HUDBAY MINING LTD.
A SUBSIDIARY OF
HUDSON'S BAY OIL AND GAS COMPANY LIMITED
Floor, 10 King St. E. Toronto, Ontario M5C 1C3

REPORT ON THE GEOPHYSICAL AND GEOCHEMICAL INVESTIGATIONS CARRIED OUT IN THE MIDDLE RIDGE AREA OF CENTRAL NEWFOUNDLAND

: 2 D/6 A,B,D; 2 D/3 B,C,D; 2 D/4 A,D

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BY

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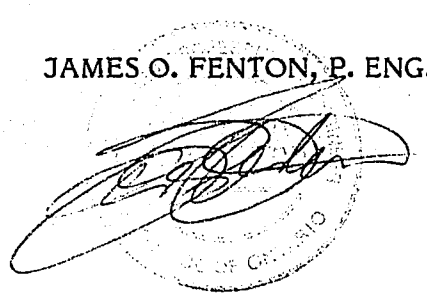


CONTENTS

CONTENTS CONT'D

PAGE NO.

FIGURES

PLATES

RECOMMENDATIONS

The following recommendations are made regarding additional work in the Middle Ridge Project Area:

1) The Twillick Brook Felsic Member and the Terra Nova Clastics should be evaluated by airborne electromagnetic and magnetic surveys.

2) The Keda Zone and the S-SE conductor on the Pentecost Zone should be drill tested.

3) The Titus Zone should be re-evaluated geologically and the potential of the immediate area should be assessed for polymetallic/hydrothermal mineralization

SUMMARY

A limited geophysical/geochemical/geological follow-up program, based on an AEM survey flown in 1969, was completed in the Middle Ridge Project Area during the 1980 field season. A total of four zones were investigated, with nine ground electromagnetic responses defined. Two conductors are considered of further interest at this time and one area should be re-assessed geologically.

CONCLUSIONS

The indirect and direct evaluations of the Twillick Brook Felsic Member completed to date do not represent a significant evaluation of the approximately 69 km strike length of felsic volcanics. In addition, the recently recognized Terra Nova Clastics have received, at best, a cursory examination. The airborne electromagnetic and magnetic survey completed, by McPhar in 1969, does not constitute a valid geophysical appraisal of the area, considering experience elsewhere in Central Newfoundland and the significant advancements in AEM surveying in recent years. Valid targets have been identified and remain to be tested.

The potential of the Ackley City Batholith for polymetallic/hydrothermal deposits has only recently been indicated. Polymetallic/hydrothermal activity is present along the eastern margin of the Project Area, proximal to the complex, intrusive suite, and additional evaluation of the area is warranted.

INTRODUCTION

Field investigations completed during 1980 in the Middle Ridge Project Area were restricted to the immediate vicinity of the Twillick Brook Felsic Member and the strike extension of the Isle Galet Formation, north from the Kaegudeck Lake Project Area. The standard follow-up program was employed and crews were deployed, by rotorcraft, from a central camp on the Conne River. All field work was performed by the permanent and temporary employees of Hudson's Bay Oil and Gas Company Limited during the months of July and August, 1980. The report and accompanying maps were prepared during the period November 1980 to April 1981. A list of personnel involved, their

addresses, and work statistics may be found in Appendix A.

LOCATION AND ACCESS

The Middle Ridge Project Area is located in Central Newfoundland, approximately midway between Bishops Falls and Milltown. The Project Area lies some distance east of highway 360 and rotorcraft provide the only assured access to most of the area. Many of the larger lakes are amenable to landings by ski/float equipped, fixed wing aircraft, but care should be exercised due to the large number of substantial boulders that litter the lake bottoms. The area of interest is shown in Fig. 1.

PREVIOUS WORK

The general area was regionally mapped and prospected by NALCO employees during the 1950's. The major units were recognized and delineated, but the general low level of technical training renders many of the original observations of limited value. Within the present project area, these early efforts located several talc-serpentine-magnesite occurrences of apparently limited extent.

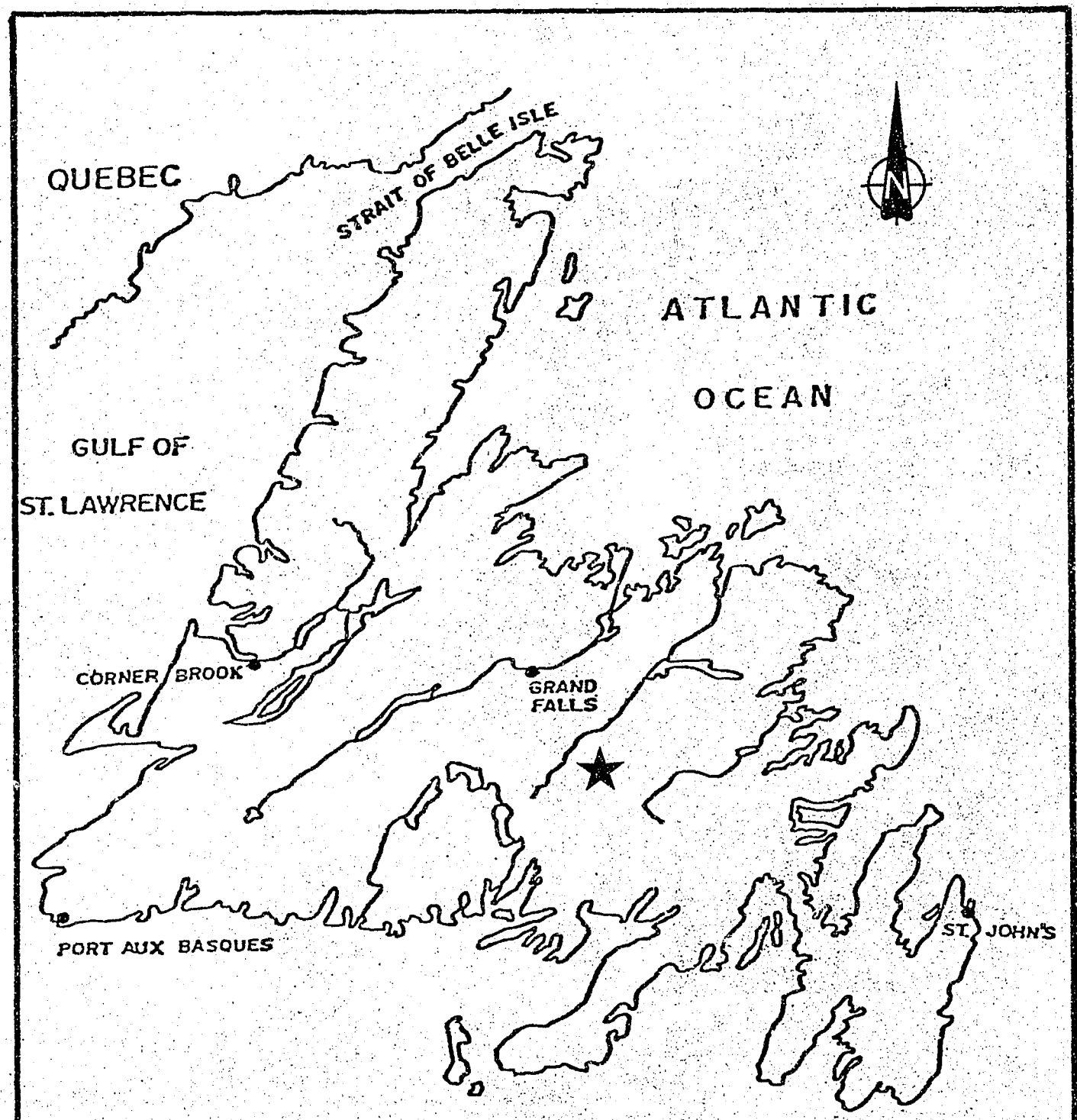
The most recent, and most extensive, previous exploration effort was completed by Noranda Exploration in the early 1970's. The program consisted of a regional geophysical evaluation by airborne electromagnetic and magnetic surveys, a limited, regional stream sediment geochemistry survey, and geophysical/geochemical/geological evaluation of a substantial number of airborne electromagnetic responses. The majority of their efforts were directed towards the Twillick Brook Felsic Member, due to the obvious similarity of the area

with the Bathurst area of northern New Brunswick. A total of six diamond drill holes were completed, all intersecting variably graphitic /pyritic/pyrrhotitic metasediments.

The area was geologically mapped by Hudson's Bay Oil and Gas during 1979 (Chance, 1979).

GEOLOGY

The area of interest is underlain by a variety of rocks ranging in age from Lower Ordovician to Devonian. The Project Area straddles the facies change from basinal sediments (Baie d'Espoir Group; Colmann-Sadd, 1976) in the SW to foreland style sedimentation (Gander Group) in the NE. A substantial bimodal, volcanic component, enclosed by units of both the Gander and Baie d'Espoir Groups, underlies the western margin of the area investigated. The volcanics consist of the Twillick Brook Felsic Member (informal name) and the Terra Nova Clastics (Chance, 1979; informal name). The Twillick Brook Felsic Member comprises a composite ignimbrite, consisting of at least three individual sheets of quartz/feldspar phyric ignimbrite of dacitic to rhyolitic composition. The Terra Nova Clastics consist of rhyolite tuff-breccias, tuffaceous conglomerates, felsic tuffs and mafic sub-trusives, within a sequence of quartzose arenites, and fine grained greywackes and argillites. The western margin of the Terra Nova Clastics appears to be marked by a narrow, linear zone of ultramafic intrusives and structurally derived ultramafic schists. These bodies appear to be of similar provenance as the ultramafic units within the Gander River Ultrabasic Belt. The ultramafic bodies and Terra Nova Clastics are interpreted to represent an east-facing melange. All volcanics and sediments are assigned a lower to middle Ordovician age.



NALCO LOT II

Hudson's Bay Oil and Gas Company Limited
MINERALS EXPLORATION

MIDDLE RIDGE

LOCATION MAP

MAP	DATE	BY	SCALE	N.T.S.
FIG. I	80/02/20	P.G.I.		20/3,4,6,7

The volcanics and sediments have been intruded by two, largely granitic bodies, the Ackley City Batholith and the Middle Ridge granite. The former is a massive, coarse grained, potash feldspar porphyritic, megacrystic, biotite granite, whereas the latter is a fine to medium grained, garnetiferous, two-mica leucogranite. Both intrusive bodies are assigned a Devonian age, though the Middle Ridge Granite is, in all likeliehood, relatively older.

GEOPHYSICAL PROGRAM

The areas investigated during the 1980 field season were selected from the AEM survey completed by Noranda Exploration in the late 1960's. Three zones lie proximal to the Twillick Brook Felsic Member, while one lies a short distance north of the Kaegudeck Lake Project, adjacent to the Ackley City Batholith.

The indicated AEM responses were evaluated by the standard company follow-up procedure, a brief summary of which is offered in Appendix B. Geophysical instruments employed in the survey were the McPhar VHEM, Crone Radem, Scintrex MP-2, and McPhar M-700. Geophysical instrument specifications are presented in Appendix C.

A brief summary of the geophysical surveys completed is presented internal to the report. The results are offered, in plan view, on the maps in the folder accompanying this report.

SAMPLING AND ANALYTICAL PROCEDURES

Soil samples were collected, generally at 15 m intervals, from the survey lines established during the geophysical follow-up program. The

samples were routinely prepared and analyzed for copper, lead, zinc, and silver by Atlantic Analytical Services Ltd., P.O. Box 489, Springdale, Newfoundland.

A brief summary of the geochemical surveys is presented internal to the report. The results are offered in plan view, on the maps in the folder accompanying this report. The following parameters were recorded at each station from which a sample was collected: horizon, depth, colour, material, slope direction and degree, and vegetation. These data are presented in Appendix D.

AREAS INVESTIGATED

PENTECOST ZONE

The Pentecost Zone is an indicated multiline AEM response. Ground geophysical surveys delineated four conductive horizons exhibiting variable characteristics. The three N-NW conductors are generally narrow, long, strong responses that exhibit poor apparent conductivity (IP/OP ratio of approximately one or less). The S-SE response is a low amplitude, wide (36 m), approximately 500 m long conductor which exhibits excellent apparent conductivity in a limited portion of its strike length. Magnetic surveying indicates no magnetic features associated directly with the conductive horizons and, indeed, the values are remarkably uniform within the surveyed area. No anomalous values were recorded in the soil geochemistry survey, though it should be pointed out that the majority of the area is underlain by peat bog, and relief is at a minimum.

It is recommended that additional HLEM surveys be completed on the S-SE conductor to confirm its characteristics and, failing identification of the conductor in outcrop, the anomaly should be drill tested.

FLAY ZONE

Ground geophysical surveys confirmed the interpreted poor characteristics of the two-line AEM response that is the Flay Zone. The VLF-EM conductor is approximately 1.1 km long and does not exhibit a significant HLEM signature. There were no anomalous features/values recorded during either the magnetic or soil geochemistry surveys.

No further work is recommended on the Flay Zone at this time.

KEDA ZONE

The Keda Zone is a single-line, weak, AEM response. Ground geophysical surveys delineated a conductor of at least 400 m strike length, of 6 to 15 m interpreted width, and exhibiting quite poor apparent conductivity, though the HLEM signature is strong and distinct. There are no anomalous magnetic features present within the area surveyed. There were no significantly anomalous values recorded in the soil geochemistry survey, though it should be pointed out that much of the surveyed area is underlain by peat bog, and relief is minimal.

It is recommended that the source of conductivity be identified by a single diamond drill hole.

TITUS ZONE

The Titus Zone is an indicated multiline AEM response, albeit generally weak and of poor character. Ground geophysical surveys delineated three, separate VLF-EM conductors varying in length from 300 to 600 m. The conductors do not exhibit HLEM signatures and there are no magnetic features associated directly with the conductors. The soil geochemistry survey produced no significant, anomalous values for the metals analyzed. The Titus Zone lies within a sequence of polyphase deformed, heavily quartz veined, thinly banded, dominantly quartzose metasediments. The area investigated lies within the cordierite isograd of the Ackley City Batholith and abundant aplitic diking is reported in the immediate area (Chance, 1979).

It is recommended that additional efforts be directed at the Titus Zone and immediately surrounding area. In light of the indicated potential of other sections of the Ackley City Batholith, it is recommended that the general area be re-evaluated geologically, and that consideration be given to the polymetallic/hydrothermal potential. To this end, the analyzing of soil samples 'on hand' for tin, tungsten, antimony, arsenic, and gold should be considered.

REFERENCES

Chance, P.N.
1979: Geological Reconnaissance of a Portion of NALCO Lot II, Central Newfounland, Middle Ridge Pond Project; 31 p, 2 appendices, 10 maps (1:50 000), unpublished company report, Hudson's Bay Oil and Gas Company Limited.

Colman-Sadd, S.P.
1976: Geology of the St. Alban's Map Area, Newfoundland (1M/13); Report 76-4, Newfoundland Dept. of Mines and Energy, Mineral Development Division.

McPhar Geophysics Ltd.
1969: Airborne Electromagnetic Survey for Noranda Exploration Company, NALCO Project, Newfoundland; Report plus 4 maps (1:31680).

APPENDIX A

PERSONNEL, ADDRESSES, WORK STATISTICS

PERSONNEL	ADDRESS	WORK STATISTICS
John Adams	P.O. Box 117 New Liskeard, Ontario POJ 1PO	5
Peter Cary	Apt. 1102 10 Walmer Road Toronto, Ontario M5R 2W4	12
James O. Fenton	1200-10 King Street East Toronto, Ontario M5C 1C3	2
Peter G. Irwin	1200-10 King Street East, Toronto, Ontario M5C 1C3	2
Stewart Nimmo	14 Atherton Crescent Toronto, Ontario M8W 2V1	24
George Owsiacki	63 Main Street, Apt. #3 Kirkland Lake, Ontario P2H 3E4	1
Frank Pumphrey	Box 7, Site 2, R.R. #1 Springdale, Newfoundland AOJ 1To	11
Walter Pumphrey	Box 7, Site 2 R.R. #1 Springdale, Newfoundland AOJ 1TO	11
Robert P. Spracklin	60 Wheatfield Road Apt. #4 Toronto, Ontario M8V 2P8	2
Marcel Viloette	Box 687 Levack, Ontario POM 2CO	10
Robert Worona	5 Byron Crescent Kingston, Ontario K7M 1H6	5
Gordon Yeo	32 Kenmore Crescent St. Catherines, Ontario L2N 4S5	11

APPENDIX B

GEOPHYSICAL SURVEY PROCEDURES

GEOPHYSICAL SURVEY PROCEDURES

The VLEM Broadside technique was utilized to search for and locate AEM responses. The survey was carried out by moving the transmitter and receiver simultaneously along adjacent, parallel lines (separation 50-100 m) oriented perpendicular to the indicated strike of the AEM response. The line, along which the receiver traverses, was flagged (yellow) every 15 m at which point dip angle readings were taken. A McPhar VHEM was utilized for the survey. Operating frequency was 2400 cps.

Where the indicated AEM response was weak and/or topography severe or the Broadside technique failed, VLF traverses were run perpendicular to the indicated strike of the airborne anomaly. The line(s) were flagged (yellow) every 15 m and the dip angle and the horizontal field strength measured. A Crone Radem was utilized for the surveys with either the Cutler, Maine or Bordeaux, France VLF broadcasting stations employed, dependent on the indicated strike of the anomaly. Any cross-over, regardless of strength, indicated by either the Broadside of VLF technique, was flagged (orange) for future reference.

Having located the indicated AEM response the VL trace of the conductor was defined by the VLEM Standard technique. The transmitter is positioned on the Broadside/VLF cross-over while the receiver traverses the indicated strike of the conductor at a distance of 50-100 m. Upon locating an additional cross-over three dip angle determinations are made at 15 m intervals on either side of the cross-over utilizing pace and compass control. The azimuth

of the VL trace between the receiver and transmitter was recorded and a line joining the two positions flagged (orange). The transmitter is then moved to the 'new' cross-over and the procedure repeated. A McPhar VHEM was utilized for the survey and an operating frequency of 2400 cps employed.

HLEM surveys were carried out at selected locations along the VL trace on blazed and/or cut lines with flagged (blue) stations every 15 m. A McPhar VHEM operated at 2400 cps was utilized. Both in-phase (IP) and out-of-phase (OP) were determined. Cable lengths employed were 30-60-90 m dependant on the topographic and overburden conditions, and indicated depth to conductor axis.

Magnetic surveys were carried out along the blazed and/or cut lines with readings taken routinely at 15 m intervals. On conductors exhibiting a significant magnetic signature readings were taken at closer spaced intervals in an effort to determine the maximum fluctuation of the magnetic field. Two instruments were employed in the course of the magnetic survey, a McPhar M-700 fluxgate magnetometer and a Scintrex MP-2 proton precession magnetometer. The former measures the vertical component of the magnetic field whereas the latter measures the total magnetic field.

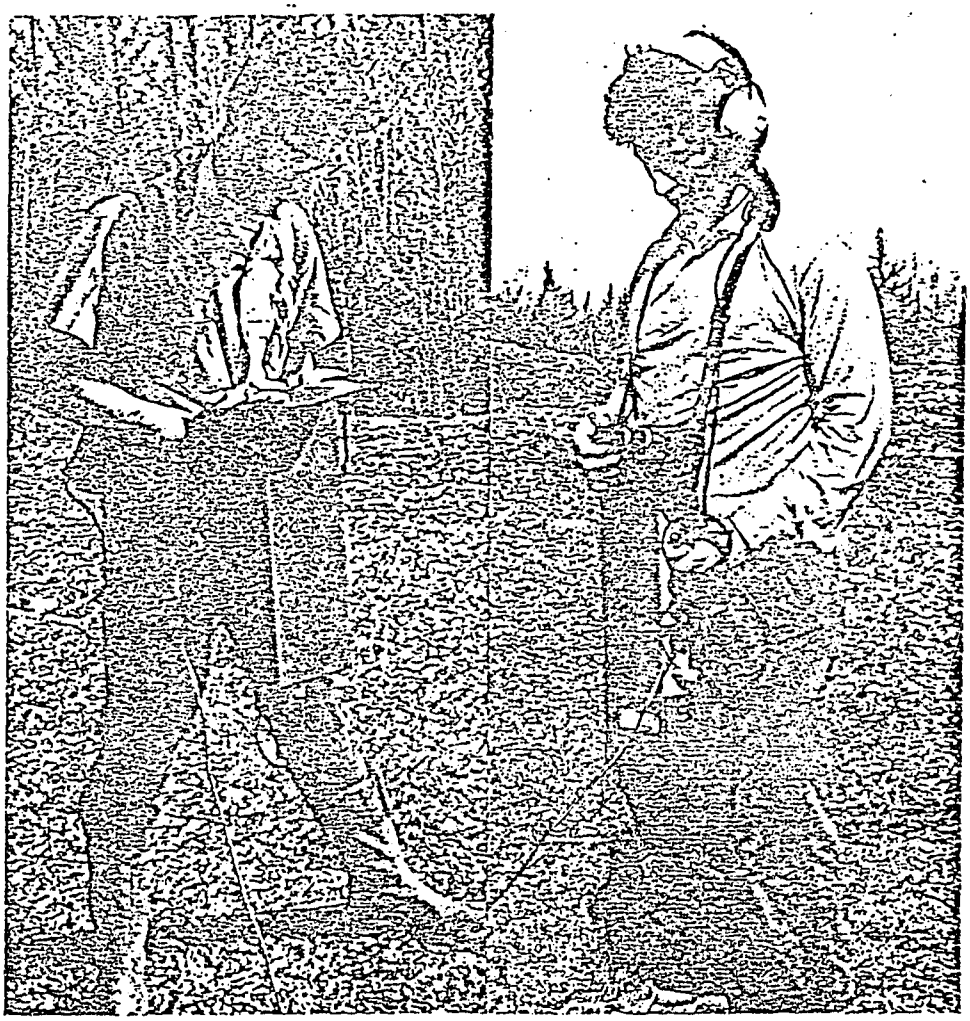
APPENDIX C

GEOPHYSICAL INSTRUMENT SPECIFICATIONS

McPHAR

V.H.E.M. Vertical and Horizontal EM System

Dual frequency system for reconnaissance and detail follow-up



Operating frequencies 600 Hz and 2400 Hz

Complete horizontal coil method

Measures in-phase and quadrature components

Clinometer for accurate dip-angle measurements

Only 18 pounds (8.2 Kgs.) total weight

The McPhar V.H.E.M. system combines both vertical loop and horizontal loop EM methods in one portable system. It has been designed for accurate dip-angle measurements to be made on reconnaissance surveys, with the horizontal loop capabilities being designed for more detailed surveys.

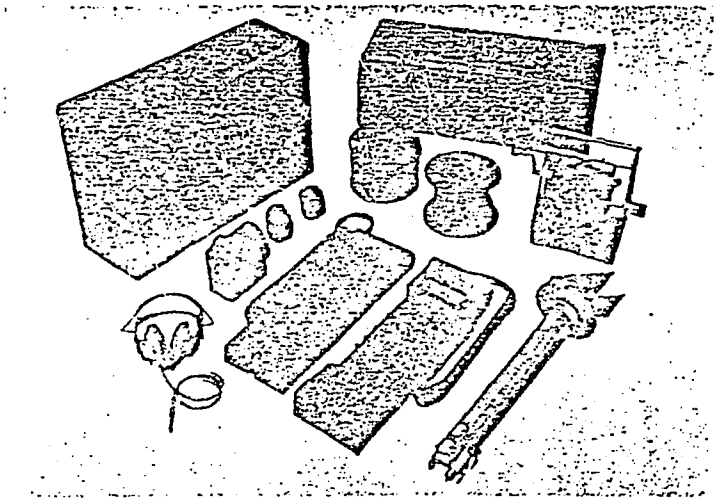
Completely transistorized the system operates on two frequencies 600 Hz and 2400 Hz. With a total weight for transmitter and receiver of 17.5 pounds (8 kg.) the V.H.E.M. is light and easily carried even in rough terrain.

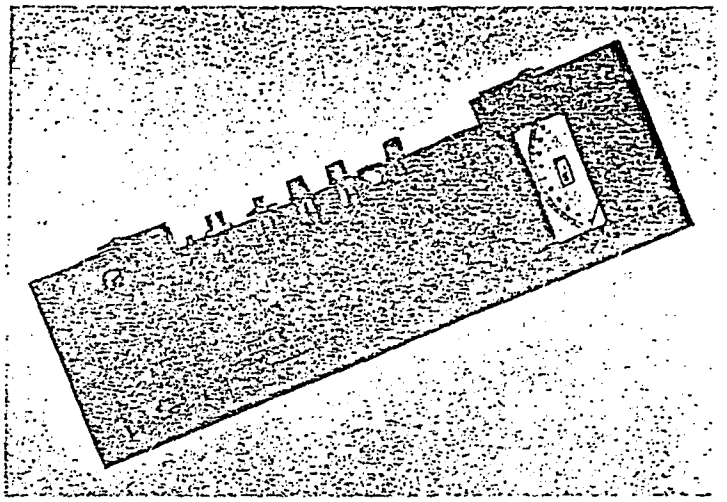
When used as a vertical loop system the V.H.E.M. iron-cored vertical coil is energized by an alternating current to produce a primary magnetic field. Any conductors in the vicinity will be linked to this field, creating a secondary field. The inclination of the resultant field from the horizontal is measured with the receiver clinometer.

The vertical loop method discriminates against overburden and is not affected by elevation differences. Use of the two frequencies gives a measure of relative conductivity and "dip-angle" profiles are useful in estimating depth to conductor axis.

The clinometer enables fast and accurate readings to be taken of the dip-angle. Null widths of two to four degrees are obtained at a separation of 400 feet (122 meters) and the dip-angle can be estimated to an accuracy of ½

Compact coil design makes for easy field use





a degree. Wider nulls are encountered at wider separations.

To operate the V.H.E.M. system as a horizontal loop EM unit the receiver and transmitter are connected by a reference cable so the secondary field can be compared to the primary field. The in-phase and out-of-phase components of the secondary field from a conductor vary as the V.H.E.M. system passes over a conductor. Readings are read directly on the receiver as a percentage of the transmitted primary field.

In-phase and out-of-phase anomalies over a given conductor tend to have the same shape, but their relative magnitudes will vary with the size and conductivity of the conductor and the frequency employed. The general shape of an anomaly is determined by the magnitudes of the coil separation, width of the conductor, depth and dip of the conductor.

The two frequencies of the V.H.E.M. in the horizontal mode enable more accurate estimates of conductivity of an anomaly to be made. Since in-phase response is dependent on the separation of the coils, their level and their elevation, error in conductivity estimates can be reduced by comparing out-of-phase readings at two frequencies.

The V.H.E.M. comes complete with a transmitter tripod, cables reel winder, earphones, battery pack, carrying harness and two shipping cases.

Specifications:

Operating frequencies: 600 Hz and 2400 Hz.

Operating range: Vertical loop — null width is ± 10 degrees at a transmitter-receiver separation of 600′ (183 meters). Horizontal loop transmitter-receiver separations are 100′ (30 meters) 200′ (61 meters) 300′ (91 meters).

Transmitter:

Power supply: high energy, light weight 45 V battery packs, back-pack mounted. Contains 30 "D" cells.

Battery life: Approximately 15 hours of transmission.

Receiver:

Power supply: two type "E" 146 Eveready batteries.

Battery life: 250 operating hours.

Operating temperature range: −35°F to +120°F (−37°C to +49°C).

Transmitter weight: 9 pounds (4.1 kg.)

Receiver weight: 8½ pounds (3.8 kg.)

System components: Transmitter, receiver, three cables, 100, 200 and 300 feet (30, 61, and 91 meters) reel winder, tripod, earphones, battery pack, carrying straps, two shipping cases.

Shipping weight: 90 pounds (41 kg.)

McPhar Instrument Corporation

Head Office:

55 Tempo Avenue,
Willowdale, Ontario, Canada M2H 2R9
Tel: (416) 497-1700 Telex: 0623541
Cable: McPHAR TOR

Sales agents in:

Africa, Asia, Australia, Europe, North & South America

Contact McPhar Instrument Corp. head office for the agent in your area.

CRONE GEOPHYSICS LIMITED

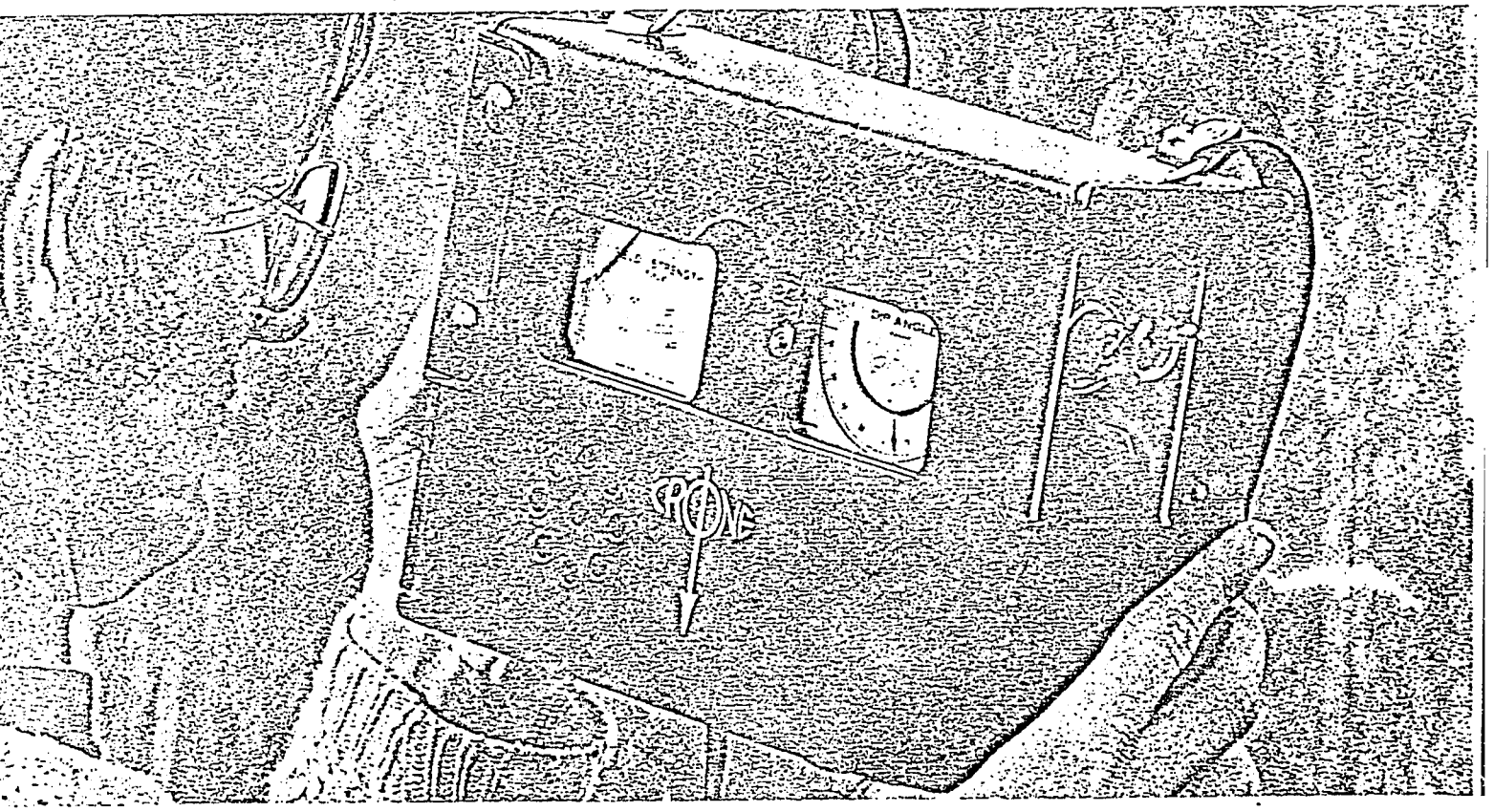
3607 WOLFEDALE ROAD,
MISSISSAUGA, ONTARIO,
CANADA,
L5C 1V8

Phone: (416) 270-0096

Cable: CRONGEO, TORONTO

RADEM

AN EM RECEIVER MEASURING THE FIELD STRENGTH, DIP ANGLE AND QUADRATURE COMPONENTS OF THE VLF COMMUNICATION STATIONS.



This is a rugged, simple to operate, ONE MAN EM unit. It can be used without line cutting and is thus ideally suited for GROUND LOCATION OF AIRBORNE CONDUCTORS and the CHECKING OUT OF MINERAL SHOWINGS. This instrument utilizes higher than normal EM frequencies and is capable of detecting DISSEMINATED SULPHIDE DEPOSITS and SMALL SULPHIDE BODIES. It accurately isolates BANDED CONDUCTORS and operates through areas of HIGH HYDRO NOISE. The method is capable of deep penetration but due to the high frequency used its penetration is limited in areas of clay and conductive overburden.

The DIP ANGLE measurement detects a conductor from a considerable distance and is used primarily for locating conductors. The FIELD STRENGTH measurement is used to define the shape and attitude of the conductor.

SPECIFICATIONS

SOURCE OF PRIMARY FIELD: VLF Communication Stations 12 to 24K hz

NUMBER OF STATIONS: 7 switch selectable

STATIONS AVAILABLE: The seven stations my be selected from:

Code	Station & Location	Frequency
CM	Cutler, Maine	17.8 KHz
SW	Seattle, Washington	18.6 KHz
AM	Annapolis, Maryland	21.4 KHz
H	Laulualei, Hawaii	23.4 KHz
BOF	Bordeaux, France	15.1 KHz
E	Rugby, England	16.0 KHz
MS	Gorki, Russia	17.1 KHz
OD	Odessa (Black Sea)	15.6 KHz
NC	Australia, N.W.C.	22.3 KHz
YJ	Yosamai, Japan	17.4 KHz
HN	Hegaland, Norway	17.6 KHz
TJ	Tokyo, Japan	20.0 KHz
BA	Buenos Aires	23.6 KHz

CHECK THAT STATION IS TRANSMITTING: Audible signal from speaker.

PARAMETERS MEASURED:

(1) DIP ANGLE in degrees of the magnetic field component, from the horizontal, of the major axis of the polarization ellipse. Detected by a minimum on the field strength meter and read from an inclinometer with a range of ± 90° and an accuracy of ± ½°.

(2) FIELD STRENGTH (total or horizontal) of the magnetic component of the VLF field, (amplitude of the major axis of the polarization ellipse). Measured as a percent of normal field strength established at a base station. Accuracy ± 2% deper dent on signal. Meter has two ranges: 0 — 300% and 0 — 600%.

(3) OUT-OF-PHASE component of the magnetic field, perpendicular in direction to the resultant field, as a percent of normal field strnegth, (amplitude of the minor axis of the polarization ellipse). This is the minimum reading of the Field Strength meter obtained when measuring the dip angle. Accuracy ± 2%.

OPERATING TEMPERATURE RANGE: -30°C (-20°F) to +50°C (120°F)

DIMENSIONS AND WEIGHT: 9 x 19 x 27cm — 2.7Kg (6 lb)

SHIPPING: Instrument with foam lined wooden case,
shipping wt. — 6.0Kg (13 lb)

BATTERIES: 2 of 9 volt — Eveready 216
Average life expectancy — 20 hours for continuous operation

UNITS AVAILABLE ON A RENTAL OR PURCHASE BASIS.
CONTRACT SERVICES AVAILABLE FOR FIELD SURVEYS.

SCINTREX MP-2 Portable Proton Precession Magnetometer

Function

The MP-2 is a portable one gamma proton precession magnetometer for field survey or base station use. The optimized design of sensor and circuitry using the latest COS/MOS components has resulted in a very light weight, low power consumption, rugged and reliable magnetometer.

Light emitting diodes coupled with an ingenious optically polarized reflector combine solid state reliability with easy reading even in bright sunlight.

Coupled with a module into which the MP-2 is easily inserted, the magnetometer can be used as a base station unit for analogue or digital recording. Full details of the MBS-2 Magnetic Base Station are available on another Scintrex specification sheet.

The noise-cancelling dual-coil sensor and electronics have been so designed as to effectively eliminate reading problems due to virtually all magnetic gradients which may be encountered in field survey conditions.

Features

1 gamma sensitivity and accuracy over range of 20,000 to 100,000 gammas.

Operates in very high gradients, to 5000 gammas per meter.

Ultra small size and weight.

Up to 25,000 readings from only 8 D cells.

Battery pack isolated from electronics for corrosion protection.

Battery pack easily extended for winter use.

Light emitting diode digital display, with complete test feature.

Unique no-glare polarized reflector permits easy reading in bright sunlight.

Indicator light warning of excessive gradient, ambient noise or electronic failure.

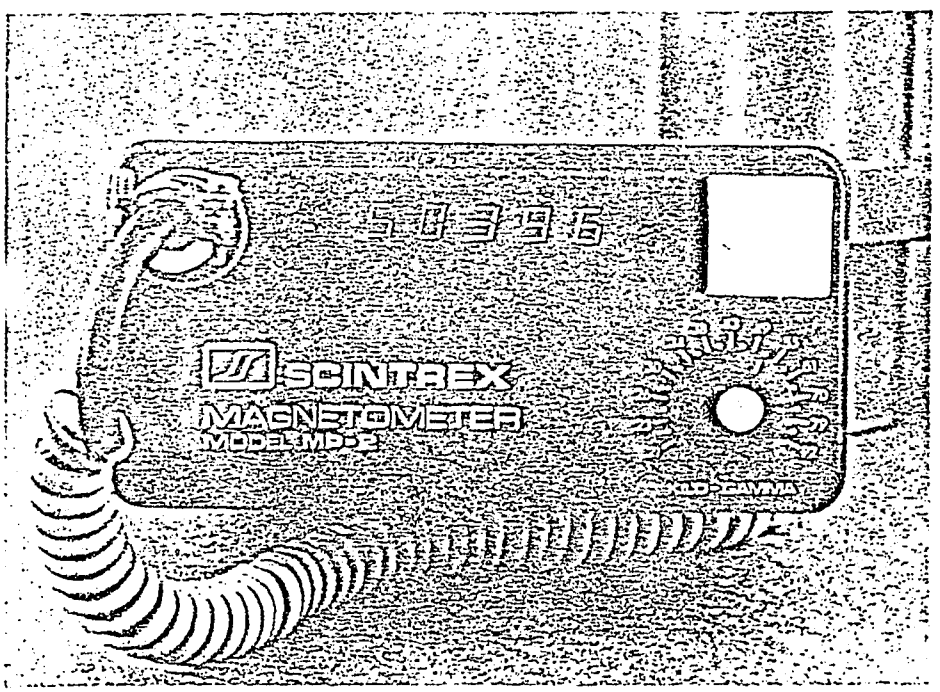
Digital readout of battery voltage.

Rugged all metal housing for rough field use at all temperatures.

Automatic recycling or external trigger features permit ready conversion to base station use.

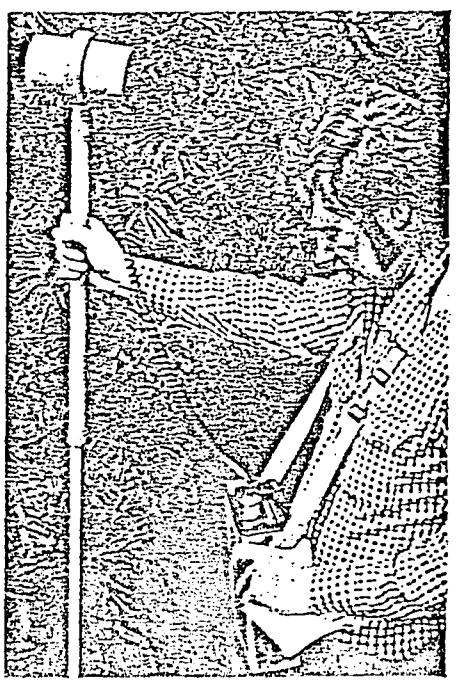
Short reading time.

Broad operating temperature range.

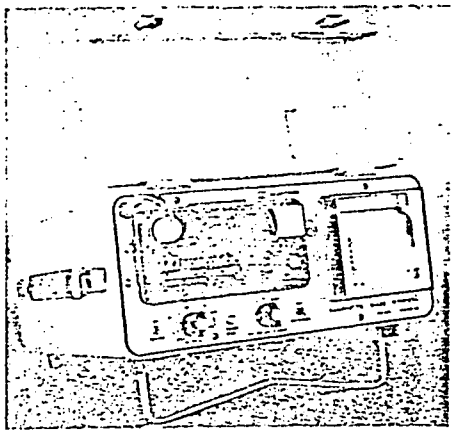


MP-2 Console

MP-2 in Operation with Staff Sensor



Technical Description of MP-2 Portable Proton Precession Magnetometer



MBS-2 Magnetic Base Station

MP-2 in Operation with Back Pack Sensor

Resolution	1 Gamma
Total Field Accuracy	±1 Gamma over full operating range
Range	20,000 to 100,000 gammas in 25 overlapping steps
Internal Measuring Program	Single reading — 3.7 seconds. Recycling feature permits automatic repetitive readings at 3.7 second intervals
External Trigger	External trigger input permits use of sampling intervals longer than 3.7 seconds
Readout	5 digit LED (Light Emitting Diode) readout displaying total magnetic field in gammas or normalized battery voltage
Digital Output	Multiplied precession frequency and gate times
Base Station Mode	MP-2 console slips into a base station module which provides external triggering as well as digital and analogue outputs. The complete unit is called the MBS-2 Magnetic Base Station
Gradient Tolerance	Up to 5000 gammas/meter
Power Source	8 alkaline "D" cells provide up to 25,000 readings at 25°C under reasonable signal/noise conditions (less at lower temperatures). Premium carbon-zinc cells provide about 40% of this number
Sensor	Omnidirectional, shielded, noise-cancelling dual coil, optimized for high gradient tolerance
Harness	Complete for operation with staff or back pack sensor
Operating Temperature Range	−35°C to +60°C
Size	Console, with batteries: 80 x 160 x 250mm Sensor: 80 x 150mm Staff: 30 x 1550mm (extended) 30 x 600 mm. (collapsed)
Weights	Console, with batteries: 1.8 kg Sensor: 1.3 kg Staff: 0.6 kg
Standard Accessories	Sensor, Staff, Cable, Harness, Carrying Case, Manual
Shipping Weight	Approximately 9.5 kg

Scintrex Limited
222 Snidercroft Road
Concord (Toronto) Ontario
Canada L4K 1B5
Tel: (416) 669-2280
Telex: 06-964570
Cable: Scintrex Toronto

Complete Geophysical Instrumentation and Services

APPENDIX D

SOIL SAMPLE DATA SHEETS

G.D.

SOIL SAMPLE DATA SHEETS

Project; MIDDLE RIDGE. Anomaly; MR-1 PENTECOST

SAMPLE NO.	LINE	STN	HOR	DEP	COLOUR	MATERIAL	SLOPE	VEG	REMARKS
MR-1 -001	8+75E	0+00	A_0	30	br	humus	0°	moss	swamp
- -002		0+15S	A_0	35	br-bl	humus	0°	moss	swamp
- -003		0+30S	A_0	35	br	humus	0°	moss	swamp
- -004		0+45S	A_0	30	bl	humus	0°	moss	swamp
- -005		0+60S	A_2	25	br	sand-silt	0°	moss	swamp
- -006		0+75S	A_2	15	gy	sandy	0°	moss	swamp
- -007		0+90S	A_2	25	br	silt-clay	0°	moss	swamp
- -008		1+05S	A_2	20	gy	sandy	0°	moss	swamp
- -009		1+20S	A_2	35	bl-br	silt-clay	0°	moss	swamp
- -010		1+35S	A_0	40	bl-br	humus	0°	moss	swamp
- -011		1+50S	A_0	45	bl-br	humus	0°	moss	swamp
- -012		1+65S	A_2	35	br	silt-clay	0°	moss	swamp
- -013		1+80S	A_2	30	br	clay	0°	moss	swamp
- -014		0+15N	A_0	30	br	humus	0°	moss	swamp
- -015		0+30N	A_0	40	br	humus	0°	moss	swamp
- -016		0+45N	A_0	45	br	humus	0°	moss	swamp
- -017		0+60N	A_2	40	br	humus	0°	moss	swamp
- -018		0+75N	A_0	45	br-bl	humus	0°	moss	swamp
- -019		0+90N	A_0	45	bl-br	humus	0°	moss	swamp
- -020		1+05N	A_0	45	br	humus	0°	moss	swamp
- -021		1+20N	A_0	40	bl	humus	0°	moss	swamp
- -022		1+35N	A_0	35	br	humus	0°	moss	swamp
- -023		1+50N	A_0	30	br	humus	0°	moss	swamp
- -024		1+65N	A_0	40	br	humus	0°	spruce	-edge forest
- -025		1+80N	A_0	40	br	humus	0°	spruce	-edge forest
-026	REPEAT STN. of 1+80N								

RM

SOIL SAMPLE DATA SHEETS

Project; MIDDLE RIDGE. Anomaly; MR-1 PENTECOST

SAMPLE NO.	LINE	STN.	HOR	DEP	COLOUR	MATERIAL	SLOPE	VEG.	REMARKS
MR-1 -027	2+00E	1+80N	A_3	25	gy	sandy	0°	spruce	forest
- -028		1+65N	A_3	20	gy	sandy	0°	spruce	"
- -029		1+50N	A_3	25	gy-br	humus	0°	spruce	"
- -030		1+35N	B_2	20	or-br	sandy	2°/N	spruce	"
- -031		1+20N	A_3	20	gy	sandy	2°/N	spruce	"
- -032		1+05N	B_2	20	or.-br	sandy	2°/N	spruce	"
- -033		0+90N	B_2	30	or-br	sandy	1°/S	spruce	"
- -034		0+75N	A_3	25	gy	sandy	3°/S	spruce	"
- -035		0+60N	A_3	25	gy	sandy	3°/S	spruce	"
- -036		0+45N	B_2	20	or-br	sandy	2°/S	spruce	"
- -037		0+30N	A_3	25	gy-br	humus-silt	0°	spruce	"
- -038		0+15N	A_0	30	bl	humus	0°	spruce	-wet area
- -039		0+00	A_0	30	br	humus	0°	spruce	"
- -040		0+15S	A_0	25	bl	humus	0°	moss	"
- -041		0+30S	A_0	40	br	humus	0°	moss	"
- -042		0+45S	A_0	40	bl-br	humus	0°	moss	"
- -043		0+60S	A_3	20	gy	sandy	0°	moss	"
- -044		0+75S	B_1	20	br-gy	sandy	0°	moss	"
- -045		0+90S	A_3	25	gy	sandy	0°	moss	"
- -046		1+05S	A_0	40	br	humus	0°	moss	swamp
- -047		1+20S	A_0	40	br-bl	humus	0°	moss	
- -048		1+35S	A_0	40	br	humus	0°	moss	"
- -049		1+50S	A_0	40	br	humus	0°	moss	"
- -050		1+65S	A_0	40	br	humus	0°	moss	"
- -051		1+80S	A_0	45	br	humus	0°	moss	"

(052 - REPEAT STN. OF 1+80S

SOIL SAMPLE DATA SHEETS

Project; MR-1 MIDDLE RIDGE

Anomaly; PENTACOST MR-1

SAMPLE NO.	LINE	STN.	HOR	DEP	COLOUR	MATERIAL	SLOPE	VEG	REMARKS
MR-1 -100	2+00W	1+80 N		15	dk br.	humus	0	con	
-101		1+65N		15	gry brn	silt/gravel	0	con	
-102		1+50N		20	gry	silt/organic	0	con	
-103		1+35 N		15	white/gry	organic	0	con	
-104		1+20N		20	gry brn	silt	0	con	
-105		1+05N		20	red	silt	0	con	
-106		0+90N		15	red	silt	0	con	
-107		0+75N		20	red	silt	0	con	
-108		0+60N		10	brn-gry	silt/humus	0	con	
-109		0+45N		25	gry-red	silt	0	con	
-110		0+30N		25	brown	organic	0	con	
-111		0+15N		15	gry	silt	0	con	
-112		0+00		15	brown	organic	0	bog	
-113		0+15S		15	brown	organic/gravel	0		
-114		0+30S		25	brown	organic/humus	0	bog	
-115		0+45S		25	brown	humus	0	bog	
-116		0+60S		25	brown	humus	0	bog	
-117		0+75S		20	brown	humus	0	con	
-118		0+90S		20	brown	organic	0	mixed	
-119		1+05S		25	brown	organic	0	mixed	
-120		1+20S		25	brown	[illegible]	0	mixed	
-121		1+35S		25	brown	[illegible]	0	open con.	
-122		1+50S		25	brown	[illegible]	0	mixed	
-123		1+65S		25	brown	[illegible]	0	mixed	
-124		1+80S		25	brown	organic	0	mixed	

SOIL SAMPLE DATA SHEETS

Project; MRM MIDDLE RIDGE. Anomaly; PENTACOST MR-1

SAMPLE NO.	LINE	STN.	HOR	DEP	COLOUR	MATERIAL	SLOPE	V.E.G.	REMARKS
MR-1 -125	2+00W	1+95S		15	brown	humus	0	moss	
- -126		2+10S		20	brown	humus	0	moss	
- -127		2+25S		20	brown	humus	0	moss	
- -128		2+40S		20	brown	humus	0	moss	
- -129		2+55S		20	brown	humus	0	moss	
- -130		2+70S		20	brown	humus	0	moss	
- -131		2+85S		20	brown	humus	0	moss	
- -132		3+00S		30	brown	humus	0	moss	
- -133		3+15S		25	brown	humus	0	moss	
- -134		3+30S		25	brown	humus	0	moss	
- -135		3+45S		25	brown	humus	0	moss	
- -136		3+60S		30	brown	humus	0	moss	
- -137		3+75S		25	brown	organic/humus	0	moss	
- -138		3+90S		20	red	silt	2°W	con	
- -139		4+05S		20	red	silt	2°W	con	
- -140		4+20S		25	red	silt	10°W	con	
- -141		4+35S		25	red	silt	2°W	con	
- -142		4+50S		20	red	silt	2°S	con	
- -143		4+65S		25	red/grey	silt	0	con	
- -144		4+80S		30	brown	humus	0	coniferous	
- -145		4+95S		30	brown	humus	0	moss	
- -146	CONTROL	4+05S		20	red	silt	2°W	con	* STANDARD
- -									
- -									
- -									

Nimmo & Carey

SOIL SAMPLE DATA SHEETS

Project; MR-1 MIDDLE RIDGE. Anomaly; PENTECOST MR-1

SAMPLE NO.	LINE	STN.	HOR	DEP	COLOUR	MATERIAL	SLOPE	VEG.	REMARKS
MR-1-225	10+00W	2+80N	A_1	150	Brown	peat	flat	bog	
MR-1-226	"	2+65N	A_1	100	"	"	flat	"	
MR-1-227	"	1+50N	"	130	"	"	S	"	
MR-1-228	"	1+35N	"	140	black	"	"	"	
MR-1-229	"	1+20N	"	100	brown	"	"	"	
MR-1-230	"	1+05N	"	120	black	"	"	"	
MR-1-231	"	0+90W	"	120	brown	"	"	"	
MR-1-232	"	0+75N	"	140	"	"	"	"	
MR-1-233	"	0+60N	"	130	"	"	"	"	
MR-1-234	"	0+45N	"	140	brown	"	"	"	
MR-1-235	"	0+30N	"	"	"	"	"	"	
MR-1-236	"	0+15N	"	"	"	"	"	"	
MR-1-237	"	0+00	"	"	"	"	"	"	
" - " -238	"	0+15S	"	"	"	"	"	"	
" - 1-239	"	0+30S	"	"	"	"	"	"	
" - 1-240	"	0+45S	"	"	"	"	"	"	
" - 1-241	"	0+60S	B_2	20	red brown	sand silt	S	shrub	edge of bog
" - 1-242	"	0+75S	B_1	30	gray brown	sand silt	S	"	
" - 1-243	"	0+90S	B_2	20	gray	sand silt	S	bog	
" - 1-244	"	1+05S	A_1	70	brown	peat	"	"	
" - 1-245	"	1+20S	"	130	"	"	"	"	
" - 1-246	"	1+35S	"	150	"	"	"	"	
" - 1-247	"	1+50S	"	150	"	"	"	"	
" - 1-248	"	1+65S	"	150	"	"	"	"	
" - 1-249	"	1+80S	"	"	"	"	"	"	

Nuinsco / Cavey

SOIL SAMPLE DATA SHEETS

Project: Middle Ridge **Anomaly:** Pentecost (MR-1)

SAMPLE NO.	LINE	STN.	HOR	DEP	COLOUR	MATERIAL	SLOPE	VEG.	REMARKS
MR-1-200	6+75W	1+80S	A_1	15cm	brown	peat	0°	bog	
MR-1-201	6+75W	1+65S	A_2-B_1	15	grey-brown	silt-sandy	0	rocky	
MR-1-202	6+75W	1+50S	A_2-B_1	15	grey-brown	"	0	"	
MR-1-203	6+75W	1+35S	A_1	20	brown	peat	0	bog	
MR-1-204	6+75W	1+20S	A_1	20	brown	peat	0	bog	
MR-1-205	6+75W	1+05S	A_1	20	"	"	0	"	
MR-1-206	6+75W	0+90S	A_1	50	brown black	"	0	"	
MR-1-207	6+75W	0+75S	A_1	50	"	"	"	"	
MR-1-208	6+75W	0+60S	A_1	50	brown black	"	"	"	
MR-1-209	6+75W	0+45S	A_1	50	"	"	"	"	
MR-1-210	6+75W	0+30S	A_1	50	brown	"	"	"	
MR-1-211	6+75W	0+15S	A_1	80	brown	"	"	"	
MR-1-212	6+75W	0+00	A_1	90	black brown	"	"	"	
MR-1-213	6+75W	0+15N	A_1	90	"	"	"	"	
MR-1-214	6+75W	0+30N	A_1	90	"	"	"	"	
MR-1-215	6+75W	0+45N	A_1	80	"	"	"	"	
MR-1-216	6+75W	0+60N	A_1	15	brown	"	"	"	creek
MR-1-217	6+75W	0+75N	A_1	25	brown	"	"	"	
MR-1-218	6+75W	0+90N	A_1	30	brown	"	"	"	
MR-1-219	6+75W	1+05N	A_1	15	brown	"	"	tamarack, spruce, shrub	
MR-1-220	6+75W	1+20N	A_1	20	black	"	"	bog	
MR-1-221	6+75W	1+35N	B_1	10	light brown	sand, silt	0	shrub	sample taken 5m. W. of line
MR-1-222	6+75W	1+50N	B_2	15	red-brown	"	0	"	
MR-1-223	6+75W	1+65N	A_2	15	grey	leach	"	"	rocky sample
MR-1-224	6+75W	1+80N	A_2	10	grey	"	"	"	" "

SCANNED IMAGE

SOUTH ANOMALY

SOIL SAMPLE DATA SHEETS

Project; MIDDLE RIDGE **Anomaly;** Penlecoste MR-1

SAMPLE NO.	LINE	STN.	HOR	DEP.	COLOUR	MATERIAL	SLOPE	VEG.	REMARKS
-MR-1-300	2+00W	1+80S	A_0	60	brown	peat	S	bog	
- " -301	"	1+65S	A_0	55	"	"	S	bog	
- " -302	"	1+50S	A_0	80	"	"	S	"	
- " -303	"	1+35S	A_0	100	"	"	SE	"	
- " -304	"	1+20S	A_0	145	"	"	SE	"	
- " -305	"	1+05S	A_0	145	"	"	SE	"	
- " -306	"	0+90S	A_0	120	"	"	E	"	
- " -307	"	0+75S	A_0	80	"	"	SE	"	
- " -308	"	0+60S	A_0	60	"	"	E	"	
- " -309	"	0+45S	A_0	40	"	"	E	"	
- " -310	"	0+30S	A_0	50	"	"	E	"	
- " -311	"	0+15S	A_{0-2}	50	grey, brown	peat with some leached	E	"	
- " -312	"	0+00	A_0	40	brown	peat	E	bog	
- " -313	"	0+15N	A_0	50	"	"	"	"	
- " -314	"	0+30N	A_0	65	"	"	"	"	
- " -315	"	0+45N	H_1	50	"	"	SE	"	
- " -316	"	0+60N	A_0	40	"	"	"	"	
- " -317	"	0+75N	A_2	20	grey, brown	leach			
- " -318	"	0+90N	B	20	brown	sand, silt gravel	S	comit forest	
- " -319	"	1+05N	B	20	red brown	sand, silt	S	"	
- " -320	"	1+20N	B	15	"	"	S	"	
- " -321	"	1+35N	B	20	"	"	S	"	
- " -322	"	1+50N	A_2	15	grey	leach	NE	"	
- " -323	"	1+65N	A_0	30	brown	peat	N	Bog	
- " -324	"	1+80N	A_0	60	brown	"	NE	Bog	

Cary & Minnie
Aug 9/80

SOIL SAMPLE DATA SHEETS

Project; MR-3 MIDDLE RIDGE Anomaly; Flag MR3

SAMPLE NO.	LINE	STN	HOR	DEP	COLOUR	MATERIAL	SLOPE	VEG	REMARKS
MR-3 -001	4+00E	1+80N	A_1A_2	30	gray	Organic Leached	NE	comp.	
MR-3 -002	"	1+65N	A_1A_2	30	gray	Leached	NE	"	
MR-3 -003	"	1+50N	"	25	gray	"	NE	"	
MR-3 -004	"	1+35N	A_2B_1	15	gray brown	sand silt Leached	NE	"	
MR-3 -005	"	1+20N	A_1A_2	20	gray	Leached	NE	"	
MR-3 -006	"	1+05N	A_1A_2	20	gray	Leached	NE	"	
MR-3 -007	"	0+90N	B_2	20	brown	sand silt	NE	"	
MR-3 -008	"	0+75N	A_1A_2	20	gray	Leached	NE	"	
MR-3 -009	"	0+60N	A_2B_1	30	gray brown	Leached	NE	"	
MR-3 -010	"	0+45N	B_1	20	gray brown	sand silt	NE	"	
MR-3 -011	"	0+30N	A_2	15	gray	Leached	NE	"	
MR-3 -12	"	0+15N	A_2B_1	15	gray	Leached	NE	"	
MR-3 -13	"	0+00	B_1	15	gray	"	NE	"	
MR-3 -14	"	0+15S	B_1	15	gray	Leached	NE	"	
MR-3 -15	"	0+30S	B_2	20	brown	sand silt	NE	"	
MR-3 -16	"	0+45S	B_2	20	brown	sand silt	NE	"	
MR-3 -17	"	0+60S	B_2	20	brown	sand silt	NE	"	
MR-3 -18	"	0+75S	A_2B_1	20	gray	Leached	NE	"	
MR-3 -19	"	0+90S	A_2	20	gray	Leached	NE	"	
MR-3 -20	"	1+05S	B_2	15	brown	sand silt	NE	"	
MR-3 -21	"	1+20S	A_2	15	gray	Leached	NE	"	
MR-3 -22	"	0+35S	B_2	20	brown	sand silt	NE	"	
MR-3 -23	"	1+50S	B_2	20	red brown	sand silt	NE	"	
MR-3 -24	"	1+65S	B_2	25	brown	sand silt	NE	"	
MR-3 -25	"	1+80S	B_2	20	red brown	sand silt	NE	"	

Carry & Minmo
Aug 9/80

SOIL SAMPLE DATA SHEETS

Project; MR-3 MIDDLE RIDGE

Anomaly; Flag MR-3

SAMPLE NO.	LINE	STN.	HOR	DEP	COLOUR	MATERIAL	SLOPE	VEG.	REMARKS
MR-3 -26	2+00W	1+80S	A_1	150	brown	peat	NW	bog	
MR-3 -27	"	1+65S	"	150	"	"	"	"	
MR-3 -28	"	1+50S	"	150	"	"	"	"	
MR-3. -29	"	1+35S	"	"	"	"	"	"	
MR-3 -30	"	1+20S	"	"	"	"	"	"	
MR-3 -31	"	1+05S	"	"	"	"	"	"	
MR-3 -32	"	0+90S	"	"	"	"	"	"	
MR-3 -33	"	0+75S	"	"	"	"	"	"	
MR-3 -34	"	0+60S	"	"	"	"	"	"	
MR-3 -35	"	0+45S	"	"	"	"	"	"	
MR-3 -36	"	0+30S	"	"	"	"	"	"	
MR-3 -37	"	0+15S	"	"	"	"	"	"	
MR-3 -38	"	0+00	"	75	"	"	"	"	
MR-3 -39	"	0+15N	"	75	"	"	"	"	
MR-3 -40	"	0+30N	"	90	"	"	"	"	
MR-3 -41	"	0+45N	"	100	"	"	"	"	
MR-3 -42	"	0+60N	"	120	"	"	"	"	
MR-3 -43	"	0+75N	"	120	"	"	"	"	
MR-3 -44	"	0+90N	"	140	"	"	"	"	
MR-3 -45	"	1+05N	"	150	"	"	"	"	
MR-3 -46	"	1+20N	"	120	"	"	"	"	
MR-3 -47	"	1+35N	"	120	"	"	"	"	
MR-3 -48	"	1+50N	"	150	"	"	"	"	
MR-3 -49	"	1+65N	"	"	"	"	"	"	
MR-3 -50	"	1+80N	"	"	"	"	"	"	

Camp at Nanimo
Aug 9 '80

SOIL SAMPLE DATA SHEETS

Project; MR-3 MIDDLE RIDGE Anomaly; Flag MR-3

SAMPLE NO.	LINE	STN	HOR	DEP	COLOUR	MATERIAL	SLOPE	VEG	REMARKS
MR- 3 -51	5 to W	1+80N	B_2	10	yellow-brown	silt-sand	E 3°	spruce	
MR - 3 -52	"	1+65N	A_2-B_1	15	grey-brown	leach-sand	E 3°	spruce	
MR - 3 -53	"	1+50N	A_2-B_1	20	grey-brown	leach-silt sand	E 2°	spruce	woods
- 3 -54	"	1+35N	A_2-B_1	20	" "	" "	E 1°	spruce	
- 3 -55	"	1+20N	A_1	120	brown	peat	0°	spruce	
- 3 -56	"	1+05N	A_1	150	"	"	flat	bog	bog
- 3 -57	"	0+90N	A_1	130	"	"	"	"	
- 3 -58	"	0+75N	A_1	150	"	"	"	"	
- 3 -59	"	0+60N	A_1	150	"	"	"	"	
- 3 -60	"	0+45N	A_1	150	"	"	"	"	
- 3 -61	"	0+30N	A_1	150	"	"	"	"	
- 3 -62	"	0+15N	A_1	150	"	"	"	"	
- 3 -63	"	0+00	A_1	"	"	"	"	"	
- 3 -65	"	0+15S	A_1	"	"	"	"	"	← number 64 skipped
- 3 -66	"	0+30S	A_1	"	"	"	"	"	
- 3 -67	"	0+45S	A_1	"	"	"	"	"	
- 3 -68	"	0+60S	A_1	"	"	"	"	"	
- 3 -69	"	0+75S	A_1	"	"	"	"	"	
- 3 -70	"	0+90S	A_1	"	"	"	"	"	
- 3 -71	"	1+05S	A_1	20	"	"	"	shrub	
- 3 -72	"	1+20S	A_1	80	"	"	"	"	
- 3 -73	"	1+35S	A_1	50	"	"	"	swamp	
- 3 -74	"	1+50S	A_1	50	"	"	"	swamp	
- 3 -75	"	1+65S	A_1	40	"	"	"	shrub	
- 3 -76	"	1+80S	A_2	20	grey	leach	"	shrub	

SOIL SAMPLE DATA SHEETS

Project; Middle-Ridge Anomaly; 4 MR-9 KEDA

SAMPLE NO.	LINE	STN.	HOR	DEP	COLOUR	MATERIAL	SLOPE	VEG.	REMARKS
MR4-1	0+50E	1+30N	A_2	15	grey	leach	W	conif shrubs	
- 2	"	1+65N	A_2	15	"	"	W	"	
- 3	"	1+50N	B	20	black, brown	sand silt	W	"	
- 4	"	1+33N	B	25	black	silt sand	SW	"	Edge of bog
- 5	"	1+20N	A_0	35	brown	peat	Flat	bog	
- 6	"	1+05N	A_0	40	"	"	"	"	
- 7	"	0+90N	A_0	55	"	"	"	"	
- 8	"	0+75N	A_0	100	"	"	"	"	
- 9	"	0+60N	A_0	80	"	"	"	"	
- 10	"	0+45N	A_0	90	"	"	"	"	
- 11	"	0+30N	"	90	"	"	"	"	
- 12	"	0+15N	"	80	"	"	"	"	
- 13	"	0+00	"	80	"	"	"	"	
- 14	"	0+15S	"	90	"	"	"	"	
- 15	"	0+30S	"	90	"	"	"	"	
- 16	"	0+45S	"	80	"	"	"	"	
- 17	"	0+60S	B	15	brown	sand silt	S	conif forest	CREEK
- 18	"	0+75S	B	15	brown	"	N	conif forest	
- 19	"	0+90S	A_0	20	"	peat	N	bog	
- 20	"	1+05S	A_0	80	"	"	"	"	
- 21	"	1+20S	A_0	25	"	"	"	"	
- 22	"	1+35S	A_0	65	"	"	N	"	
- 23	"	1+50S	A_0	150	"	"	"	"	
- 24	"	1+65S	A_0	150	"	"	"	"	
- 25	"	1+80S	"	"	"	"	"	"	

SOIL SAMPLE DATA SHEETS

Project; MR-4 MIDDLE RIDGE Anomaly; MR-4 KEDA

SAMPLE NO.	LINE	STN	HOR	DEP	COLOUR	MATERIAL	SLOPE	VEG.	REMARKS
MR-4-26	1+50E	1+05S	A_1-A_2	55	black	peat	S	conf	edge of pond.
" - " -27	"	0+90S	A_2	20	grey	leached	S	"	
" - " -28	"	0+75S	A_0	40	black	peat	S	"	shrub
" - " -29	"	0+60S	"	30	"	"	"	bog	edge of shrub
" - " -30	"	0+45S	"	30	"	"	"	"	
" - " -31	"	0+30S	"	30	"	"	"	"	
" - " -32	"	0+15S	"	"	"	"	"	"	
" - " -33	"	0+00S	"	"	"	"	"	"	
" - " -34	"	0+15N	"	"	"	"	"	"	
" - " -35	"	0+30N	"	"	"	"	"	"	
" - " -36	"	0+45N	"	"	"	"	"	"	
" - " -37	"	0+60N	"	"	"	"	"	"	
" - " -38	"	0+75N	"	"	"	"	"	"	
" - " -39	"	0+90N	"	"	"	"	"	"	
" - " -40	"	1+05N	"	"	"	"	"	"	
" - " -41	"	1+20N	"	"	"	"	"	"	
" - " -42	"	1+35N	"	"	"	"	"	"	
" - " -43	"	1+50N	"	"	"	"	"	"	
" - " -44	"	1+65N	"	"	"	"	"	"	
" - " -45	"	1+80N	"						
- -									
- -									
- -									
- -									
- -									

SOIL SAMPLE DATA SHEETS

Project; MIDDLE RIDGE Anomaly; MR-5 TITUS

SAMPLE NO.	LINE	STN.	HOR	DEP	COLOUR	MATERIAL	SLOPE	V.EG.	REMARKS
MR-5 -001	1+00W	0+00		5cm	red brown	silt humic	—	conif	blue down
- -002		0+15N		10	gray-brown	silt	—	conif	"
- -003		0+30N		10	red-brown	silt	—	conif	blue down
- -004		0+45N		15	red-brown	silt sand	—	conif	"
- -005		0+60N		5	red brown	silt	—	conif	"
- -006		0+75N		10cm	red-brown	silt	—		"
- -007		0+90N		10	red-brown	silt	—	conif	"
- -008		1+05N		5	red brown	silt	—	conif	"
- -009		1+20N		10	gray-brown	silt	—	conif	"
- -010		1+35N		5	gray	silt	—	conif	"
- -011		1+50N		15	gray	leach clay	—	conif	"
- -012	0+00	0+00		15	grey	leach clay	—	conif	"
- -013		0+15S		10	grey	leach	—	conif	"
- -014		0+30S		15	grey	leach	—	conif	"
- -015		0+45S		15	red brown	silt	—	conif	"
- -016		0+60S		15	red brown	silt	—	conif	"
- -017		0+75S		15	brown	silt	—	conif	"
- -018		0+90S		15	brown	silt	—	conif	"
- -019		1+05S		10	brown	silt	—	conif	"
- -020		1+20S		10	brown	silt	—	conif	"
- -021		1+35S		5	brown	silt	—	conif	"
- -022		1+50S		10	brown	silt	—	conif	"
- -023		0+45N		10	brown	silt	—	conif	"
- -024		0+30N		10	brown	silt	—	conif	"
- -025		0+45N		15	brown	silt	—	conif	"

SOIL SAMPLE DATA SHEETS

Project; MIDDLE RIDGE Anomaly; MR-5 TITUS

SAMPLE NO.	LINE	STN.	HOR	DEP	COLOUR	MATERIAL	SLOPE	VEG.	REMARKS
MR-5 -026	0+00	0+60N		10	brown	silt	–	conif	
- -026		0+75N		10	brown	silt	–	conif	
- -028		0+90N		10	red brown	silt	–	conif	
- -029		1+05N		13	red brown	silt	–	conif	
- -030		1+20N		10	brown	silt	–	conif	
- -031		1+35N		5	brown	silt	–	conif	
- -032		1+50N		10	red brown	silt	–	conif	
- -033	1+00W	0+15S		15	brown	silt	–	conif	
- -034		0+30S		15	lt brown	silt	–	conif	
- -035		0+45S		10	brown	silt	–	conif	
- -036		0+60S		5	brown	silt	–	conif	
- -037		0+75S		5	brown	silt	–	conif	
- -038		0+90S		10	brown	silt	–	conif	
- -039		1+05S		10	red brown	silt	–	conif	
- -040		1+20S		15	red brown	silt	–	conif	
- -041		1+35S		10	brown	silt	–	conif	
- -042		1+50S		10	grey	beach	–	conif	
- -									
- -									
- -									
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- -									
- -									
- -									

SOIL SAMPLE DATA SHEETS

Project: [redacted] RIDGE Anomaly; MR-5A TITUS.

SAMPLE NO.	LINE	STN	HOR	DEP	COLOUR	MATERIAL	SLOPE	VEG	REMARKS
MR-5A -043	3+00S	0+00	-	10S	Brown/Blk	Humic	—	Bog	
- -044		0+15W		10S	"	"	—	"	
- -045		0+30W		10S	"	"	—	"	
- -046		0+45W		10S	"	"	—	"	
- -047		0+60W		10S	"	"	—	"	
- -048		0+75W		10S	"	"	—	"	
- -049		0+90W		10S	"	"	—	"	
- -050		1+05W		10S	"	"	—	"	
- -051		1+20W		10	Brown	Silt	—	conif	
- -052		1+35W		15	red brown	silt	—	conif	
- -053		1+50W		5	grey	leach	—	conif	outcrop
- -054		0+15E		10S	Black	Humic	—	Bog	
- -055		0+30	B	10	Brown	Silt	—	conif	
- -056		0+45	B	10	red brown	silt	—	conif	
- -057		0+60		15	Black	Humic	20°W	conif	outcrop
- -058		0+75E	B	10	red brown	silt	" "	conif	
- -059		0+90	B	10	brown	silt	" "	conif	
- -060		0+05		10S	black	humic	" "	bog	
- -061		1+20	B	15	brown	silt	"	conif	
- -062		1+35E	B	15	brown	silt	" "	conif	
- -063		1+50		10	grey	leach	" "	conif	
- -064	1+10N	0+00		10S	BLACK	Humic	—	Bog	
- -065		0+15E		10S	"	"	—	"	
- -066		0+30E		10S	"	"	—	"	
- -067		0+45E		10S	"	"	—	"	

SCANNED IMAGE

SOIL SAMPLE DATA SHEETS

Project; MIDDLE RIDGE Anomaly; TITUS 5A

SAMPLE NO.	LINE	STN.	HOR	DEP	COLOUR	MATERIAL	SLOPE	VEG.	REMARKS
MR 5A -068	1+20N	0+60E		10S	BLACK	Humic	—	Bog	
- -069		0+75E		"	"	"	—	"	
- -070		0+90E		"	"	"	—	"	
- -071		1+05E		"	"	"	—	"	
- -072		1+20E		20	"	"	—	"	OUTCROP
- -073		1+35E		10S	"	"	—	"	
- -074		1+50		"	"	"	—	"	
- -075		0+15W		10S	"	"	—	"	
- -076		0+30W		"	"	"	—	"	
- -077		0+45W		"	"	"	—	"	
- -078		0+60W		"	"	"	—	"	
- -079		0+75W		"	"	"	—	"	
- -080		0+90W		"	"	"	—	"	
- -881		1+05W		"	"	"	—	"	
- -082		1+20W		"	"	"	—	"	
- -083		1+35W		10	grey	leach	—	conif	outcrop
- -084		1+50W		10	grey	leach	—	conif	outcrop
- -									
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SOIL SAMPLE DATA SHEETS

Project; MIDDLE RIDGE Anomaly; MR-5B TITUS

SAMPLE NO.	LINE	STN.	HOR	DEP	COLOUR	MATERIAL	SLOPE	V.E.G.	REMARKS
MRS-B -085	0+50N	0+00		30	BLACK	Humic	—	Bog	
- -086		0+15W		30	"	"	"	"	
- -087		0+30W		30	"	"	"	"	
- -088		0+45W		20	grey/Brown	Silt/Leach	—	Bog	outcrop
- -089		0+60W		15	grey	leach	—	Bog	outcrop
- -090		0+75W		20	grey/brown	silt/leach	—	Bog	outcrop
- -091		0+90W		10	brown	silt	—	open	(Bog)
- -092		1+05W		15	brown	silt	—	open	"
- -093		1+20W		10	brown	silt	—	open	"
- -094		1+35W		15	brown	silt	—	open	"
- -095		1+50W		10	brown	silt	—	open	"
- -096		0+15E		20	brown	organic	0	bog	
- -097		0+30E		20	brown	organic	0	bog	
- -098		0+45E		10	red-brown	silt	0	bog	
- -099		0+60E		20	brown	organic	0	bog	
- -100		0+75E		10	red-brown	silt	0	bog	
- -101		0+90E		15	red-brown	silt	0	bog	
- -102		1+05E		25	brown	humus	0	bog	
- -103		1+20E		25	brown	humus	0	bog	
- -104		1+35E		20	brown	humus	0	bog	
- -105		1+50E		20	brown	humus	10E	bog	
- -									
- -									
- -									
- -									

Sent by Mr. James Fenton

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ANALYTICAL LABORATORY

ANALYSIS REPORT

Phone No. (709) 673-4223, 4224

Report No. 800432

Method Geochem

From M.K. Gadia, Ph.D.

Sample Description Soil - H.B.O.G.

Date August 19, 1980

Sample No.		PPM Cu	PPM Pb	PPM Zn	PPM Ag		
MR - 5 -	001	14	25	31	1.1		
MR - 5 -	002	10	18	41	0.6		
MR - 5 -	003	5	13	23	0.4		
MR - 5 -	004	9	13	28	0.7		
MR - 5 -	005	12	14	41	0.7		
MR - 5 -	006	11	14	35	1.0		
MR - 5 -	007	9	28	30	1.0		
MR - 5 -	008	14	21	32	0.6		
MR - 5 -	009	3	15	14	0.2		
MR - 5 -	010	2	11	14	<0.2		
MR - 5 -	011	1	9	5	0.2		
MR - 5 -	012	<1	9	9	<0.2		
MR - 5 -	013	<1	10	8	<0.2		
MR - 5 -	014	<1	9	9	<0.2		
MR - 5 -	015	3	11	10	0.2		
MR - 5 -	016	4	13	13	0.3		
MR - 5 -	017	5	16	20	0.3		
MR - 5 -	018	6	17	22	0.5		
MR - 5 -	019	4	14	15	0.4		
MR - 5 -	020	2	9	12	0.2		
MR - 5 -	021	5	15	17	0.3		
MR - 5 -	022	2	10	13	0.3		
MR - 5 -	023	7	19	24	0.6		
MR - 5 -	024	5	22	16	0.8		
MR - 5 -	025	5	17	24	0.7		
MR - 5 -	026	8	19	21	0.8		
MR - 5 -	027	11	23	24	1.0		
MR - 5 -	028	10	18	21	1.1		
MR - 5 -	029	8	21	14	0.8		
MR - 5 -	030	6	18	12	0.8		
MR - 5 -	031	7	16	11	0.6		
MR - 5 -	032	7	17	16	0.7		
MR - 5 -	033	16	18	32	1.0		

PULPS AND REJECTS DISCARDED AFTER 3 MONTHS UNLESS OTHERWISE ARRANGED.

Signed ... Mahendra K. Gadia

Sent by Mr. James Fenton

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Sample Description Soil - H.B.O.G.

Date August 19, 1980

Sample No.		PPM Cu	PPM Pb	PPM Zn	PPM Ag		
MR - 5 -	034	16	16	32	0.8		
MR - 5 -	035	16	17	32	0.7		
MR - 5 -	036	15	16	33	0.9		
MR - 5 -	037	19	19	37	0.9		
MR - 5 -	038	11	13	25	0.7		
MR - 5 -	039	10	14	23	0.7		
MR - 5 -	040	8	14	23	0.6		
MR - 5 -	041	9	16	28	0.7		
MR - 5 -	042	7	15	23	0.7		

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Method Geochem

From M.K. Gadia, Ph.D.

Sample Description Soil - H.B.O.G.

Date August 19, 1980

Sample No.		PPM Cu	PPM Pb	PPM Zn	PPM Ag		
MR - 3-	001	3	7	4	0.2		
MR - 3 -	002	2	6	9	0.4		
MR - 3 -	003	1	6	3	0.3		
MR - 3 -	004	1	6	2	0.2		
MR - 3 -	005	1	4	1	<0.2		
MR - 3 -	006	1	5	3	<0.2		
MR - 3 -	007	4	17	9	0.5		
MR - 3 -	008	1	7	3	0.2		
MR - 3 -	009	3	5	3	<0.2		
MR - 3 -	010	2	6	4	<0.2		
MR - 3 -	011	1	5	1	<0.2		
MR - 3 -	012	3	8	10	<0.2		
MR - 3 -	013	3	9	7	0.2		
MR - 3 -	014	1	6	2	<0.2		
MR - 3 -	015	5	17	11	0.4		
MR - 3 -	016	4	11	6	0.2		
MR - 3 -	017	6	17	12	0.4		
MR - 3 -	018	2	7	4	<0.2		
MR - 3 -	019	1	5	2	<0.2		
MR - 3 -	020	4	14	10	0.3		
MR - 3 -	021	2	6	2	<0.2		
MR - 3 -	022	5	16	8	0.5		
MR - 3 -	023	11	25	12	0.9		
MR - 3 -	024	7	20	12	0.7		
MR - 3 -	025	6	20	16	0.6		

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Signed Mahendra K. Gadia

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Report No. 800432

Method Geochem

From M.K. Gadia, Ph.D.

Sample Description Soil - H.B.O.G.

Date August 19, 1980

Sample No.		PPM Cu	PPM Pb	PPM Zn	PPM Ag		
MR - 1 -	027	6	18	10	0.2		
MR - 1 -	028	2	10	8	<0.2		
MR - 1 -	029	4	12	18	1.3		
MR - 1 -	030	6	10	11	0.2		
MR - 1 -	031	2	7	5	<0.2		
MR - 1 -	032	5	15	14	0.4		
MR - 1 -	033	4	9	8	<0.2		
MR - 1 -	034	2	6	4	<0.2		
MR - 1 -	035	3	8	6	0.2		
MR - 1 -	036	13	24	14	0.9		
MR - 1 -	037	6	21	23	0.5		
MR - 1 -	038	4	13	11	0.2		
MR - 1 -	039	3	18	14	<0.2		
MR - 1 -	040	2	18	23	0.2		
MR - 1 -	041	5	29	34	0.2		
MR - 1 -	042	5	23	82	0.2		
MR - 1 -	043	1	9	13	<0.2		
MR - 1 -	044	4	17	14	0.3		
MR - 1 -	045	4	11	9	<0.2		
MR - 1 -	046	4	20	9	0.2		
MR - 1 -	047	6	15	12	0.3		
MR - 1 -	048	5	24	15	0.3		
MR - 1 -	049	3	17	26	<0.2		
MR - 1 -	050	2	13	25	<0.2		
MR - 1 -	051	2	13	40	<0.2		
MR - 1 -	052	2	18	48	<0.2		
MR - 1 -	100	5	19	21	0.6		
MR - 1 -	101	1	13	13	0.2		
MR - 1 -	102	3	13	10	0.2		
MR - 1 -	103	3	15	28	0.9		
MR - 1 -	104	2	7	11	0.4		
MR - 1 -	105	5	8	20	0.3		
MR - 1 -	106	24	28	36	0.8		

PULPS AND REJECTS DISCARDED AFTER
3 MONTHS UNLESS OTHERWISE ARRANGED.

Signed .... Mahendra K. Gadia

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Report No. 800432

Method Geochem

From M.K. Gadia, Ph.D.

Sample Description Soil - H.B.O.G.

Date August 19, 1980

Sample No.		PPM Cu	PPM Pb	PPM Zn	PPM Ag		
MR - 1 -	107	7	26	19	0.7		
MR - 1 -	108	3	12	6	0.4		
MR - 1 -	109	4	12	13	0.5		
ME - 1 -	110	5	17	23	0.5		
MR - 1 -	111	3	7	5	0.3		
MR - 1 -	112	4	28	33	0.2		
MR - 1 -	113	4	22	20	0.2		
MR - 1 -	114	4	28	19	0.2		
MR - 1 -	115	7	18	16	0.2		
MR - 1 -	116	4	17	9	<0.2		
MR - 1 -	117	3	15	15	0.2		
MR - 1 -	118	2	10	11	<0.2		
MR - 1 -	119	2	12	13	0.2		

PULPS AND REJECTS DISCARDED AFTER 3 MONTHS UNLESS OTHERWISE ARRANGED.

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ANALYTICAL LABORATORY

ANALYSIS REPORT

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Report No. 800432

Method Geochem

From M.K. Gadia, Ph.D.

Sample Description Soil - H.B.O.G.

Date August 19, 1980

Sample No.		PPM Cu	PPM Pb	PPM Zn	PPM Ag		
MR - 4 -	001	4	6	5	0.3		
MR - 4 -	002	2	3	2	<0.2		
MR - 4 -	003	5	21	9	0.4		
MR - 4 -	004	10	17	10	0.6		
MR - 4 -	005	7	20	15	0.4		
MR - 4 -	006	6	12	11	0.2		
MR - 4 -	007	5	11	13	0.2		
MR - 4 -	008	3	11	14	<0.2		
MR - 4 -	009	3	7	10	<0.2		
MR - 4 -	010	3	6	9	<0.2		
MR - 4 -	011	4	10	13	<0.2		
MR - 4 -	012	4	7	9	<0.2		
MR - 4 -	013	4	7	10	<0.2		
MR - 4 -	014	4	9	12	<0.2		
MR - 4 -	015	4	10	14	<0.2		
MR - 4 -	016	4	8	16	<0.2		
MR - 4 -	017	9	23	62	0.6		
MR - 4 -	018	6	23	30	0.9		
MR - 4 -	019	4	16	13	0.4		
MR - 4 -	020	5	10	13	<0.2		
MR - 4 -	021	4	8	10	<0.2		
MR - 4 -	022	4	7	10	<0.2		
MR - 4 -	023	5	8	20	<0.2		
MR - 4 -	024	3	7	25	<0.2		
MR - 4 -	025	2	5	16	<0.2		
MR - 4 -	026	4	23	21	0.4		
MR - 4 -	027	<1	6	8	<0.2		
MR - 4 -	028	<1	7	3	<0.2		
MR - 4 -	029	2	5	16	<0.2		
MR - 4 -	030	2	3	8	<0.2		
MR - 4 -	031	1	6	8	<0.2		
MR - 4 -	032	5	18	13	0.2		
MR - 4 -	033	<1	8	11	<0.2		

PULPS AND REJECTS DISCARDED AFTER 3 MONTHS UNLESS OTHERWISE ARRANGED.

Signed Mahendra K. Gadia

Sent by Mr. James Fenton

ATLANTIC ANALYTICAL SERVICES LTD.

P. O. Box 489 — Springdale, Newfoundland, Canada, A0J 1T0
ANALYTICAL LABORATORY

ANALYSIS REPORT

Phone No. (709) 673-4223, 4224

Report No. 800432

Method Geochem

From M.K. Gadia, Ph.D.

Sample Description Soil - H.B.O.G.

Date August 19, 1980

Sample No.		PPM Cu	PPM Pb	PPM Zn	PPM Ag		
MR - 4 -	034	1	11	14	< 0.2		
MR - 4 -	035	< 1	4	9	< 0.2		
MR - 4 -	036	1	7	12	0.2		
MR - 4 -	037	< 1	5	10	< 0.2		
MR - 4 -	038	1	6	9	< 0.2		
MR - 4 -	039	1	5	10	0.2		
MR - 4 -	040	1	6	9	< 0.2		
MR - 4 -	041	2	7	15	< 0.2		
MR - 4 -	042	1	9	13	0.2		
MR - 4 -	043	1	7	11	< 0.2		
MR - 4 -	044	1	6	14	< 0.2		
MR - 4 -	045	1	4	14	< 0.2		

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Report No. 800432

Method Geochem

From M.K. Gadia, Ph.D.

Sample Description Soil - H.B.O.G.

Date August 19, 1980

Sample No.		PPM Cu	PPM Pb	PPM Zn	PPM Ag		
MR - 1 -	300	3	11	15	0.3		
MR - 1 -	301	3	10	12	0.2		
MR - 1 -	302	3	10	17	0.2		
MR - 1 -	303	3	10	14	<0.2		
MR - 1 -	304	4	12	29	<0.2		
MR - 1 -	305	3	10	23	<0.2		
MR - 1 -	306	6	12	30	0.2		
MR - 1 -	307	3	11	23	0.2		
MR - 1 -	308	8	16	20	0.2		
MR - 1 -	309	4	12	19	0.2		
MR - 1 -	310	7	15	14	0.2		
MR - 1 -	311	16	22	30	0.3		
MR - 1 -	312	8	19	15	0.5		
MR - 1 -	313	5	13	10	0.3		
MR - 1 -	314	3	11	8	0.2		
MR - 1 -	315	6	14	21	0.3		
MR - 1 -	316	11	20	32	0.4		
MR - 1 -	317	4	5	10	<0.2		
MR - 1 -	318	12	12	32	0.4		
MR - 1 -	319	19	41	35	1.4		
MR - 1 -	320	9	22	25	0.6		
MR - 1 -	321	14	22	29	1.2		
MR - 1 -	322	3	4	7	0.2		
MR - 1 -	323	4	11	12	0.3		
MR - 1 -	324	5	11	13	0.4		

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ANALYTICAL LABORATORY

ANALYSIS REPORT

Phone No. (709) 673-4223, 4224

Method Geochem H.B.O.G.

Report No. 800436

From M.K. Gadia, Ph.D.

Sample Description Soil Sent by Mr. J. Fenton

Date August 20, 1980

Sample No.	PPM Cu	PPM Pb	PPM Zn	PPM Ag			
MR-1-120	3	11	12	<0.2			
MR-1-121	2	12	16	<0.2			
MR-1-122	2	7	9	<0.2			
MR-1-123	2	9	9	<0.2			
MR-1-124	2	10	8	<0.2			
MR-1-125	2	6	9	<0.2			
MR-1-126	1	8	10	0.4			
MR-1-127	2	6	9	<0.2			
MR-1-128	2	4	5	<0.2			
MR-1-129	3	6	9	<0.2			
MR-1-130	3	8	12	<0.2			
MR-1-131	3	12	10	<0.2			
MR-1-132	3	6	8	<0.2			
MR-1-133	3	9	9	<0.2			
MR-1-134	3	4	6	<0.2			
MR-1-135	3	17	18	<0.2			
MR-1-136	4	15	19	<0.2			
MR-1-137	4	8	43	<0.2			
MR-1-138	9	18	16	0.3			
MR-1-139	11	21	21	0.6			
MR-1-140	21	16	35	0.6			
MR-1-141	13	20	25	0.5			
MR-1-142	17	31	25	0.9			
MR-1-143	6	13	20	<0.2			
MR-1-144	5	13	22	<0.2			
MR-1-145	3	15	9	<0.2			
MR-1-146	13	19	28	0.6			
MR-1-200	9	14	28	0.2			
MR-1-201	7	16	13	0.2			
MR-1-202	6	16	13	0.3			
MR-1-203	5	19	6	0.5			
MR-1-204	3	8	9	<0.2			
MR-1-205	4	8	14	<0.2			

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Signed ..... Mahendra K. Gadia

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ANALYTICAL LABORATORY

ANALYSIS REPORT

Phone No. (709) 673-4223, 4224

Report No. 800436

Method Geochem H.B.O.G.

From M.K. Gadia, Ph.D.

Sample Description Soil Sent by Mr. J. Fenton

Date August 20, 1980

Sample No.	PPM Cu	PPM Pb	PPM Zn	PPM Ag			
MR-1-206	15	25	49	0.5			
MR-1-207	11	14	25	0.2			
MR-1-208	14	11	29	<0.2			
MR-1-209	18	15	31	0.3			
MR-1-210	22	12	89	0.2			
MR-1-211	20	12	190	0.2			
MR-1-212	17	17	82	0.3			
MR-1-213	15	15	87	0.3			
MR-1-214	17	11	110	0.2			
MR-1-215	17	9	44	0.2			
MR-1-216	6	13	15	0.2			
MR-1-217	5	10	15	<0.2			
MR-1-218	16	13	13	0.2			
MR-1-219	7	15	14	<0.2			
MR-1-220	8	16	12	0.4			
MR-1-221	5	15	2	0.2			
MR-1-222	4	14	6	0.2			
MR-1-223	3	7	9	<0.2			
MR-1-224	3	6	7	<0.2			
MR-1-225	7	9	8	<0.2			
MR-1-226	4	14	9	<0.2			
MR-1-227	9	13	13	<0.2			
MR-1-228	15	28	38	0.2			
MR-1-229	14	21	55	0.4			
MR-1-230	10	21	50	0.4			
MR-1-231	14	18	24	0.3			
MR-1-232	7	15	10	<0.2			
MR-1-233	6	13	10	<0.2			
MR-1-234	5	9	17	<0.2			
MR-1-235	4	8	10	<0.2			
MR-1-236	4	11	9	<0.2			
MR-1-237	4	13	9	<0.2			
MR-1-238	4	10	12	<0.2			

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ANALYSIS REPORT

Phone No. (709) 673-4223, 4224

Report No. 800436

Method Geochem H.B.O.G.

From M.K. Gadia, Ph.D.

Sample Description Soil Sent by Mr. J. Fenton

Date August 20, 1980

Sample No.	PPM Cu	PPM Pb	PPM Zn	PPM Ag			
MR-1-239	4	11	8	<0.2			
MR-1-240	4	10	7	<0.2			
MR-1-241	4	15	8	0.4			
MR-1-242	2	12	3	0.2			
MR-1-243	3	10	7	0.2			
MR-1-244	3	10	12	<0.2			
MR-1-245	2	15	12	<0.2			
MR-1-246	2	15	9	<0.2			
MR-1-247	2	14	8	<0.2			
MR-1-248	3	11	12	<0.2			
MR-1-249	2	8	8	<0.2			
MR-1-001	1	<1	8	<0.2			
MR-1-002	3	13	12	<0.2			
MR-1-003	2	12	17	<0.2			
MR-1-004	2	7	7	<0.2			
MR-1-005	3	15	47	1.1			
MR-1-006	3	16	29	0.7			
MR-1-007	2	11	7	0.2			
MR-1-008	2	15	14	0.3			
MR-1-009	4	11	15	0.6			
MR-1-010	4	18	19	1.0			
MR-1-011	5	19	18	0.6			
MR-1-012	4	26	15	0.5			
MR-1-013	4	20	24	1.2			
MR-1-014	4	16	15	<0.2			
MR-1-015	4	13	13	<0.2			
MR-1-016	5	10	17	<0.2			
MR-1-017	3	16	17	<0.2			
MR-1-018	3	7	15	<0.2			
MR-1-019	4	10	8	<0.2			
MR-1-020	5	14	11	<0.2			
MR-1-021	5	9	6	<0.2			
MR-1-022	5	17	75	<0.2			

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Method Geochem H.B.O.G.

From M.K. Gadia, Ph.D.

Sample Description Soil Sent by Mr. J. Fenton

Date August 20, 1980

Sample No.	PPM Cu	PPM Pb	PPM Zn	PPM Ag			
MR-1-023	4	17	16	<0.2			
MR-1-024	4	13	22	<0.2			
MR-1-025	4	9	68	<0.2			
MR-1-026	3	25	17	<0.2			
MR-3-026	3	15	16	<0.2			
MR-3-027	3	10	12	0.2			
MR-3-028	4	18	10	<0.2			
MR-3-029	5	13	9	0.2			
MR-3-030	5	13	9	<0.2			
MR-3-031	5	8	6	<0.2			
MR-3-032	6	9	9	0.2			
MR-3-033	6	12	9	<0.2			
MR-3-034	6	11	11	0.2			
MR-3-035	5	13	7	0.2			
MR-3-036	5	9	6	<0.2			
MR-3-037	5	8	4	<0.2			
MR-3-038	7	10	8	<0.2			
MR-3-039	8	20	12	0.2			
MR-3-040	2	10	6	<0.2			
MR-3-041	<1	10	7	0.2			
MR-3-042	<1	8	4	<0.2			
MR-3-043	<1	14	13	<0.2			
MR-3-044	1	14	13	<0.2			
MR-3-045	<1	10	12	<0.2			
MR-3-046	<1	9	8	<0.2			
MR-3-047	<1	11	9	<0.2			
MR-3-048	<1	8	11	<0.2			
MR-3-049	<1	11	11	<0.2			
MR-3-050	<1	17	11	<0.2			
MR-3-051	7	16	16	0.6			
MR-3-052	3	11	9	<0.2			
MR-3-053	<1	8	2	<0.2			

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ANALYSIS REPORT

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Report No. 800436

Method Geochem H.B.O.G.

From M.K. Gadia, Ph.D.

Sample Description Soil Sent by Mr. J. Fenton

Date August 20, 1980

Sample No.	PPM Cu	PPM Pb	PPM Zn	PPM Ag
MR-3-054	<1	7	1	<0.2
MR-3-055	9	15	13	0.3
MR-3-056	3	10	11	0.2
MR-3-057	3	9	10	0.2
MR-3-058	2	11	10	<0.2
MR-3-059	2	9	13	<0.2
MR-3-060	4	11	17	0.3
MR-3-061	3	8	14	0.2
MR-3-062	4	8	13	0.2
MR-3-063	3	8	12	<0.2
MR-3-065	4	14	23	0.3
MR-3-066	5	11	32	0.3
MR-3-067	4	13	27	0.4
MR-3-068	6	13	29	0.4
MR-3-069	6	11	16	0.4
MR-3-070	7	10	15	0.3
MR-3-071	9	13	16	0.2
MR-3-072	5	11	16	0.3
MR-3-073	5	13	14	0.4
MR-3-074	6	14	15	0.4
MR-3-075	5	16	12	0.5
MR-3-076	1	6	3	0.3

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ANALYTICAL LABORATORY

ANALYSIS REPORT

Phone No. (709) 673-4223, 4224

Report No. 800463

Method Geochem H.B.O.G.

From M.K. Gadia, Ph.D.

Sample Description Soil Sent by Mr. J. Fenton

Date August 27, 1980

Sample No.	PPM Cu	PPM Pb	PPM Zn	PPM Ag			
MR-5B-085	4	10	15	0.2			
MR-5B-086	5	21	27	0.2			
MR-5B-087	4	16	20	<0.2			
MR-5B-088	1	9	4	<0.2			
MR-5B-089	1	9	4	<0.2			
MR-5B-090	2	16	6	0.3			
MR-5B-091	1	11	3	0.2			
MR-5B-092	4	15	14	0.5			
MR-5B-093	11	19	19	0.8			
MR-5B-094	3	11	5	0.2			
MR-5B-095	3	8	7	0.2			
MR-5B-096	3	11	16	<0.2			
MR-5B-097	3	12	17	<0.2			
MR-5B-098	16	21	29	0.7			
MR-5B-099	4	13	19	0.3			
MR-5B-100	6	13	14	0.3			
MR-5B-101	10	19	14	0.7			
MR-5B-102	3	11	8	0.2			
MR-5B-103	2	6	6	<0.2			
MR-5B-104	3	7	11	<0.2			
MR-5B-105	6	18	26	<0.2			
MR-5-043	5	15	18	0.2			
MR-5-044	5	16	16	0.2			
MR-5-045	3	11	11	<0.2			
MR-5-046	3	12	13	<0.2			
MR-5-047	3	9	13	<0.2			
MR-5-048	4	13	17	<0.2			
MR-5-049	3	7	9	<0.2			
MR-5-050	2	8	6	<0.2			
MR-5-051	13	21	20	0.6			
MR-5-052	10	19	18	0.5			
MR-5-053	1	11	4	<0.2			

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Method Geochem H.B.O.G.

Report No. 800463

From M.K. Gadia, Ph.D.

Sample Description Soil Sent by Mr. J. Fenton

Date August 27, 1980

Sample No.	PPM Cu	PPM Pb	PPM Zn	PPM Ag
MR-5-054	3	19	18	0.3
MR-5-055	4	12	11	<0.2
MR-5-056	3	9	6	<0.2
MR-5-057	3	7	7	<0.2
MR-5-058	2	7	4	0.2
MR-5-059	5	14	10	0.2
MR-5-060	3	10	9	0.2
MR-5-061	2	7	5	<0.2
MR-5-062	3	8	5	0.2
MR-5-063	1	4	1	<0.2
MR-5-064	3	11	15	<0.2
MR-5-065	2	10	11	<0.2
MR-5-066	3	9	11	0.2
MR-5-067	2	4	8	<0.2
MR-5-068	3	8	12	0.2
MR-5-069	2	9	10	0.2
MR-5-070	4	11	11	0.2
MR-5-071	2	6	6	<0.2
MR-5-072	2	5	9	0.2
MR-5-073	3	7	10	0.2
MR-5-074	2	4	4	<0.2
MR-5-075	2	6	9	<0.2
MR-5-076	3	10	17	<0.2
MR-5-077	2	7	13	<0.2
MR-5-078	2	6	18	0.2
MR-5-079	2	7	11	<0.2
MR-5-080	2	5	10	<0.2
MR-5-081	2	9	16	<0.2
MR-5-082	1	7	12	<0.2
MR-5-083	<1	4	3	<0.2
MR-5-084	<1	3	9	<0.2

PULPS AND REJECTS DISCARDED AFTER
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Signed Mahendra K. Gadia

LIST OF PLATES

PLATE NO.	PLATE NAME	SCALE
1	Compilation of 1980 Field Work	1:20 000
2	Regional Geology (Compilation)	1:20 000
3	Pentecost Zone, 1, Geophysical Compilation, N½	1:2000
4	Pentecost Zone, 1, Geophysical Compilation, S½	1:2000
5	Pentecost Zone, 1, Geochemistry, N½	1:2000
6	Pentecost Zone, 1, Geochemistry, S½	1:2000
7	Flay Zone, 3, VLF Survey	1:2000
8	Flay Zone, 3, Geophysical Compilation	1:2000
9	Flay Zone, 3, Geochemistry	1:2000
10	Keda Zone, 4, Geophysical Compilation	1:2000
11	Keda Zone, 4, Geochemistry	1:2000
12	Titus Zone, 5, Geophysical Compilation	1:2000
13	Titus Zone, 5, Soil Geochemistry	1:2000
14	Titus Zone, 5, Geology Plan Map	1:2000

MIDDLE RIDGE POND

MR-3 FLAY

MR-1 PENTECOST

MR-4 KEDA

RAINY LAKE

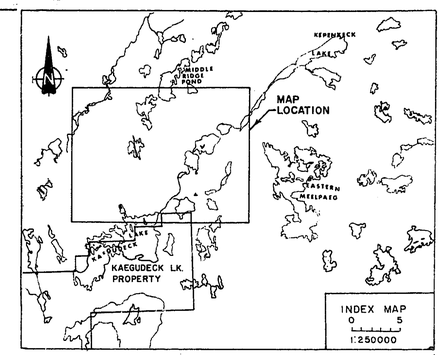
MR-5 TITUS

5

5A

5B

MOUNT SYLVESTER



500 0 500 1000m
1:20000

LEGEND

TITUS MR-5 — Zone name, Zone number

// — Area of one or more of the following surveys: VHEM, MAGNETOMETER, SOIL GEOCHEMISTRY, VLF, GEOLOGY

Conductor trace. VLF or VHEM as indicated on map.

MIDDLE RIDGE PROJECT 1980

Hudson's Bay Oil and Gas Company Limited
MINERALS EXPLORATION

COMPILATION OF 1980 FIELD WORK

002D/0447

MAP	DATE	BY	SCALE	NTS
1	81/01/06	P.G.I.	1:20000	20/3,4,6

MIDDLE RIDGE POND

RAINY LAKE

MOUNT SYLVESTER

MAP LOCATION

KAEGUDECK LK. PROPERTY

LEGEND

V1	Rhyolite
S¢	Shale/Slate
S5	Quartzite/Sandstone
M	Metamorphics (undifferentiated, see modifiers)
≈	ignimbrite
Blk	black
qz	quartz
py	pyrite
fs	feldspar
bt	biotite
mu	muscovite

Bedding (tops known, tops unknown)
Bedding (vertical, inclined)
Foliation (vertical, inclined)
Geological contact (approximate)
Geological contact (geophysically defined)
outcrop
area of outcrop

1:20000

MIDDLE RIDGE PROJECT 1980

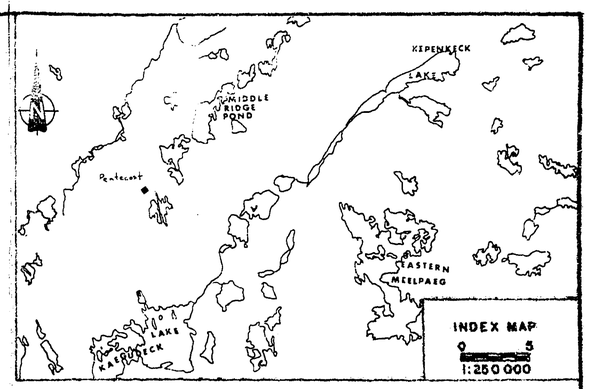
Hudson's Bay Oil and Gas Company Limited
MINERALS EXPLORATION

REGIONAL GEOLOGY
(COMPILATION)

0020/0447

REF	DATE		SCALE	FILE
2	81/01/06	JQF	1:20000	2D/3,4,6/

ACME NO R-405-15 CHINA



Conductors continue

Line 9+75E Proj = NE. 60m calc.

Line 10+00E Plotted on Plate A

Note see plate A for continuation of these conductors

LEGEND

Vertical Loop
- Conductor Axis

Horizontal Loop
- In-phase
- Out-of-phase
- IP/OP Ratio — R = 15/10
- Width — 200m
- Vertical Scale — 1cm = 10%

Magnetics
- Values
- Vertical Scale — 1cm = 500 γ

INSTRUMENTS

McPHAR VHEM

SCINTREX MP-2

0 50 100 200 meters

002D/0447

Hudson's Bay Oil and Gas Company Limited
MINERALS EXPLORATION

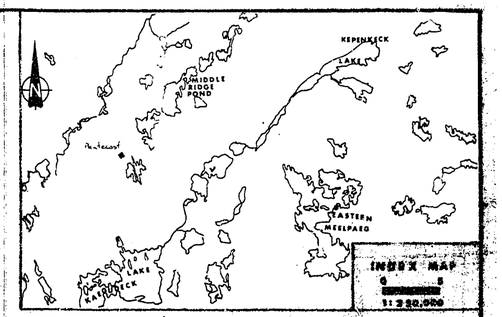
Middle Ridge Project

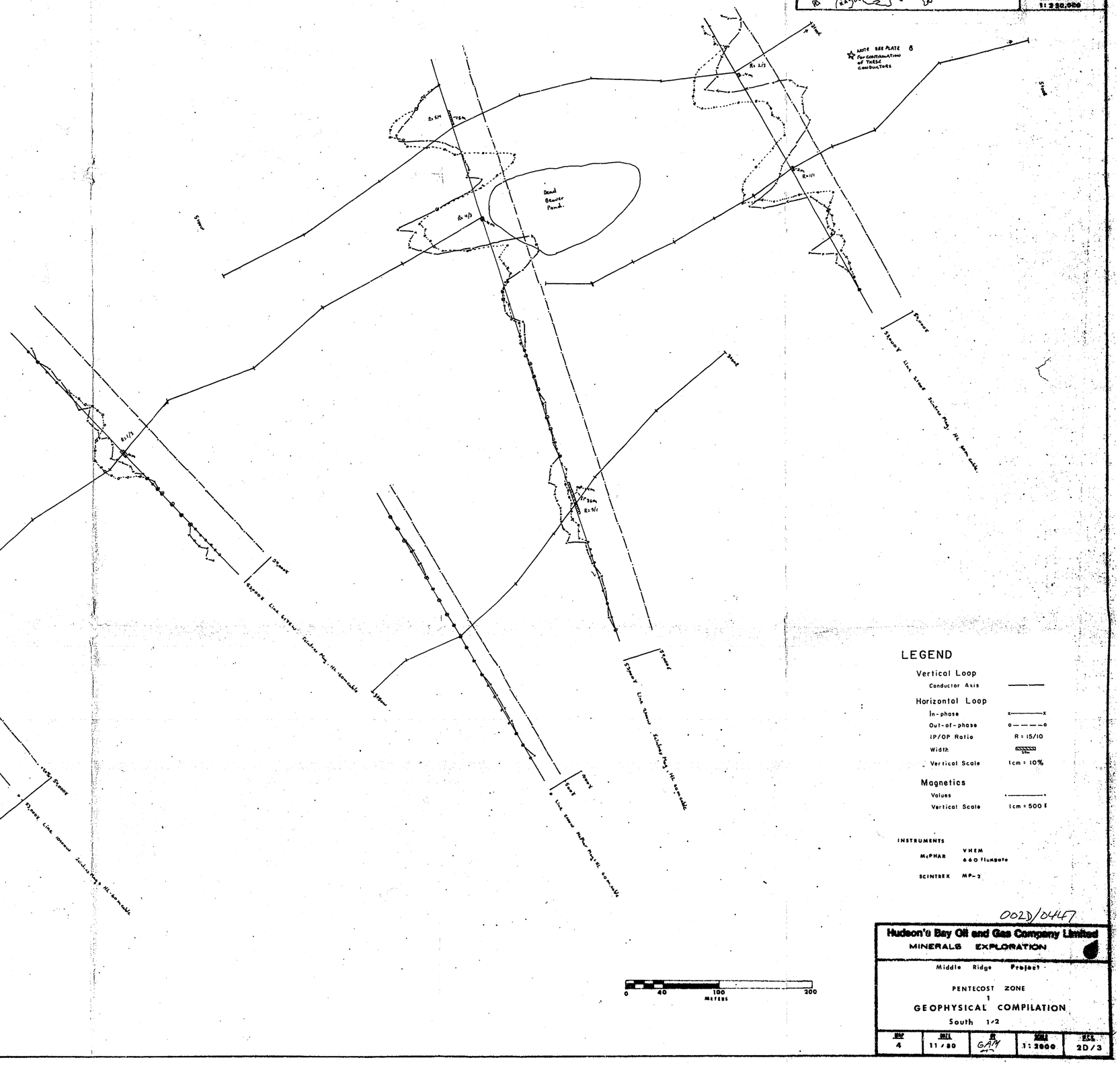
PENTECOST ZONE

GEOPHYSICAL COMPILATION

North 1/2

MAP	DATE	BY	SCALE	N.T.S.
3	11/80	GAM	1:2000	2D/3





LEGEND

Vertical Loop
- Conductor Axis

Horizontal Loop
- In-phase
- Out-of-phase
- IP/OP Ratio — R = 15/10
- Width — 50m
- Vertical Scale — 1cm = 10%

Magnetics
- Values
- Vertical Scale — 1cm = 500 γ

INSTRUMENTS

McPHAR	VHEM 660 Fluxgate
SCINTREX	MP-2

0 40 100 200 METERS

0 1 2 3 4 5 6 cm — ADAME NO R-405-15 CHINA

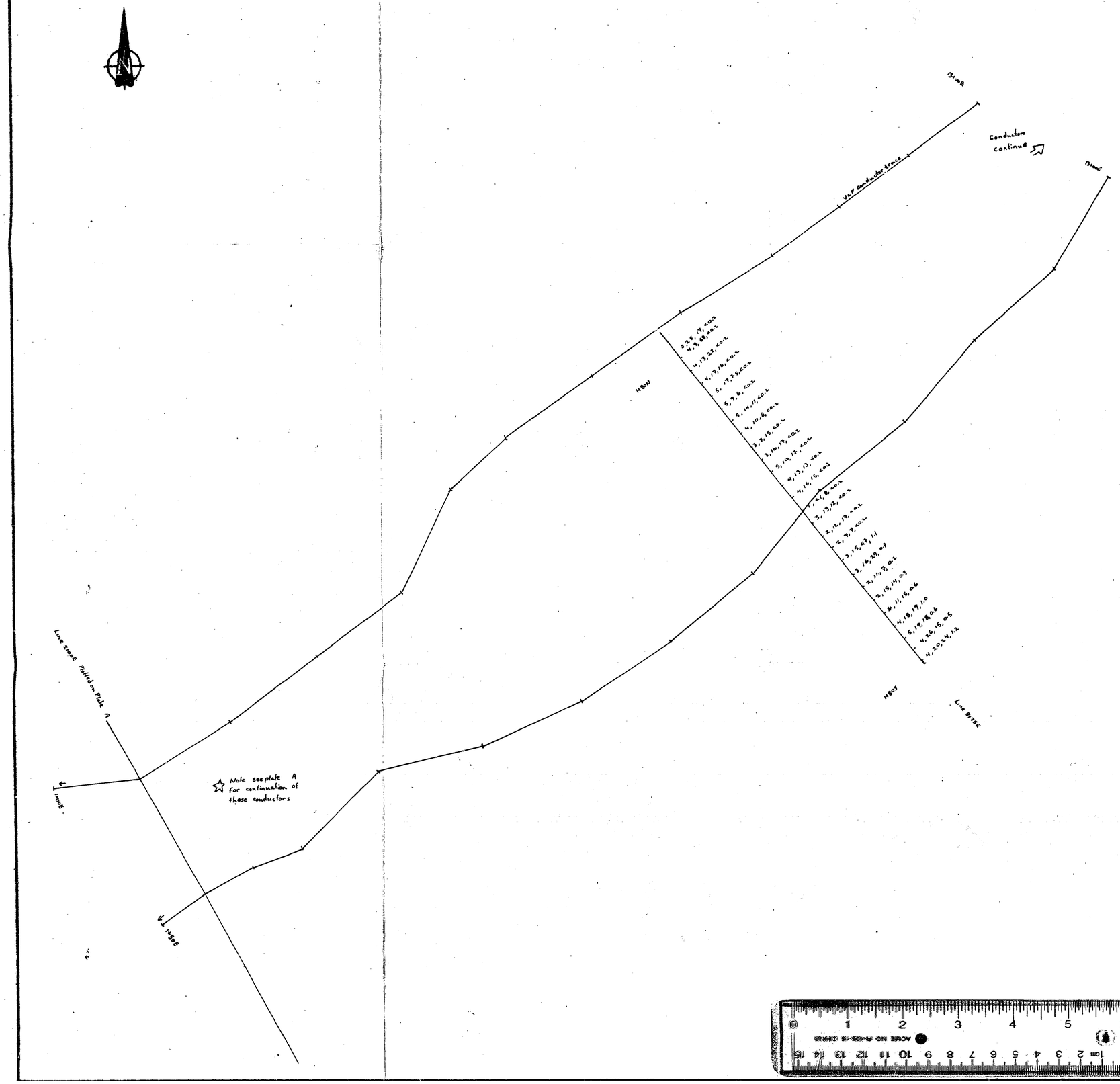
0029/04E7

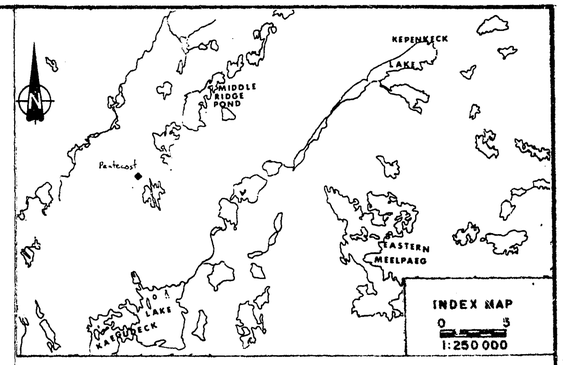
Hudson's Bay Oil and Gas Company Limited
MINERALS EXPLORATION

Middle Ridge Project

PENTECOST ZONE
1
GEOPHYSICAL COMPILATION
South 1/2

MAP	DATE	BY	SCALE	FILE
4	11/80	GAM	1:2000	2D/3





LEGEND

Soil Sample Locations
with Analysis in ppm for Cu, Pb, Zn, Ag
• 16 12 23 0·6

NS — No Sample

0 50 100 200
meters

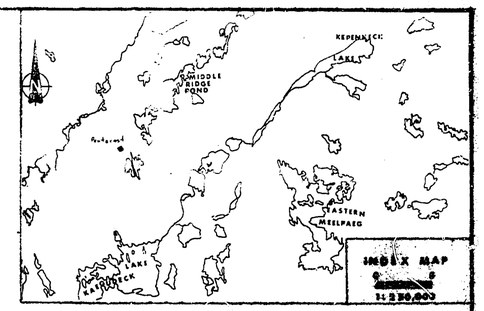
0020/0447

Hudson's Bay Oil and Gas Company Limited
MINERALS EXPLORATION

Middle Ridge Project

PENTECOST ZONE
1
GEOCHEMISTRY
North 1/2

MAP	DATE	BY	SCALE	I.S.
5	11/80	GAM	1:2000	2D/3



LEGEND

Soil Sample Locations
with Analys' in ppm for Cu, Pb, Zn, Ag
- 16 12 23 0·6

NS — No Sample

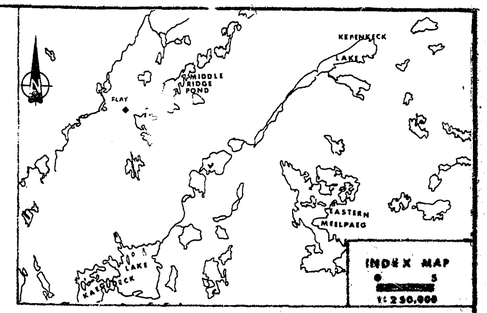
0029/0447

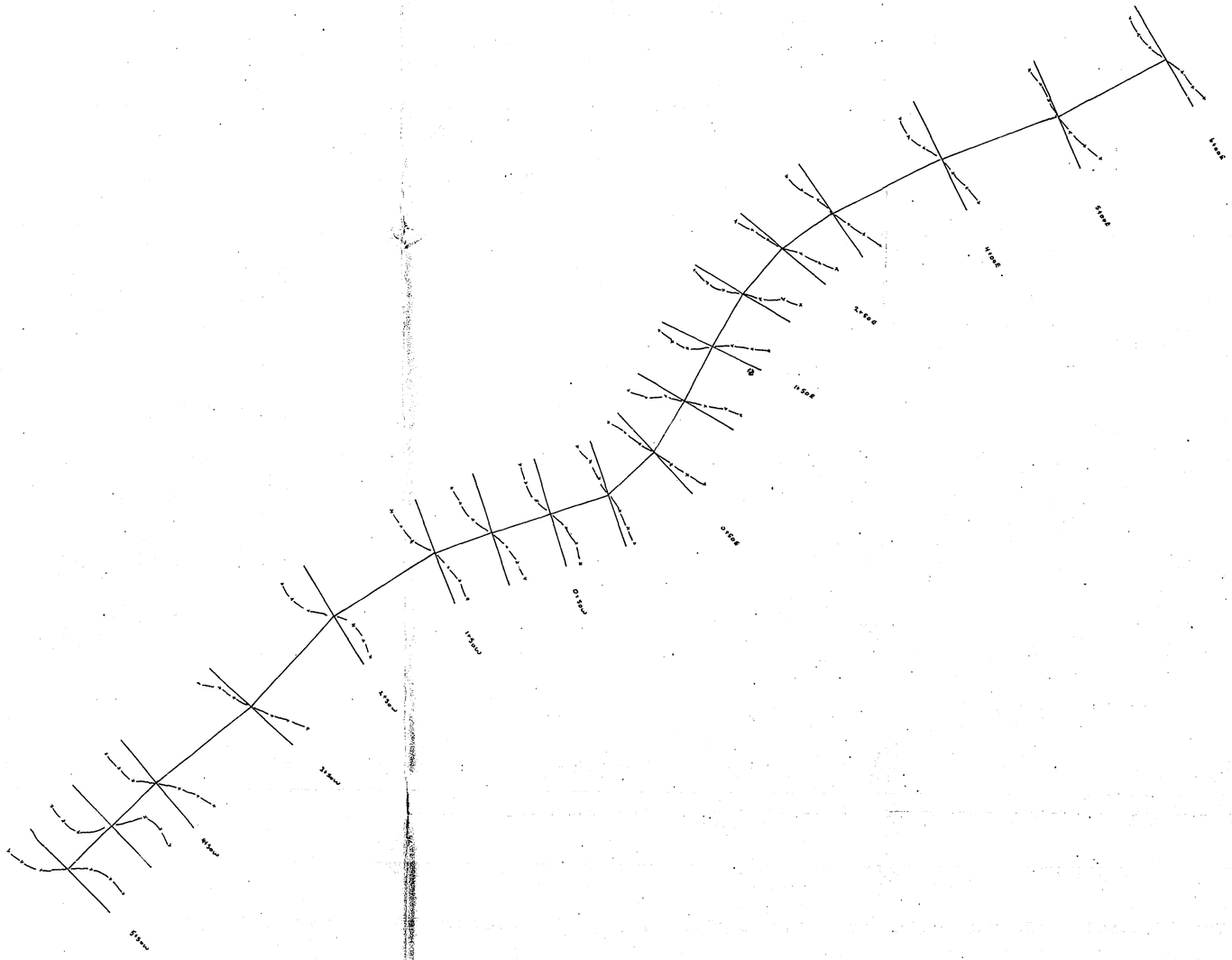
Hudson's Bay Oil and Gas Company Limited
MINERALS EXPLORATION

Middle Ridge Project

PENTECOST ZONE
1
GEOCHEMISTRY
South 1/2

MAP	SHEET	BY	SCALE	FILE
6	11 / 89	GAM	1:2000	2D / 3



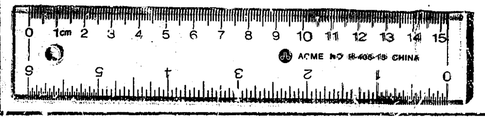


LEGEND

VLF (Crone Rodem)
x——x Dip Angle

Vertical Scale
1cm = 10°

TRANSMITTER CUTLER MAINE



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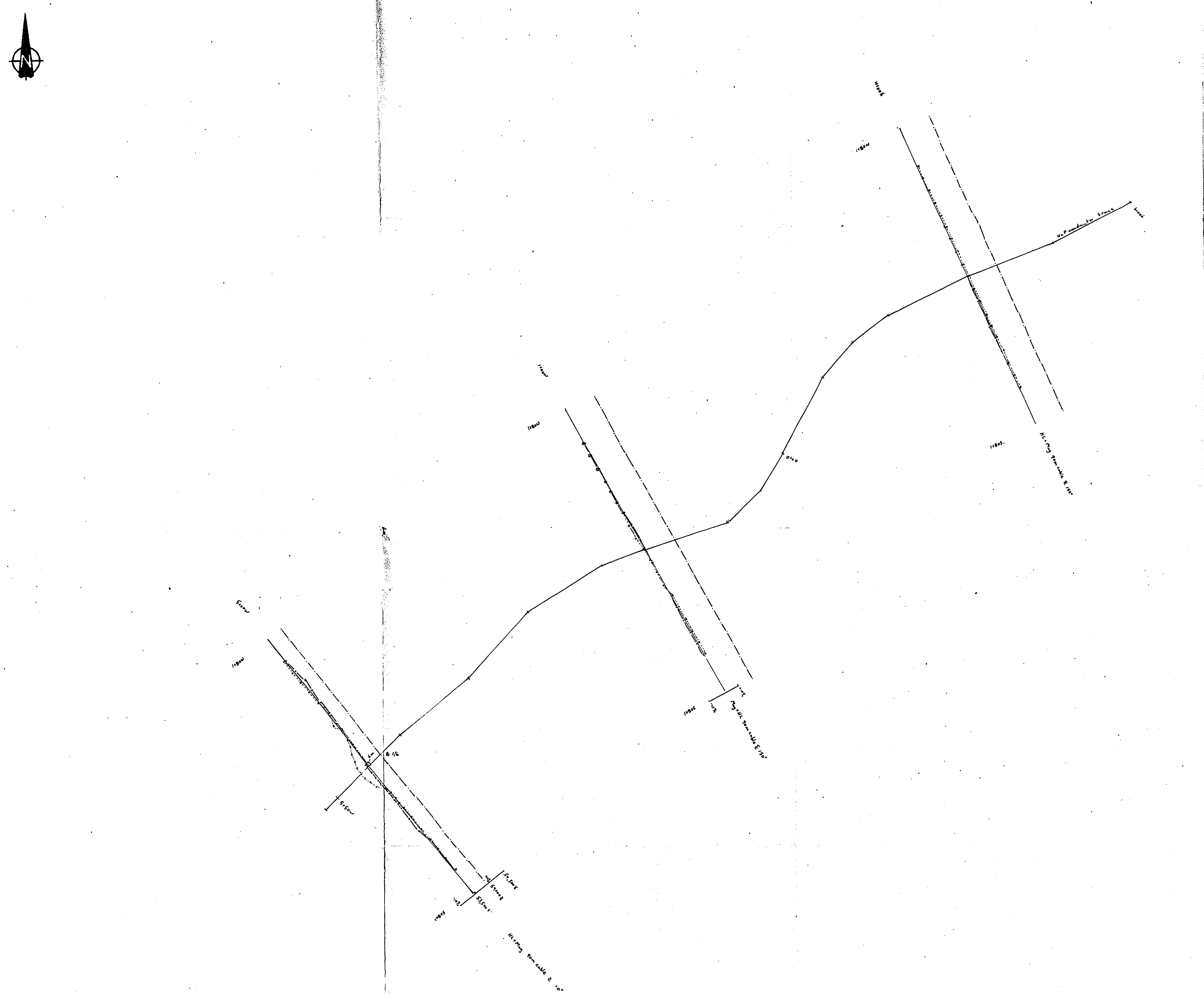
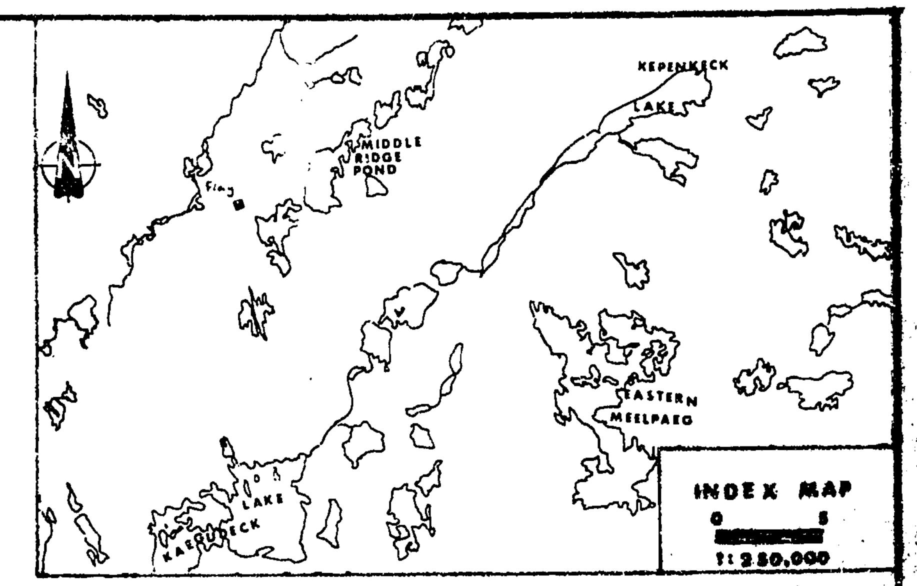
MINERALS EXPLORATION

Middle Ridge Project

FLAY ZONE 3
VLF SURVEY

MAP	DATE	BY	SCALE	FIG.
7	11/80	GAM	1:2000	2D/3





0 40 100 200
METERS

LEGEND

Vertical Loop
Conductor Axis

Horizontal Loop
In-phase
Out-of-phase
IP/OP Ratio R : 15/10
Width 20m
Vertical Scale 1cm = 10%

Magnetics
Values
Vertical Scale 1cm = 500 γ

Instruments
McPhar - VHEM
Scintrex - MP-2

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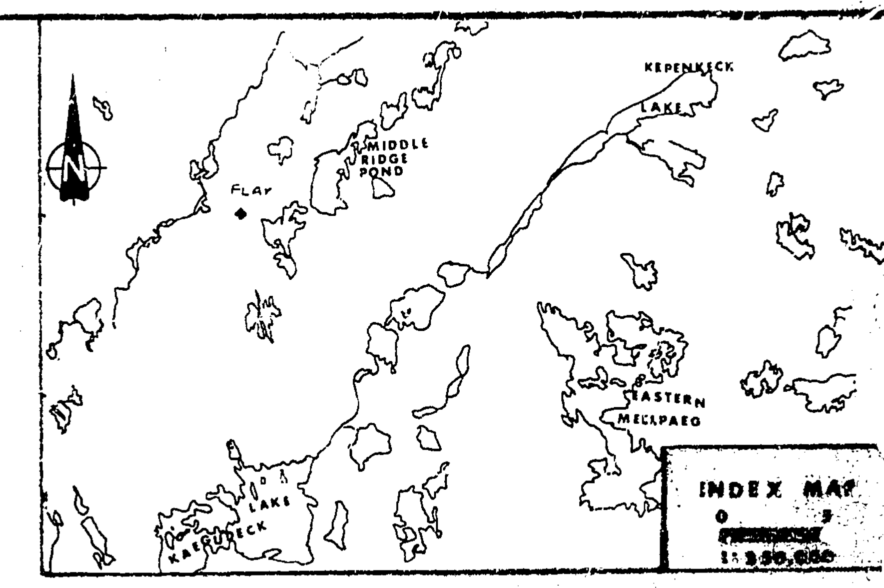
MINERALS EXPLORATION

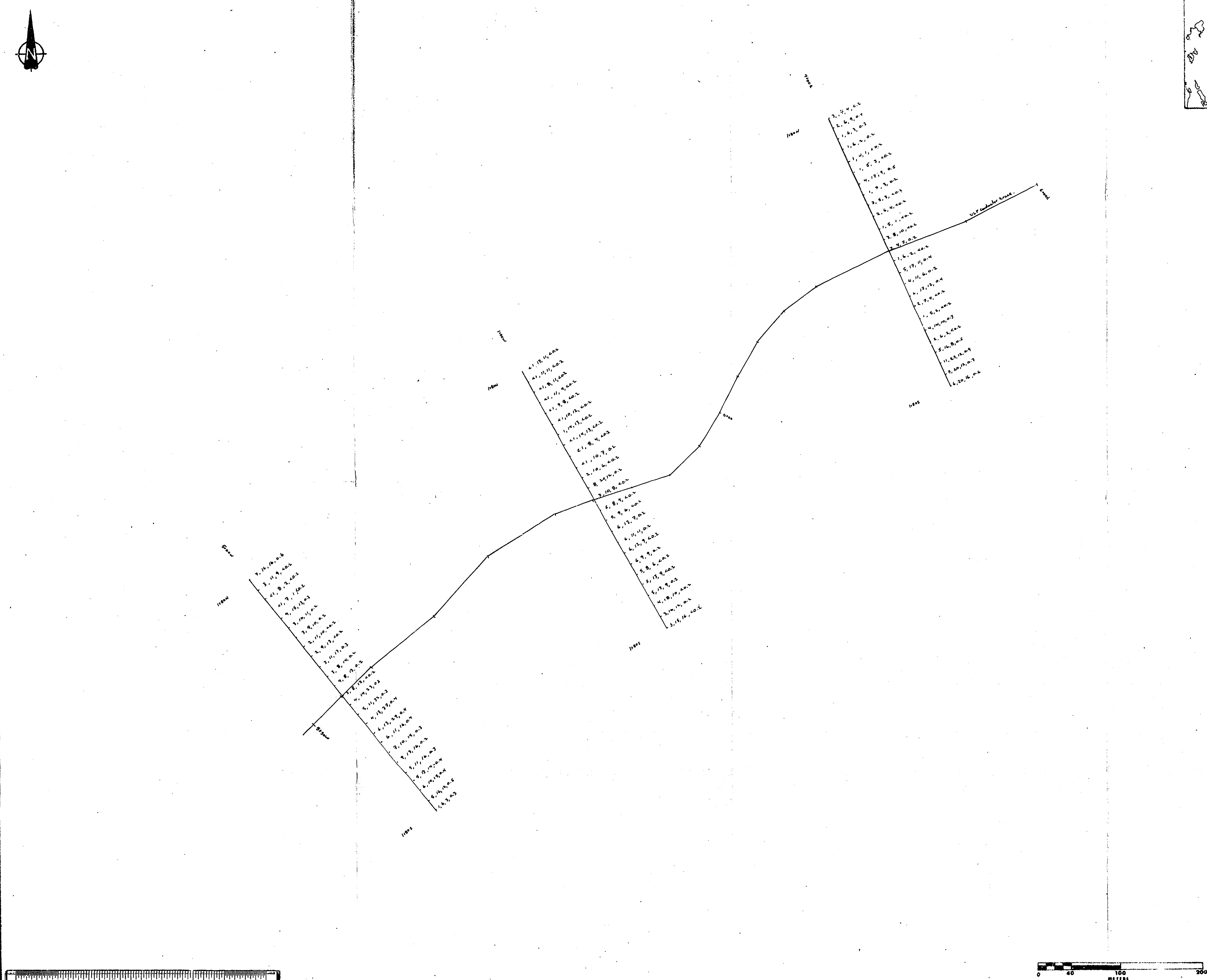
Middle Ridge Project

FLAY ZONE 3

GEOPHYSICAL COMPILATION

MAP	DATE	BY	SCALE	NTS
8	11/80	GAM	1:2000	2D/3





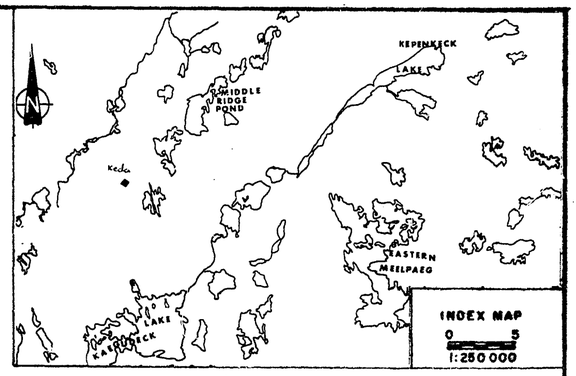
LEGEND

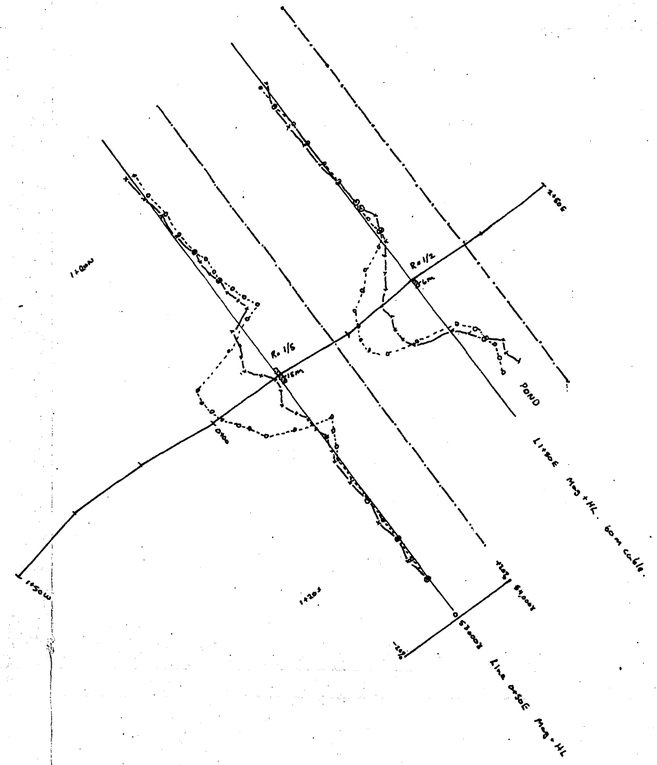
Soil Sample Locations
with Analysis in ppm for Cu, Pb, Zn, Ag
• 16 12 23 0·6

NS — No Sample

0020/0447

Hudson's Bay Oil and Gas Company Limited				
MINERALS EXPLORATION				
Middle Ridge Project FLAY ZONE 3 GEOCHEMISTRY				
9	11/80	GAM	1:2000	2D/3





LEGEND

Vertical Loop
- Conductor Axis ——

Horizontal Loop
- In-phase x——x
- Out-of-phase o— — —o
- IP/OP Ratio R = 15/10
- Width 50m
- Vertical Scale 1cm = 10%

Magnetics
- Values •——•
- Vertical Scale 1cm = 500 γ

INSTRUMENTS

McPHAR VHEM

SCINTREX MP-2

0 50 100 200
meters

0020/0447

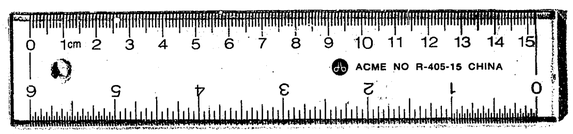
Hudson's Bay Oil and Gas Company Limited
MINERALS EXPLORATION

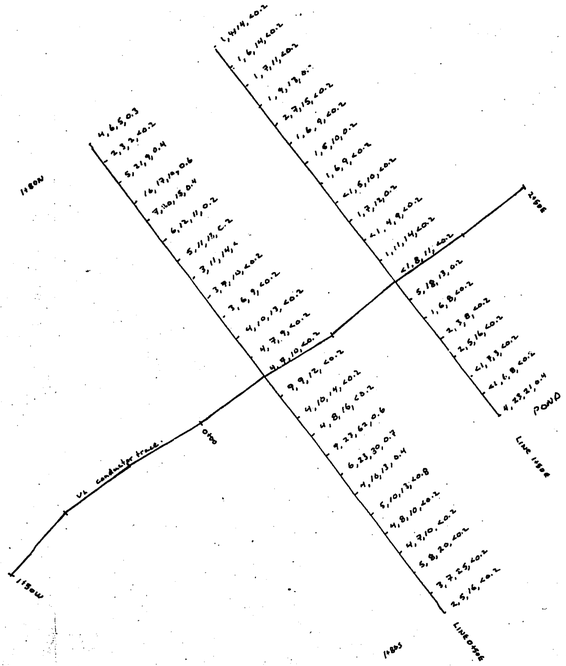
Middle Ridge Project

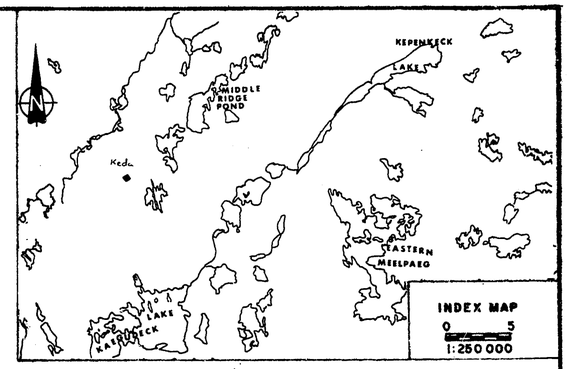
KEDA ZONE 4

GEOPHYSICAL COMPILATION

MAP	DATE	BY	SCALE	N.T.S.
10	11/80	GAM	1:2000	2D/3







LEGEND

Soil Sample Locations
with Analysis in ppm for Cu, Pb, Zn, Ag
• 16 12 23 0·6

NS — No Sample

0 50 100 200
meters

002D/6447

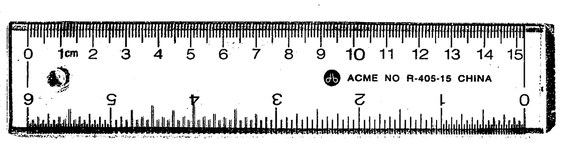
Hudson's Bay Oil and Gas Company Limited
MINERALS EXPLORATION

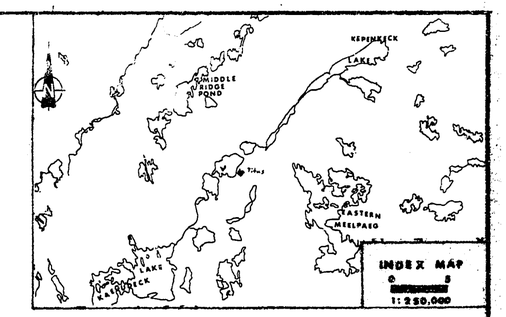
Middle Ridge Project

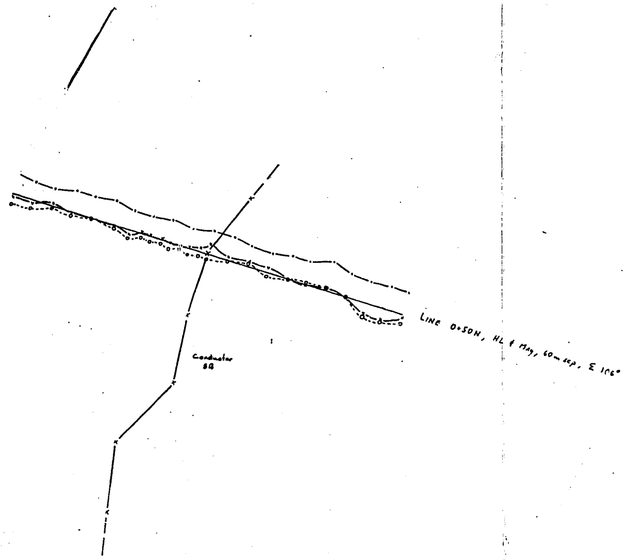
KEDA ZONE 4

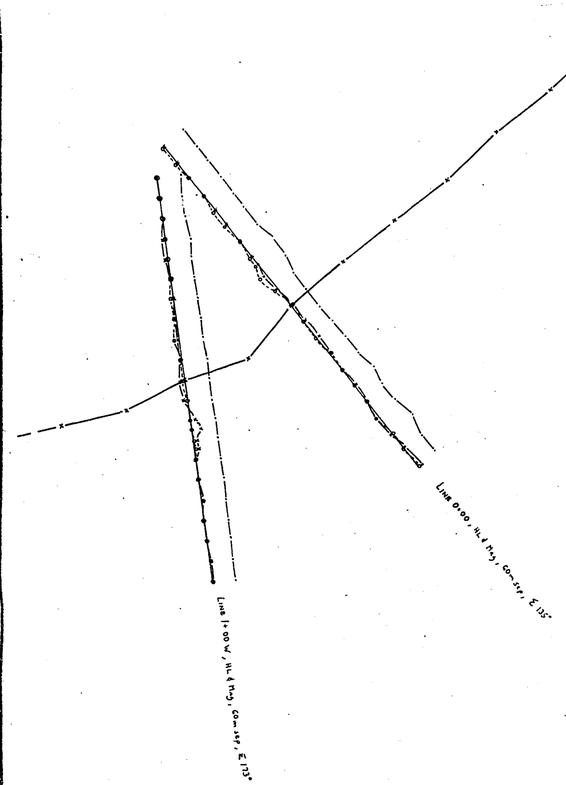
GEOCHEMISTRY

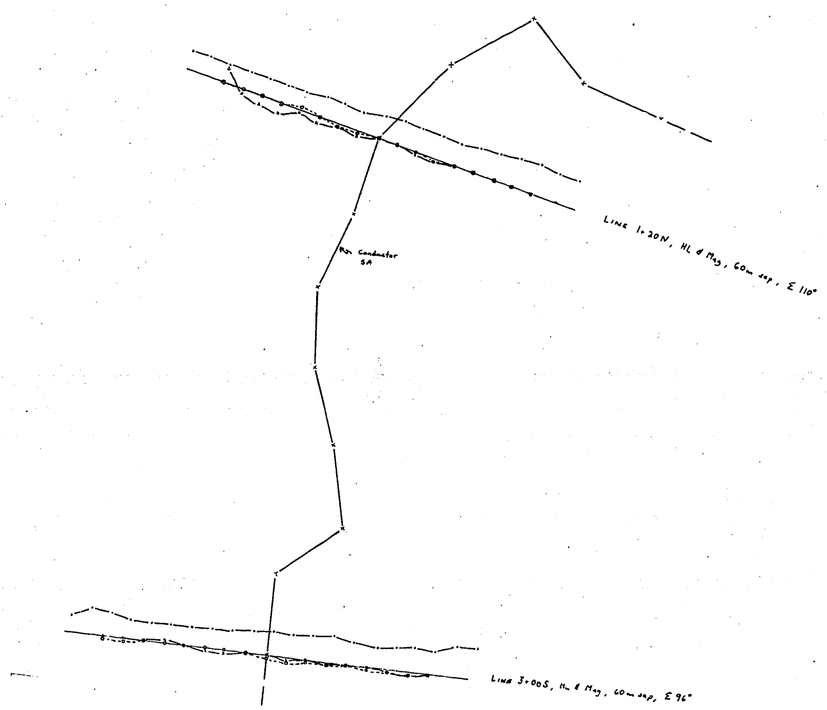
MAP	DATE	BY	SCALE	N.T.S.
11	11/80	GAM	1:2000	2D/3







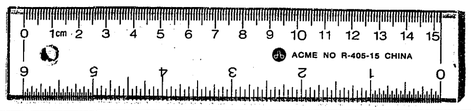


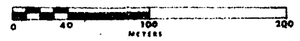


LEGEND

Vertical Loop
- Conductor Axis
- Horizontal Loop
- In-phase
- Out-of-phase
- IP/OP Ratio R = 15/10
- Width
- Vertical Scale 1cm = 10%

Magnetics
- Values
- Vertical Scale 1cm = 500 γ





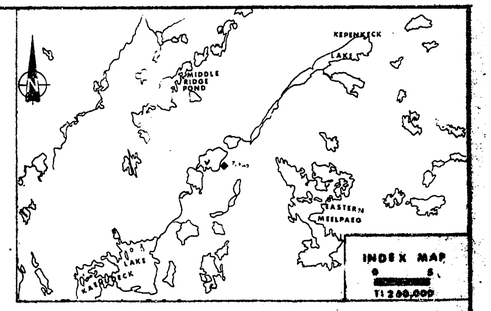
002D/0447

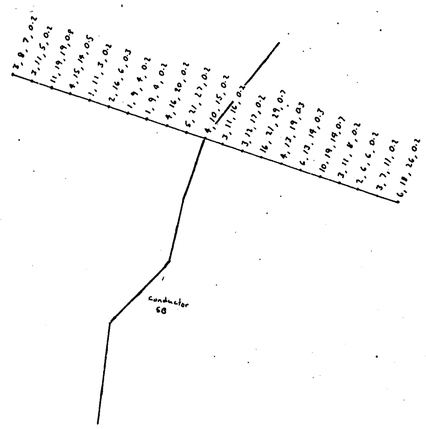
Hudson's Bay Oil and Gas Company Limited
MINERALS EXPLORATION

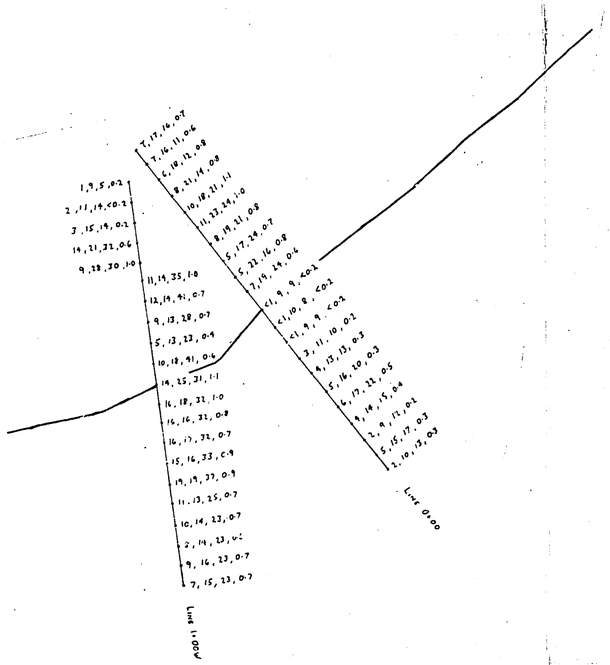
Middle Ridge Project

TITUS ZONE
5
GEOPHYSICAL COMPILATION MAP

MAP	DATE	BY	SCALE	FILE
12	11/80	D.E.	1:2000	2D/3





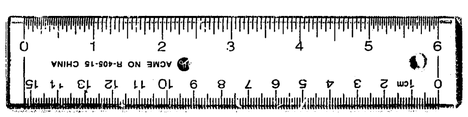


LEGEND

Soil Sample Locations
with Analysis in ppm for Cu, Pb, Zn, Ag
- 16 12 23 0·6

NS — No Sample

Conductor Axis ———



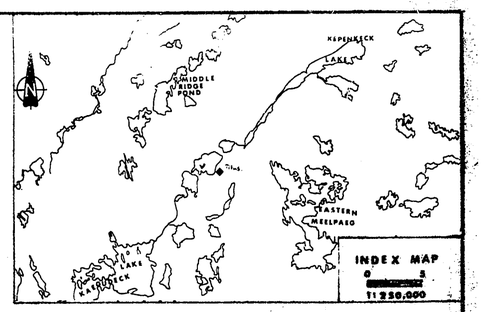
0020/0447

Hudson's Bay Oil and Gas Company Limited
MINERALS EXPLORATION

Middle Ridge Project

TITUS ZONE 5
SOIL GEOCHEMISTRY

MAP	SCALE	BY	DATE	FILE
13	1" = 100'	D.E.	1: 2000	2D/3



S, gr(?) gv, fg, mi

S, fg, mi, gv

Conductor SB

SS, S(?) mi, bi, fg, gv

bi, ch, gv, fg

x bi, mi, plag, fg, gv

x mi, bi

x Cord, fg, plag, gv

fg, plag, gv

x S, gv, mi, plag

x S, mi, fg, gv

x plag, ch

Conductor SA

x fg, plag, bi

x fg, plag, bi

x fg

S, fg, gv

S, fg, mi, plag, gv

S, fg, mi, plag, gv

S, mi, plag, gv

S, gv, mi

C S, gv, fg, mi, fg

LEGEND

S	undifferentiated sediments
SS	sandstone
qv	quartz vein
bt	biotite
mi	micas
ch	chlorite
fg	fine grained
plag	plagioclase feldspars
cord	cordierite
/	bedding - tops unknown
/	bedding - dip
fs	feldspar
	shearing

0 40 100 200
METRES

0 1cm 2 3 4 5 6 7 8 9 10 11 12 13 14 15
6 5 4 3 2 1 0
ACME NO R-405-15 CHINA

082D/6447

Hudson's Bay Oil and Gas Company Limited
MINERALS EXPLORATION

Middle Ridge Project

TITUS ZONE
S
GEOLOGY PLAN MAP

No.	Date	By	Scale	File
14	11/80	D.E.	1:250	2D/3