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PROSPECTUS  
August 20, 1985

062207

PROGRESS REPORT  
OF THE  
INDUCED POLARIZATION-RESISTIVITY SURVEY  
AND  
MAX-MIN ELECTROMAGNETIC SURVEY  
FOR  
HERDIS INTERNATIONAL CANADA INC.  
ON  
CLAIMS XL 1 TO 150  
AND  
PLACER LEASE AND CLAIMS  
IN  
DAWSON MINING DISTRICT  
YUKON TERRITORY

NOVEMBER 23, 1984

E. AMENDOLAGINE, P.Eng.

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## **INTRODUCTION**

During the period of September 28 through October 19, 1984 a preliminary induced polarization and EM survey was conducted over the Herdis International Canada Inc. XL claims in the Dawson Mining Division of Yukon Territory.

The surveys consisted of seven IP survey lines and one Max Min EM line.

The surveys were conducted by Geotronics Surveys Ltd. under the supervision of Manny Consultants Ltd.

## CONCLUSIONS AND RECOMMENDATIONS

Surveys were conducted on 24 of the 150 Herdis claim group in the Dawson Mining Division of the Yukon Territory.

The surveys conducted were:

1. Soil geochemical survey on 24 claims
2. Magnetometer survey on 16 claims
3. IP survey. Seven lines on the 24 claim group
4. Max Min EM line on L900E

1. The soil geochemical survey indicated anomalous indications for Au, Ag, Cu, Mo, Pb, Zn, Ni and Cr.
2. The magnetometer survey indicated a low intensity response magnetic anomaly striking east-west across the northern portion of the surveyed claims and a high magnetic anomalous response across the southern portion of the 16 claim survey area.

The low intensity magnetic response correlates with east-west Au, Ag, Cu, Mo, Pb and Zn anomalies.

The high intensity magnetic response correlates and projects on to the high geochemical Ni-Cr anomalies.

3. The IP survey lines superimpose the soil geochemical anomalies and the low intensity magnetic response zone.

All six IP lines yield high chargeability and low resistivity responses.

This zone of positive geochem, mag., I.P. and EM results measures some 1500 meters on strike east-west and some 1-200 meters in width.

The anomalous indications are open to the east, west and at depth.

The seventh IP survey line was along the west boundary of the 24 claim group surveyed.

This tested 1/2 of the Ni-Cr geochem anomaly and the projection of the magnetic high response.

The IP survey gave a resistivity response.

4. The Max Min EM survey indicate a shallow conductor dipping to the south and a strong second conductor at depth which correlates with the north dipping low resistivity I.P. response.

With all the positive indications obtained in the surveys, it is recommended that the exploration program on the Herdis property be continued.

The third phase should consist of a preliminary minimum drill program of some 500 meters.

This drill program should test the anomalous areas for mineral values and will be instrumental in planning the follow-up surface exploration program and follow-up diamond drill program. In conjunction with the drilling, it would be advantageous to cut back-hoe trenches across the anomalous zone to examine sample and map the geology and mineralized zones.

The exploration and development of the property should consist of a minimum of three more phases.

The next phase (3rd Phase) should be some 500 meters of core drilling in conjunction with a back-hoe surface trenching program.

The monies required for this would be some \$99,500.00.

The 4th phase would be based on obtaining favourable results in the third phase. This program should consist of a systematic surface exploration program of soil geochemical, magnetometer, EM and IP surveys to cover extensions of the anomalous zones.

In conjunction with the surveys, the third phase diamond drill program should continue and be expanded to cover the extension of the anomalous zones outlined with the fourth phase survey information.

The monies for this phase would be some \$450,000.00.

**PROPERTY**

The claims consist of 150 contiguous lode mining claims, 3 placer leases and 4 placer claims as follows:

**Claims**

XL-1-150

**Placer Leases**

PL 6821 on Shovel Creek  
PL 6822 on Bradley Creek  
PL 6824 on Ruitter Creek

**Placer Claims**

BRAD P25022  
BRAD 1 P24434  
BRAD 2 P24435  
BRAD 3 P24436 all on Bradley Creek.

These are located in the Dawson Mining District, Yukon Territory. The property area is shown on the following claim and placer maps.

**LOCATION**

The property is located at 64°7' N Latitude, 139°12' W Longitude, some 500 km northwesterly of Whitehorse, some 8 km northeasterly of Dawson City, Yukon Territory, northeast of the junction of the Klondike River and Lepine Creek, on Moosehide Hills, and in the headwaters of Shovel Creek, Bradley Creek, Rüter Creek, Noble Creek and Moosehide Creek, in the Dawson Mining District of the Yukon Territory.

**ACCESS**

The property is accessible some 500 air kms northwesterly of Whitehorse by daily air flights from Whitehorse to Dawson City, Yukon Territory.

From Dawson City, access to the property is by an old unused, unserviced road which will have to be repaired so that it can be used. This is shown on the following Yukon Mining District Map, and Dawson Topographic Map 1:50,000 and 1:250,000 scale.



## I.P. AND EM SURVEYS

An Induced Polarization-chargeability resistivity survey was conducted across the northern, east-west trending low intensity magnetometer response and across the west boundary high intensity magnetic response.

Six I.P. lines were run across the northern (east-west trending) anomaly. All six surveyed lines yielded positive results with high chargeability and very low resistivity factors.

A seventh I.P. traverse across the west boundary high magnetic-geochemical responses also yield positive results.

One Max Min electromagnetometer (EM) survey line superimposed on the L900E IP line also yielded a positive response.

The soil geochemical anomalies, the low intensity magnetic response, the IP high chargeability-resistivity-response and the Max Min (EM) response, all correlate and indicate a mineralized zone of some 1500 meters on an east-west strike measuring some 1-200 meters in width and open to the east and west.

A detailed report on the IP and EM surveys is reported in the following survey report by Geotronics Surveys Ltd. that follows.

Copies of the line plan and sections of the survey information are included in the appendix.

The line plan and sections are copies of the rough preliminary plotted information.

All the information is included.

The final drafting of the information will be completed at a later date.



GEOTRONICS SURVEYS LTD.  
403 - 750 W. PENDER ST.  
VANCOUVER, CANADA V6C 2T7  
(604) 687-6671

Herdis International Canada Inc.  
c/o Manny Consultants Ltd.  
4550 Harriet Street  
Vancouver, B.C.  
V5V 4K5

November 16, 1984

Attention: Emanuel Amendolagine, P.Eng.  
Consulting Geologist

Induced Polarization-Resistivity Survey  
XL Claims  
Dawson Mining Division, Yukon Territory

Dear Sirs:

The above-noted work was carried out in October, 1984 and has been completed. The following is therefore a summary report on the results and includes information given in the writer's previous letter dated October 22, 1984.

The work was done across soil geochemistry and magnetic anomalies revealed in previous work and reported on in a previous letter by the writer dated September 19, 1984. The purpose was to delineate the causative sources more precisely and to determine the possibility of sulphides occurring with or being the causative sources.

The survey was run across three anomalous zones. Two were principally anomalous in silver, molybdenum, zinc, lead and copper; and the one in nickel and chromium.

The soil sampling and magnetic surveying were done on lines running northeast-southwest. However, all indications were that the causative sources were striking east-west, and therefore, of necessity, the IP-resistivity lines were run north-south. The one exception is the west boundary line which was run in a southeast direction along the southwest boundary of the previous survey

grid in order to check a chromium-nickel magnetic anomaly. The north-south lines run were 240W, 300E, 540E, 900E and 1140E.

The first two lines that were surveyed, lines 540E and 900E, were run with the dipole-dipole array with a dipole length of 30 m and a dipole separation of 1 to 5. This gave a depth penetration of approximately 90 m. These survey parameters resulted in a fairly detailed pseudosection which was felt necessary since the size of the mineral zone that was being explored for was unknown. From this it was determined that the causative source was fairly large and therefore the remaining lines were surveyed with a dipole length of 60 m and a dipole separation of 1 to 3. The resulting depth penetration is up to 120 m.

The results are very positive. Over the main soil anomalous zone, (described in the previous letter on soil geochemistry-magnetic results as northernmost, at least 400 m long, open to the east) the survey revealed a very strong IP anomaly (50 to 90 milliseconds) correlating directly with a strong resistivity low anomaly (2 to 20 ohm-meters). This is a classic geophysics model for disseminated or fracture-filling sulphides. Considering the direct correlation with silver, molybdenum, zinc, lead and copper soil anomalies, the possibility of the occurrence of economic mineralization is quite good.

The IP-resistivity survey shows the zone to extend for 1,380 meters in an east-west direction with it being open on both ends. However, the soil results are anomalous only on the eastern 400 to 500 meters of the IP-resistivity response. This suggests either, (1) mineralization only occurs on the eastern part of the structure that the IP-resistivity is responding to, or, (2) mineralization occurs along the total length of the IP-resistivity response, but along the western part it occurs too deep for the soil geochemistry to respond to (though there is some molybdenum response).

When it was discovered how low the resistivity values were and therefore how strong the conductor was that was correlating with the soil results, it was decided to send a MaxMin electromagnetometer (EM) to the job site by air cargo. This was done for two reasons. Firstly, the EM may provide extra information in order to optimize diamond drill hole location and therefore save on diamond drill costs. Secondly, if the EM responds to the mineral-

ization adequately, this would save significant costs in any future exploration work on the XL claims.

The EM work, which was done in the horizontal loop mode, was carried out across the main anomalous zone on line 900E. Two profiles were run, one at 100 meter coil separation, and the second at a 200 meter coil separation. All five frequencies were read (222, 444, 888, 1777 and 3555 Hertz).

The 100-meter coil profiles were interpreted resulting in 5 conductors described as follows:

Conductor A

Model: Thin plane conductor (relative term, could be up to 50 m thick).

Location: 300N

Depth to top: 15 to 20 m

Dip: 45 to 75° S

Conductivity-thickness: 30 to 80 mhos with increasing depth.

Conductor B

Model: 2 closely-spaced thin-plane conductors

Location: approximately 4+25N, 4+75N

Depth to top: probably 10 to 30 m

Dip: unknown, probably steep, i.e. 70S to 70N

Conductivity-thickness: unknown

Conductor C

Model: thick conductor with width of 100 m

Location: center at 6+00N

Depth to top: unknown

Dip: unknown

Conductivity-thickness: increasing with depth.

Conductor D

Broad conductive zone from approximately 50S to 350S; no other information available.

Conductor E

Possible shallow, weak conductor at 1+50N; no other information available.

Of the above conductors, that labelled A occurs within the main anomalous zone. The 200-meter coil results, which have twice the depth penetration, appear to show two conductors at the Conductor A location with at least one dipping to the north. The location of these two conductors is 250N and 350N. A possible explanation

is that the 250N conductor was the one picked up by the 100-meter coil profile, dips to the south and is at a shallower depth. The 350N conductor, however, occurs at too great a depth for the 100-meter coil profile to be seen. Unlike the 250N conductor, this one dips to the north. The resistivity results somewhat corroborate this explanation.

Conductor B occurs on the northern part of the main soil geochemistry anomalous zone. Possibly this conductor is reflecting a fault, shear or contact zone indicating the causative mineralization is structurally controlled. There is some correlation with the resistivity and IP results.

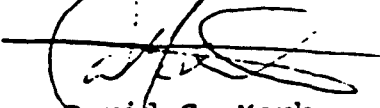
Since the IP crew had a magnetometer with them, line 900E was run with readings taken every 10 m. The purpose was to more closely correlate the magnetic high since the magnetic survey had been done on northeast-southwest lines. The high was outlined and is shown to extend from 320N to 740N. Another narrow magnetic high centered at 170N, correlates with a resistivity high, and therefore probably reflects an intrusive dyke.

What geological model can be formulated to explain all of the geophysics and geochemistry results may over the main zone, be difficult at this point to come up with, since there is very little outcrop in the area. The results as well as the downstream placer gold strongly suggest sulphide mineralization with gold and silver values. The resistivity low may be responding to associated graphite as well as alteration. The IP may be responding to sulphides and/or graphite. The MaxMin EM may be picking up graphite on the ceiling of the gold-silver-sulphide zone. The magnetics could be indicating an intrusive or a volcanic flow occurring with or adjacent to the mineral zone. The soil geochemistry results reflect causative minerals directly but only from the surface of the bedrock (that is, not to depth). The soil results indicate the zone to have a width of approximately 200 m from 300N to 500N. Since the anomaly is on a north-facing slope, the width of the anomaly could be caused by metal ion mobility northwards. Therefore the causative source could be narrower. However, the mobility is not felt to be great since the slope is quite moderate.

Lines 540E and 240W were run across the second soil anomalous zone (silver, lead, zinc, copper) and a similar, though not quite as strong, response was shown across it. The minimum length for this IP-resistivity zone is 780 m though the soil geochemistry results suggest a minimum length of 1,500 m with it open on both ends. The IP-resistivity results suggest the zone to dip to the north.

The west boundary line shows an IP high correlating with a chromium-nickel soil geochemistry high and a resistivity high of moderate intensity. It also correlates with the probable westward extension of the very strong magnetic high. As mentioned in a previous letter, the magnetic high is probably reflecting serpentinite which would also explain the resistivity high. Chromium and nickel mineralization are often associated with ultrabasic bodies such as serpentinite. The IP high could also be reflecting the magnetite that is causing the magnetic anomaly, or, possibly, sulphides as well.

Sincerely yours,  
GEOTRONICS SURVEYS LTD.



David G. Mark,  
Geophysicist

**EXPENDITURES Required**

The exploration program is a continuing program.

The next phase is the third phase.

The monies required would be:

**Phase 3:** would require some \$99,500.00 for drilling and back-hoe trenching.

**Phase 4:** would require some \$450,000.00 for surface exploration surveys extending the anomalous zones and continued diamond drilling.

REVISED ESTIMATE OF COSTS

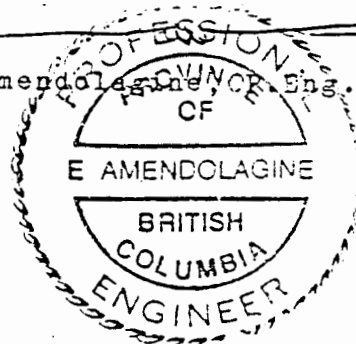
3rd Phase

Diamond drilling 500 metres @ \$90/m	\$45,000.00
Backhoe Trenching	5,000.00
Core grabber - one month	4,000.00
Jr. Geologist - one month	8,000.00
Room & Board	6,000.00
4 x 4 Transportation and Gas - one month	3,000.00
Air Fares (2)	2,000.00
Consultant Airfare, Rm & Bd, 5 field days	3,000.00
Core splitting, shipping and assaying	10,000.00
Communication	500.00
Consultant Geologist/Engineer	5,000.00
Report, maps, drafting	5,000.00
Contingencies	<u>3,000.00</u>
TOTAL	\$99,500.00
4th PHASE - Surface exploration and drilling	\$450,000.00

Respectfully submitted,

June 28, 1985

E. Amendolagine, Eng.





## CERTIFICATE

I, Emanuel Amendolagine, of the City of Vancouver, the Province of British Columbia, hereby certify that:

1. That I am a geologist and reside in Vancouver, British Columbia.
2. That I am a graduate of Hunter College of the City of New York, and Columbia University, with a B.A. and M.A., respectively, and that I have been practising my profession as a geologist for 31 years.
3. That I am a registered Professional Engineer in the Province of British Columbia.
4. That this report is based on the studies of government geological reports, history of the property areas and on visits to the property. Also on studies of the geophysical and geochemical surveys conducted during the period of September 28 - October 19, 1984.
5. That the writer does not have, nor does he expect to receive, either directly or indirectly, an interest in Herdis International Canada Inc. or its associated companies.
6. That this report may be used for the purpose of a Prospectus, if so desired.

DATED at Vancouver, British Columbia this 23rd day of November, 1984.

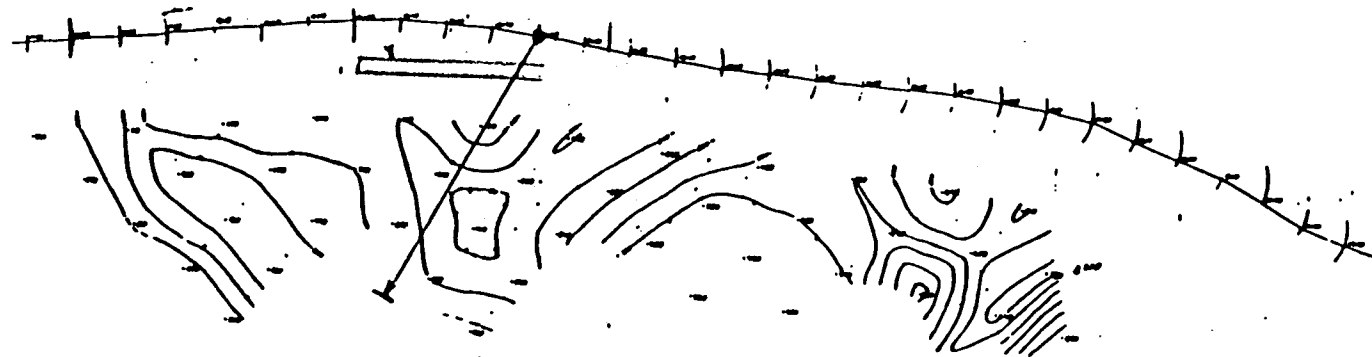


E. Amendolagine, P.Eng.



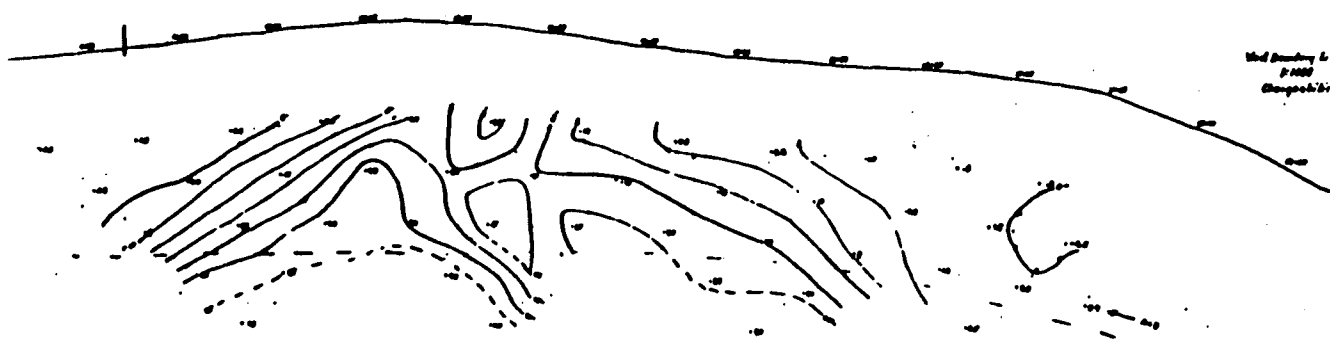
**APPENDIX**

BACK-HOP TRENCH  
13700 - 14750



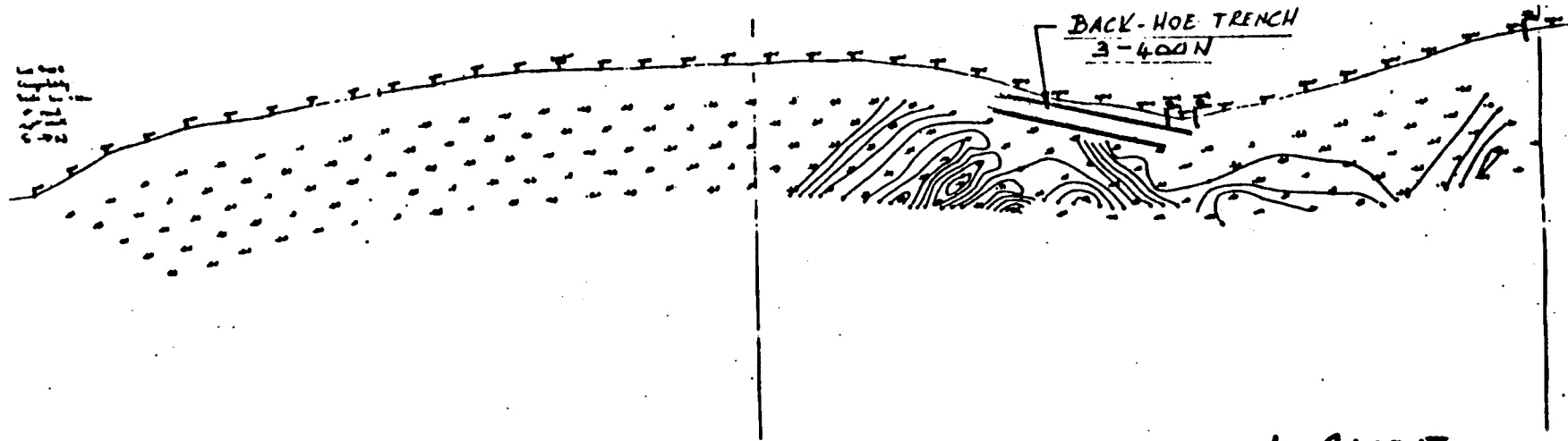
West Boundary line  
E 1000  
Accessibility

WEST BOUNDARY LINE  
RESIST.

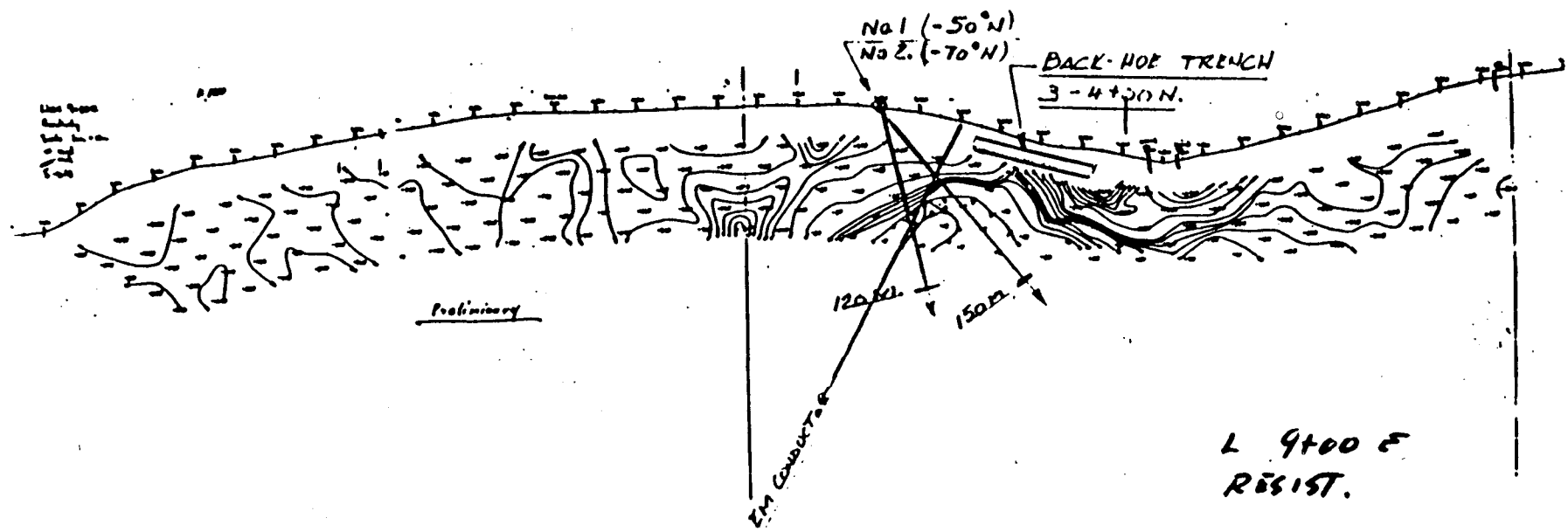


West Boundary line  
7000  
Accessibility

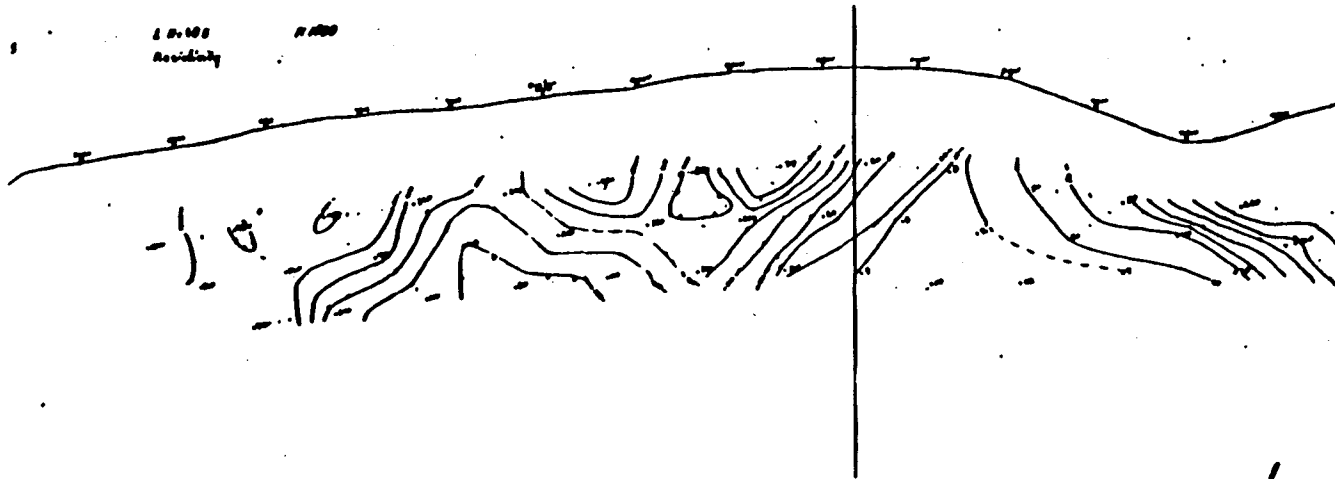
W. BOUNDARY LINE  
CHARG.



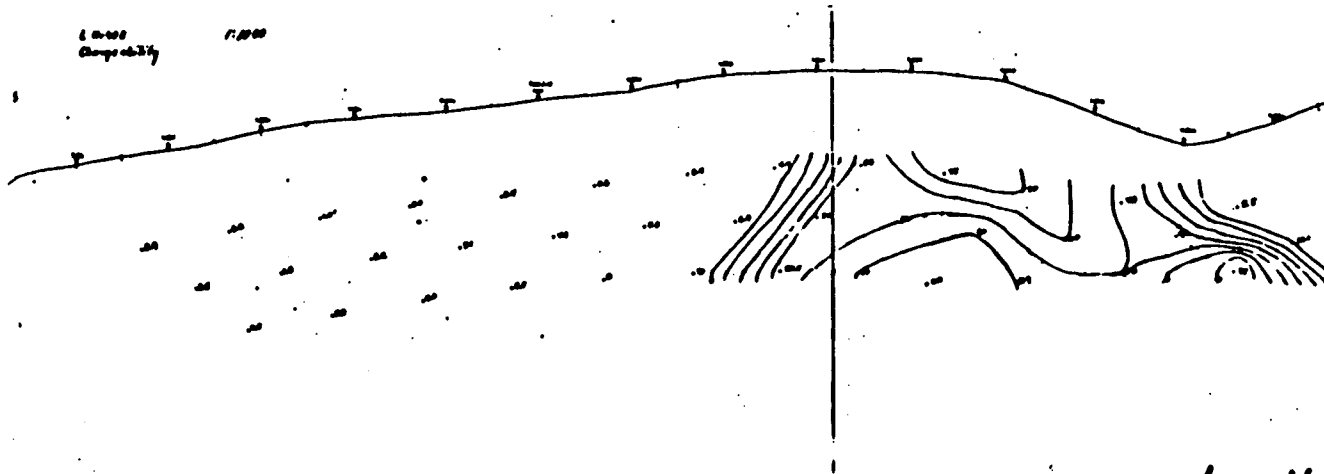
L 9+00 E  
CHARG.



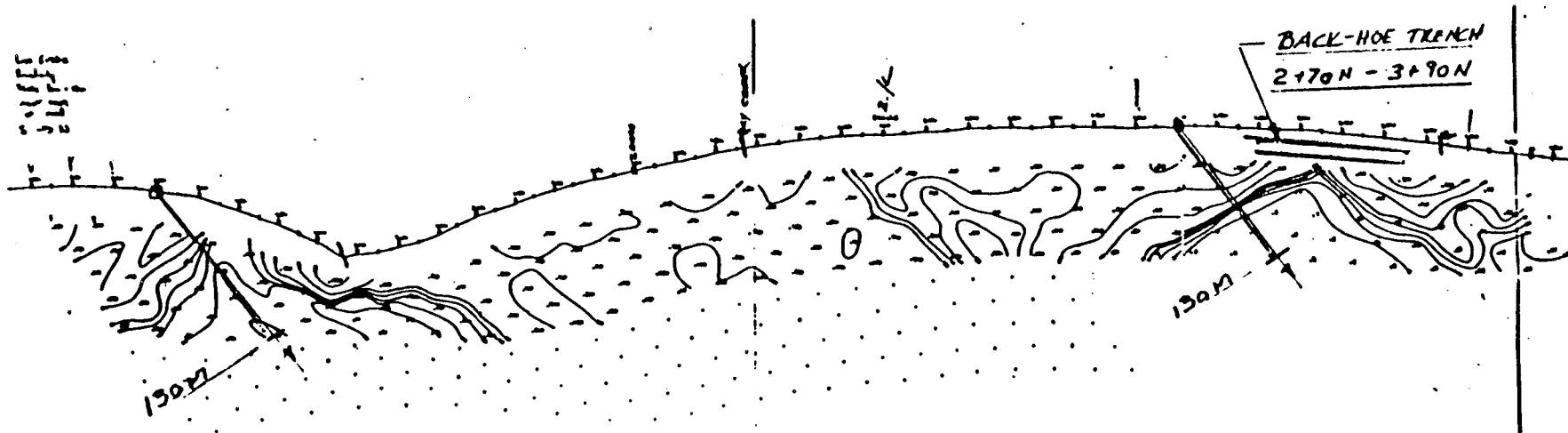
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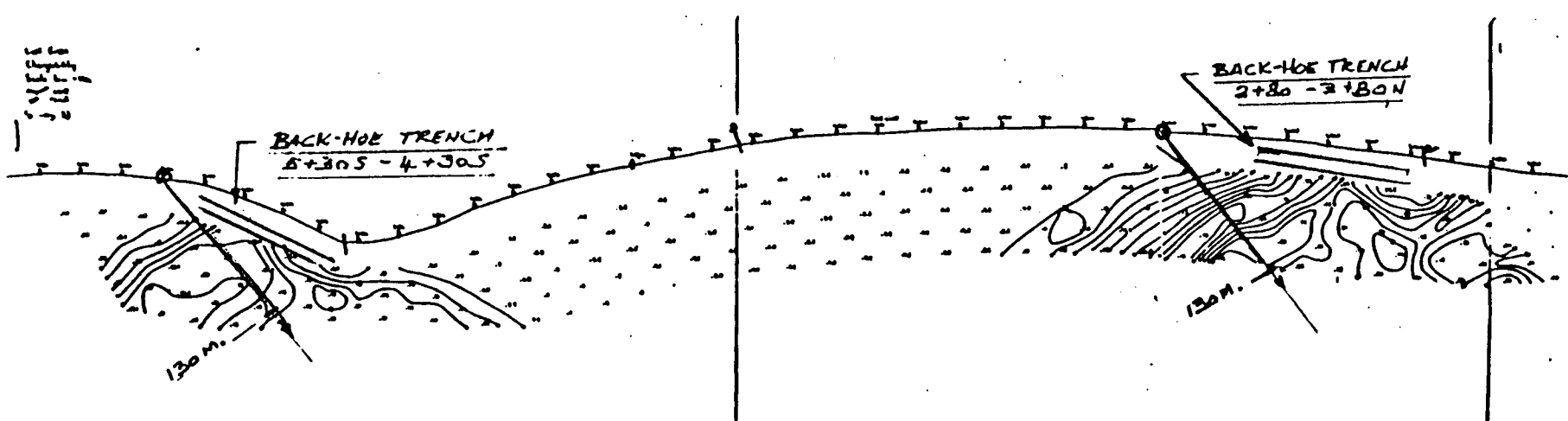
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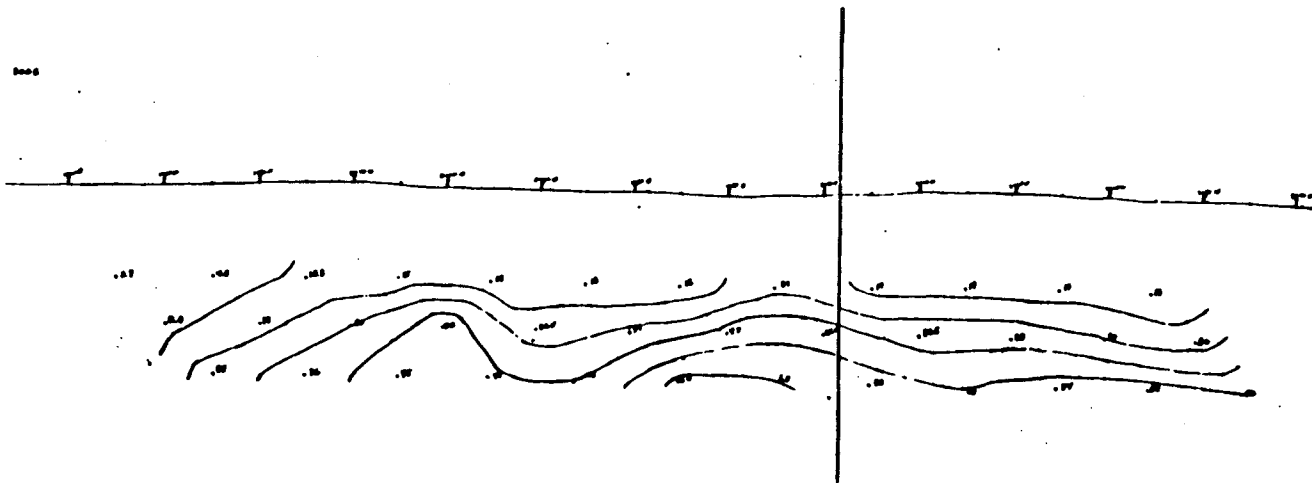
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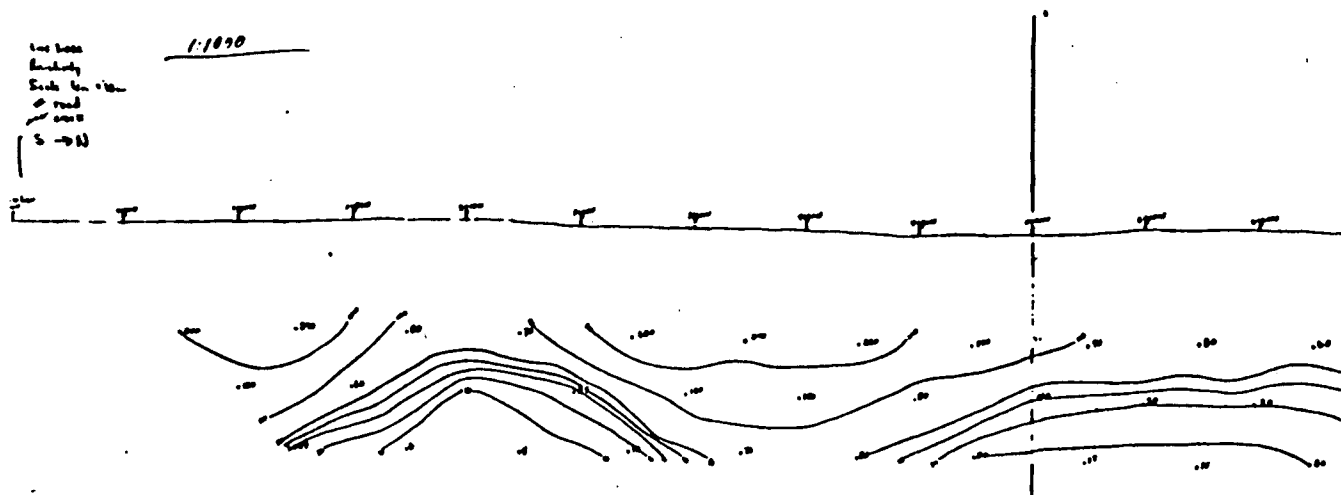
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L 5140 E  
CHARG.



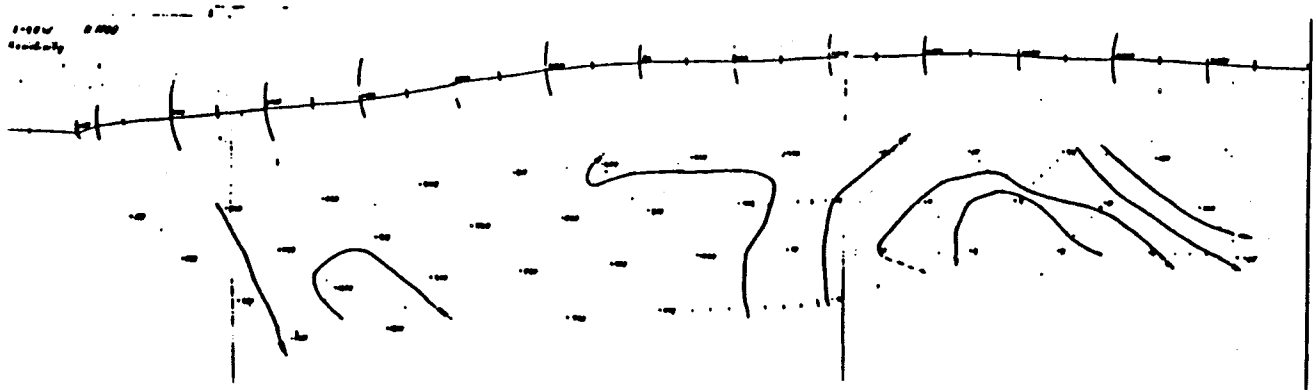
L 3+00 E  
CHARG.



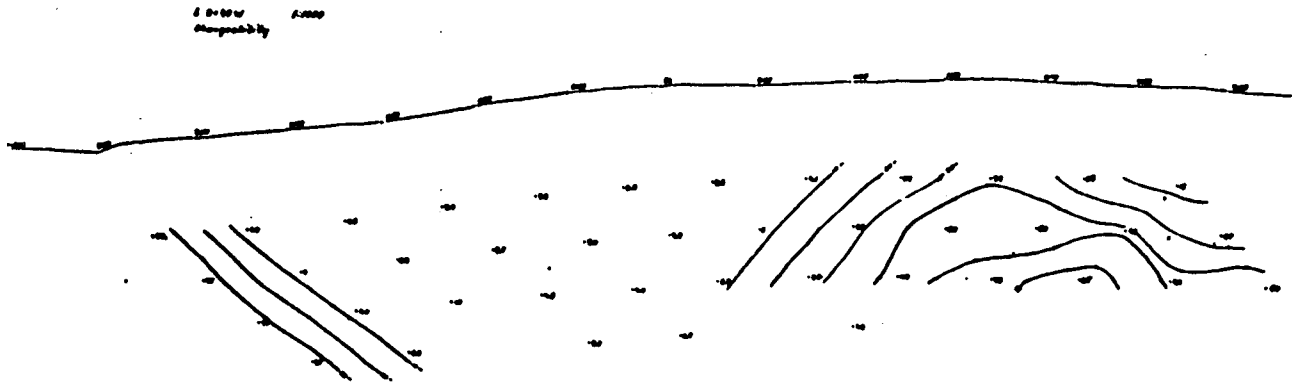
Line 3000  
Resistivity  
Scale 100  
S → E

1:1000

L 3+00 E  
RESIST.



L 2+40 W  
RESIST.



L 2+40 W  
CHARG.