in fact be a brecciated flow top.

The remainder of the bedrock exposures that were investigated are confined to a large ridge that trends in a northeasterly direction. At the eastern most end of this ridge (L25+50W and L26+00W), the north face shows a steep slope, but a gradual decrease in elevation to the south and west eventually negates any topographic difference. As with the northern exposures, any significant evidence of alteration or mineralization that might be part of or related to the "Upper Zone" could not be found. This was not unexpected, with drill indications suggesting that the zone should outcrop just to the north of the ridge. This area is covered by up to 8.5 metres of overburden.

The mapped exposures consisted of sediments and mafic volcanics. The volcanics, while occupying the high ground from L25+50W to L29+50W, were found to be of basaltic to andesitic composition and are geophysically inferred to be in fault contact with a unit of greywacke at L30+00W. As with the more northerly outcroppings, mapping of the bedrock exposures along this ridge failed to uncover any mineralized or altered occurrences of the auriferous horizon.

It should be noted that a large amount of rock is covered by only a thin veneer of overburden and while new exposures could be acquired with little difficulty, it was beyond the scope of this mapping program to make any such attempts. See Map 6256-86-4-1 in back pocket.

11.4 Sample Collection and Assaying

During the course of the mapping programme, a total of five bedrock grab samples were collected. For a listing of the sample locations, rock descriptions and assay results refer to Table 5. Of these samples, three were collected from the greywacke unit and returned geochemically anomalous results that ranged from 88 ppb to 128 ppb. The remaining two samples were collected from the mafic volcanics with assays of 19 ppb and 45 ppb being returned.

The results from these five samples when compared with the interpreted IP anomaly locations suggest that a more detailed mapping and stripping programme could possibly uncover a surface expression of the auriferous horizon. The preliminary indications suggest that sedimentary rocks might be the more favourable area to investigate, but the volcanics should also be explored.

12.0 CONCLUSIONS

The conclusions that can be drawn from the individual segments of this programme, while being initially independent, can and should be interrelated. This approach will allow for a more meaningful geological interpretation and therefore allow for better programme planning.

TABLE 5
MISSION HARKER EXPLORATION LTD.
SAMPLE DESCRIPTION AND ASSAY RESULTS

Sample No.	Location	Description	Assay Result
6256-0010A	26+10W/3+25N	basalt, minor carb tr py	19 ppb
6256-0011A	L30W/2+60S	basalt w/silicified frac. carb, 1-2% diss. py	45 ppb
6256-0012A	L30W/2+00S	Greywacke, diss. py, minor carb, possible hem. alt'n	89 ppb
6256-0013A	L30W/1+25S	Greywacke, diss. py	88 ppb
6256-0014A	30+55W/2+70S	Greywacke, diss. py	128 ppb

The IP survey has outlined a distinct anomalous zone that trends in a northeast-southwest direction across the property. This zone is coincident with an anomalous zone that was outlined by the previously completed VLF-EM survey. The degree and strength of the IP results suggests that the mineralized horizon persists across the entire width of the property. It therefore becomes apparent that the IP survey can be used as a reliable guide for future programme planning.

The mapping programme, though examining only a small quantity of the available bedrock, was able to confirm the basic geological trends that had been outlined by previous, government sponsored mapping campaigns, and the 1985 magnetometer survey.

The property is known to be underlain by two rock types, one of which is the mafic volcanics and the other being a unit of sediments. Surface mapping has located dominantly massive flows with only one occurrence of flow top breccia. The sediments are represented by a greywacke horizon. Both rock types, even with the little exposure available, show at least minor amounts of mineralization and alteration. Even though exposures of the gold bearing horizons were not recognized, the alteration as seen in conjunction with the geochemically anomalous assay results show that more surface work is warranted.

The sum total of all the results as acquired via both this, and the previous programme, shows that the property is underlain by a very exciting gold bearing structure. Due to the presence of this structure it is felt that the Mission Harker property exhibits above average potential for hosting an economic gold deposit. In light of this, the following recommendations have been made.

13.0 RECOMMENDATIONS

The most recent exploration activities comprised the first two of the three phases as recommended in the 1986 report "Summary Report of Geophysics and Diamond Drilling..." (Conquer, Simunovic). The remaining third phase was to be a 4700 meter diamond drilling programme. It is still recommended that this drilling be completed, but at the same time further surface examinations should be initiated.

Therefore, a two phase exploration programme is recommended. These phases, although presented separately could be run concurrently.

The first phase of this program would consist of prospecting and mechanical stripping. The intent of this work is to locate any surface expressions of the gold bearing horizon. With the knowledge that the overburden is relatively shallow the possibility of finding economic mineralization on surface must be examined. The second phase will consist of the aforementioned 4700 meter (15,420 feet) diamond drilling. The aim of this drilling is to further investigate and confirm the size and potential of this gold zone.

It is estimated that this two phase programme will cost \$495,000.00.

14.0 COST ESTIMATES

Phase I

Prospecting

Wages

Prospector

7 days @ \$200./day 1,400.00

Assistant

7 days @ \$150./day 1,050.00

Meals and Accommodation

7 days @ 2 men/day = 14 man days

14 man days @ \$50./man day 700.00

Transportation

vehicle gas and maintenance 500.00

Field Supplies 500.00

Stripping and Trenching

10 days @ \$1,000./day 10,000.00

Mapping and Sampling

Wages

Senior

5 days @ \$300./day 1,500.00

Junior

5 days @ \$200./day 1,000.00

Meals and Accommodation

5 days @ 2 men/day = 10 man days

10 man days @ \$50./man day 500.00

Transportation

vehicle gas and maintenance 500.00

Field Supplies 200.00

Assaying 500.00

18,350.00

10% contingencies 1,835.00Phase I Total \$20,185.00Phase II

Diamond Drilling - all inclusive

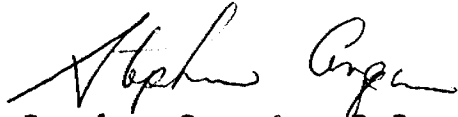
4700 meters @ \$91.84/meter 431,648.00


10% contingencies 43,164.80Phase II Total \$474,812.80

Phase I 20,185.00

Phase II 474,812.80Total \$494,997.80say \$495,000.00

Respectfully submitted by,


Stephen Conquer, B.Sc.


Mike Simunovic, B.Sc.

October 3, 1986
Timmins, Ontario

REFERENCES

Conquer, S.W.

Simunovic, M.R.

- 1986: Summary Report of Geophysics and Diamond Drilling of the Harker Township, Larder Lake Mining Division property of Mission Harker Exploration Ltd., Project #6256:
Unpublished Company Report

Jensen, L.S.

- 1981: Gold Mineralization in the Kirkland Lake - Larder Lake Area; P59-65 in Genesis of Archean Volcanic-Hosted Gold Deposits, Symposium held at the University of Waterloo, March 7, 1980, Ontario Geological Survey, MP97, 175p.
- 1982: Precambrian Geology of the Lightning River Area, Cochrane District; Ontario Geological Survey, Map P.2433, Geological Series-Preliminary Map, Scale 1:63,360 or 1 inch to 1 mile. Geology 1973.
- 1982: Precambrian Geology of the Magusi River Area, Cochrane and Timiskaming District; Ontario Geological Survey Map P.2434, Geological Series. Preliminary Series Map, Scale 1:63,360 or 1 inch to 1 mile. Geology 1968-1972.

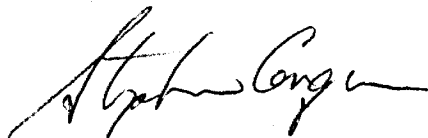
Satterly, J.

- 1951: Geology of Harker Township, Cochrane District; Ontario Dept. of Mines Annual Report, Vol. LX, part VII, 1951; with accompanying Map No. 1951-4. Geology 1948 and 1949.
- 1953: Geology of the North Half of Holloway Township, Cochrane District; Ontario Dept. of Mines Annual Report, Vol. LXII, part VII, 1953, pl-38; with accompanying Map No. 1953-4.

CERTIFICATE OF QUALIFICATIONS

I, Stephen Conquer hereby certify:

1. that I am a geologist employed by David R. Bell Geological Services Inc., 261 Third Avenue, Timmins, Ontario
2. that I am a graduate of the University of Waterloo, holding a Bachelor of Science degree (1979)
3. that I have been practising my profession as a geologist since 1979
4. that I do not have nor do I expect to receive either directly or indirectly, any interest in this property or the securities of Mission-Harker Exploration Ltd.



Stephen W. Conquer, B.Sc.


Timmins, Ontario
October 3, 1986

CERTIFICATE OF QUALIFICATIONS

I, Mike Simunovic hereby certify:

1. that I am a geologist employed by David R. Bell Geological Services Inc., 261 Third Avenue, Timmins, Ontario
2. that I am a graduate of Lakehead University in Thunder Bay, holding a Bachelor of Science degree in Geology (1983)
3. that I have been practising my profession as a geologist since 1983
4. that I do not have nor do I expect to receive either directly or indirectly, any interest in this property or the securities of Mission-Harker Exploration Ltd.

Timmins, Ontario
October 3, 1986


Mike Simunovic, B.Sc.

APPENDIX I
CERTIFICATE OF ANALYSIS



BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

Certificate of Analysis

NO. 0423

DATE: February 19, 1987

SAMPLE(S) OF: Rock (5)

RECEIVED: February 1987

SAMPLE(S) FROM: Mr. Stephen Conquer, David R. Bell Geological Services Inc.

PROJECT: #6256

<u>Sample No.</u>	<u>Au ppb</u>
6256-010A	19
1A	45
2A	89
3A	88
4A	128

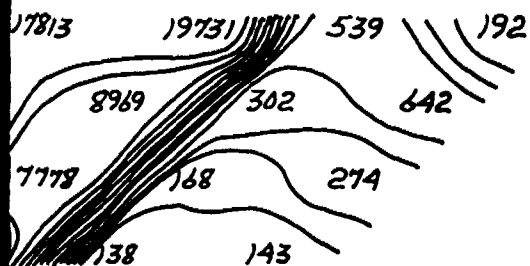
BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER 

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

0+50s BL-0+00 0+50N 1+00N 1+50N

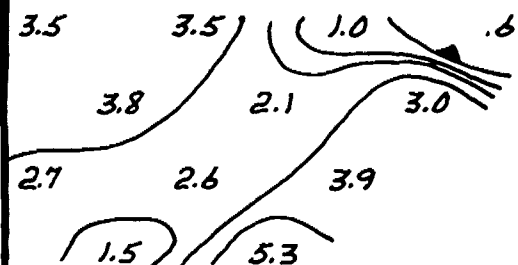
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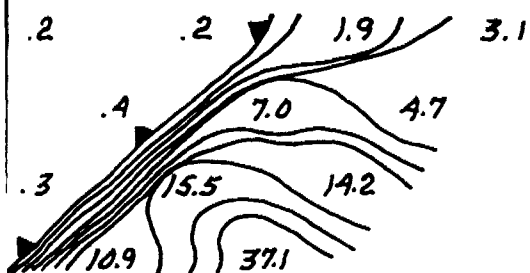
FREQUENCY EFFECT (APP) IN %



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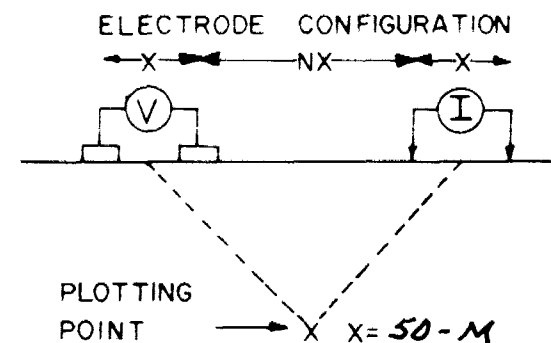
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N = 5

COMPANY: MISSION HARKER EXPL. LTD.

PROPERTY: HARKER J.W.P.

ONTARIO

LINE NO. - 28150-W



Map 6256-86-5-13

SURFACE PROJECTION OF ANOMALOUS ZONES

FREQUENCIES: .25 & 4.0 H.Z.

DEFINITE

PROBABLE

POSSIBLE

NOTE CONTOURS AT LOGARITHMIC INTERVALS 1, 1.5, 2., 3., 5., 7.5, 10.0

INSTRUMENT : PHOENIX IPV-1 IPT-1

CONTRACTOR : REMY BELANGER ENRG.

DATE SURVEYED:

APPROVED:

SEPT-16- 1986

A. Gagnon, M. L. L'Amour

OPERATOR: ANDRE FAUBERT

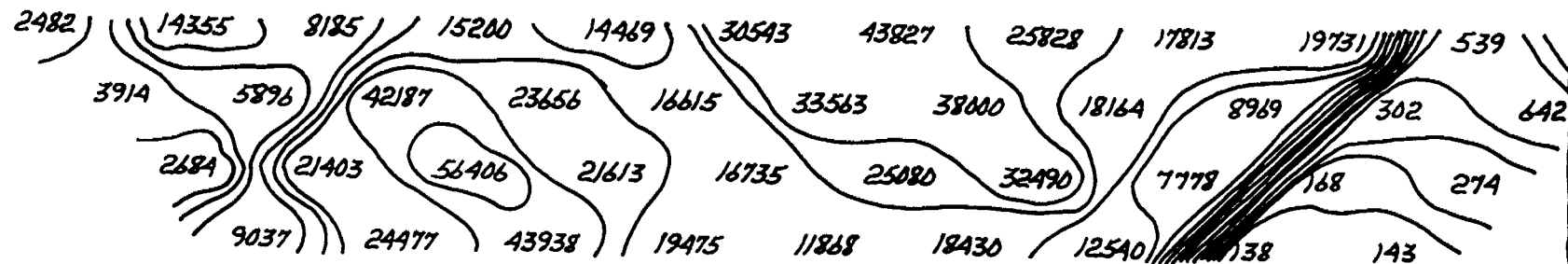
DATE: Sept, 1986

INDUCED POLARIZATION AND RESISTIVITY SURVEY

OM86-6-P-142

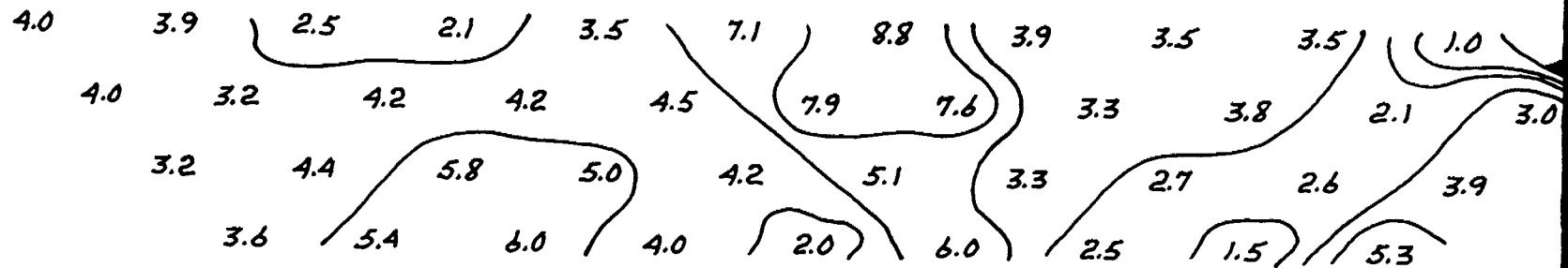
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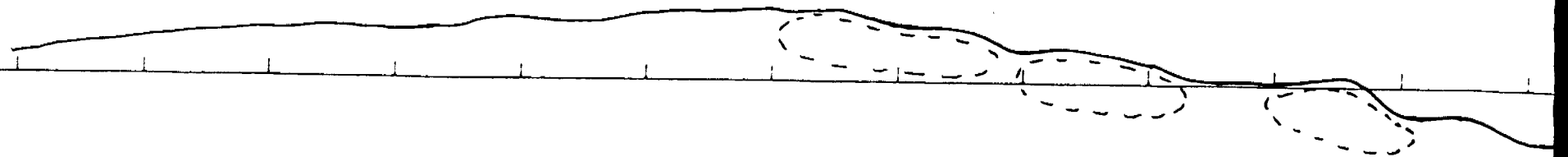
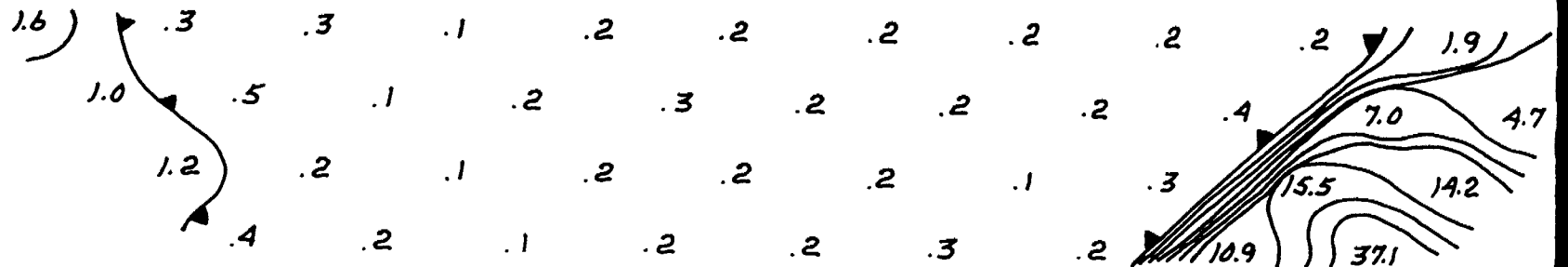


(MAGNETITE?)
CHECK FOR HIGH MAG.

↓ FAULT



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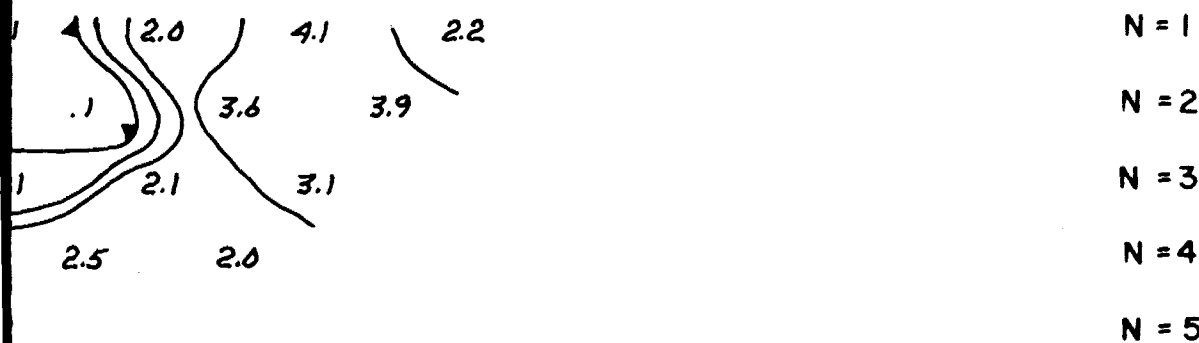


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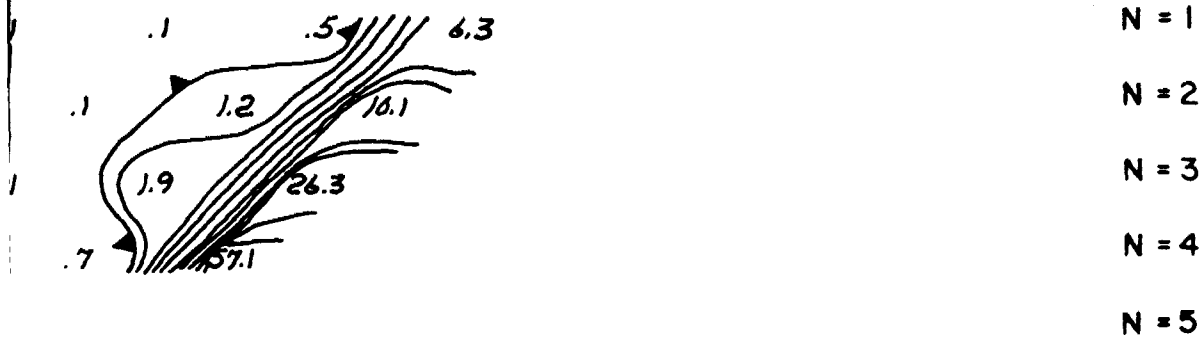


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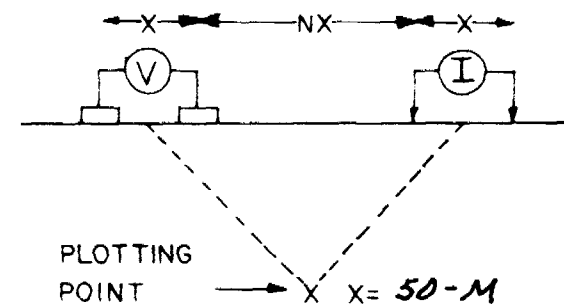
COMPANY: Mission HARKER Expl. LTD.

PROPERTY: HARKER T.W.P.

ONTARIO

LINE NO. - 28+00-W

ELECTRODE CONFIGURATION



Map 6256-86-5-12

SURFACE PROJECTION OF ANOMALOUS ZONES

FREQUENCIES: .25 & 4.0 H.Z.

DEFINITE

PROBABLE

POSSIBLE

NOTE CONTOURS AT LOGARITHMIC INTERVALS 1, 1.5, 2, 3, 5, 7.5, 10.0

INSTRUMENT : PHOENIX IPV-1
IPT-1

CONTRACTOR : REMY BELANGER ENRG.

DATE SURVEYED:

APPROVED:

SEPT.-15- 1986

S. Giguere, M. Lussier

OPERATOR: ANDRE FAUBERT

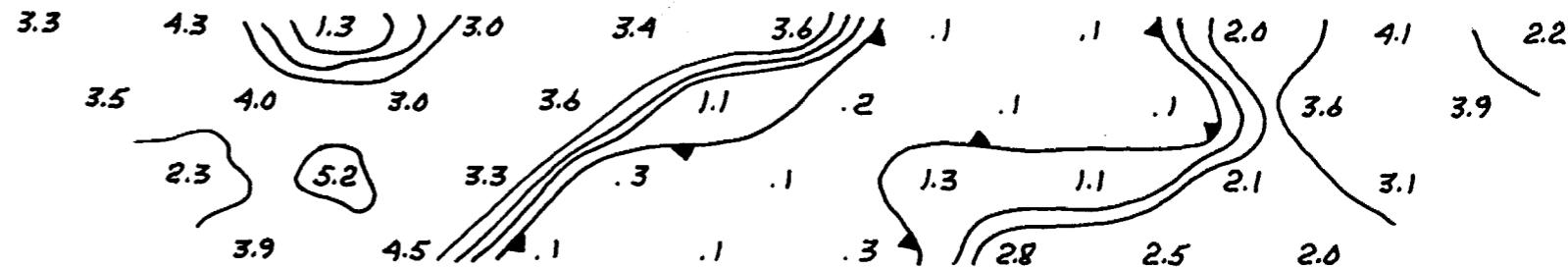
DATE: Sept, 1986

INDUCED POLARIZATION
AND RESISTIVITY SURVEY

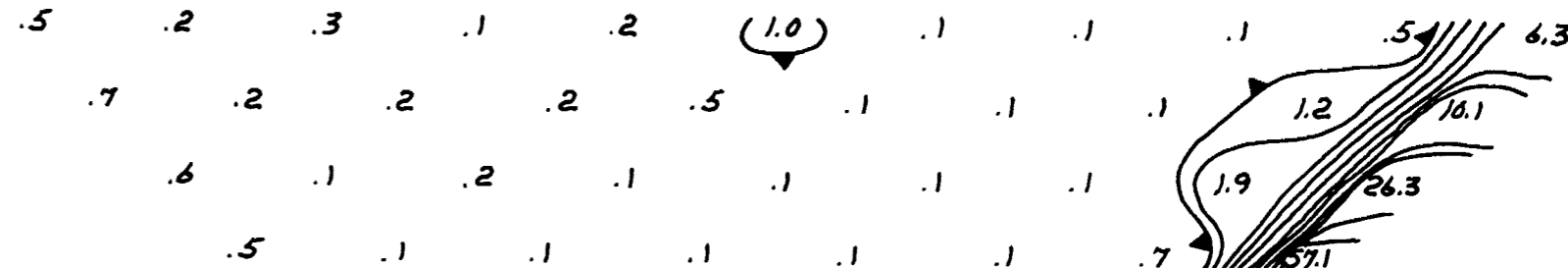
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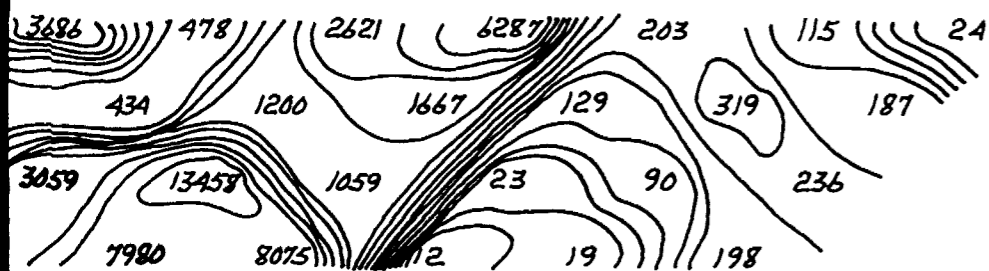


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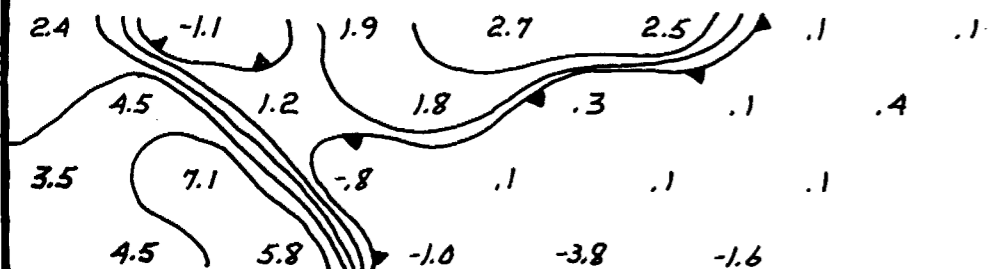
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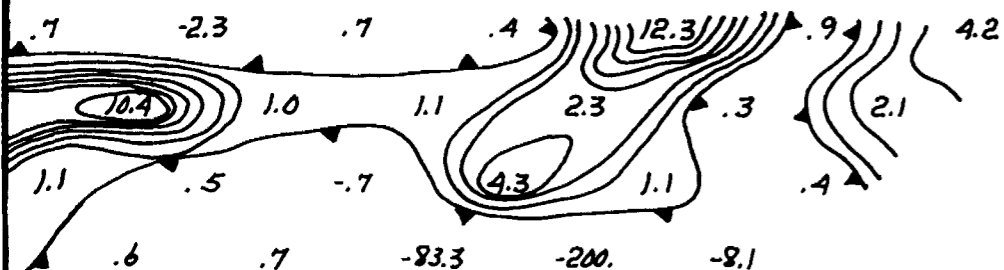
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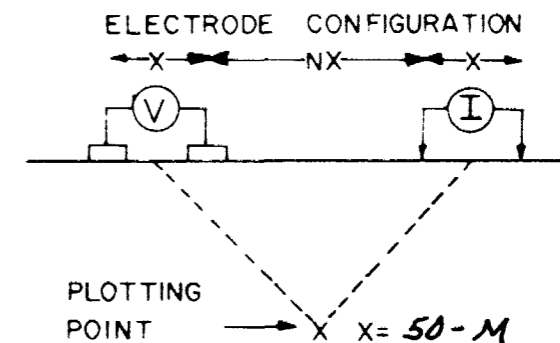
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COMPANY: MISSION HARKER EXPL LTD.

PROPERTY: HARKER T.W.P.

ONTARIO

LINE NO. - 27+50-W



Map 6256-86-5-11

SURFACE PROJECTION OF ANOMALOUS ZONES

FREQUENCIES: .25 & 4.0 H.Z.

DEFINITE ————
PROBABLE |||||
POSSIBLE ////

NOTE CONTOURS AT LOGARITHMIC INTERVALS 1, 1.5, 2., 3., 5., 7.5, 10.0

INSTRUMENT : PHOENIX IPV-1
IPT-1

CONTRACTOR : REMY BELANGER ENRG

DATE SURVEYED: SEPT-15-18-1986

APPROVED: S. Conger, M. Simuon

OPERATOR: RAYMOND LAVOIE

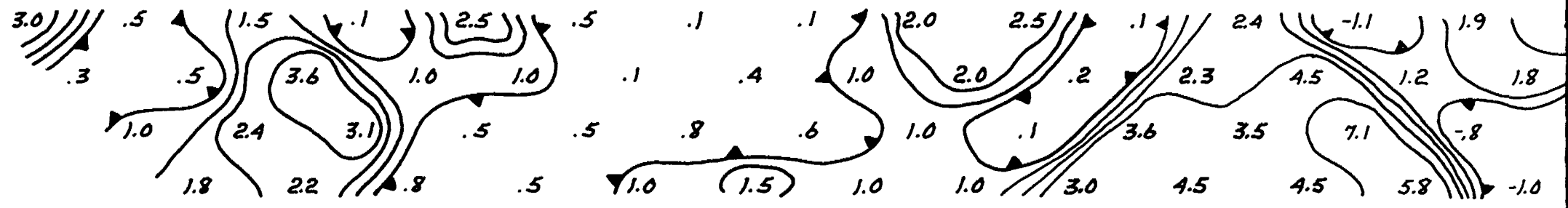
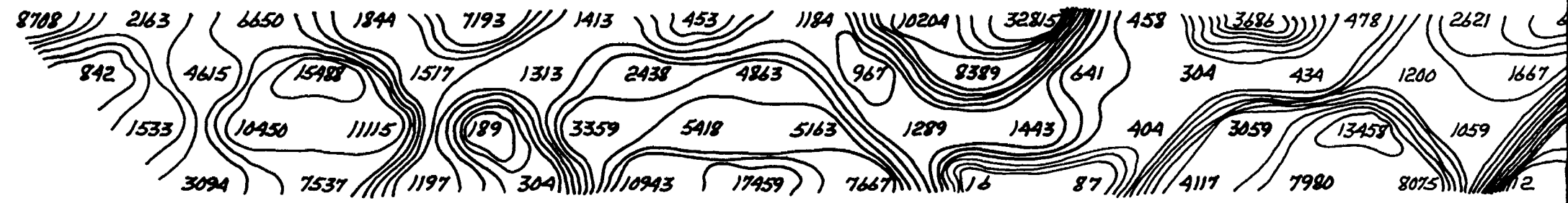
DATE: Sept, 1986

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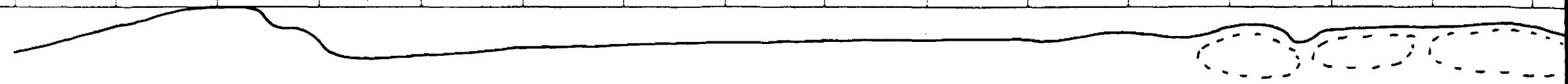
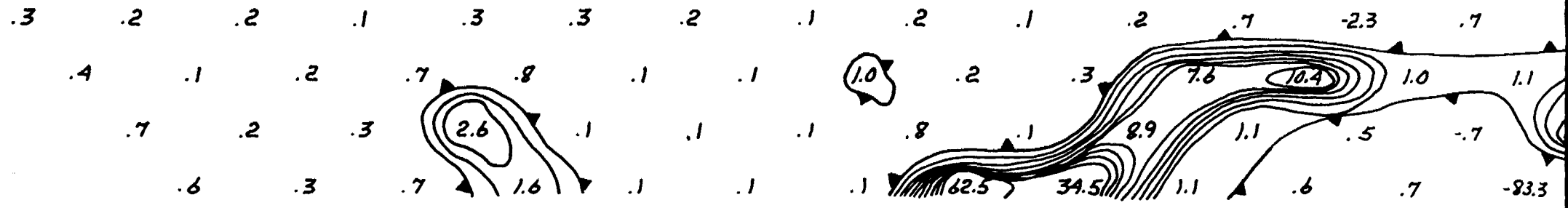
OM86-6-P-142

63, 5005

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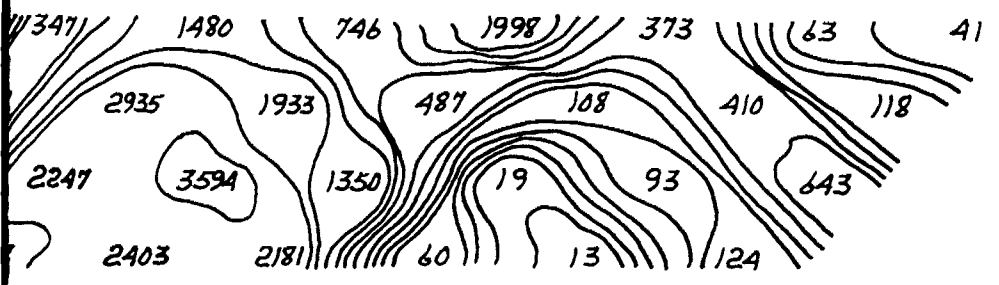


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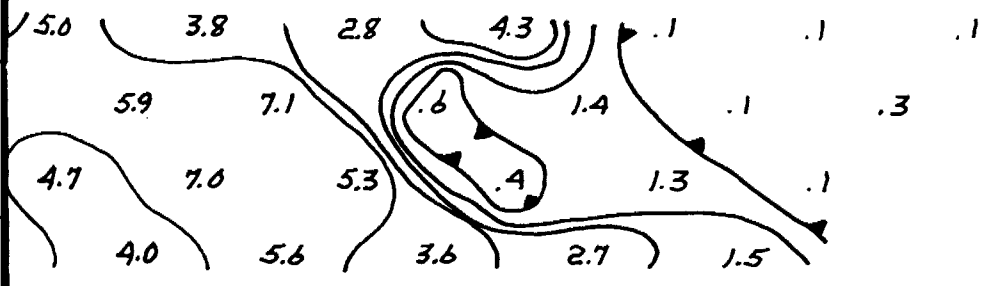


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FAULT

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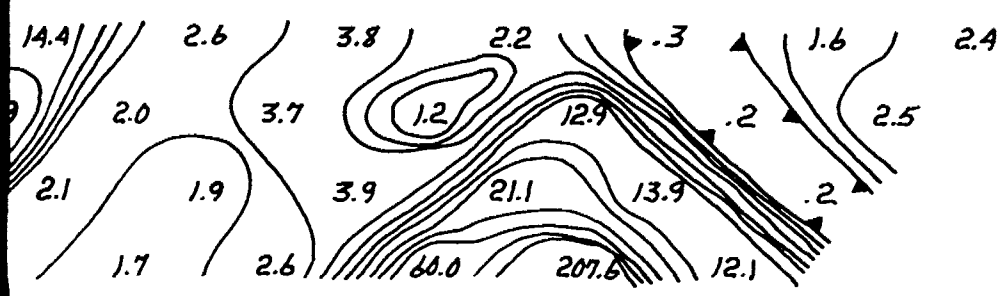
FREQUENCY EFFECT (APP) IN %



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N=4
N=5

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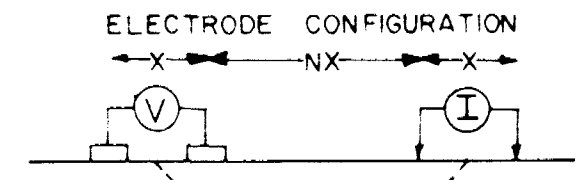
45°
DRILL
HOLE

COMPANY: Mission HARKER Expl. LTD.

PROPERTY: HARKER J.W.P.

ONTARIO

LINE NO. - 27+00-W



PLOTTING POINT X X=50-M

Map 6256-86-5-10

SURFACE PROJECTION OF ANOMALOUS ZONES

FREQUENCIES: 25 & 4.0 H.Z.

DEFINITE

PROBABLE

POSSIBLE

NOTE CONTOURS AT LOGARITHMIC INTERVALS 1, 1.5, 2, 3, 5, 7.5, 10.0

INSTRUMENT : PHOENIX IPV-1 IPT-1

CONTRACTOR : REMY BELANGER ENRG.

DATE SURVEYED: SEPT-14-15-18-1986

APPROVED: S. Conger, M. Limmense

OPERATOR ANDRE FAUBERT

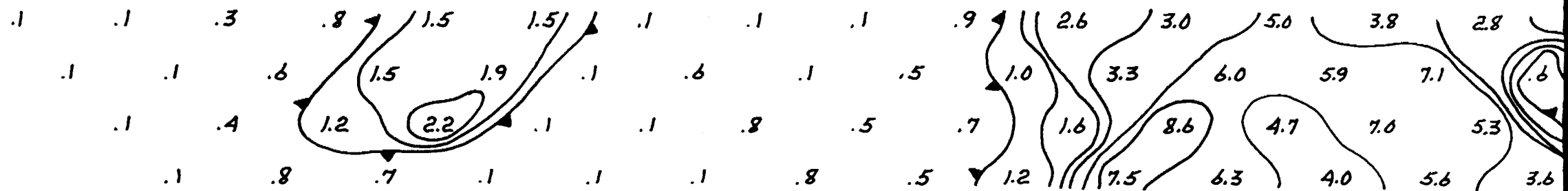
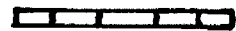
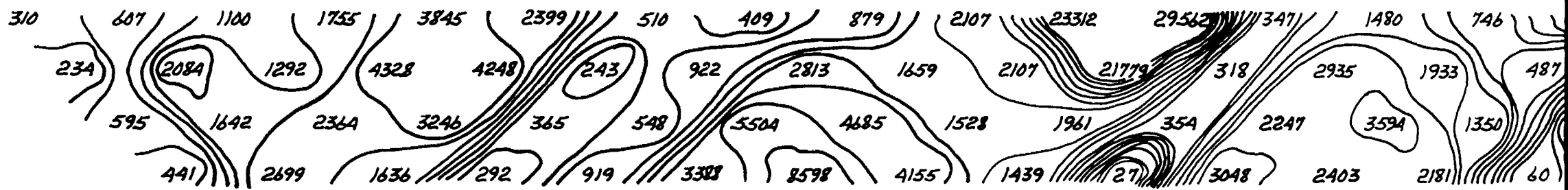
DATE: Sept, 1986

INDUCED POLARIZATION AND RESISTIVITY SURVEY

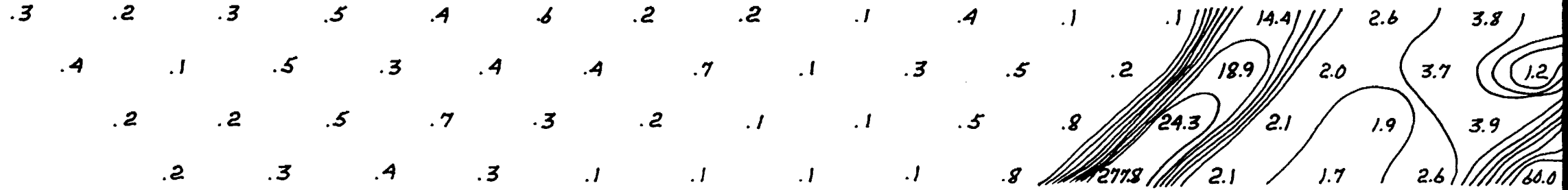
OM 86-6-P-142

63.5005

5+50s 5+00s 4+50s 4+00s 3+50s 3+00s 2+50s 2+00s 1+50s 1+00s 0+50s Bl-0+00 0+50N 1+00N 1+50N 2+00N 2+50



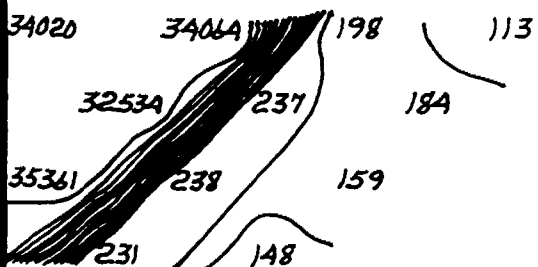
5+50s 5+00s 4+50s 4+00s 3+50s 3+00s 2+50s 2+00s 1+50s 1+00s 0+50s Bl-0+00 0+50N 1+00N 1+50N 2+00N 2+50



45°
G,
DRILL
HOLE

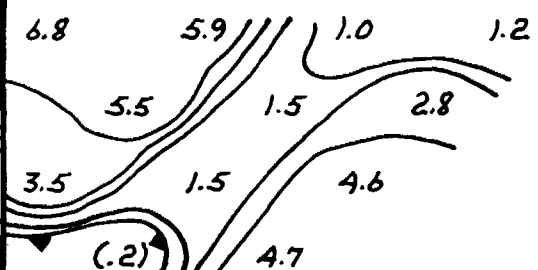
1+00s 0+50s BL-0+00 0+50N 1+00N

RESISTIVITY (APP) IN OHM METER



N = 1
N = 2
N = 3
N = 4
N = 5

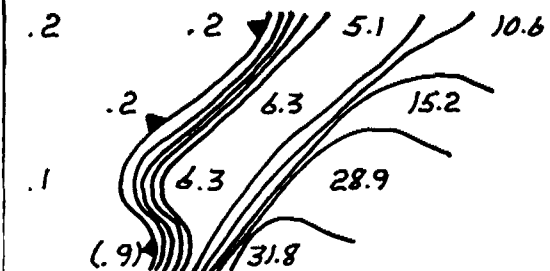
FREQUENCY EFFECT (APP) IN %



N = 1
N = 2
N = 3
N = 4
N = 5

1+00s 0+50s BL-0+00 0+50N 1+00N

METAL FACTOR (APP)



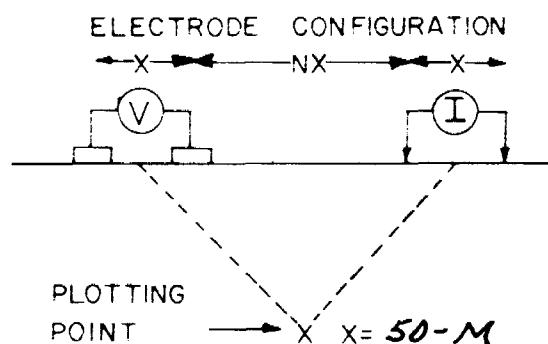
N = 1
N = 2
N = 3
N = 4
N = 5

COMPANY: MISSION HARKER Expl. LTD.

PROPERTY: HARKER T.W.P.

ONTARIO

LINE NO. - 29+00-W



Map 6256-86-5-14

SURFACE PROJECTION OF ANOMALOUS ZONES

FREQUENCIES: .25 & 4.0 H.Z.

DEFINITE ————
PROBABLE |||||
POSSIBLE ////

NOTE CONTOURS AT LOGARITHMIC INTERVALS 1, 1.5, 2, 3, 5, 7.5, 10.0

INSTRUMENT : PHOENIX IPV-1
IPT-1

CONTRACTOR : REMY BELANGER ENRG.

DATE SURVEYED:

APPROVED:

SEPT-16- 1986

S. Coq M. Simons

OPERATOR: ANDRE FAUBERT

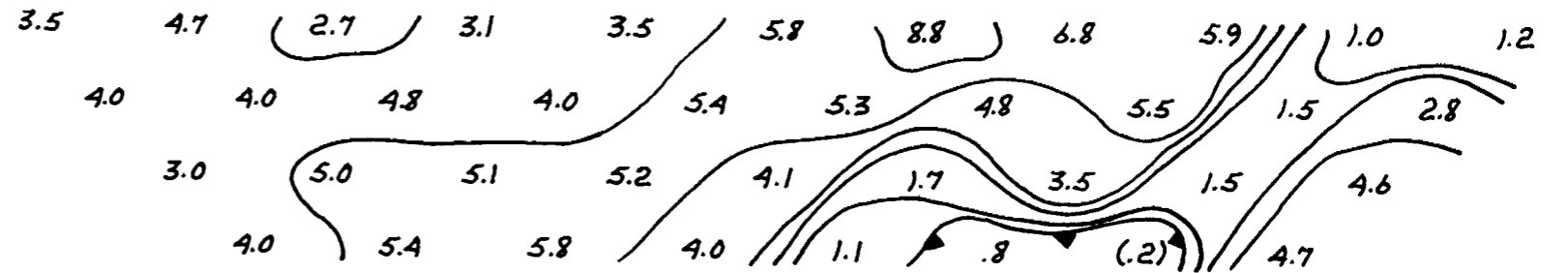
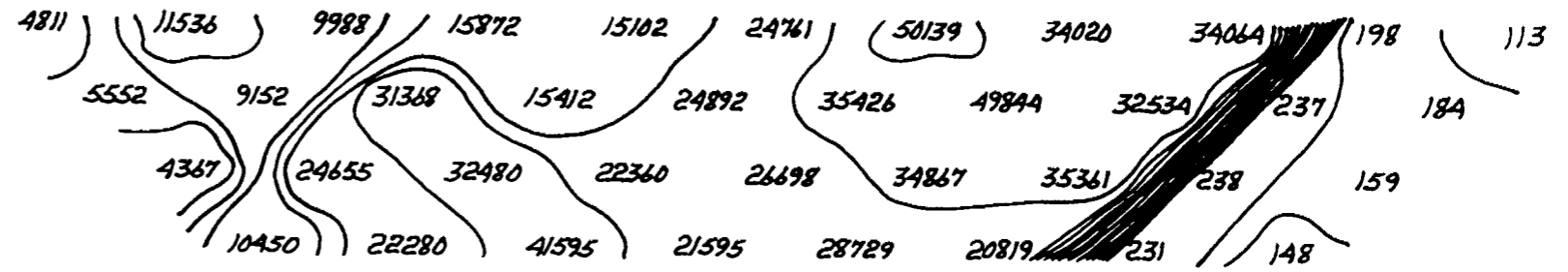
DATE: Sept, 1986

INDUCED POLARIZATION AND RESISTIVITY SURVEY

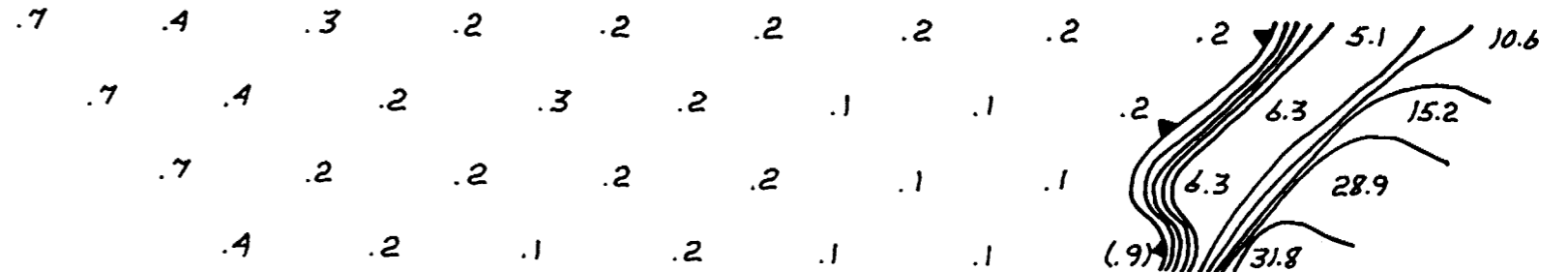
0486-6-P-142

63.5005

5+50s 5+00s 4+50s 4+00s 3+50s 3+00s 2+50s 2+00s 1+50s 1+00s 0+50s Bl-0+00 0

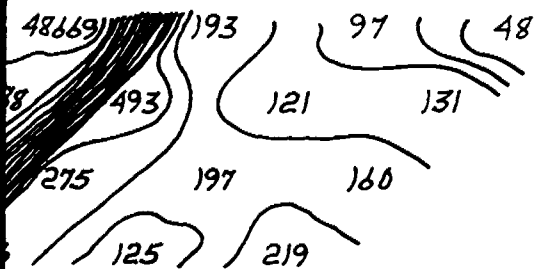


5+50s 5+00s 4+50s 4+00s 3+50s 3+00s 2+50s 2+00s 1+50s 1+00s 0+50s Bl-0+00 0



1+00s 0+50s 2L-0+00 0+50N 1+00N

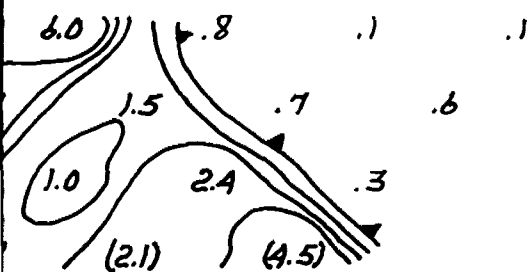
RESISTIVITY (APP) IN OHM METER



N = 1
N = 2
N = 3
N = 4
N = 5

1+00s 0+50s 2L-0+00 0+50N 1+00N

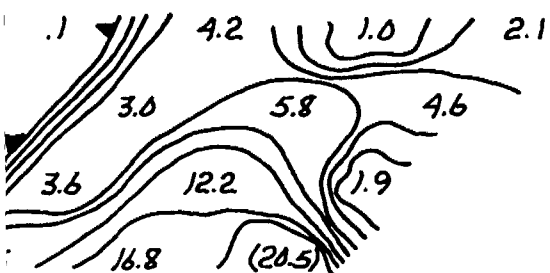
FREQUENCY EFFECT (APP) IN %



N = 1
N = 2
N = 3
N = 4
N = 5

1+00s 0+50s 2L-0+00 0+50N 1+00N

METAL FACTOR (APP)



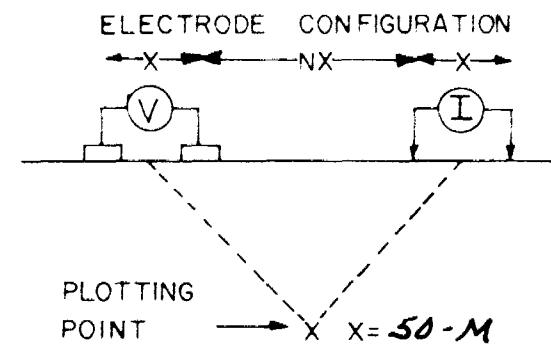
N = 1
N = 2
N = 3
N = 4
N = 5

COMPANY: MISSION HARKER EXPL. LTD.

PROPERTY: HARKER T.W.P.

ONTARIO

LINE NO. - 29+50-W



Map 6256-86-5-15

SURFACE PROJECTION OF ANOMALOUS ZONES

FREQUENCIES: .25 & 4.0 H.Z.

DEFINITE
PROBABLE
POSSIBLE

NOTE CONTOURS AT LOGARITHMIC INTERVALS 1, 1.5, 2, 3, 5, 7.5, 10.0

INSTRUMENT : PHOENIX IPV-1 IPT-1

CONTRACTOR : REMY BELANGER ENRG.

DATE SURVEYED:

APPROVED:

SEPT.-16- 1986

S. Conger, M. Simonovic

OPERATOR: ANDRE FAUBERT

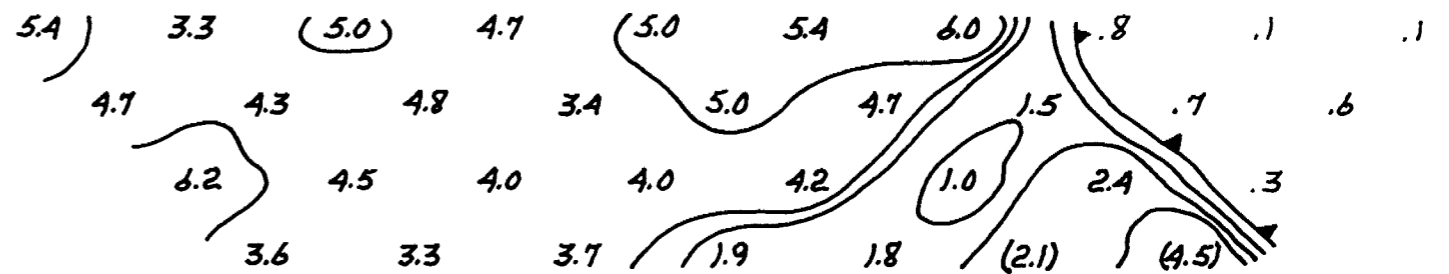
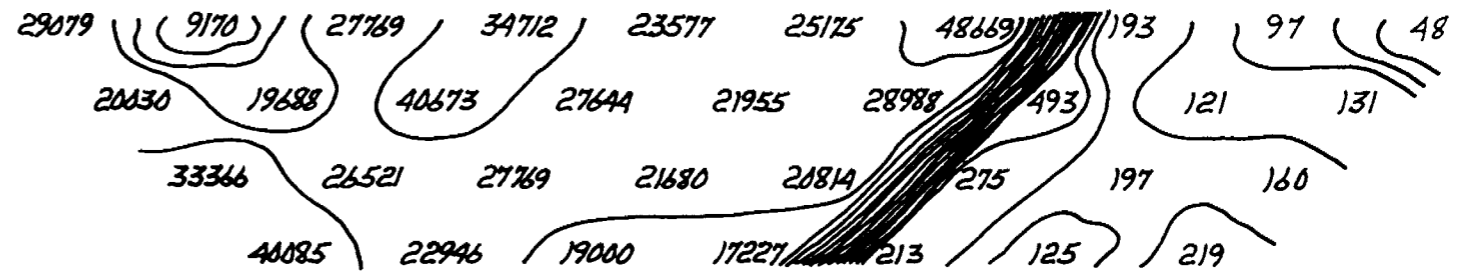
DATE: Sept, 1986

INDUCED POLARIZATION AND RESISTIVITY SURVEY

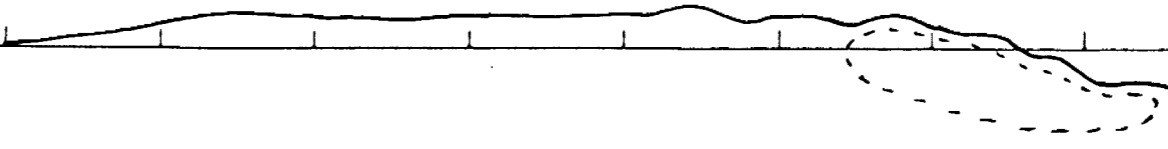
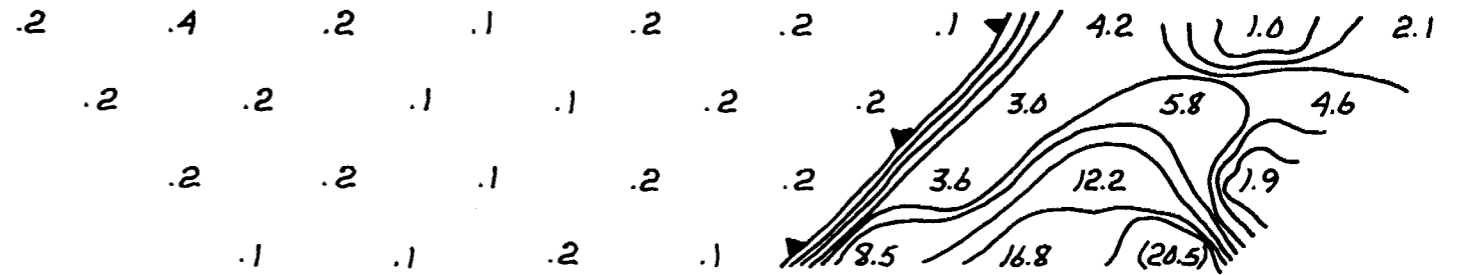
OM86-6-P-142

63.5005

5+00s 4+50s 4+00s 3+50s 3+00s 2+50s 2+00s 1+50s 1+00s 0+50s Bl-0+00 0+

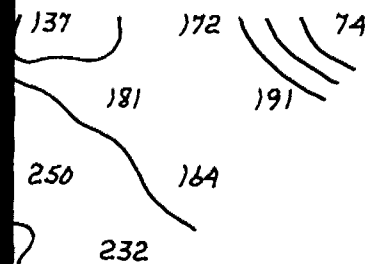


5+00s 4+50s 4+00s 3+50s 3+00s 2+50s 2+00s 1+50s 1+00s 0+50s Bl-0+00 0+



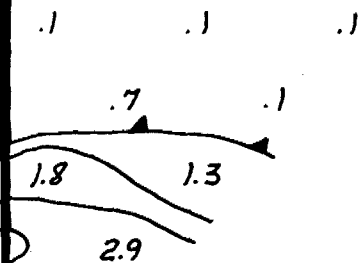
1+00s 0+50s Bl-0+00 0+50w

RESISTIVITY (APP) IN OHM METER



N = 1
N = 2
N = 3
N = 4
N = 5

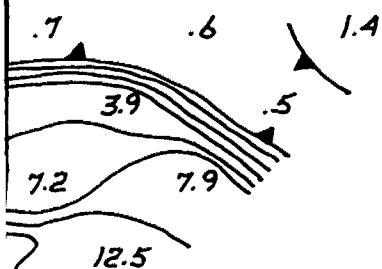
FREQUENCY EFFECT (APP) IN %



N = 1
N = 2
N = 3
N = 4
N = 5

1+00s 0+50s Bl-0+00 0+50w

METAL FACTOR (APP)



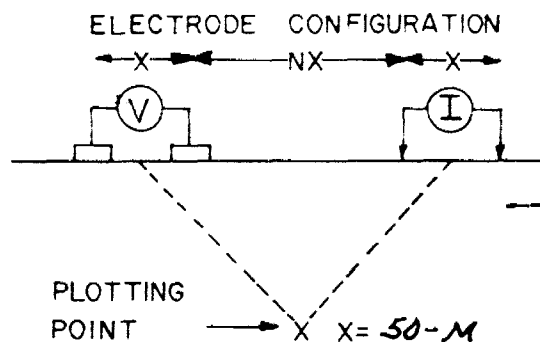
N = 1
N = 2
N = 3
N = 4
N = 5

COMPANY: MISSION HARKER EXPL. LTD.

PROPERTY: HARKER T.W.P.

ONTARIO

LINE NO. - 30+00-W



Map 6256-86-5-16

SURFACE PROJECTION OF ANOMALOUS ZONES

FREQUENCIES: 25 & 4.0 H.Z.

DEFINITE
PROBABLE
POSSIBLE

NOTE CONTOURS AT LOGARITHMIC INTERVALS 1, 1.5, 2., 3., 5., 7.5, 10.0

INSTRUMENT : PHOENIX IPV-1
IPT-1

CONTRACTOR : REMY BELANGER ENRG.

DATE SURVEYED:

APPROVED:

SEPT-17- 1986

OPERATOR: ANDRE FAUBERT

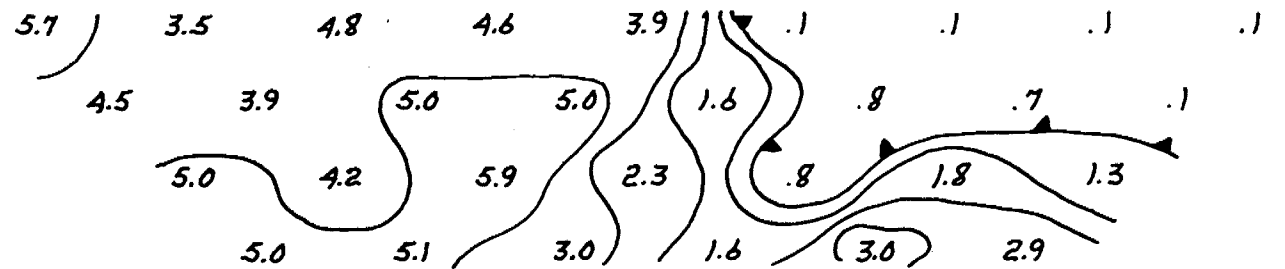
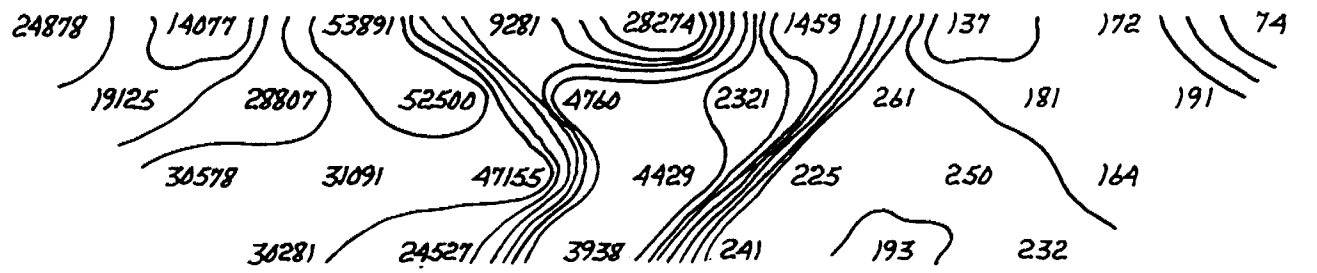
DATE: Sept, 1986

INDUCED POLARIZATION AND RESISTIVITY SURVEY

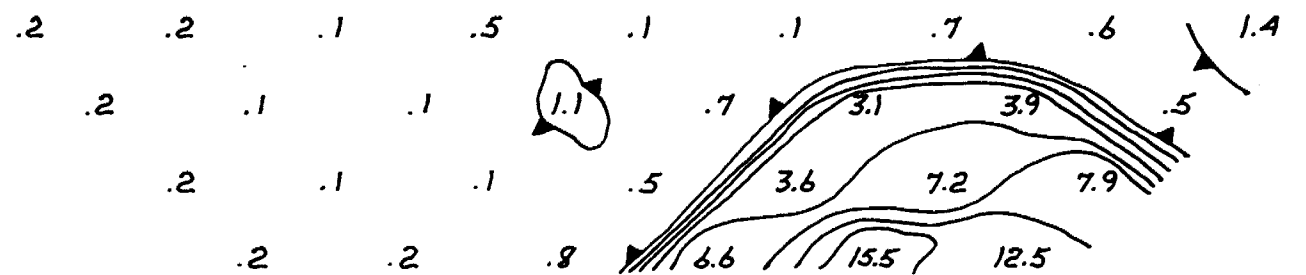
OM86-6-P-142

W.5005

5+00s 4+50s 4+00s 3+50s 3+00s 2+50s 2+00s 1+50s 1+00s 0+50s Bl-0+00

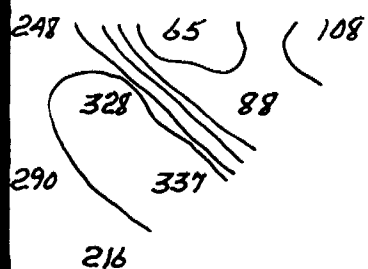


5+00s 4+50s 4+00s 3+50s 3+00s 2+50s 2+00s 1+50s 1+00s 0+50s Bl-0+00



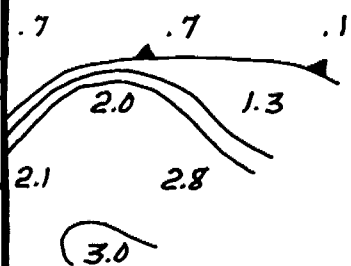
1+50s 1+00s 0+50s BL-0+00

RESISTIVITY (APP) IN OHM METER



N = 1
N = 2
N = 3
N = 4
N = 5

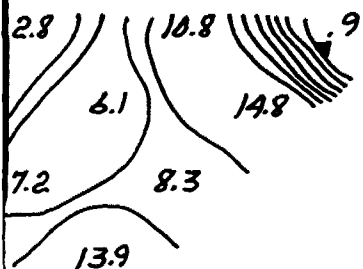
FREQUENCY EFFECT (APP) IN %



N = 1
N = 2
N = 3
N = 4
N = 5

1+50s 1+00s BL-0+00

METAL FACTOR (APP)



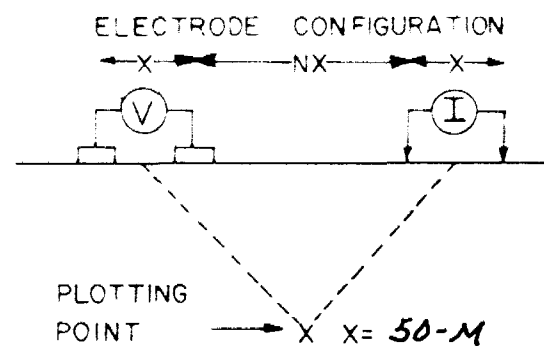
N = 1
N = 2
N = 3
N = 4
N = 5

COMPANY: Mission HARKER Expl. LTD.

PROPERTY: HARKER J.W.P.

ONTARIO

LINE NO. - 30+50-W



Map 6256-86-5-17

SURFACE PROJECTION OF ANOMALOUS ZONES

FREQUENCIES: 25 & 4.0 H.Z.

DEFINITE

PROBABLE

POSSIBLE

NOTE CONTOURS AT LOGARITHMIC INTERVALS 1, 1.5, 2, 3, 5, 7.5, 10.0

INSTRUMENT : PHOENIX IPV-1
IPT-1

CONTRACTOR : REMY BELANGER ENRG.

DATE SURVEYED:

APPROVED:

SEPT-17- 1986

S. Conge, M.M. Dumais

OPERATOR: ANDRE FAUBERT

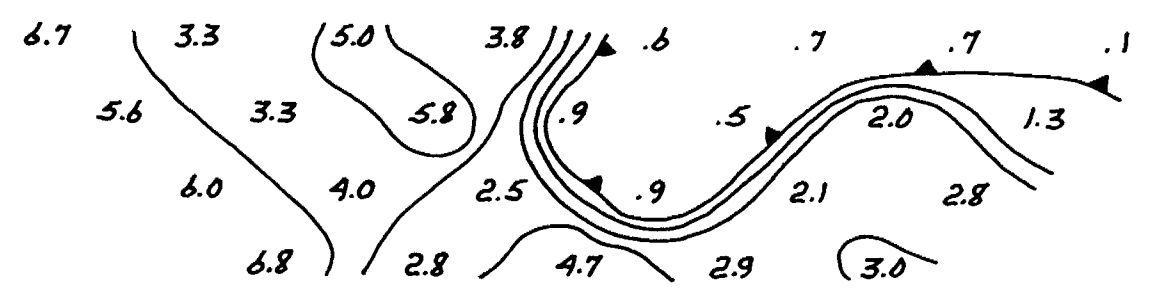
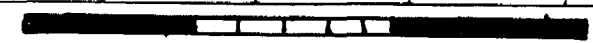
DATE: Sept, 1986

INDUCED POLARIZATION AND RESISTIVITY SURVEY

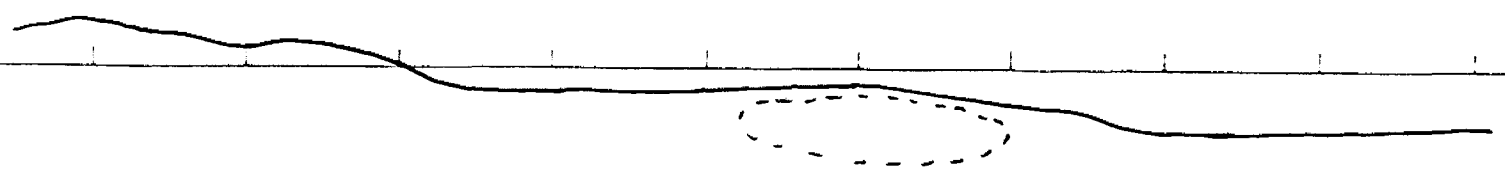
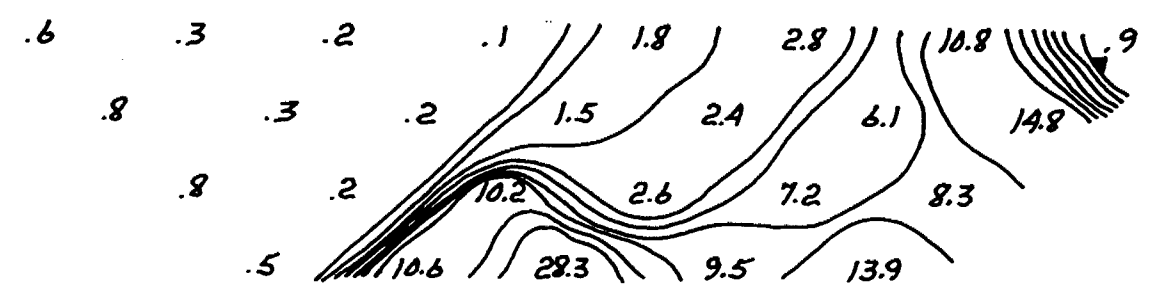
OM 86-6-P-142

63.5005

5+00s 4+50s 4+00s 3+50s 3+00s 2+50s 2+00s 1+50s 1+00s 0+50s BL-0+00

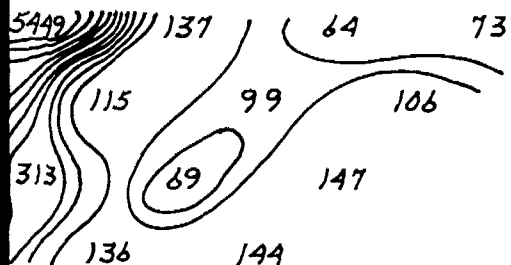


5+00s 4+50s 4+00s 3+50s 3+00s 2+50s 2+00s 1+50s 1+00s BL-0+00



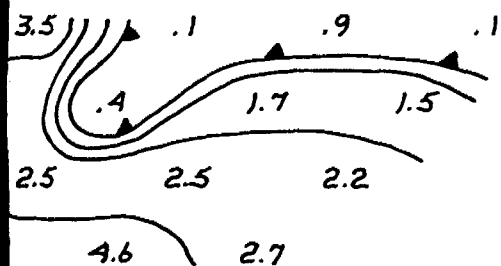
2+50s 2+00s 1+50s 1+00s 0+50s

RESISTIVITY (APP) IN OHM METER



N = 1
N = 2
N = 3
N = 4
N = 5

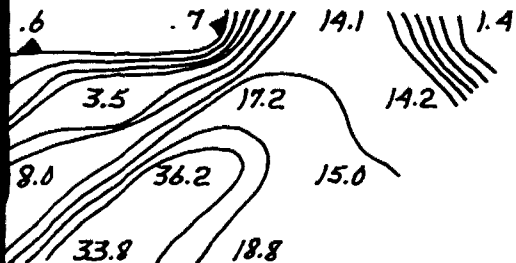
FREQUENCY EFFECT (APP) IN %



N = 1
N = 2
N = 3
N = 4
N = 5

2+50s 2+00s 1+50s 1+00s 0+50s

METAL FACTOR (APP)



N = 1
N = 2
N = 3
N = 4
N = 5

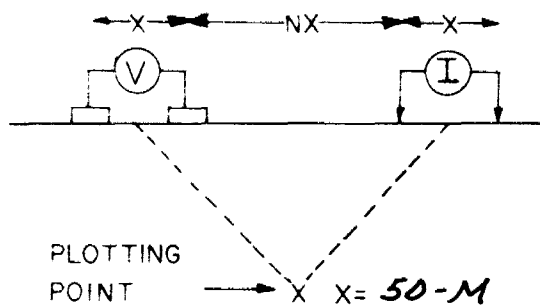
COMPANY: Mission HARKER EXPL. LTD.

PROPERTY: HARKER T.W.P.

ONTARIO

LINE NO. - 31+00-W

ELECTRODE CONFIGURATION



Map 6256-86-5-18

SURFACE PROJECTION OF ANOMALOUS ZONES

FREQUENCIES: .25 & 4.0 H.Z.

DEFINITE

PROBABLE

POSSIBLE

NOTE CONTOURS AT LOGARITHMIC INTERVALS 1, 1.5, 2, 3, 5, 7.5, 10.0

INSTRUMENT : PHOENIX IPV-1
IPT-1

CONTRACTOR : REMY BELANGER ENRG.

DATE SURVEYED:

APPROVED:

SEPT-17- 1986

OPERATOR: ANDRE FAUBERT

DATE: Sept, 1986

INDUCED POLARIZATION AND RESISTIVITY SURVEY

0186-6-P-142

63.5005

5+00s

4+50s

4+00s

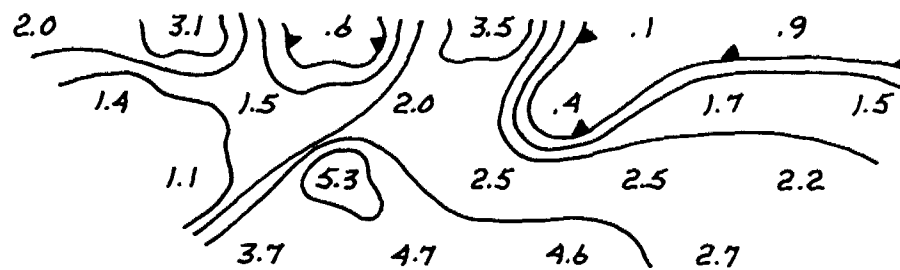
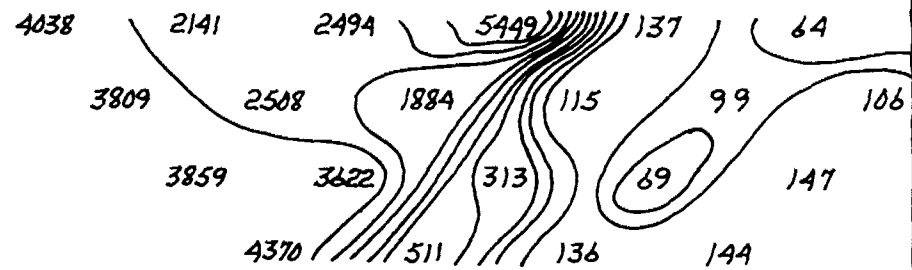
3+50s

3+00s

2+50s

2+00s

1+50s



5+00s

4+50s

4+00s

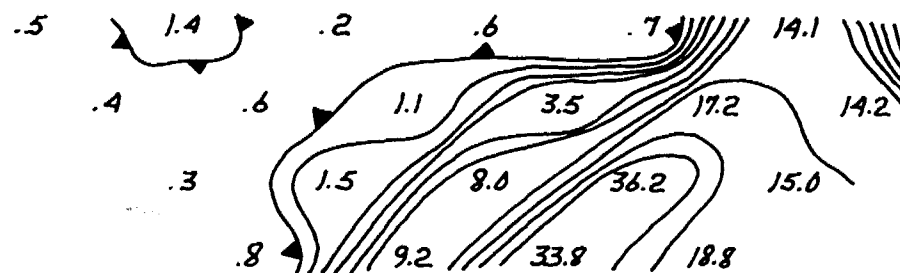
3+50s

3+00s

2+50s

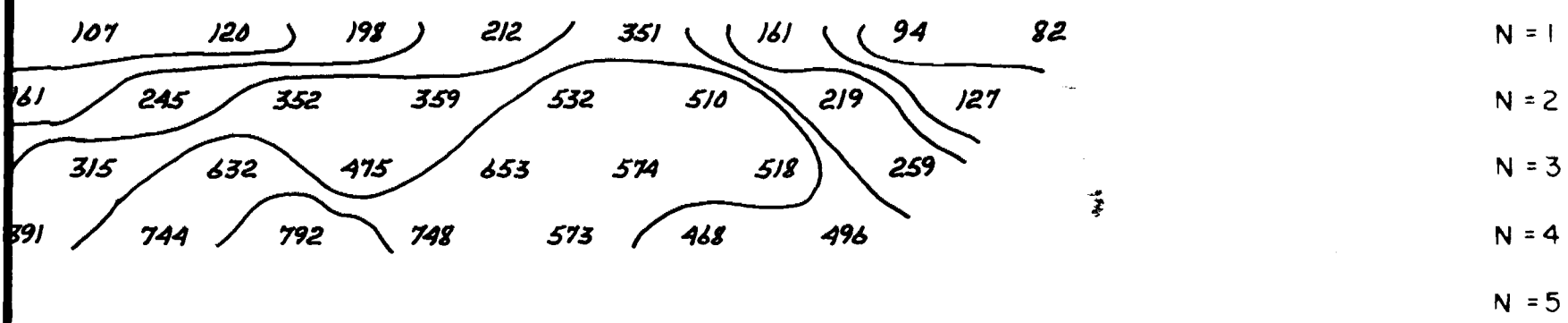
2+00s

1+50s

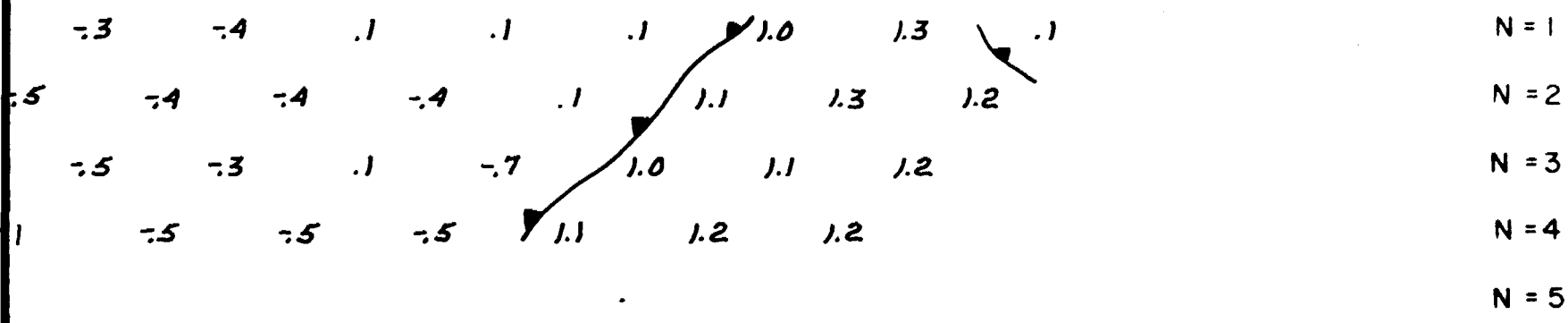


00s 0+50s BL-0.00 0+50N 1+00N 1+50N 2+00N 2+50N 3+00N 3+50N

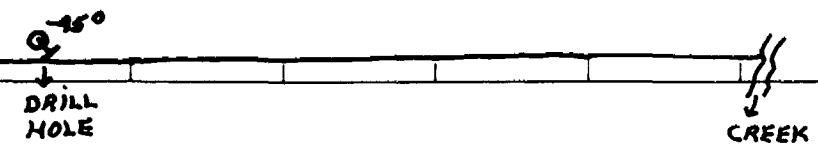
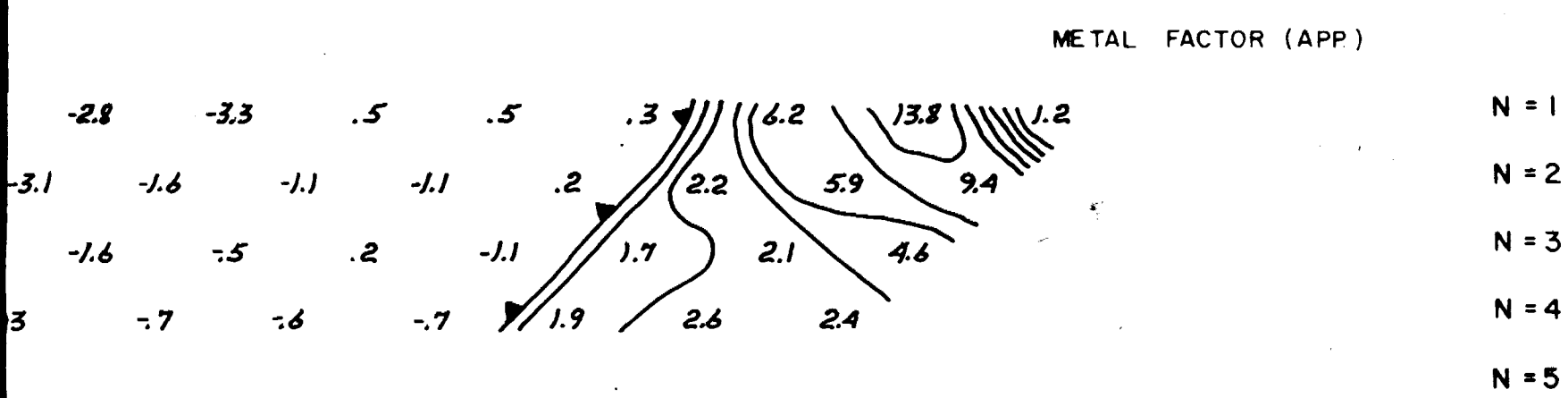
RESISTIVITY (APP) IN OHM METER



FREQUENCY EFFECT (APP) IN %



METAL FACTOR (APP)

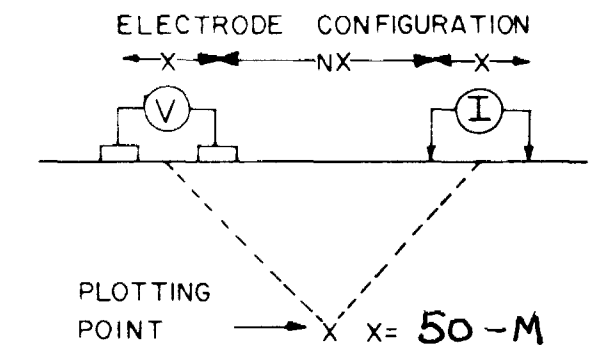


COMPANY: Mission HARKER Expl. LTD.

PROPERTY HARKER T.W.P.

ONTARIO

LINE NO. - 25+00-W



Map 6256-86-5-6

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES: .25 & A.O.H.Z.

NOTE CONTOURS AT LOGARITHMIC INTERVALS 1, 1.5, 2., 3., 5., 7.5, 10.0

INSTRUMENT : PHOENIX IPV-1 IPT-1

CONTRACTOR : REMY BELANGER ENRG.

DATE SURVEYED: SEPT.-9-13-1986

APPROVED:

OPERATOR: ANDRE FAUBERT
RAYMOND LAVOIE

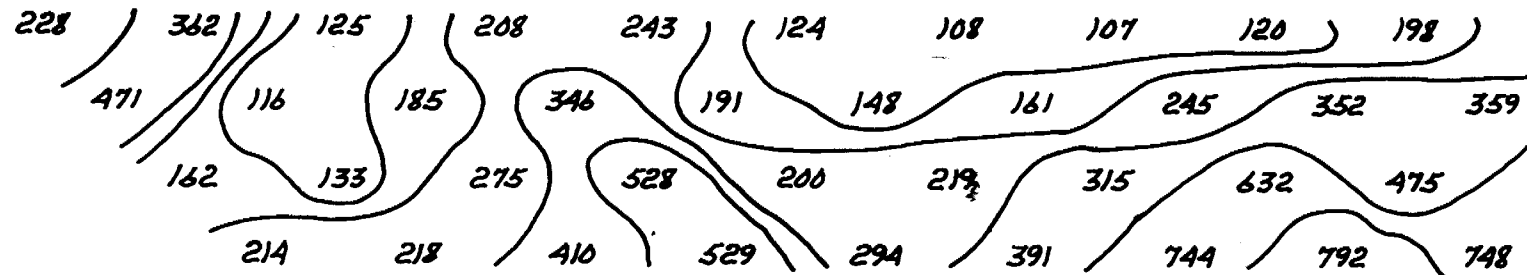
DATE: Sept, 1986

INDUCED POLARIZATION AND RESISTIVITY SURVEY

OM86-6-P-142

63.5005

5+00S 4+50S 4+00S 3+50S 3+00S 2+50S 2+00S 1+50S 1+00S 0+50S BL-0.00 0+50N



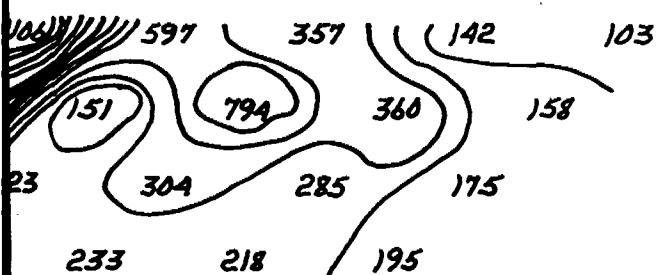
.1	.1	.1	.1	.1	.1	.1	.5	.3	.4	.1
.1	.1	.1	.1	.1	.1	.1	.5	.4	.4	.4
	.1	.1	.1	.1	.1	.1	.5	.3	.1	
		.1	.1	.1	.1	.1	.1	.5	.5	.5

5+00S 4+50S 4+00S 3+50S 3+00S 2+50S 2+00S 1+50S 1+00S 0+50S BL-0.00 0+50N

.4	.2	.8	.4	.4	.8	-4.6	-2.8	-3.3	.5	
.2	.9	.5	.3	.5	.7	-3.1	-1.6	-1.1	-1.1	
	.6	.8	.4	.2	.5	.5	-1.6	-.5	.2	
		.5	.5	.2	.2	.3	.3	-.7	-.6	-.7

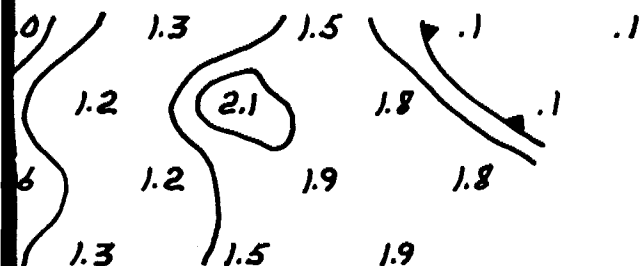
1+50N 2+00N 2+50N 3+00N 3+50N 4+00N 4+50N 5+00N

RESISTIVITY (APP) IN OHM METER



N = 1
N = 2
N = 3
N = 4
N = 5

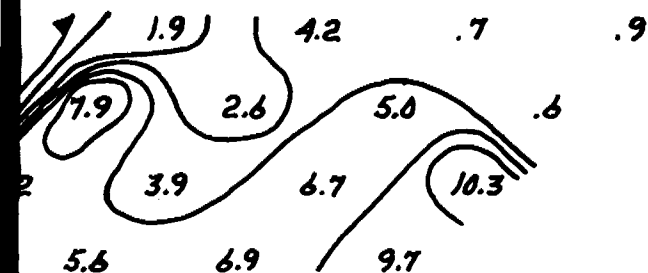
FREQUENCY EFFECT (APP) IN %



N = 1
N = 2
N = 3
N = 4
N = 5

1+50N 2+00N 2+50N 3+00N 3+50N 4+00N 4+50N 5+00N

METAL FACTOR (APP)



N = 1
N = 2
N = 3
N = 4
N = 5

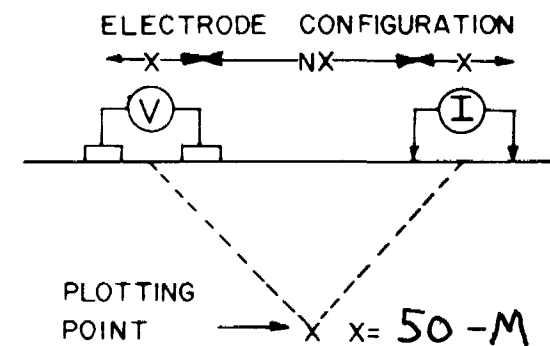


COMPANY: MISSION HARKER Expl. LTD.

PROPERTY: HARKER T.W.P.

ONTARIO

LINE NO. - 25+50-W



Map 6256-86-5-7

SURFACE PROJECTION OF ANOMALOUS ZONES

FREQUENCIES: .25 & 4.0 H.Z.

DEFINITE

PROBABLE

POSSIBLE

NOTE CONTOURS AT LOGARITHMIC INTERVALS 1, 1.5, 2, 3, 5, 7.5, 10.0

INSTRUMENT : PHOENIX IPV-1 IPT-1

CONTRACTOR : REMY BELANGER ENRG.

DATE SURVEYED:

APPROVED:

SEPT-9-13-1986

S. Conquer, M. Dumais

OPERATOR: ANDRE FAUBERT

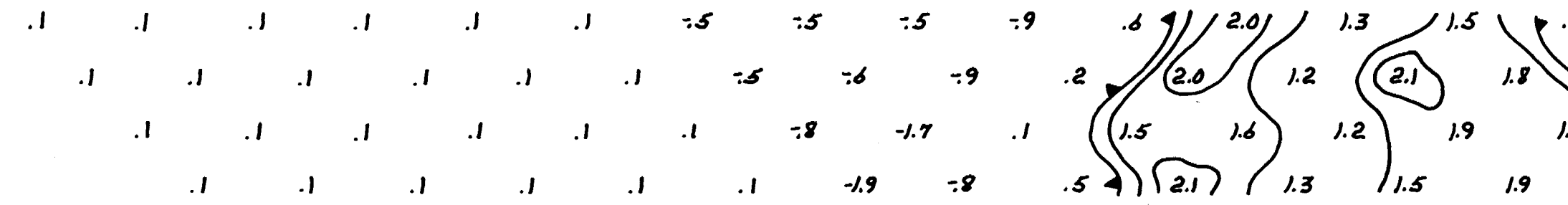
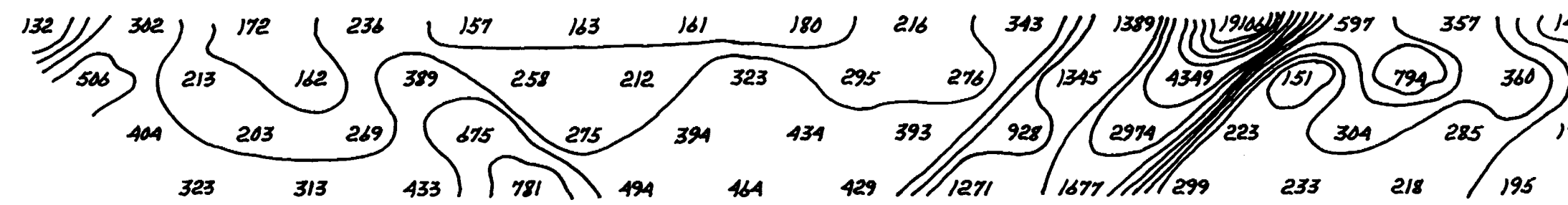
DATE: Sept, 1986

INDUCED POLARIZATION AND RESISTIVITY SURVEY

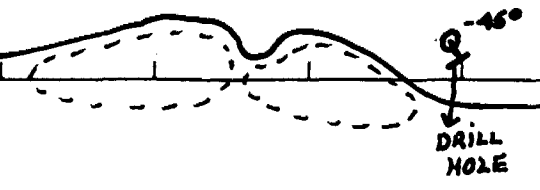
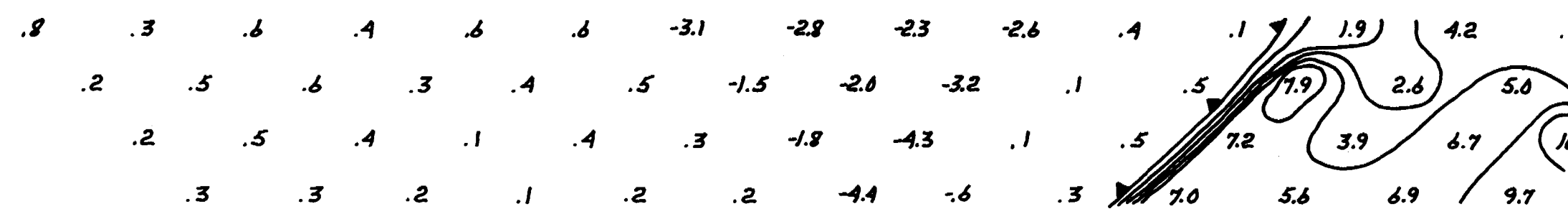
OM86-6-P-142

63.5005

5+00S 4+50S 4+00S 3+50S 3+00S 2+50S 2+00S 1+50S 1+00S 0+50S BL-0.00 0+50N 1+00N 1+50N 2+00N 2+50N

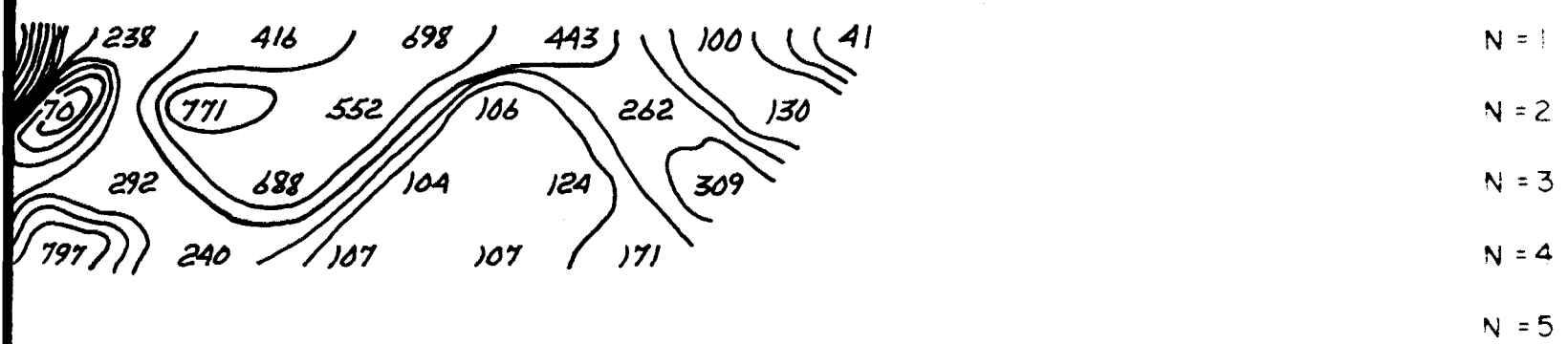


5+00S 4+50S 4+00S 3+50S 3+00S 2+50S 2+00S 1+50S 1+00S 0+50S BL-0.00 0+50N 1+00N 1+50N 2+00N 2+50N



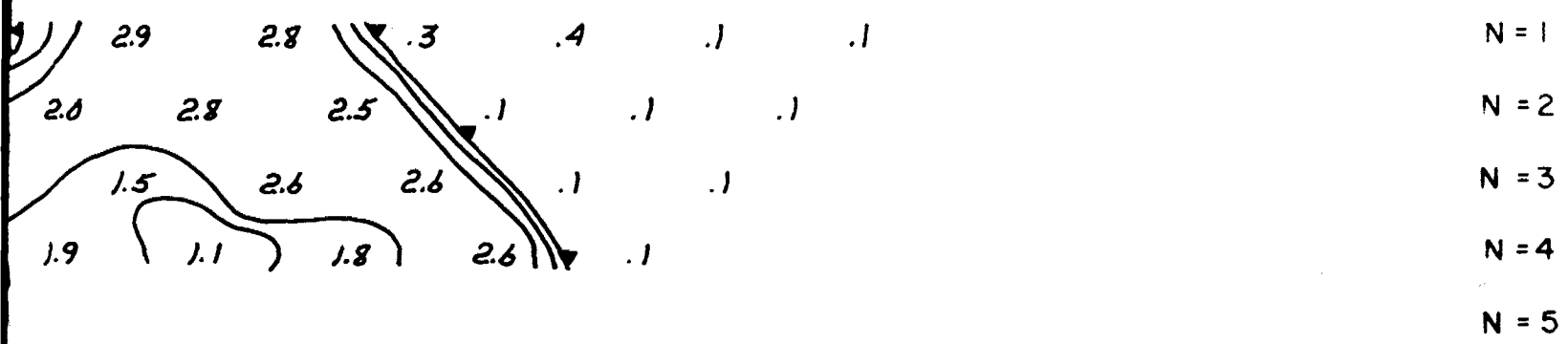
1+50N 2+00N 2+50N 3+00N 3+50N 4+00N 4+50N 5+00N

RESISTIVITY (APP) IN OHM METER



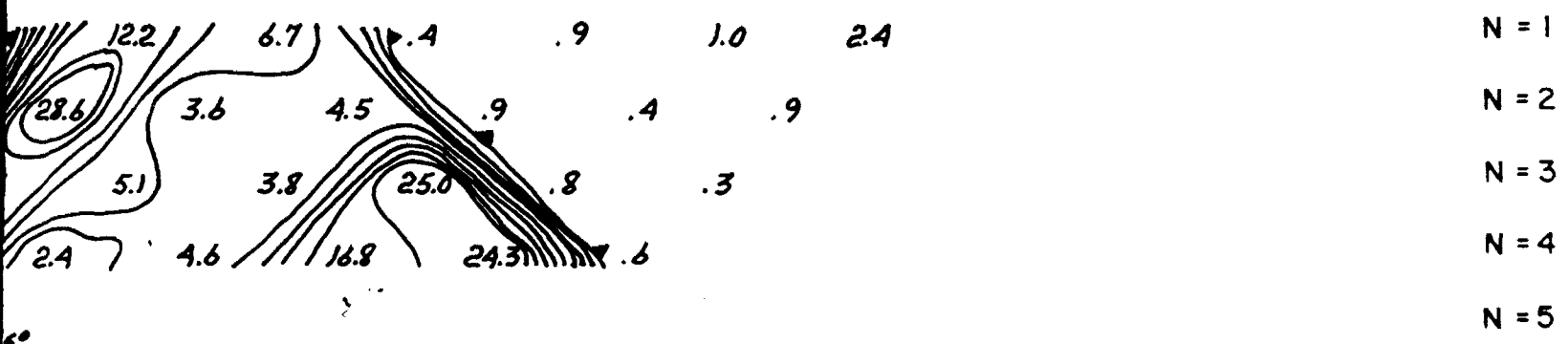
FAULT

FREQUENCY EFFECT (APP) IN %



1+50N 2+00N 2+50N 3+00N 3+50N 4+00N 4+50N 5+00N

METAL FACTOR (APP)



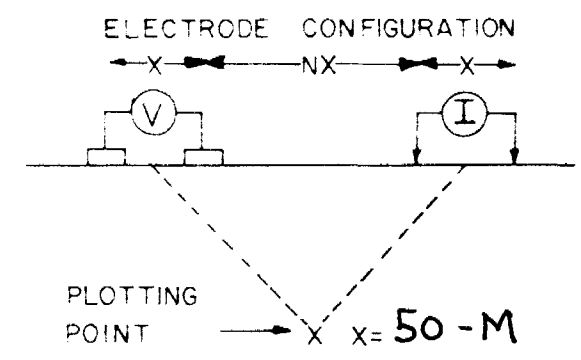
CREEK

COMPANY: MISSION HARKER Expl. LTD.

PROPERTY: HARKER T.W.P.

ONTARIO

LINE NO. - 26+00W



Map 6256-86-5-8

SURFACE PROJECTION OF ANOMALOUS ZONES

FREQUENCIES: 25 & 4.0 H.Z.

DEFINITE **————**
 PROBABLE **|||||**
 POSSIBLE **////**

NOTE CONTOURS AT LOGARITHMIC INTERVALS 1, 1.5, 2., 3., 5., 7.5, 10.0

INSTRUMENT : PHOENIX IPV-1 IPT-1

CONTRACTOR : REMY BELANGER ENRG.

DATE SURVEYED: Sept-9-14- 1986

APPROVED: S. Conger, M. Simons

OPERATOR: ANDRE FAUBERT

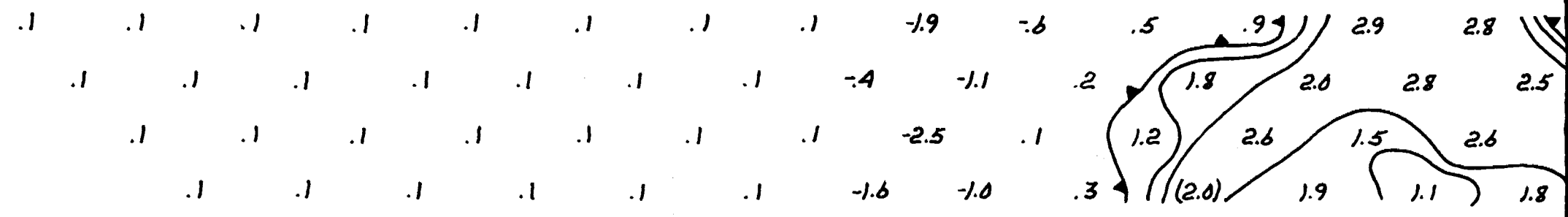
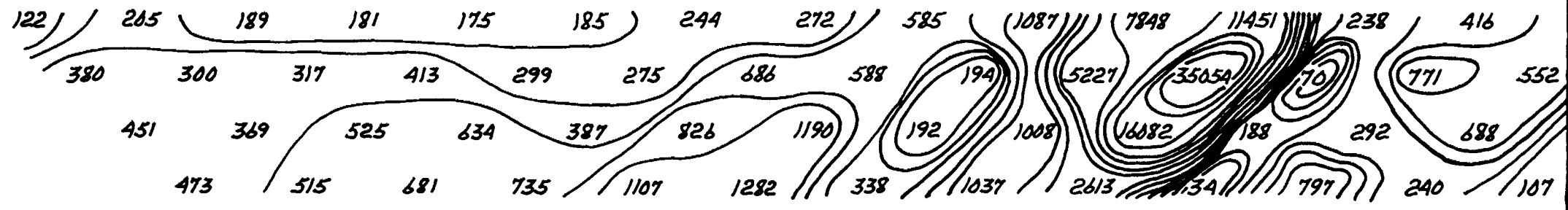
DATE: Sept, 1986

INDUCED POLARIZATION AND RESISTIVITY SURVEY

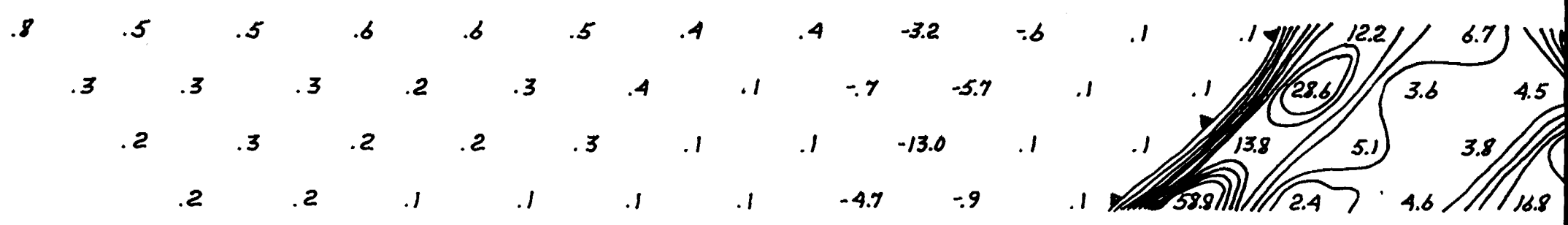
0186-4-P-142

68.5005

5+00S 4+50S 4+00S 3+50S 3+00S 2+50S 2+00S 1+50S 1+00S 0+50S BL-0.00 0+50N 1+00N 1+50N 2+00N 2+50N



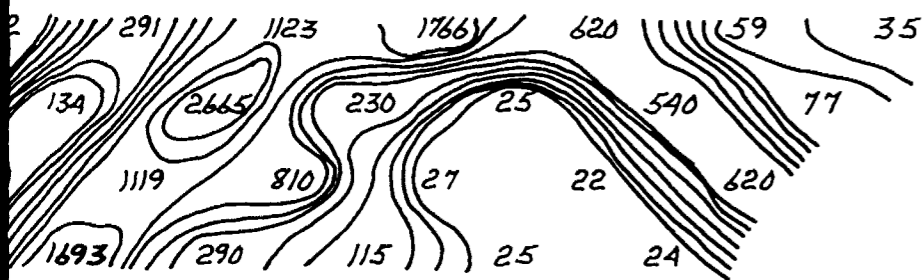
5+00S 4+50S 4+00S 3+50S 3+00S 2+50S 2+00S 1+50S 1+00S 0+50S BL-0.00 0+50N 1+00N 1+50N 2+00N 2+50N



99-46°
DRILL HOLE

1+50N 2+00N 2+50N 3+00N 3+50N 4+00N 4+50N 5+00N

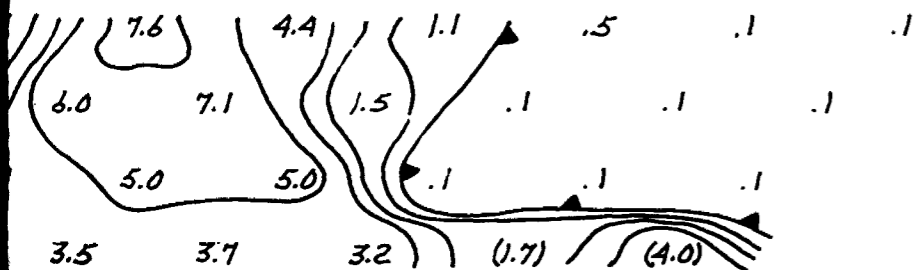
RESISTIVITY (APP) IN OHM METER



N = 1
N = 2
N = 3
N = 4
N = 5

FAULT

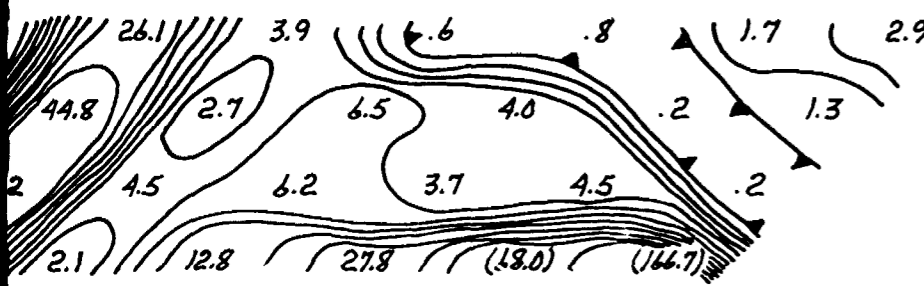
FREQUENCY EFFECT (APP) IN %



N = 1
N = 2
N = 3
N = 4
N = 5

1+50N 2+00N 2+50N 3+00N 3+50N 4+00N 4+50N 5+00N

METAL FACTOR (APP)



N = 1
N = 2
N = 3
N = 4
N = 5

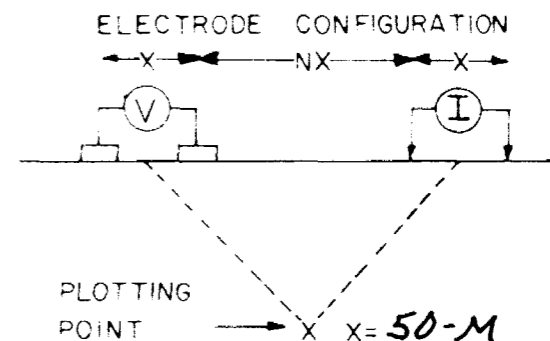
DRILL HOLE Q-450
DRILL HOLE Q-450

COMPANY: Mission HARKER Expl. LTD.

PROPERTY: HARKER T.W.P.

ONTARIO

LINE NO. - 26+50-W



Map 6256-86-5-9

SURFACE PROJECTION OF ANOMALOUS ZONES

FREQUENCIES: .25 & 4.0 H.Z.

DEFINITE ————
PROBABLE |||||
POSSIBLE //////

NOTE CONTOURS AT LOGARITHMIC INTERVALS 1, 1.5, 2, 3, 5, 7.5, 10.0

INSTRUMENT : PHOENIX IPV-1 IPT-1

CONTRACTOR : REMY BELANGER ENRG.

DATE SURVEYED: SEPT-19-18- 1986

APPROVED: S. Conquer, M. J. Simons

OPERATOR: ANDRE FAUBERT

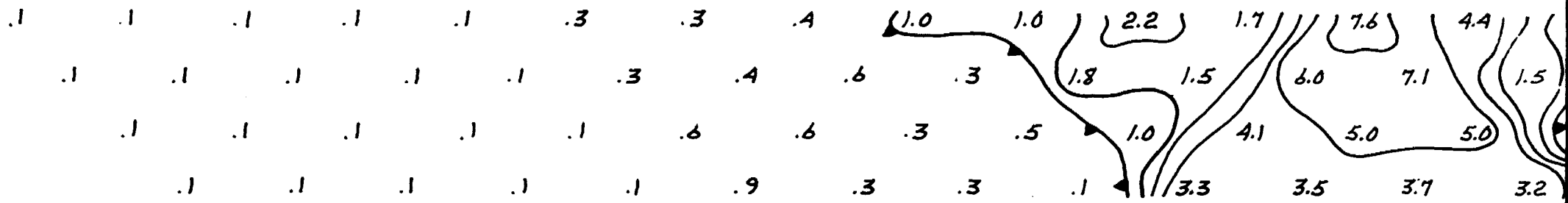
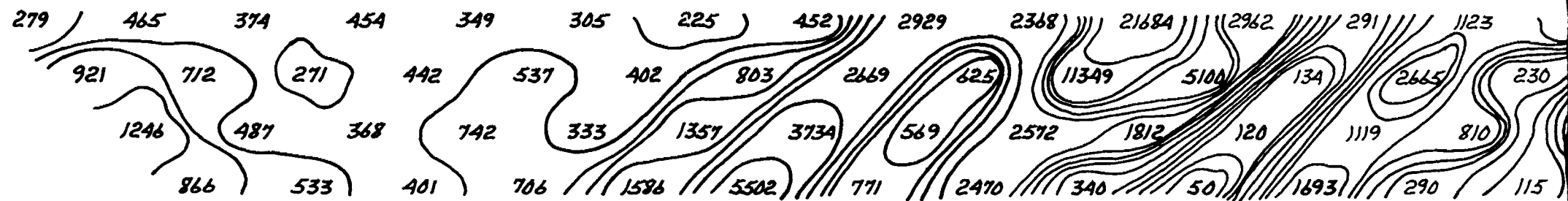
DATE: Sept, 1986

INDUCED POLARIZATION AND RESISTIVITY SURVEY

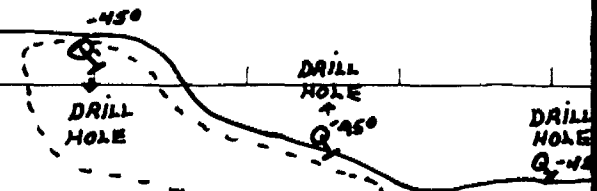
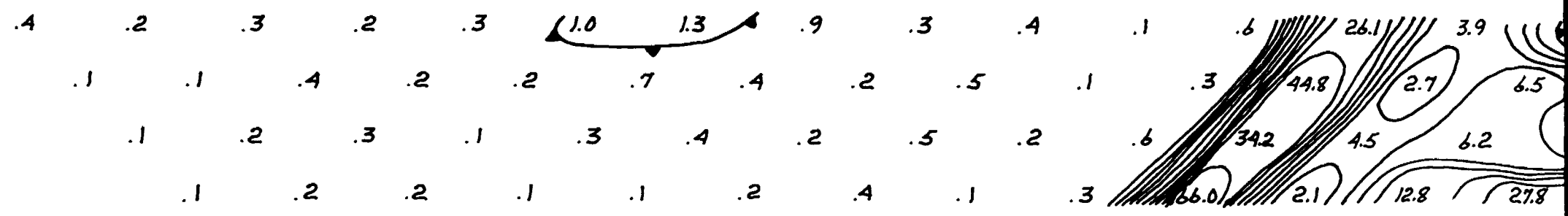
0486-6-P-142

63.5005

5+00s 4+50s 4+00s 3+50s 3+00s 2+50s 2+00s 1+50s 1+00s 0+50s BL-0+00 0+50N 1+00N 1+50N 2+00N 2+50N



5+00s 4+50s 4+00s 3+50s 3+00s 2+50s 2+00s 1+50s 1+00s 0+50s BL-0+00 0+50N 1+00N 1+50N 2+00N 2+50N



PLAN GR - 4730

CLAIM 3 | 3

PART 2

L - 1 | 5 | 4 | 7

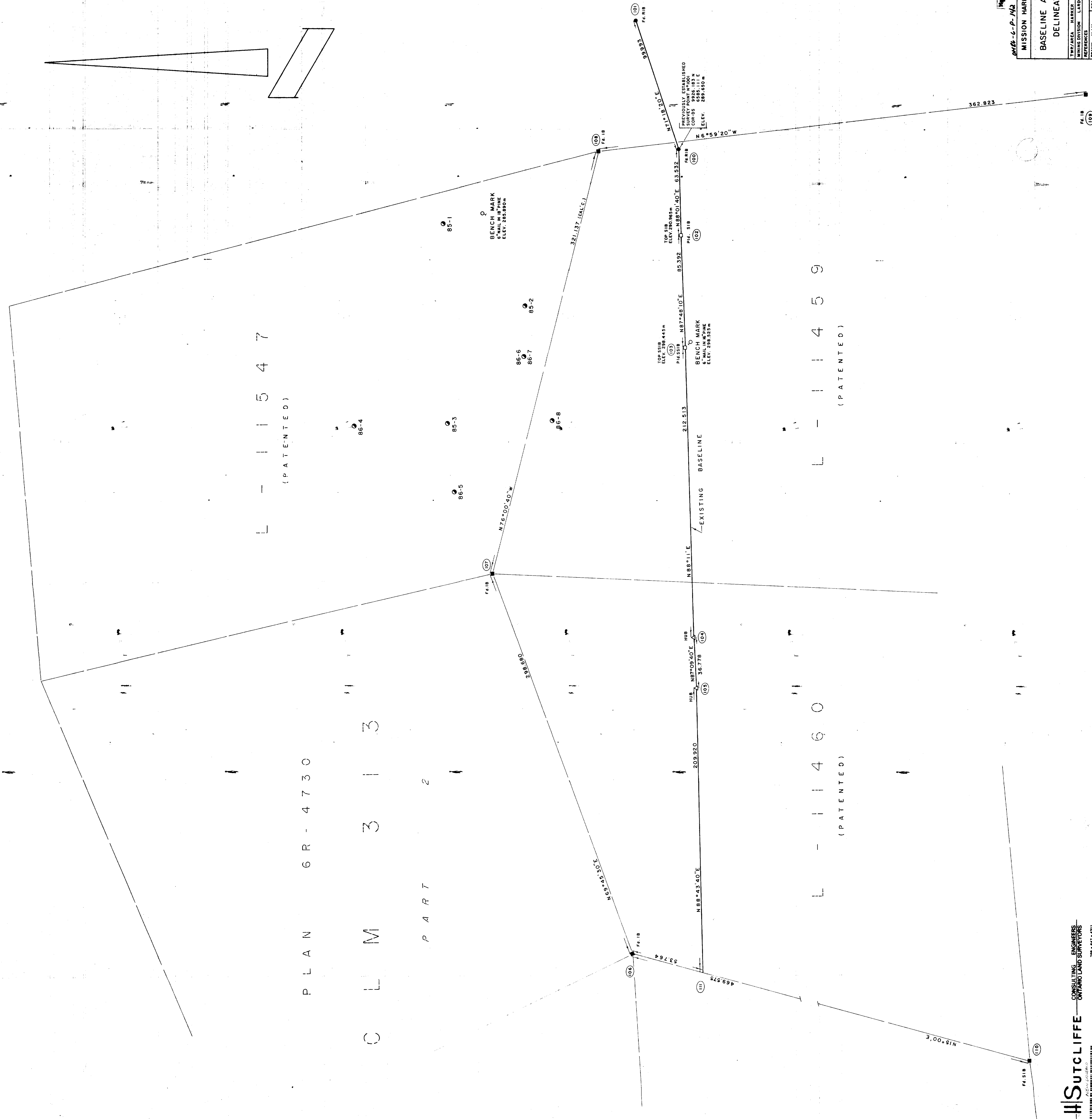
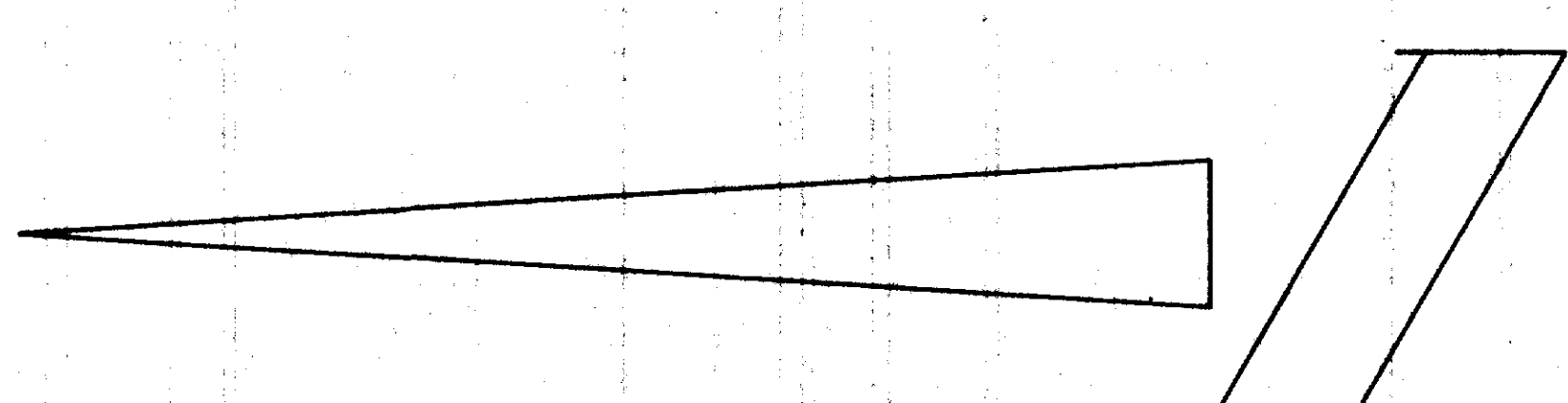
(PATENTED)

L - 1 | 4 | 6 | 0

(PATENTED)

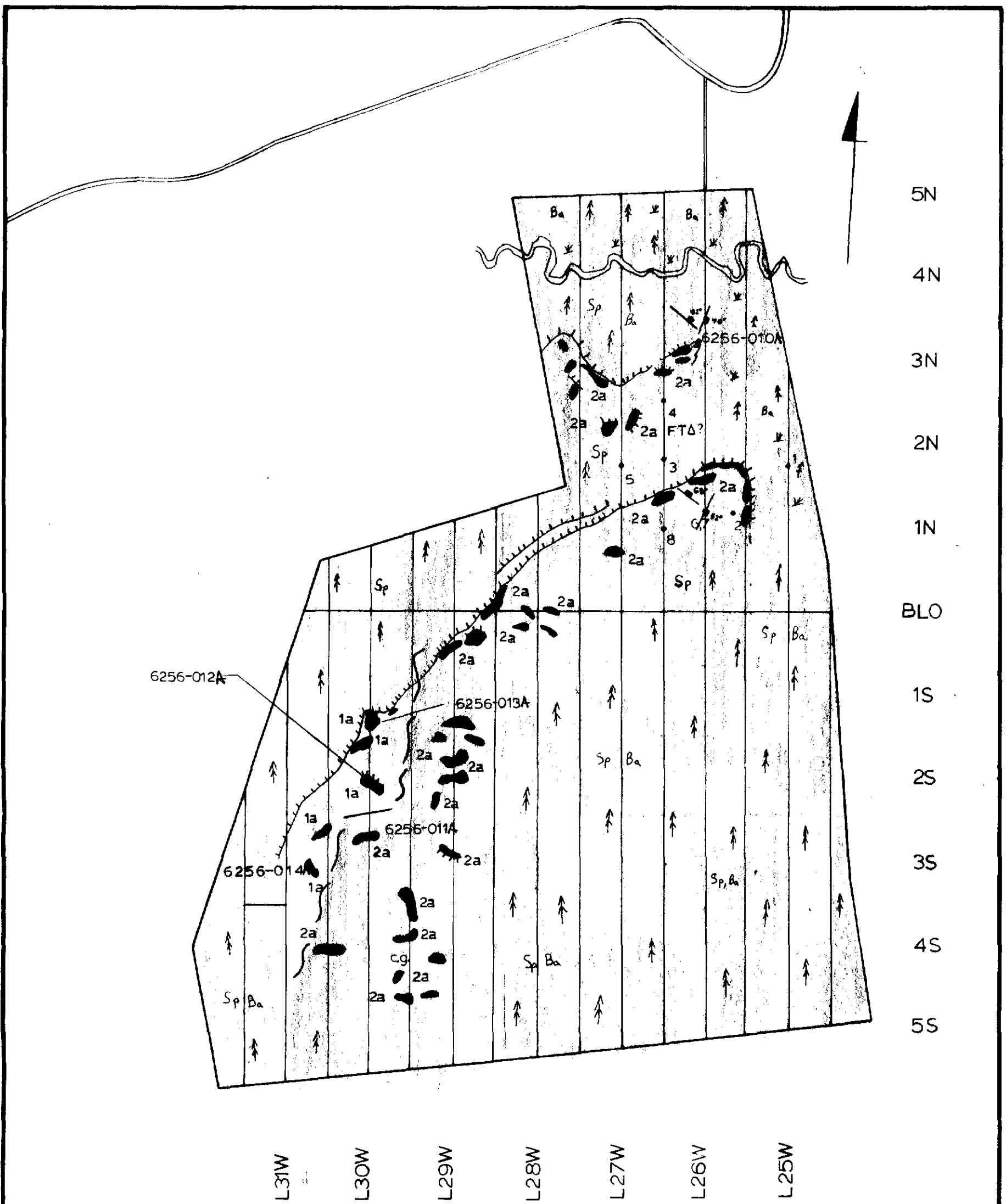
L - 1 | 4 | 5 | 9

(PATENTED)



BENCH MARK
6" MALL IN IR PINE
ELEV. 285.890m

PREVIOUSLY ESTABLISHED
SURVEY POINT WOOD
COR-D5
ELEV. 288.630 m



*Steph Jager
Miko Juranovic*

0486-6-P-142

63.5005

David R. Bell Geological Services Inc.

MISSION HARKER EXPLORATION LTD.

HARKER TOWNSHIP PROPERTY

GEOLOGICAL PLAN

TWP/AREA Harker Township	PROVINCE Ontario
MINING DIVISION Larder Lake	PROJECT No. 6256
REFERENCES	N.T.S. No. 32D/12
DRAWN S.W.C.	DRAFTED S.W.C.
SCALE 1:5000	CHECKED
DATE Feb./86	SHEET No. 6256-06-01

LEGEND

- 2a fine to coarse grained Basaltic to Andesitic Flow
- 1a Greywacke

SYMBOLS

- cg coarse grained
- FTA Flow Top Breccia
- Sp Spruce
- Ba Balsam
- #• Diamond drill hole
- Joints
- ~ Direction of Slope
- 6256 - Sample location



32D12SW0061 63.5005 HARKER