



42110NW0002 83.1-46 YESTERDAY RIVER

900

ARGOR EXPLORA'

MAILING ROUTE TO:	SUITE 1700
	11 KING STREET WEST
	TORONTO 1, ONTARIO

March 1, 1968

REGISTERED

Mr. R. V. Scott, Director  
 Department of Mines  
 Mining Lands Branch  
 Room 1308, East Block  
 Parliament Buildings  
 TORONTO 2, Ontario



Dear Sir:

Re: Exploratory License No. 13,759 granted  
 to Argor Explorations Limited

The following is a summary of the exploration work completed on the above Concession during the year March 1st, 1967 to February 29th, 1968. Attached are duplicate signed copies of diamond drill logs, cross sections, geological and drilling location plans covering this exploration work.

The program consisted of diamond drilling for further investigation of geophysical anomalies located by previous ground and airborne surveys and geological studies relating to these areas. Some ground geophysical reconnaissance work was carried out to more accurately define anomalies indicated by the airborne work.

Diamond drilling was under contract to Inspiration Limited of North Bay, Ontario. Servicing of the drill crews was provided by fixed wing aircraft, muskeg tractors and skidoos. Transportation for the geological investigation was provided by Niagara Helicopters Limited of Niagara Falls, Ontario, during the summer months. Diamond drill core representing the attached work is currently stored at Moosonee, Ontario.

Total diamond drilling completed on the concession during the year amounted to some 1,707'.

March 1, 1968

Exploration activities were concentrated on the following anomalies and areas within the Concession.

#### ARGOR 10 ANOMALY

Two drill holes were completed on this anomaly during March, 1967. The 50° inclined holes were drilled approximately 1400' apart and were designed to intersect an electromagnetic anomaly at points of low and high magnetic expression, as indicated by previous geophysical surveys. As a result of the drilling, the electromagnetic anomaly is assumed to have been caused by solution-bearing fractures within the gneissic rocks encountered, or possibly due to electrolytic solutions in the overburden. Considerable magnetite was observed in hole number Argor 10-2, explaining the high magnetic anomaly.

Total drilling amounted to some 1105'. Geophysical Plans showing the drill hole locations have been submitted previously. No economic mineralization was encountered during the course of this work.

Enclosed: Diamond Drill Logs - Holes Argor 10-1 and 2.  
Diamond Drill Hole - Sections - Argor 10-1 and 2.  
Drilling Location Plan - (Holes shown on Magnetometer Survey Plan).

#### ARGOR 20 ANOMALY

One inclined hole was drilled in the central peak of a magnetic anomaly, plans of which have been previously submitted. The hole was completed to a depth of 602', encountering 114' of overburden and Palaeozoic sediments before entering the Precambrian gneiss basement. Enrichment in magnetite is thought to have caused the magnetic anomaly. Nothing of economic importance is indicated.

A geological examination of the area during the summer revealed no Precambrian outcrops visible in the anomaly area.

A 2,000' winter airstrip was constructed near Argor-20 for servicing of drill crews by single-engine aircraft.

March 1, 1968

Enclosed: Diamond Drill Hole Section 2100N  
Drilling Location Plan (Hole shown on Magnetometer  
Survey Plan)  
Diamond Drill Log - Hole Argor 20-1

### GEOLOGICAL INVESTIGATIONS

Geological mapping was concentrated in areas covered by helicopter airborne magnetometer surveys during the previous year. Maps showing the magnetic contours have already been submitted for the Big Eye and Yesterday River areas.

#### BIG EYE AREA

General helicopter reconnaissance was extended over the Big Eye area covering the northern part of the concession. Particular attention was paid to areas with abnormally high or low magnetic response as indicated by results of the helicopter magnetic survey. Unfortunately no Precambrian outcrops were found during the course of the reconnaissance work, although outcrops of Palaeozoic sediments in the Nettogami River bed are not uncommon.

In assessing the significance of the magnetic anomalies indicated, it is felt that none are sufficiently interesting to warrant testing by diamond drilling.

#### YESTERDAY RIVER AREA - Including Argor 10

Considerable time was spent in mapping outcrops along the bed of the Yesterday River. Investigations were carried out both by the Project Geologist and by Dr. J. Gittins, Consulting Geologist.

The rocks exposed, consisting of garnet-feldspar gneisses, contain many small calcite-bearing fractures and narrow lamprophyre dykes which could be indicative of a carbonatite complex in the vicinity. The gneissic rocks contain local disseminations of pyrite.

Mr. R. V. Scott  
Page 4.

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Yesterday River Area - Including Argor 10 (cont'd.)

No outcrops were found to the east of the river in the Argor-10 area.

A fairly strong magnetic anomaly, situated approximately 2000' northwest of Argor 10-1, was traversed on a ground reconnaissance basis with the magnetometer in conjunction with a search for outcrops which might indicate the source of the anomaly. The anomaly was located and found to occupy an overburden-filled depression, flanked by several outcrops on the east side. The outcrops, consisting of well banded feldspar gneiss, contain no visible mineralization.

The results of recent mapping program are shown on the updated geological plan of the concession area.

Enclosed: Project Terrane - Geological Plan - 1" = 1 mile

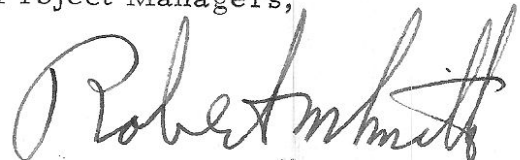
As you are aware, this Exploratory License expires on March 1st, 1968. By submission of the attached data and expenditure breakdown we believe our Company has fulfilled its obligation, under the original terms of the exploratory license granted in our favour.

As no deposit of economic importance was indicated by this exploration program, our Company advises that the exploration license now is officially terminated; and after the government has reviewed the data the \$25,000.00 performance bond will be returned.

Please advise if your Department requires any further details in conjunction with the attached information.

Yours very truly,

Argor Explorations Limited,  
Project Managers,



Per: ROBERT M. SMITH  
Vice-President

RMS:mk  
Attach.



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020

McPHAR GEOPHYSICAL

REPORT ON THE  
ELECTROMAGNETIC AND MAGNETIC SURVEYS  
KESAGAMI LAKE PROJECT  
PORCUPINE M. D. ONTARIO  
FOR  
ARGOR EXPLORATIONS LIMITED

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1. INTRODUCTION

As requested by Mr. R. Smith of Argor Exploration Ltd., a program of ground magnetic and electromagnetic surveying has been carried out over five airborne anomalies near Kesagami Lake, Porcupine M. D. Ontario.

2. PRESENTATION OF RESULTS

The results of the electromagnetic survey are shown on accompanying plan maps E 2823-1 to -5 at a scale of 1" = 200'. Measurements are recorded as dip angles and are plotted as profiles in accordance with the notes preceding this report.

The magnetic data are shown in contour form on corresponding plan maps M 2824-1 to -5, also at a scale of 1" = 200'.

3. DISCUSSION OF RESULTS

Each airborne conductor was detailed by ground geophysics on a separate grid, and the results have been discussed individually.

ANOMALY B-1

The electromagnetic response is not typical of a near-surface, massive-sulphide conductor. It could be caused by a large bed of conductive overburden. However, there is a magnetic trend (of amplitude comparable to that expected from sulphides containing pyrrhotite) coinciding directly with the broad EM crossover.

Although the large magnetic anomaly in the southern section of the grid indicates rock containing a considerable concentration of magnetite, the iron content does not appear high enough to be conductive, so the EM response cannot be explained by iron formation.

In summary, the area does not present an obviously good drill target, but there is the possibility of sulphides at a depth of 100 to 150 feet. If the depth and conductivity of overburden is insufficient to explain the EM anomaly, a 600 foot drill hole may be suggested at Line 28E, 5+00N dipping 45° south.

ANOMALY E-2

The electromagnetic response is very weak, and the existence of the conductor uncertain. There is no associated magnetic response.

If the source of the airborne anomaly has been found, it is very deeply buried.

ANOMALY G-3

The EM response appears caused by one very good conductor which makes an abrupt bend. Magnetic correlation with the conductor is

prominent on several lines, but not consistent over the whole conductive length.

Drilling is definitely recommended. The magnetic profiles indicate an easterly dip on Line 8S, so a drill hole is suggested at 0+50W dipping 45° west.

#### ANOMALY K-4

The survey over this grid has not revealed any good conductors. The response on Line 0 is typical of overburden, although there does appear to be magnetic correlation of 150 gammas.

#### ANOMALY P-5

The electromagnetic data indicate an excellent, near-surface conductor. A definite southern dip is suggested on all lines except Line 30E. There the profile appears influenced by a second conductor lying 200' to the south.

The magnetic response correlates exactly with both the main conductor and the suggested subsidiary conductor. Profiles of the magnetic measurements indicate depth of overburden at about 50' and susceptibility comparable to that expected from pyrrhotite mineralization.

A drill hole at Line 28E, 2+00S dipping 45° north should intercept the conductor within 200'.

#### 4. SUMMARY AND RECOMMENDATIONS

The ground geophysical survey over the five airborne conductors has revealed two strong anomalies of the type expected from massive

sulphides. If drilling Anomaly P and Anomaly G yields mineralization of economic interest, further geophysical investigation is recommended to outline the entire length of the deposits and to re-evaluate the other anomalies.

McPHAR GEOPHYSICS LIMITED

*William H. Pelton*

William H. Pelton,  
Geophysicist.

*Robert A. Bell*

Robert A. Bell,  
Geologist.

Dated: October 8, 1969



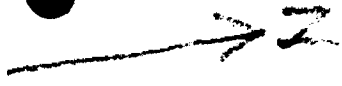
# McPHAR GEOPHYSICS

## GENERAL NOTES ON THE VLF EM METHOD

This EM technique uses as its transmitter field the low-frequency signals from submarine stations located throughout the world. Electromagnetic measurements are made in terms of "dip angles" and are recorded in degrees. An observation is also made of the out-of-phase component of the field by measuring the width of the null in percent. These two readings describe the variations in the primary field due to nearby conductors. They are recorded beneath or to the right of the station at which the measurements were taken.

"Conductor-axes" are marked on the maps according to the legend. They are, in general, vertical projections to the surface of the upper extremities of electrically-conductive bodies.

Electromagnetic anomalies can result from sulphide mineralization, graphitic schists, carbonaceous sediments and, on occasion, fault zones. Apropos of this it is to be noted that disseminated sulphide mineralization consisting entirely of discrete particles is not a conductor at the normal frequencies used for practical geophysical exploration. Consequently, exploration of a property subsequent to an electromagnetic survey should be based not only on the indicated electromagnetic anomalies, but should take into account all the geologic and physiographic data that can be obtained.



L 18 E

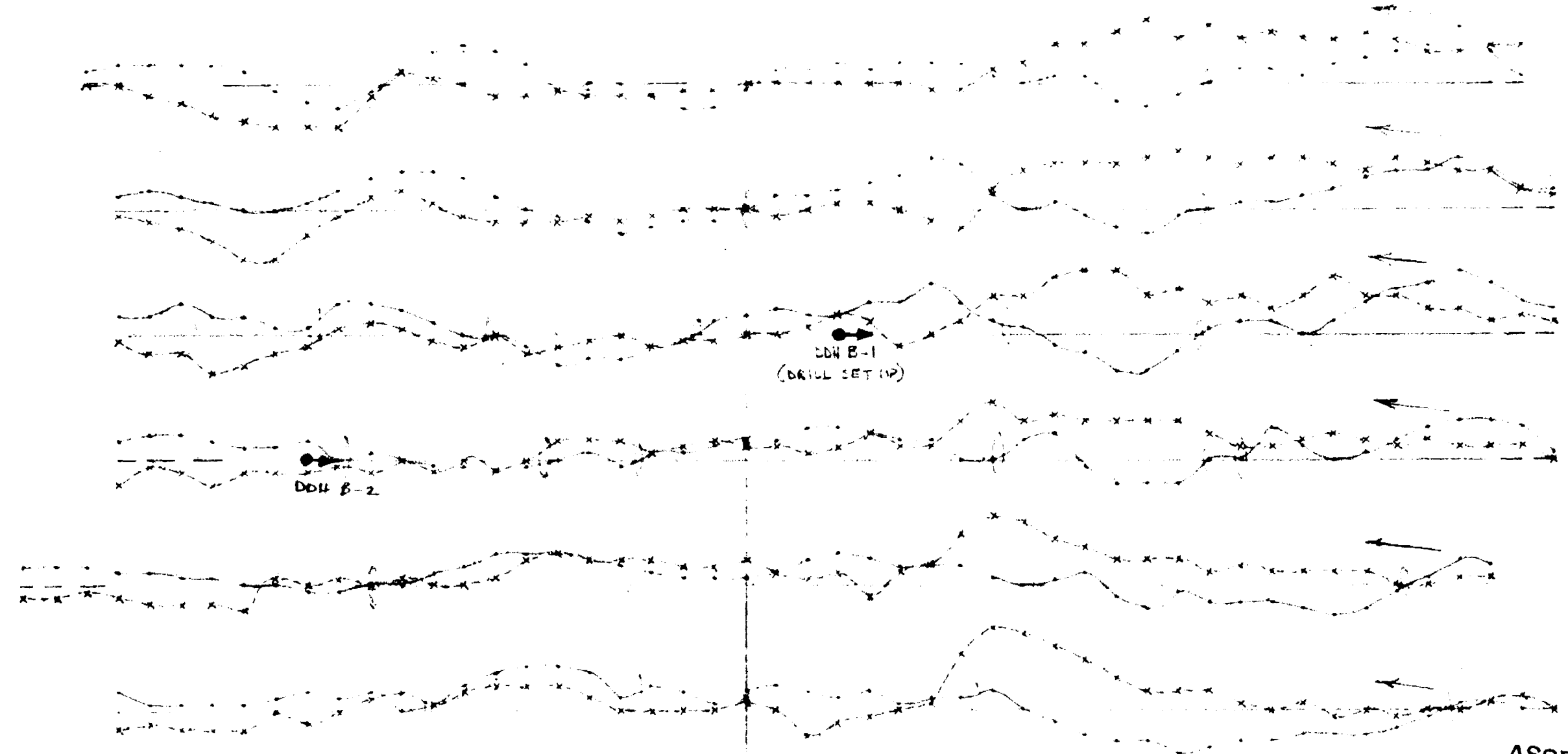
L 20 E

L 22 E

L 24 E

L 26 E

L 28 E



DDH B-1  
(DRILL SET UP)

DDH B-2

VERTICAL  
SCALE: 1" = 20'

BASELINE

APPROX. DIRECTION OF ALL READINGS

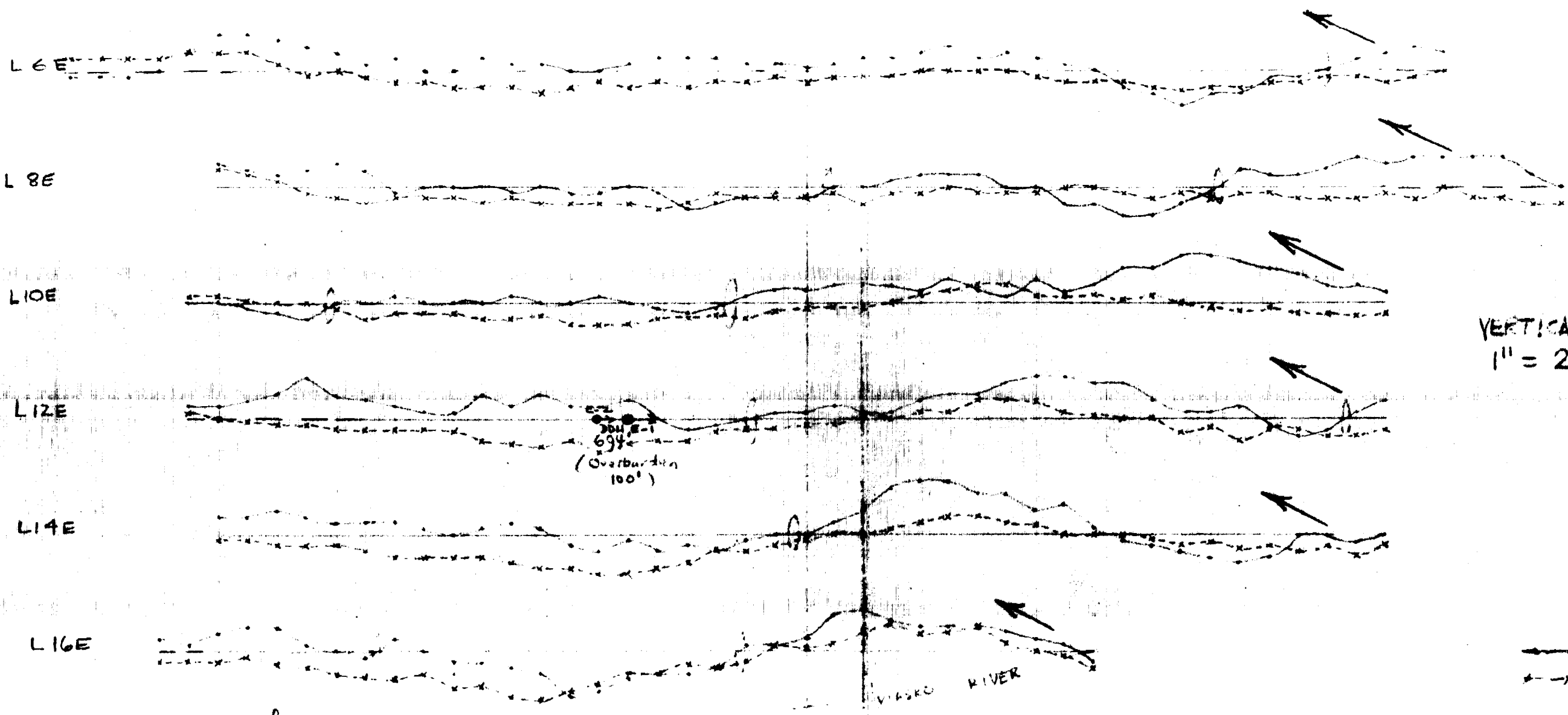
CUTTER MARKS  
(APPROX. DIRECTION)

ASSESSMENT WORK  
T.I.C.C.I.

PROJECT TERRANE  
YESAGAMI LAKE AREA  
ANOMALY - B  
RONKA - EM 16 SURVEY  
SCALE: 1" = 200'    SEPT 28, 1969  
1" = 20%  
BRICK EXPLORATIONS LTD.

*Handwritten signature*

BASE LINE



VERTICAL SCALE:  
1" = 20'

→ Z

—•— In Phase  
-x- Quadrature



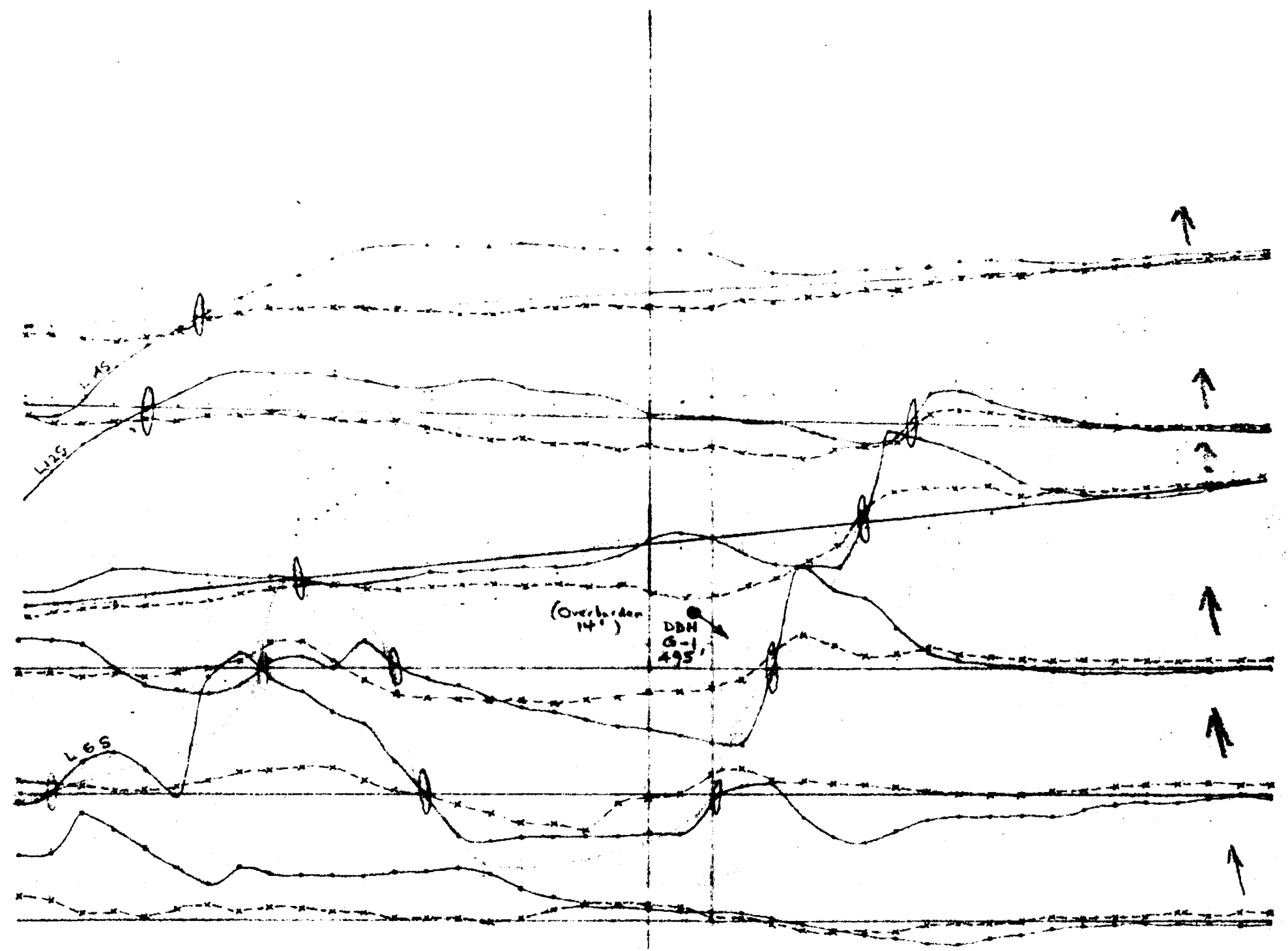
ASSESSMENT WORK  
T.1061

83-1-46

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PROJECT TERRANE  
 KESAGAMI LAKE AREA  
 ANOMALY - E  
 RONKA - EMIG SURVEY  
 SCALE: 1" = 250' SEPT 29, 1969  
 1" = 20'  
 ARGON EXPLORATIONS LTD.

L14S  
L12S  
L10S  
L8S  
L6S  
L4S



Lines located very approximately.

VERTICAL SCALE: 1" = 50'

0+0

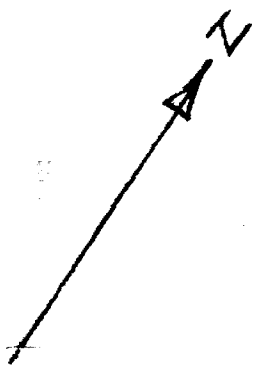
BASELINE B9.040

CUTLER, ME.  
APPROX DIRECTION OF ALL READINGS

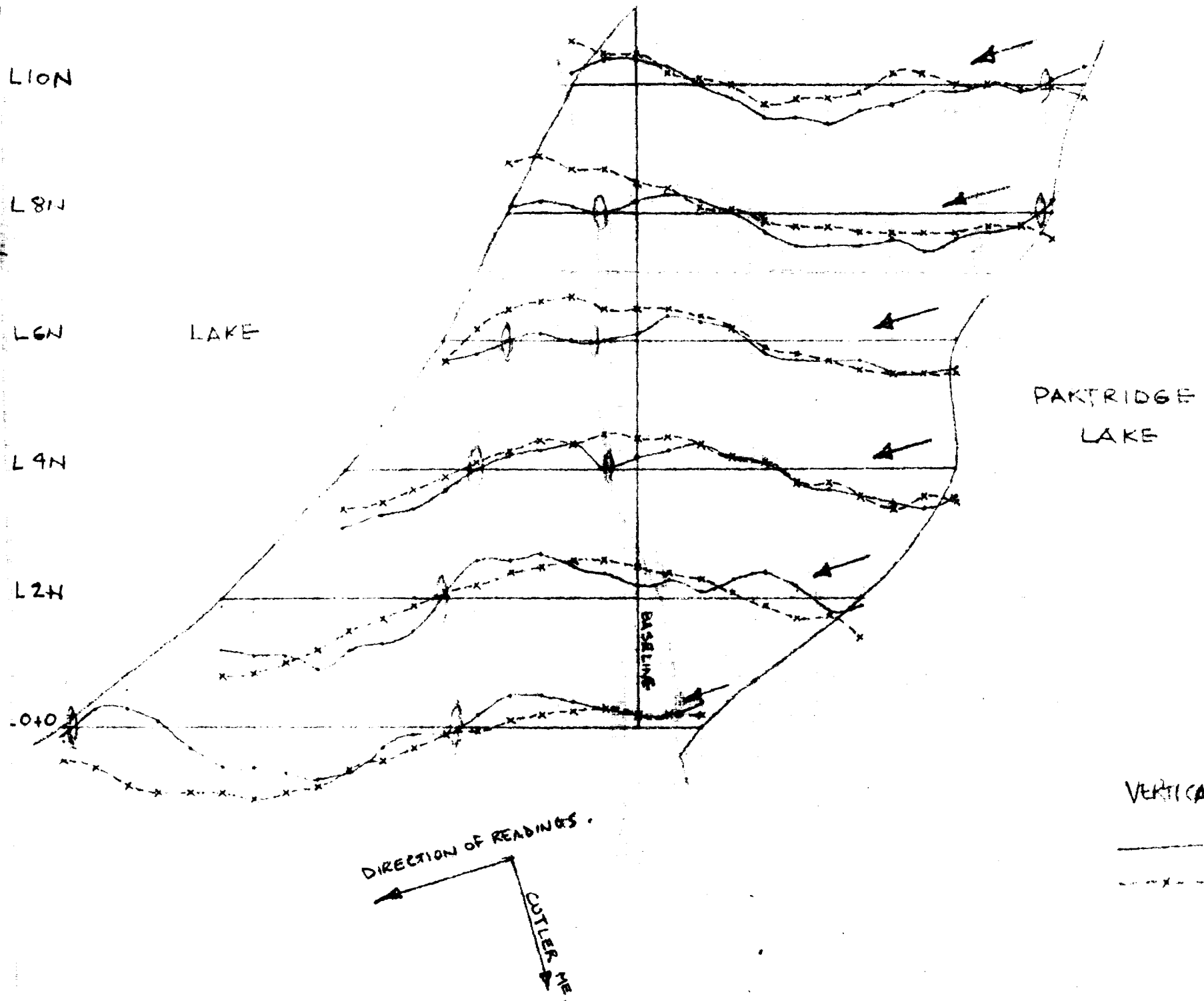
ASSESSMENT WORK T.1061

*H. Stumpf*

PROJECT TERRANE  
 KESAGAMI LAKE AREA  
 ANOMALY - G  
 RONKA - EM 16 SURVEY  
 SCALE: 1" = 200' SEPT. 29, 1969  
 1" = 50%  
 ARGON EXPLORATIONS LTD #12



BL. B.A. 326°



VERTICAL SCALE 1" = 20'  
—— In Phase  
-x- Quadrature

ASSESSMENT WORK *H. Sturtevant*  
T.1061 - (Timmins)

PROJECT TERRANE  
KESAGAMI LAKE AREA  
ANOMALY - K  
RONKA - EMIG SURVEY  
SCALE: 1" = 200'  
1" = 20% OCT. 4, 1964