010

REPORT ON GEOPHYSICAL SURVEYS

ATIKAMINIKIE LAKE PROPERTY
PHILLIPS TOWNSHIP
52F/5

KALROCK DEVELOPMENTS LTD.

Thunder Bay, Ontario
September 1984.

Jūratė Lukošius-Sanders
Geologist.

TABLE OF CONTENTS

SUMMARY

Kalrock Developments Ltd. holds a group of nineteen unpatented mining claims in Phillips Township, Ontario. Gold mineralization is reported from two sites on the property. At the Boulder prospect a shaft was sunk 300 feet, with drifting conducted at four levels. A grid was established and magnetometer and VLF surveys were performed. The purpose of the VLF survey was to locate conductive zones which may contain gold in association with other metals. The magnetometer survey was utilized as an aid in defining lithological contacts and geological structures. Prospecting, sampling and geological mapping are strongly recommended.

INTRODUCTION

Kalrock Developments Limited of Toronto holds a group of 19 unpatented mining claims in Phillips Township, Kenora Mining Division, Ontario.

The claims were staked in February of 1983. This ground was picked up in light of the two known gold showings and favourable geology on the property, and the proximity of the Trojan and Mascotte gold mines. A major staking rush throughout the Kenora-Fort Frances region resulted from important discoveries by Nuinsco.

The purpose of this report is to present new geophysical information, on these claims. Both VLF and magnetometer surveys were performed, and results are being submitted by G.L. Mealey, operator. The surveys were conducted from April 18 to May 5, 1984. The entire area of all nineteen claims was surveyed, including sections over water.

LOCATION AND ACCESS

The Atikaminikie Lake property is situated in Phillips Township, District of Kenora, Kenora Mining Division. It lies just west of Highway 71. The claim block is between Whitefish Bay (Lake of the Woods) and Robinson Lake. It can be most easily accessed along a one kilometre road from the highway, to Atikaminikie Bay. The nearest major town is Kenora, approximately 68 kilometres to the north-northwest. Topographically, the area is quite hilly, although the relief rarely exceeds 30 metres.

CLAIM STATUS

Nineteen contiguous unpatented mining claims have been staked over this area. As shown in Figure 1, and on claim map no. M2102, Phillips Township, the claims are numbered 685114-685122 and 685164-685173 inclusive. The property is held by Kalrock Developments Limited, Suite 321, 3701 Chesswood Drive, Downsview, Ontario, M3J 2P6.

GEOLOGY

The geology over the claim group is shown on Preliminary Map P920, and the Kakagi Lake Map Sheet 2447. Refer to Figure 2 for a geological sketch.

The south shore of Whitefish Bay and the peninsula between Whitefish and Atikaminikie Bay host granites of the Aulneau Batholithic Complex. This is a major contact zone, and some of the rocks display inclusions or are hybridized. The contact strikes northeast over the property. South of this contact, and representing the majority of the rocks, are amphibolites, and massive or pillowed basalts/andesites. Contact metamorphism has produced a well-defined northeast foliation in the amphibolites, with steep to vertical dip. Part of a large quartz feldspar porphyry is included in the southern part of the property. Several other dikes and sills of porphyry and felsite occur in the volcanics. A conformable lense of a metamorphosed mafic/ultramafic intrusive has also been mapped, towards the western edge of the property. No veins are indicated on the government maps.

A few north-northeast trending lineaments are shown on the maps, as well as one fault which terminates within the eastern portion of the claim block. It too is north-northeast trending. The map gives no sense of movement or displacement.

Glacial striae indicate northeast-southwest ice movements.

PREVIOUS WORK

The only record of development on this property comes from the 1976 O.D.M. Report on Gold Deposits of the Kenora-Fort Frances Area. At the location indicated by a gold symbol on the Geological Compilation Map 2443, is the Boulder prospect. It would be situated in the northwest portion of Kalrock's claim 685165. The geophysical operator noted workings about one quarter of a mile southwest from that point. The reference is from O.D.M.,vol.8, pt.1, p.61, 1899. It describes that in 1900 the shaft was down 300 feet, and had four levels. The vein was traced for one half mile, along the contact between mafic metavolcanics and granite.

The O.G.S. Preliminary Map P920 indicates a second gold occurrence on the property, which is situated in the central part of Kalrock's claim 685118. The marginal notes indicate that this was a sample site, from which at least a trace gold value was found. The operator has noted workings in this vicinity. No further reference to this

site was found. The preliminary map suggests that the host rock is an amphibolite with some pillowed phases. There is also an indication of a felsite sill or dike at this locality.

This geophysical survey and linecutting represents the first exploration of the property by Kalrock.

INSTRUMENTATION AND SURVEY METHODS

A grid system was cut and picketed over the entire area of the claim group, with line spacings of 400 feet and station spacings of 50 feet. The baseline is 9200 feet long and trends 045° astronomic and the picketed lines are perpendicular to this direction. Altogether 1572 station pickets were erected, and 16.1 miles of line were cut.

The McPhar M700 Fluxgate Magnetometer was used to accomplish the magnetometer survey. Readings were taken at each 50 foot station. The VLF survey utilized a Phoenix VLF-2 unit. Readings were generally taken at every 100 foot station, although 50 foot stations were utilized over some areas.

MAGNETOMETER SURVEY

A McPhar M700 vertical field fluxgate magnetometer was employed for this survey. It has a sensitivity of 5 gammas. Diurnal variations were compensated for by using each grid-line/base-line intersection as an arbitrary

base station. These were read morning and evening as well as each time the operator crossed the base-line during the survey. Another base station used as a tie-in every morning and evening was at L 12+00W, 5N.

VLF SURVEY

The Phoenix VLF-2 unit was utilized to conduct the survey. The frequency of 17.8 kHz out of the Cutler , Maine transmitter was selected. Normal operating procedures were followed.

SURVEY RESULTS

The results of both surveys are presented in two maps, Maps 1 and 2, at the end of the report.

The magnetometer survey recorded variations in the geomagnetic field of over 17,100 gammas. Anomalies identified consist of narrow, linear highs trending on average at approximately 045°. There do not appear to be any discordant trends. A series of anomalies forms a distinct trend from about L84+00W, 14N across the property to L8+00W, 6N. The greatest magnetic relief on the property occurs over a distance of only 400 feet. This occurs at L 72 to 76 W, at about 3S. This anomaly is restricted by L80+00W and L68+00W, where normal background readings were obtained. A few isolated one line highs are also evident.

The VLF survey identified four anomalies of appreciable strike length. They are all coparallel and

trend about 065°. There do not appear to be any discordant trends, although some areas appear to display abrupt terminations. The most prominent zone is centred over L24W, from 2 to 16N; a second is found at L60W, 2 to 16N. There may be other zones near the edges and corners of the grid.

The most prominent VLF anomaly,"A", crosses the entire property from southwest to northeast. It is especially pronounced from L72W,20N to L0W, 5S. The maximum deflection from peak to peak is 38°, and the minimum distance from peak to peak is 50 feet. The metalliferous conducting zone appears to be positioned at a shallow to moderate depth. At the north ends of L 4W and L12W, there are strong yet shallow anomalies trending off of the grid.

A second linear VLF anomaly,"B", exhibits the most intense anomalies, as revealed by the Fraser filtering method. It extends from L60W,BL0, to L12W,20S. The strongest responses are at L40W,9S where a shallow conductor may be deduced, and at L12W, 18S, where a conductor of shallow to moderate depth may be present. Along anomaly "B" the minimum distance peak to peak is 100 feet, and the maximum deflection peak to peak is 60°.

Between anomalies "A" and "B" and parallel to them, are two anomalies on strike with one another. The two portions are separated by a zone of discontinuous, truncated trends. Anomaly "C" extends from L48W,2N to L32W, 7S. The minimum distance peak to peak is 150 feet and the maximum deflection from peak to peak is 54°. The conducting

body may be positioned at a moderate depth. To the west, anomaly "D" stretches from L92W,15N to L76W,10N. Its minimum distance peak to peak is 200 feet, and maximum deflection from peak to peak is 38°. A moderate depth is postulated for this body. Other weak anomalies are observed particularly near the margins of the grid.

DISCUSSION OF GEOPHYSICAL RESULTS

The main magnetic anomaly, crossing the entire property, reveals distinct changes in the susceptibilities of the rocks, as would be true across a geologic contact. It is a straight trend, and is not directly coincident with the VLF anomaly "A" The VLF anomaly reflects a metalliferous conducting body, particularly from L44W eastward. West of this point, the VLF may be indicating a vein or fault structure without the metal content. Anomaly "A" and the main magnetometer anomaly coincide at approximately L44+00W,11N.

The other VLF anomalies do not have magnetometer anomalies spacially associated with them. Anomalies "B", "C" and "D" reflect responses to metalliferous conductors.Discontinuities and truncated anomalies suggest the presence of faults.

The magnetometer anomaly at L72W,2S shows a marked transition in magnetic susceptibilities, suggesting a fault or contact between two distinctly different lithologies. The other one line highs are probably indicative of contacts.Areas of flat response suggest lithologic continuity.

QUALIFICATIONS

I, the undersigned, Jūratė Lukošius-Sanders, residing at 149 Duke Street, Thunder Bay, Ontario, graduated from the University of Toronto in 1982, with a Bachelor of Science honours degree in the Geology Specialist program.

I have been employed in the field of geology since graduation in 1978.

I am an associate member of the Geological Association of Canada, and a member of the Prospectors and Developers Association.

I do not hold, nor do I expect to receive an interest of any kind in these claims held by Kalrock Developments Limited, nor in any other mining claims they may have.

Jūratė Lukošius-Sanders

Jūratė Lukošius-Sanders,
Geologist.

DISCUSSION OF GEOLOGY AND MINERALIZATION

Available government literature indicates that there are two gold showings, hosted in different geological environments. The Boulder prospect consists of a vein at the granite/volcanic contact, through which a shaft was sunk. The depth of the workings and number of levels suggests that some encouraging results were obtained. The vein itself has been traced over about 800 metres, and the contact is two kilometres in length, over this property. The potential for locating other sites of mineralization along this contact is great, particularly in light of other workings to the southwest. Just to the south of the property, and centred over Robinson Lake, is a stock or cupola of granite. This granite/volcanic contact just enters the property limits in the southeast portion. The possibility of a similar style of mineralization to the Boulder prospect exists.In general terms, this type of mineralization is a metamorphic/hydrothermal contact effect. The molten pluton, in metamorphosing the country rocks, tends to dehydrate the contact zone. The pluton can also release fluids that may leach, transport and deposit metals in favourable sites.

The second gold occurrence, on Atikaminikie Bay, may reflect the style of mineralization just discussed. A fault passes just west of the site, and it is possible that secondary faults branching from it provided pathways for mineralized fluids. South of the property, the pyrite

occurrence in the fault suggests that some mineralized fluids did migrate through this zone. The fault is parallel to the fault hosting the Trojan gold mine nearby. On the other hand, the fault may prove to be of little consequence, and the presence of felsite bodies, and a large quartz feldspar porphyry may be significant. The predominant country rock at the occurrence is mafic metavolcanic.

INTERPRETATION

In correlating the geophysical results to the known geology, an interesting fact is revealed. The vicinity in which anomaly "A" and the main magnetometer anomaly cross, is also the locale of the Boulder prospect. This suggests that the convergence of the batholithic contact with a probable fault structure has some significance with respect to mineralization.

A series of one line magnetometer highs and anomaly "D", over the western part of the property may be an indication of the mafic to ultramafic intrusive body. The magnetometer anomaly at L72W, 2S is probably reflecting both faults and a contact between the quartz feldspar porphyry and mafic volcanics.

The VLF anomalies centred around L40W,6S appear to coincide with the main fault mapped by the O.G.S., where it crosses the quartz feldspar porphyry contact. Two isolated VLF anomalies in the southeast corner of the grid are in the vicinity of the southern granite contact, where it is intersected by three lineaments.

RECOMMENDATIONS

Geological mapping of the entire claim block is recommended. The two gold showings and third area of workings should be carefully sampled and mapped. Prospecting should be carried out along the batholithic contact, as well as the stock/cupola contact, most of which is south of the property. Of particular interest there, would be the site of the pyrite occurrence, which is on the fault, proximal to the contact. It should be determined whether the other lineaments are hosts to fault zones. The quartz feldspar porphyry should be inspected with attention directed to identifying stockworks and alteration. Upon completion of this mapping, sampling and propecting, a decision should be made as to whether a grid geochemical survey is warranted.

Jurate Lukošius-Sanders

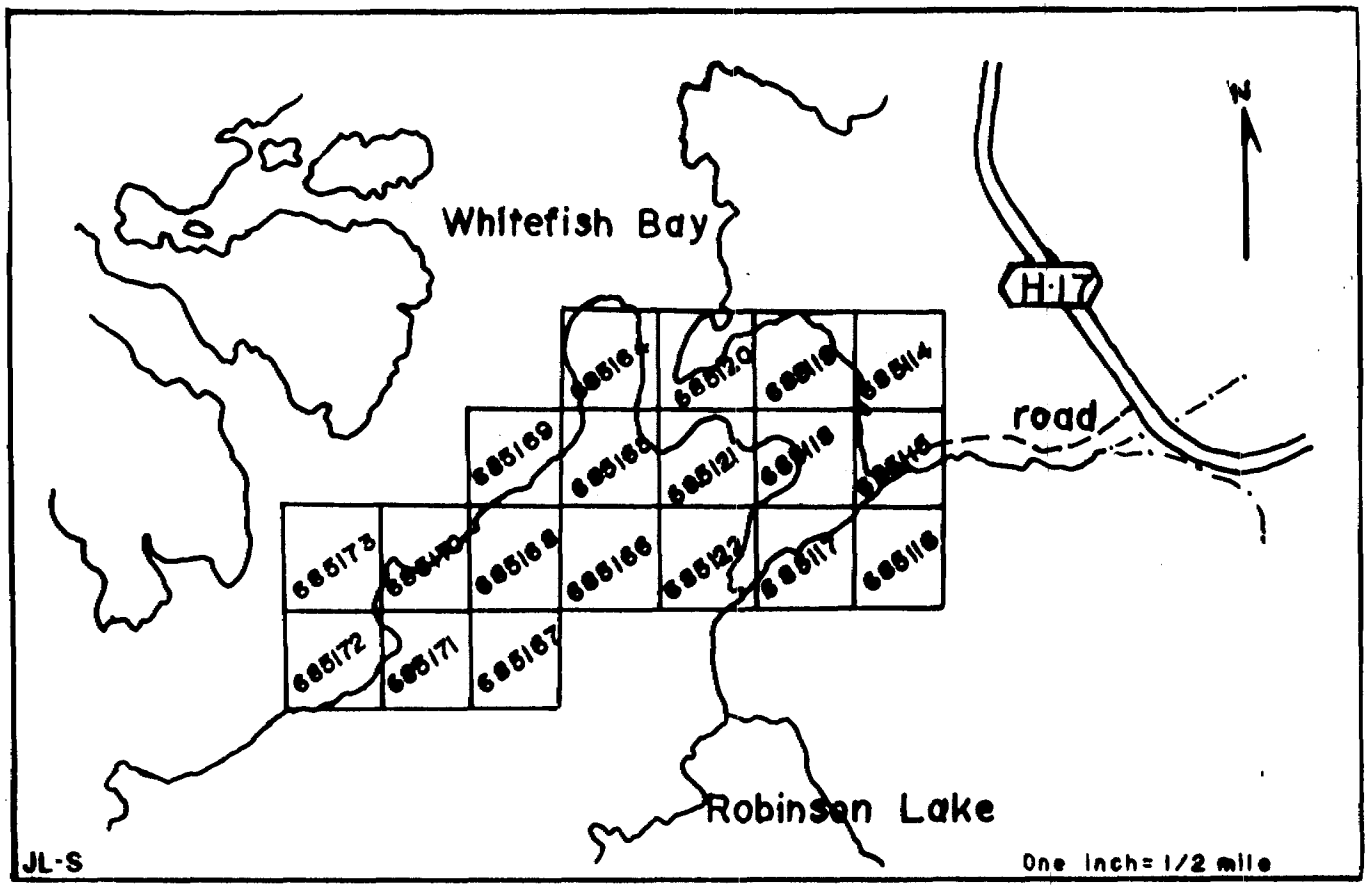


FIGURE 1

LOCATION AND CLAIM MAP

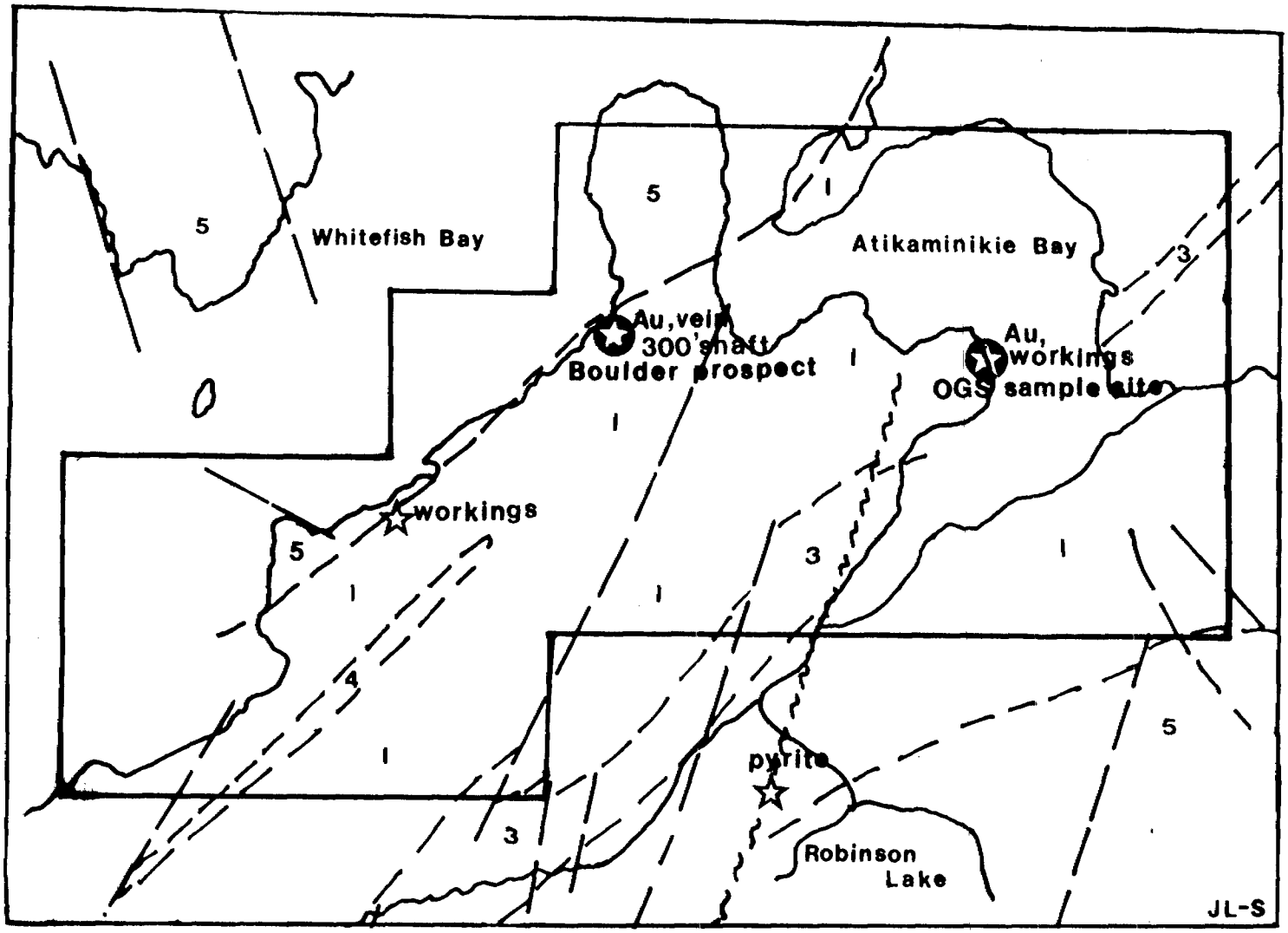


FIGURE 2

GENERAL GEOLOGY OF ATIKAMINIKIE LAKE PROPERTY

Legend

1 mafic metavolcanics
3 quartz feldspar porphyry
4 mafic to ultramafic metaintrusives
5 granite

fault zone
lineament
contact

Scale: One inch=1/4 mile

Geology adapted from P920.

SECTION 1

INTRODUCTION

The M700 Magnetometer is a vertical field magnetometer employing the flux gate principle. The instrument is self-levelling, and a self-cancelling circuit permits rapid, accurate measurement of the earth's magnetic field from a meter, without adjustments or calculations.

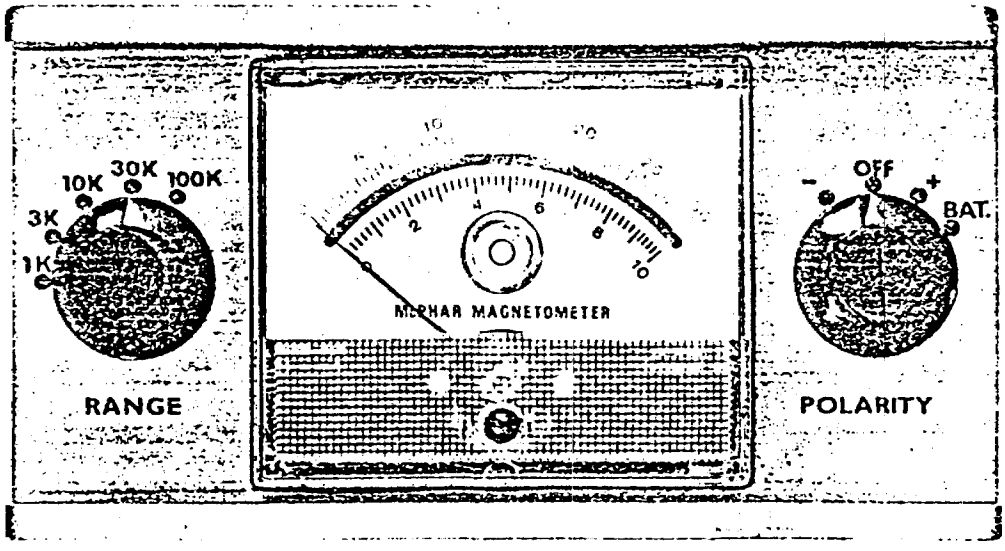
The self-levelling feature of this electronic magnetometer eliminates the need for bulky tripods and time consuming fine levelling procedures. Further, the instrument is practically insensitive to orientation. Errors are as low as 25 gammas for 180 degree rotation in a 15,000 gamma horizontal field.

Since the instrument can be adjusted electronically to measure vertical fields from plus 100,000 gammas to minus 100,000 gammas, there is no need for auxiliary magnets or complicated latitude adjustments.

The operation of the M700 is very simple. The reading on the meter is set to zero at a chosen base station by operating the latitude adjustment control. This can be done to an accuracy of 5 gammas. Next, as successive stations are occupied, the instrument is held roughly level, and the increase or decrease in the vertical component of the earth's magnetic field is read directly from the meter. Five scale ranges are available and on the most sensitive range the accuracy is 5 gammas.

The M700 Magnetometer is the result of extensive engineering based on rugged field requirements. It incorporates the latest advances in solid state components and has built in temperature stability. The instrument provides rapid, accurate, repeatable measurements.

An accessory socket broadens the applications of the M700. Optional accessories available from McPhar permit the same console to be used, for example, as a base station monitor or an airborne recording magnetometer.



SECTION 2

SPECIFICATIONS

2–1 MAXIMUM SENSITIVITY

20 gammas per scale division on 1,000 gamma range.
Readability is 1/4 scale division or 5 gammas.

2–2 MAXIMUM MEASUREMENT

Zero to ± 100,000 gammas in five ranges.

Range Switch Position	Full Scale In Gammas	Gammas Per Scale Division
1K	1,000	20 black scale
3K	3,000	50 red scale
10K	10,000	200 black scale
30K	30,000	500 red scale
100K	100,000	2,000 black scale

2–3 MEASUREMENT POLARITY

The above ranges can be reversed in polarity as a simple function of the Polarity switch.

2–4 LATITUDE ADJUSTMENT

The latitude adjustment permits cancelling the earth's field up to a magnitude of ± 100,000 gammas. The adjustment control is a ten revolution precision potentiometer located under the sliding side panel. A positive type locking lever on the control removes the hazard of accidentally dislodging the setting.

2–5 SELF-LEVELLING SENSING HEAD

The unique self-levelling sensing head of this magnetometer is inserted as a plug-in unit. It is easily detached so that the same magnetometer can be used with other types of sensing heads such as the airborne gyro stabilized head etc.
It is recommended that the instrument be re-calibrated at our servicing depot, each time the sensing head is changed.

2–6 ORIENTATION ERROR

The orientation error is set at the factory to 25 gammas or less in the presence of a 15,000 gamma horizontal field. It is possible to adjust the orientation error and the procedure is explained in the section 9–2 under Maintenance.

2–7 TEMPERATURE STABILITY

Over the temperature range of –35 to +55 degrees centigrade the temperature drift is limited to less than 50 gammas. See section 4–6 on Minimizing Temperature Drift.

2–8 BATTERY SUPPLY

The M700 Magnetometer is powered by two internally mounted 9 volt batteries. Any pair of the following batteries may be used.

Eveready No. 276
Mallory No. M1603
Burgess No. D6
R. C. A. No. VS306

For sub-zero operation the batteries may be transferred to an external battery case and carried under clothing to keep them from freezing. **See section 6, Operation with External Batteries.**

Two types of external battery cases are available **see accessory list, section 11.** One type is for the above batteries. Another type of case will accommodate the equivalent in flashlight cells for use in countries where the normal batteries are difficult to obtain.

2–9 ACCESSORY RECEPTACLE

A Cannon receptacle is located on the side of the instrument under the sliding panel. This increases the versatility of the instrument so it can be used in a number of ways in addition to its normal vertical field ground magnetometer function. See section 8, under Extended Applications and section 11, under Accessories.

2–10 ACCESSORY & LATITUDE SWITCH

This is a double function switch. The first function is to permit operation north or south of the equator by simply changing one step

2–10 ACCESSORY & LATITUDE SWITCH (Cont'd.)

on the switch. By switching on additional step, the accessory socket is brought into connection and accessories can be applied to the instrument.

2–11 WEIGHT

The weight of the magnetometer is distributed as follows:–

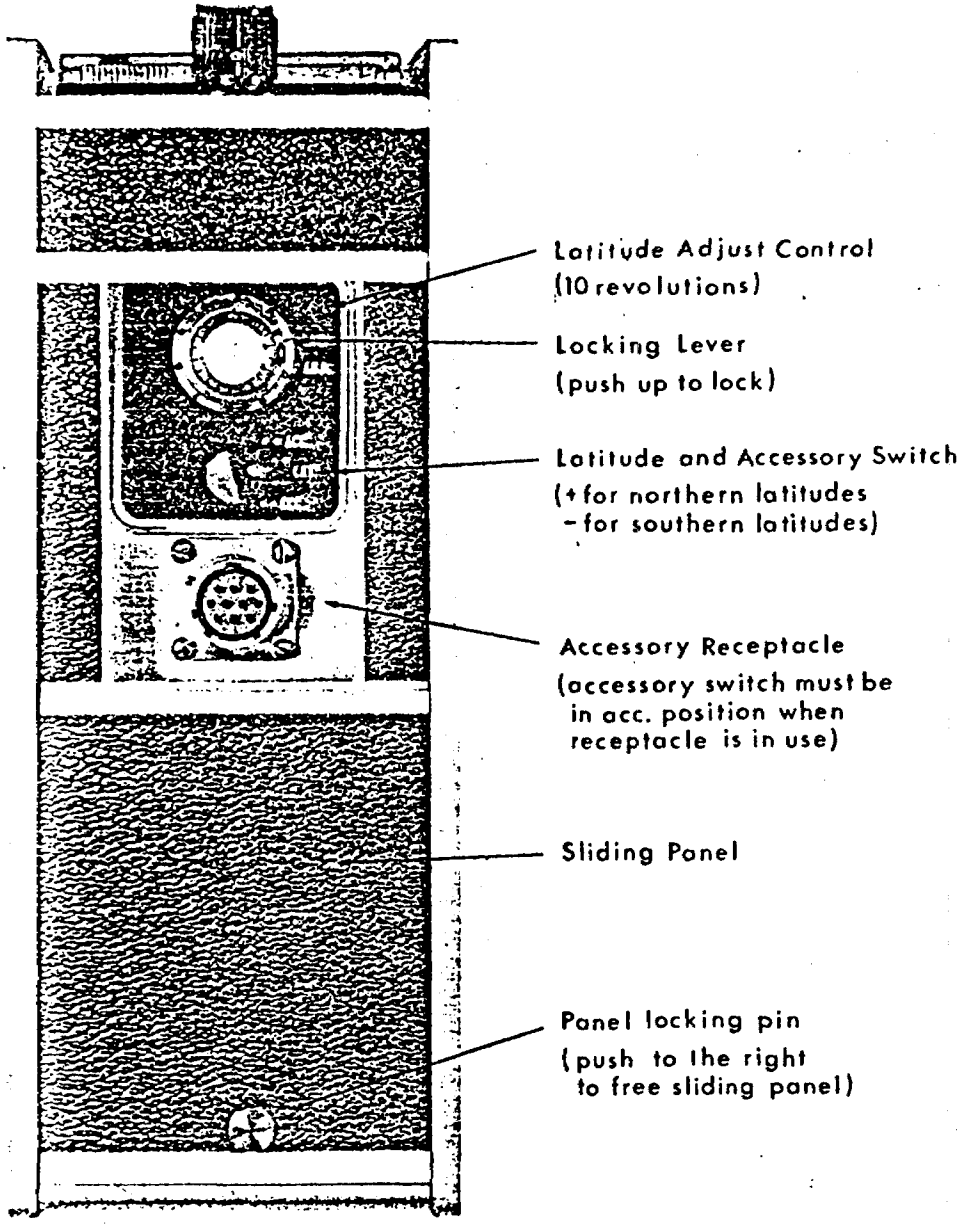
Console:	6 pounds
Batteries:	1–1/4 pounds **2 type Eveready 276**
Carrying Case:	2 pounds

2–12 MAGNETOMETER DIMENSIONS

Width:	6–7/8 inches
Depth:	3–3/4 inches
Height:	9–5/8 inches

2–13 TRANSIT CASE

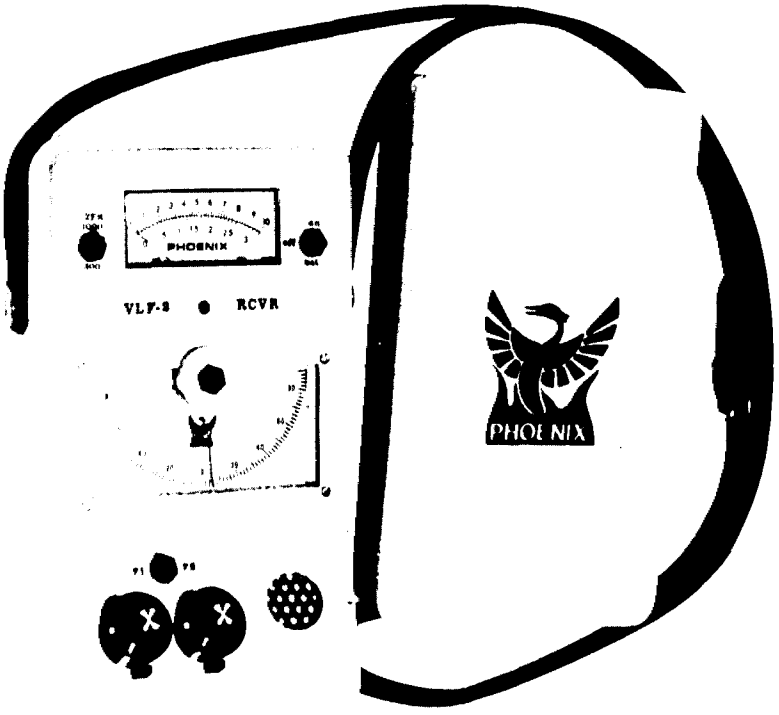
The magnetometer is shipped in a foam fitted transit case. The case is designed to accommodate the magnetometer in its leather case, spare batteries, external battery cable and battery case and instruction manual.



VLF-2

Electromagnetic Unit

- Lightweight, low battery drain, rugged, simple to operate
- Two independent channels
- Each channel may select any station between 14.0 and 29.9 kHz
- Single crystal used for all frequencies
- Locking clinometer provides tilt-angle memory
- Superheterodyne detection and digital filtering provide extremely high selectivity and noise rejection



Military and time standard VLF transmitters are distributed over the world. These stations are used for geophysical EM surveying thus eliminating the need for a local transmitter and permitting one-man operation.

To ensure that a station excites the prospective conductor, two stations at approximately right angles are used during a survey (see data on back).

The choice of 160 frequencies in the range 14.0 to 29.9 kHz permits the use of a local EM transmitter when no suitable regular VLF station is available.

PHOENIX

PHOENIX GEOPHYSICS LIMITED

Geophysical Consulting and Contracting, Instrument Manufacture, Sale and Lease.

Head Office: 200 Yorkland Blvd. Willowdale, Ont., Canada, M2J 1R6. Tel: (416) 493-6350
1424 - 355 Burrard St. Vancouver, B.C., Canada, V6C 2G8. Tel: (604) 684-2285
2430 N. Huachuca Dr., Tucson, Arizona, U.S.A. 85705. Tel: (602) 884-8542

Specifications

Parameters Measured	:	Orientation and magnitude of the major and minor axes of the ellipse of polarization.
Frequency Selection, Front Panel	:	Dual channel, front panel selectable (F1 or F2) each with independent precision 10-turn dial gain control.
Frequency Selection, Internal	:	F1 and F2 can be selected by internal switches within the range 14.0 to 29.9 kHz in 100 Hz increments.
Detection And Filtering	:	Superheterodyne detection and digital filtering provide a much narrower bandwidth and thus greater rejection of interfering stations and 60 cycle noise than conventional receivers.
Meter Display	:	2 ranges: 0 to 300 or 0 to 1000. Background is typically set at 100. Meter is also used as dip angle null indicator and battery test.
Audio	:	Crystal speaker. 2500 Hz used as null indicator.
Clinometer	:	±90°, ±0.5° resolution. Normal locking, push button release.
Battery	:	One standard 9v transistor radio battery. Average life expectancy - 1 to 3 months (battery drain is 3 mA)
Temperature Range	:	-40° to + 60° C.
Dimensions	:	8 x 22 x 14 cm (3 x 9 x 6 inches).
Weight	:	850 grams (1.9 pounds).

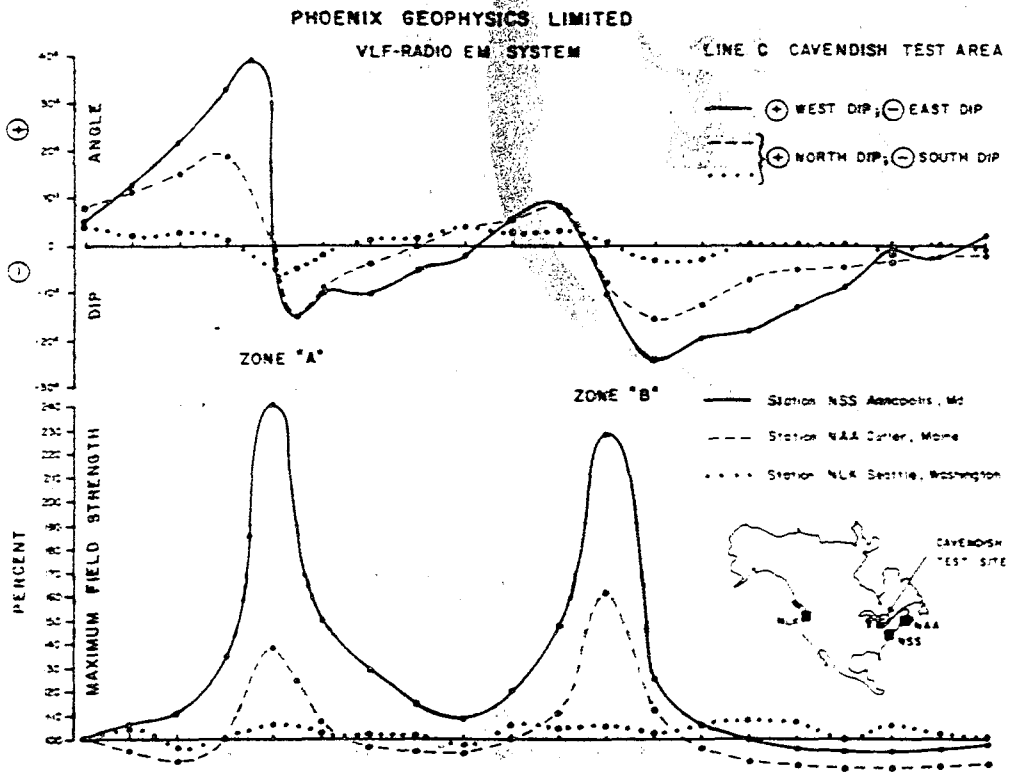
All of the established stations may be selected, or alternatively, a local VLF transmitter may be used which transmits at any frequency in the range 14.0 to 29.9 kHz.

VLF Station	Frequency (kHz)
Bordeaux, France	15.1
Odessa (Black Sea)	15.6
Rugby, U.K.	16.0
Moscow, U.S.S.R.	17.1
Yosamai, Japan	17.4
Hegaland, Norway	17.6
Cutler, Maine	17.8
Seattle, Washington	18.6
Malabar, Java	19.0
Oxford, U.K.	19.6
Paris, France	20.7
Annapolis, Maryland	21.4
Northwest Cape, Australia	22.3
Lualualei, Hawaii	23.4
Buenos Aires, Argentina	23.6
Rome, Italy	27.2

Field Data

The results below illustrate the need for using two orthogonal stations when the strike of the prospective conductor is not well-known. The dip angle and amplitude data measured using station NLK in Seattle, Washington, show only a very weak anomaly associated with the two conductive sulphide zones at Cavendish, Ontario.

The results obtained using Cutler, Maine reveal a more prominent anomaly, but the best response was obtained using Annapolis, Maryland since the station lies almost due south and the transmitted electromagnetic field is thus maximum-coupled with the North-South trending conductors.



Ontario

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TECHNICAL DAT

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TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) Geophysical : VLF & Magnetic

Township or Area Phillips

Claim Holder(s) Kalnock Developments Ltd.

Survey Company G.L. Mealey

Author of Report Jūratė Lukošius-Sanders

Address of Author 149 Duke St. Thunder Bay, P7A 5S9

Covering Dates of Survey 18/4/84 to 5/5/84 (linecutting to office)

Total Miles of Line Cut 16.14

SPECIAL PROVISIONS CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
–Electromagnetic	40
–Magnetometer	20
–Radiometric	
–Other	
Geological	
Geochemical	

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: Sept. 3, 1984 SIGNATURE: Jūratė Lukošius-Sanders
Author of Report or Agent

Res. Geol. _____ Qualifications 25777

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
K	685114
K	685115
K	685116
K	685117
K	685118
K	685119
K	685120
K	685121
K	685122
K	685164
K	685165
K	685166
K	685167
K	685168
K	685169
K	685170
K	685171
K	685172
K	685173

TOTAL CLAIMS 19

If space insufficient, attach list

OFFICE USE ONLY

837 (5/79)

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS -- If more than one survey, specify data for each type of survey

Number of Stations 1572 Number of Readings 1572

Station interval mag: 50', VLF: 100' Line spacing 400 feet

Profile scale VLF : 1"=20°

Contour interval mag: 200γ<1000γ, 500γ>1000γ

MAGNETIC

Instrument McPhar M700 vertical field fluxgate magnetometer

Accuracy -- Scale constant 5 gammas sensitivity

Diurnal correction method loop method

Base Station check-in interval (hours) one hour

Base Station location and value L 12+00W, 5N., and each intersection of each grid line with base line. variable values

ELECTROMAGNETIC

Instrument Phoenix VLF-2 unit

Coil configuration

Coil separation

Accuracy ± 0.5°

Method: ☑ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line

Frequency 17.8 kHz, Cutler Maine (specify V.L.F. station)

Parameters measured in-phase and quadrature

GRAVITY

Instrument

Scale constant

Corrections made

Base station value and location

Elevation accuracy

INDUCED POLARIZATION RESISTIVITY

Instrument

Method ☐ Time Domain ☐ Frequency Domain

Parameters -- On time Frequency

-- Off time Range

-- Delay time

-- Integration time

Power

Electrode array

Electrode spacing

Type of electrode

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

_____

Corrections made _____

_____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth – include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

_____

Additional information (for understanding results) _____

_____

_____

AIRBORNE SURVEYS

Type of survey(s) _____

Instrument(s) _____

(specify for each type of survey)

Accuracy _____

(specify for each type of survey)

Aircraft used _____

Sensor altitude _____

Navigation and flight path recovery method _____

_____

Aircraft altitude _____ Line Spacing _____

Miles flown over total area _____ Over claims only _____

GEOCHEMICAL SURVEY – PROCEDURE RECORD

Numbers of claims from which samples taken _____

_____

_____

Total Number of Samples _____

Type of Sample _____
(Nature of Material)

Average Sample Weight _____

Method of Collection _____

_____

Soil Horizon Sampled _____

Horizon Development _____

Sample Depth _____

Terrain _____

_____

Drainage Development _____

Estimated Range of Overburden Thickness _____

_____

_____

SAMPLE PREPARATION
(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis _____

_____

_____

_____

General _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

ANALYTICAL METHODS

Values expressed in: per cent ☐
p. p. m. ☐
p. p. b. ☐

Cu, Pb, Zn, Ni, Co, Ag, Mo, As,-(circle)

Others _____

Field Analysis (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Field Laboratory Analysis

No. (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Commercial Laboratory (_____ tests)

Name of Laboratory _____

Extraction Method _____

Analytical Method _____

Reagents Used _____

General _____

_____

_____

_____

_____

_____

_____

_____

_____

Mining Lands Section

File No 2.7169

Control Sheet

TYPE OF SURVEY

✓ GEOPHYSICAL

____ GEOLOGICAL

____ GEOCHEMICAL

____ EXPENDITURE

MINING LANDS COMMENTS:

lgd. L.D.

Signature of Assessor

21-11-22

Date

Ministry of Natural Resources
Ontario

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

156/84
Fred Mathews

Instructions:
- Please type or print.
- If number of mining claims traversed exceeds space on this form, attach a list.
- Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
- Do not use shaded areas below.

Type of Survey(s): Geophysical — 2716

Township or Area: Phillips

Claim Holder(s): Kalrock Developments Ltd.,

Prospector's Licence No.: T1351

Address: Suite 321, 3701 Chesswood Dr.,- Downsview, Ont., M3J 2P6

Survey Company: G. L. Mealey

Date of Survey (from & to): 18 4 84 (Day Mo. Yr.) — 5 5 84 (Day Mo. Yr.)

Total Miles of line Cut: 16.14

Name and Address of Author (of Geo Technical report): G. L. Mealey, RR#1, Mining Rd., Murillo, Ont., POT 2G0

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical - Electromagnetic	40
	Geophysical - Magnetometer	20
For each additional survey: using the same grid: Enter 20 days (for each)	Geophysical - Radiometric	
	Geophysical - Other	
	Geological	
	Geochemical	

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical - Electromagnetic	
	Geophysical - Magnetometer	
	Geophysical - Radiometric	
	Geophysical - Other	
	Geological	
	Geochemical	

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Prefix	Mining Claim Number	Expend. Days Cr.	Prefix	Mining Claim Number	Expend. Days Cr.
K	685114				
	685115				
	685116				
	685117				
	685118				
	685119				
	685120				
	685121				
	685122				
	685164				
	685165				
	685166				
	685167				
	685168				
	685169				
	685170				
	685171				
	685172				
	685173				

RECEIVED
JUL 27 1984
MINING LANDS SECTION

685114
File K~~685156~~

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits
Total Expenditures: $ ÷ 15 = Total Days Credits

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Total number of mining claims covered by this report of work: 19

For Office Use Only
Total Days Cr. Recorded: July 13/84
Date Approved as Recorded: 84.11.23
Recording Recorder: [signature]
Branch Director: [signature]
1140

KENORA MINING DIV.
JUL 13 1984
AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

Date: July 9/84

Recorded Holder or Agent (Signature): [signature]

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying: G. L. Mealey, RR#1, Mining Rd., Murillo, Ont., POT 2G0

Date Certified: July 9/84

Certified by (Signature): [signature]

1362 (81/9)

REGISTERED

November 16, 1984 File: 2.7169

Kalrock Developments Ltd
Suite 321
3701 Chesswood Drive
Downsview, Ontario
M3J 2P6

Dear Sir:

RE: Geophysical (Magnetometer & Electromagnetic)
Survey submitted on Mining Claims K 685114
et al in the Township of Phillips

Enclosed is a copy of our letter dated October 12, 1984 requesting additional information for the above-mentioned survey.

Unless you can provide the required data by November 26, 1984 the mining recorder will be directed to cancel the electromagnetic work credits recorded on July 13, 1984.

For further information, please contact Mr. Ray Pichette at (416)965-4888.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: (416)965-4888

Mr. Lewis called 84-11-19 Allow some time

cc: Mining Recorder
Kenora, Ontario

cc: G.L. Mealey
R.R.#1
Mining Road
Murillo, Ontario
P0T 2G0

Encl.

October 12, 1984 File: 2.7169

Kalrock Developments Ltd
Suite 321
3701 Chesswood Drive
Downsview, Ontario
M3J 2P6

Dear Sirs:

RE: Geophysical (Magnetometer & Electromagnetic)
Survey submitted on Mining Claims K 685114
et al in Phillips Township

Returned herein is the Electromagnetic plan (in duplicate). Please plot the raw data readings at each station on the plans and return them to this office quoting file 2.7169.

For further information, please contact Susan Hurst at (416)965-4888.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-4888

S. Hurst:mc

cc: Mining Recorder
Kenora, Ontario

cc: G.L. Mealey
R.R.#1
Mining Road
Murillo, Ontario
P0T 2G0

Encl.

1984 09 24

Your File: 150
Our File: 2.7169

Mining Recorder
Ministry of Natural Resources
808 Robertson Street
Box 5080
Kenora, Ontario
P9N 3X9

Dear Madam:

We have received reports and maps for a Geophysical (Electromagnetic and Magnetometer) Survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims K 685114 et al in the Township of Phillips.

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

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-4888

A. Barr:mc

cc: Kalrock Developments Ltd
Suite 321
3701 Chesswood Drive
Downsview, Ontario
M3J 2P6

cc: G.L. Mealey
R.R.#1, Mining Road
Murillo, Ontario
P0T 2G0

Ministry of
Natural
Resources

September 11, 1984

Director
Land Management Branch
Ministry of Natural Resources
Whitney Block
Queen's Park
TORONTO, Ontario.

Dear Sir:

Re: Geophysical Survey Reports
Kalrock Developments Limited

Enclosed herewith please find copies of reports concerning Tweedsmuir Township and Phillips Township (in duplicate) which were received at this office.

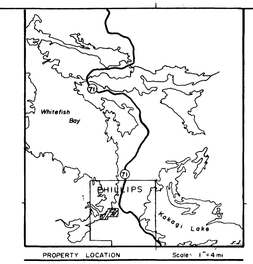
Yours very truly,

A Hayes

Audrey M. Hayes (Mrs.)
Mining Recorder
Thunder Bay Mining Division
P. O. Box 5000
435 S. James St.
Thunder Bay, Ont.
P7C 5G6

AMH/jz

enclosures



SCALE:
1"=200'

IN PHASE DEGREES 1"=20° S(-) N(+)	OUT OF PHASE 1" = 20 % % x 10

X-OVER

INSTRUMENT- PHOENIX VLF 2
FREQUENCY- CUTLER MNE. 17.8 KHz.
OPERATORS- J.DYCK & G.L. MEALEY

KALROCK DEVELOPMENT LTD.
PHILLIPS TOWNSHIP
ATIKAMIMIKE BAY PROPERTY
VLF SURVEY

27169

G.L. Mealey, August, 1984.

92 W 88 W 84 W 80 W 76 W 72 W 68 W 64 W 60 W 56 W 52 W 48 W 44 W 40 W 36 W 32 W 28 W 24 W 20 W 16 W 12 W 8 W 4W

28 N 26 N 24 N 22 N 20 N 18 N 16 N 14 N 12 N 10 N 8 N 6 N 4 N 2 N 0 2 S 4 S 6 S 8 S 10 S 12 S 14 S 16 S 18 S 20 S 22 S 24 S 26 S 28 S

L 92+00 W
L 88+00 W
L 84+00 W
L 80+00 W
L 76+00 W
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L 64+00 W
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L 40+00 W
L 36+00 W
L 32+00 W
L 28+00 W
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L 16+00 W
L 12+00 W
L 8+00 W
L 4+00 W

34+00 N
32+00 N
30+00 N
28+00 N
26+00 N
24+00 N
22+00 N
20+00 N
18+00 N
16+00 N
14+00 N
12+00 N
10+00 N
8+00 N
6+00 N
4+00 N
2+00 N
B.L. 0+00
2+00 S
4+00 S
6+00 S
8+00 S
10+00 S
12+00 S
14+00 S
16+00 S
18+00 S
20+00 S
22+00 S
24+00 S
26+00 S
28+00 S
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K685172
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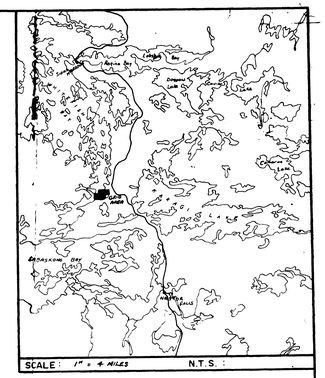
K685119
K685115
K685116
K685114



SCALE: 1" = 4 MILES N.T.S.

MAGNETOMETER SURVEY
INSTRUMENT: McPHAR M700 FLUXGATE MAG.
SENSITIVITY: 5 gammas
BASE STATION: BASE LINE – PICKET LINE INTERCEPTS
OPERATOR: G.L. MEALEY
CONTOUR INTERVAL: < 1000 at 200 ϒ; > 1000 at 500ϒ
MAGNETIC LOW:

2716?

KALROCK DEVELOPMENTS LTD.

ATIKAMINIKE BAY PROPERTY Map 2
PHILLIPS TWP., ONT.

MAGNETOMETER SURVEY

DATE: JULY, 1984 | SCALE: 1"=200 ft

Geotechnical Surveys

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