REPORT ON PROGRAMS CONDUCTED UNDER EXPLORATION ASSISTANCE CONTRACT KL -38 EFFECTIVE JUNE 26, 1973.

Introduction:

The following report describes the programs carried out by Canadian Johns-Manville Co. Limited under Exploration Assistance Agreement Contract Kl-38. These programs include line cutting and chaining followed by both R. L. M. and MS-1000 vertical loop electromagnetic surveys on a group of claims located in the southeast part of Beatty Township. This work is a continuation of programs conducted during 1971 - 72 under previous Exploration Assistance Agreements.

Claims covered by the surveys are numbered and described as follows;

372095 - NE1/4 of the N1/2 of Lot 4, Concession I.
372094 - SE1/4 of the N1/2 of Lot 4, Concession I.

367318
367319 - N 1/2 of the S1/2 of Lot 3, Concession I.

367320
367321 - N 1/2 of the S1/2 of Lot 2, Concession I.

These six claims comprise approximately 240 acres and the location of the Group is shown on the accompanying Property Plan on a scale of one inch equals 4 miles.

All work, both field and office, was completed by Company personnel based at Matheson, Ontario.

A. Grid:

Base Line No. 1 was cut and chained to the east of the original 0 point for a length of 1320 feet. Right-angled offset lines were established at 200 foot intervals along this base line and were cut to the north and south to cover claims 372094 -95. Picket lines were later established at 1+00, 3+00 and 5+00 West and cut and chained 400 feet to both the north and south of base line No. 1 for a

detailed MS-1000 survey.

Picket lines previously cut from base line No. 1, at 200 foot intervals, were extended south to cover claims 367318-19. Similarly picket lines previously established on base line No. 2 were extended to the south to cover claims 367320 -21.

During the course of this work 0.25 miles of base and 7.1 miles of picket lines were cut and chained. Note that pickets were fixed at 100 foot intervals along all lines by chainage.

Details re man days worked, wages paid and other costs are attached with Cost Statement Data.

B. Electromagnetic Survey 1:

Electromagnetic surveying was carried out on part of the grid by R. Haley and A. Brooks, geophysical operator and geologist, respectively with Canadian Johns-Manville Co. Limited.

A McPhar Reconnaissance Electromagnetic (R.E.M.) Vertical Loop unit was used exclusively during this survey. Distance between transmitter and receiver was maintained at 200 feet with the transmitter always on the north side of the receiver.

Walki-talki units were used for communicating readings which were recorded at 25 foot intervals along the offset lines. A total of 3.3 miles were traversed and 719 readings recorded during the course of this survey.

Results are shown on the accompanying R. E. M. Profile Plan on a scale of one inch equals 200 feet. Profiles have been plotted on a scale of one inch equals 20°. No conducting zones were delineated by this survey.

Details re man days worked, wages paid and other costs are attached with Cost Statement Data.

C. Electromagnetic Survey 2:

A detailed vertical loop deep penetration electromagnetic surve was conducted by P. Brown, geologist with this Company, over quartz vein systems on the Beatty Block of claims.

The MS-1000 is a single frequency vertical loop EM system designated to get the maximum range possible within the requirements of practical weight and portability. The equipment consists of a transmitter operating at a frequency of 1000 cycles and a receiver that can be tuned to the transmitted frequency. The receiver is employed to measure the dip angle of the resultant field pattern generated by the transmitter and any conductor in the vicinity of the set-up.

The maximum separation range between transmitter and receiver is of the order of 4,000 feet. The exploration depth is given as roughly half the separation distance. Other effects have to be taken into account, however, such as the conductivity of the overburden, the size and conductivity of the conductor, etc.

Principle of the Dip Angle Method:

A vertical transmitter coil is energized by an alternating curre generator which creates an alternating magnetic field. This primary field links with the receiver coil which is located at some given station. If the plane of the transmitter coil is oriented to be in line with the receiver then the field at the receiver station is horizontal regardless of difference in altitude between transmitter and receiver. The receiver measurement consists of defining the dip angle of the field by rotating the receiver coil until a null is heard in the earphones. The dip angle is then read from the clinomet face of the receiver. In this instance the null or dip angle would

be zero degrees if no conductor were present.

The primary field from the transmitter also links with any conductor in its vicinity and this gives rise to a secondary field. At the receiving station the direction and magnitude of the primary field is altered by the presence of the secondary field. The null position will be also altered and the angle of null is indicated on the receiver clinometer.

The method of survey is the same as for any vertical loop set-up method. The transmitter is normally set up on a base line and receiver stations are taken along traverse lines perpendicular to the base line. Because of the high receiver sensitivity and transmitter field, the nearest useful traverse line is determined by the extreme sharpness of the null and may be of the order of five hundred feet.

Field Recording Procedure:

Practical experience has shown that angles are best recorded as the operator receives them. For example 1) his location on the grid line is recorded, 2) whether the angle is left or right, meaning the direction the top of the receiver unit is tilted in order to obtain a null. This is later interpolated as being a north or south angle. 3) the value in degrees, 4) whether the null is hard to obtain and its width, and 5) salient topographic features.

Interpretation of Results:

Dip angles are converted into north and south angles for plotting purposes and each is always plotted on the same side of the line for profiling - north on the west, south on the east. The McPhar system for plotting is used and north angles are assumed positive, south assumed negative. Using this procedure, a conductor is identified as being at a point where negative angles change to positive whilst

traversing a line from south to north.

If the reverse occurs - i.e. a positive to negative change - this is termed a "reverse crossover" and this happens at a point usually between two conductors.

Depth of penetration has been assumed as one half of the separation between transmitter and receiver. The conductor lies between this depth and surface.

Response with different depths of penetration varies considerably and the values of dip angles are at maximums when the transmitter is set up on the conductor. Hence the need for detailing each conductor.

The results of the electromagnetic survey are shown on the accompanying MS-1000 Profile Plans, Sheets 1 and 2, on a scale of one inch equals 20°. Stations were recorded at 50 foot intervals along the offset lines.

During the course of the MS-1000 surveys, 10 transmitter set-ups were used, 673 readings recorded and 6.1 miles of line traversed.

Conductors have been marked on the plans with dashed purple lines.

The following table gives transmitter locations, area covered, depth of penetration, location and dip angles of the conductors.

Transmitter Location & Station	Lines/Footage	Conductors	Penetration of Crossovers	Angle
TX 1	L10E;10-20S	None	---	---
Line 14E; 15S	12E " "	"	---	---
	16E " "	"	---	---
	18E " "	"	---	---
TX 2	L 6E;10-20S	None	---	---
Line 10E; 15S	8E 16-20S	"	---	---
	12E 10-20S	"	---	---
	14E " "	"	---	---
TX 3	L 2W;4N-7S	0+75N	300'	1½S to
Line 8W; 2N	4W 5N-7S	None	---	---
	6W 6N-3S	"	---	---
	10W 7N-2S	Between 0 & 1+50N	120'	½S to
	12W 8N-2S	" 50 & 1+50N	200'	½S to
TX 4	L10W;2+50N-2S	None	---	---
Line 4W; 2N	12W; " -4S	"	---	---
TX 5	L 2E;2+75N-3+25S	None	---	---
Line 2W; 0+75N	0 ; " "	"	---	---
	4W;3+75N-4+25S	"	---	---
	6W;3+75N-0+25S	"	---	---
	8W;3+75N-0+25S	"	---	---
TX 6	L 0 ; 4N-4S	None	---	---
Line 4E; 0+00	1W ; " "	"	---	---
	2W ; " "	"	---	---
TX 7	L 3W; 3N-2S	None	---	---
Line 2E; 0+00	3W; 4N-4S	0+25S	250'	½S to ½
	4W; 8N-4S	None	---	---
	5W; 4N-2S	0+50N	350'	1S to ½N 1S-0-½N
TX 8	L3W;2N-3+50S	None	---	---
Line 0 ; 0+00	4W;6N-4S	0+25S	200'	½S-0-0-1
	5W;4N-4S	0+25N	250'	1S ---½
	6W;4N-4S	None	---	---
TX 9	L5W; 4N-3S	None	---	---
Line 2W; 0+00	6W; 4N-4S	"	---	---
	8W; 2N-4S	"	---	---
TX 10				
Line 5W; 0+00	L 0;3N-3S	None	---	---
	1W;4N-4S	2+25S	230'	½S- ½N
	2W;4N-4S	None	---	---
	3W;2N-4S	"	---	---
	8W;3+50N-3S	2+00N	180'	½S -½N
	10W;4N -2S	0+25N	250'	½S - 1

The series of weak conducting zones delineated by the survey appear to occur within or along the contacts of a northwesterly trending dioritic flow ? and may be indicative of disseminated sulphide mineralization. In this respect it is planned to conduct a magnetometer survey over the claims to accurately outline the moderately magnetic band of diorite. This would be followed by diamond drilling to test the conducting zones and the northeasterly trending quartz vein systems.

Submitted: February 26th, 1974

by: P. A. R. Brown
Geologist.

and: F. J. Evelegh
Regional Geologist.

CLERGUE | WALKER | WILKIE | COULSON | WARDEN | MILLIGAN | ABITIBI LAKE

COCHRANE

HWY # 11

ONTARIO NORTHLAND RAILWAY

STOCK | TAYLOR | CARR | BEATTY | MUNRO | McCOOL | I R NO 70 | RAND | LAMPLUGH | FRECHEVILLE | STOUGHTON

TIMMINS

HWY # 101

MATHESON

HWY # 101

AMOS

BOND | CURRIE | BOWMAN | HISLOP | GUIBORD | MICHAUD | GARRISON | HARKER | HOLLOWAY | MARRIOTT

SHERATON | EGAN | McCANN | PLAYFAIR | COOK | BARNET | THACKERY | ELLIOT | TANNAHILL | DORIS

ONTARIO
QUEBEC

HWY # 11

O.N.R.

TIMMINS | McEVAY | TOLSTOI | BLACK | BENOIT | MELBA | BISLEY | CLIFFORD | BEN NEVIS | PONTIAC

ARNOLD | KATRINE | OSSIAN

MORRISETTE

MICHIE | NORDICA | TERRY | LEE | MAISONVILLE | BERNHARDT

C.J.M. CLAIMS GROUPS

PROPERTY PLAN
MATHESON AREA
1:4 Miles
FEB 25 1974
MB
F.J.E.

GRENFELL

KIRKLAND LAKE

TECK

HWY # 66

ROBERTSON | SHEBA | DUNMORE | BOMPAS | LEBEL | GAUTHIER

ADJOINS SHEET No.

NICKLE LAKE

GAME LAKE

SALVE LAKE

CREEK

SALVE

LEACH LAKE

FROOME LAKE

LAWLAR LAKE

RIVER

PIKE RIVER

BEATTY TWP.
MUNRO TWP.

BARTON CR.

54692
P12045

54693
P12046

54694
P12047

54634
P12039

54633
P12038

54638
P12043

13739
P1229

54635
P12040

54636
P12041

54637
P12042

13738
P1223

BEATTY FIBRE ZONE

25634
P10838

25635
P10839

25633
P10841

25622
P10842

Barton Coach Shaft

56685
P12044

25628
P10840

25628
P10837

39403
P9942

39400
P9943

PAT GOLD

MARTIN

372095

STEWART ABATE

372077

372094

339803

339802

339640

339639

BEATTY TWP.
HISLOP TWP.

CANADIAN JOHNS MANVILLE CO. LTD. — MATHESON, ONT.

ADJOINS SHEET No.

HISLOP TWP.
GUIBORD TWP.

I II III IV V VI

1 2 3 4 5 6 7 8 9

ADJOINS SHEET No.

ONT. 1"=1000' PROPERTY PLAN BEATTY – HISLOP TWP.

JUN 23 1973

42A09SW0114 63.3205 BEATTY

210

372095

372077

372094

STEWART SHAFT

BL "1

CON. I

L12+00S L10+00S L8+00S L6+00S L4+00S L2+00S

367318

367319

BL "2

367320

367321

L0+00 L2+00E L4+00E L6+00E L8+00E L10+00E L12+00E L14+00E L16+00E L18+00E L20+00E L22+00E L24+00E L26+00E L28+00E L30+00E L32+00E L34+00E L36+00E L38+00E L40+00E L42+00E L44+00E L46+00E L48+00E L50+00E L52+00E

LOT 4

LOT 3

LOT 2

IN-LINE METHOD E.M. PROFILE 20°=1"

R.E.M. PROFILE PLAN BEATTY TWP

ONT 1"=200'

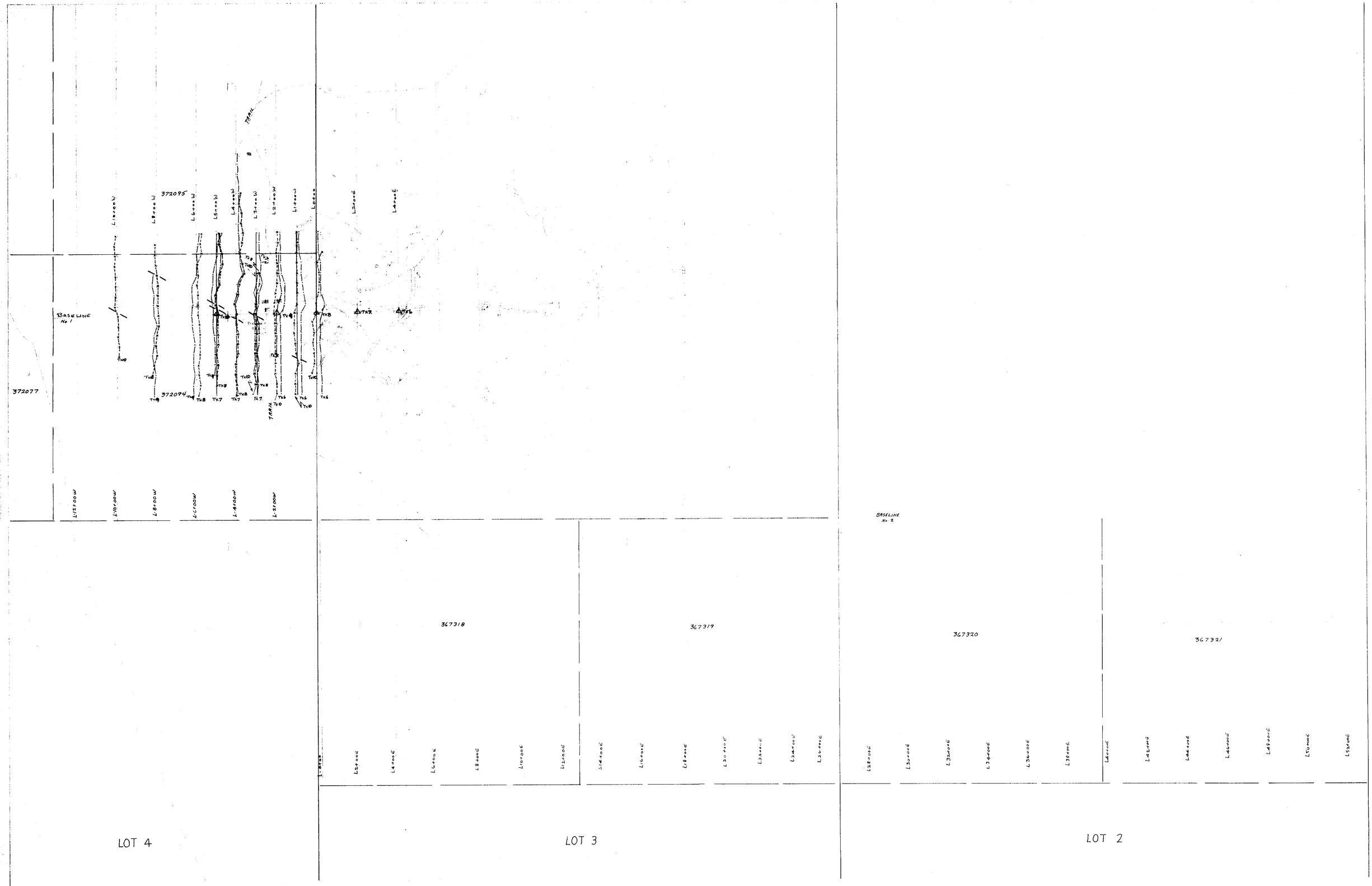
FEB 16 1974

230

M.S.-1000 UNIT. E.M. PROFILE 20"=1"

MS 1000 PROFILE PLAN

FEB 28 1974



M.S-1000 UNIT E.M. PROFILE 20°=1"
MS1000 PROFILE PLAN

FEB 28 1974