A REPORT

ON

A TURAM ELECTROMAGNETIC SURVEY

Anvil Area, Yukon Territory

FOR

KANGAROO EXPLORATION CORPORATION

Vancouver, British Columbia

BY

PETER E. WALCOTT & ASSOCIATES LIMITED

Vancouver, British Columbia

AUGUST 1972

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INTRODUCTION

Between June 24th and July 10th, 1972 Peter E. Walcott & Associates Ltd. carried out a Turam electromagnetic survey over part of a property, located in the Anvil area of the Yukon Territory, optioned by Kangaroo Exploration Corporation.

The survey was carried out over N 40° E lines, which were turned off from N 50° W baseline, and which were chained and picketed at 100 foot intervals.

Measurements of field strength and phase difference were made every 100 feet along lines 800 feet apart with a S.E. 700 electtro-magnetic unit operating at a frequency of 400 c.p.s. and using a coil separation of 100 feet during the reconnaissance phase of the survey.

Detail work was then carried out over two conductors and closer spaced lines using frequencies of 800, 400 and 200 c.p.s. respectively, with better positioned inductive loops (loops always to the south).

In addition four lines were surveyed using the 800 c.p.s. frequency with the inductive loop on the opposite side (to the north) over the strong soil anomaly where no response had been obtained with 400 c.p.s.

The data are presented in profile form on Maps W-152-1 to 4 that accompany this report.

PROPERTY, LOCATION AND ACCESS

The property is located in the Whitehorse Mining Division of the Yukon Territory and consists of the following claims:

Claim Name		Record No.
MIX	1 - 13	Y 30497 - 509
	25 - 28	Y 30521 - 524
	30	Y 30526
	56 - 62	Y 30552 - 558
	119 - 122	Y 30501 - 594
	178 - 187	Y 30637 - 646
	186A - 187A	Y 30647 - 648
	188 - 191	Y 30649 - 652
	192	Y 60514
	193	Y 30654
	194	Y 60515
	195	Y30656
TIM	1 - 32	Y 30297 - 30328
ZAN	1 - 14	Y 25973 - 986
	15	Y 26126
	16 - 24	Y 25987 - 995
	25 - 48	Y 26127 - 150
AC	67 - 72	Y 60492 - 497
	75 - 88	Y 60500 - 513
	89 - 96	Y 60516 - 523
	111 - 112	Y 60498 - 499
KD	1	Y 61954
	2	Y 61962
	3 - 4	Y 62052 - 053
	5 - 7	Y 61955 - 957
	8	Y 61963
	9 - 10	Y 62071 - 072
	11 - 12	Y 62054 - 055
	13 - 18	Y 61964 - 969
	19 - 22	Y 62056 - 059
	23 - 26	Y 61958 - 961
JET	1 - 16	Y 3142 - 157
	18	Y 3159
	20	Y 3161
	22	Y 3163
	24	Y 3165

PROPERTY, LOCATION AND ACCESS cont'd

JET	45	Y 3186
	47	Y 3188
	49 - 64	Y 3190 - 205
	93	Y 3234
	95	Y 3236
	97 - 104	Y 3238 - 245
AM	1 - 14	Y 63877 - 890
TAF	1 - 6	Y 62459 - 464
	7 - 12	Y 62467 - 472
	13 - 20	Y 62475 - 482
	21 - 22	Y 62465 - 466
	23 - 24	Y 62473 - 474
	25 - 64	Y 62483 - 522

The claims are situated 8 miles northeast of the Anvil Mine.

Access is obtained either by helicopter from Faro, 16 miles to the South, or via a tote road extending from the Anvil Mine.

PREVIOUS WORK

Previous work on the property consists of airborne magnetic and electromagnetic surveys, prospecting, ground magnetic, electromagnetic, geochemical, gravity and induced polarization surveys and diamond drilling.

The results of these are well documented in reports by the staff of Kangaroo Exploration Corporation.

GEOLOGY

The reader is referred to reports by the staff of Kangaroo Exploration Corporation.

SURVEY SPECIFICATIONS

The basic principle of any electromagnetic survey is that when conductors are subjected to primary alternating fields secondary magnetic fields are induced in them. Measurements of these secondary fields give indications as to the size, shape and conductivity of conductors. In the absence of conductors no secondary fields are obtained.

The electromagnetic survey was carried out using a Scintrex S.E. 700 electromagnetic unit. The primary field was set up by closed inductive loops laid on the ground. Two receiver coils connected by a lightweight shielded cable to a compensator amplifier are used to measure the distortions in the electromagnetic field. The quantities measured are:

1. the ratio of the field strengths at each coil and

2. the phase difference in the fields at the two coils.

Eight rectangular loops of varying size (48 x 25 to 16 x 15 hundred feet depending on the lengths of the lines, etc.) were used on the reconnaissance survey, while five rectangular loops were used on the detail and re-investigation of the geochemical anomaly. The loops were always to the south of the area surveyed except in the case of the re-investigation of the geochemical anomaly and two lines over conductor E read during the reconnaissance part of the survey.

Readings were taken every 100 feet along the picket lines perpendicular to the long side of the loops with a 100 foot coil separation.

The equipment was operated at 400 c.p.s. during the reconnaissance part of the survey, and at 200, 400 and 800 c.p.s. respectively during various parts of the detail investigation.

DISCUSSION OF RESULTS

The Turam E.M. survey indicated the presence of a number of conductors as can be seen on Map W-152-3.

Five of them, conductors A, B, C, D & E respectively, exhibit considerable strike length.

Conductor A is associated with a strong magnetic response and corresponds with an airborne E.M. anomaly. However no gravity high was obtained on a previous survey over or in the vicinity of this conductor.

Conductor B is associated with a moderate magnetic response. Again no gravity high was obtained over this conductor.

The eastern part of conductor C was not covered by previous gravity work. No magnetic response was associated with it.

Conductors D and E are most probably one conductive zone. No associated magnetic response was obtained but a narrow high geochemical expression was observed over them. However the western part of this conductive zone was previously investigated by drilling and considerable graphitic intersections were encountered in the hole. Also no gravity highs were obtained over conductor D (previous) and E (recent).

No E.M. response was observed over the crest of the hill where the very strong geochemical anomaly was obtained. However the character of the response was observed to change over the area suggesting a different rock type. Further investigation of this anomaly with the higher frequency of 800 c.p.s. and with the inductive loop to the north gave essentially the same results.

An interpreted fault trending northwards through the grid area appears to offset conductors B, C and D respectively.

Detail work over conductors D and E show them to possess good conductivity based on the ratio of response at three frequencies (Maps W-152-4, 5 and 6).

Detail work over conductor D on Lines 200 and 204 with the loop to the north showed the edge of the conductor 100 feet north of that obtained with the loop to the south indicating a width of some 100 feet.

DISCUSSION OF RESULTS cont'd

Complex component studies of conductor B gave depths to the real and imaginary current axes of 200 and 150 feet respectively with depths to the top of the conductor as 160 and 110 feet respectively. They also showed a displacement of the conductor axis some 100 feet to the south.

Similar studies of conductor D gave depths to the real and imaginary current axes of 190 and 180 feet respectively with depths to the top of the conductor of 150 and 140 feet respectively. Again they showed a displacement of the conductor axis to the south.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Between June 24th and July 10th, 1972, Peter E. Walcott & Associates Limited carried out a Turam electromagnetic survey over part of a property optioned by Kangaroo Exploration Corporation.

The property is situated in the Anvil area of the Yukon Territory.

The E.M. survey indicated the presence of a number of conductors, some exhibiting considerable strike length. However most of these occurred in areas covered by previous gravity surveys where no gravity anomalies were observed.

No E.M. response was obtained over the strong geochemical anomaly on the crest of the hill.

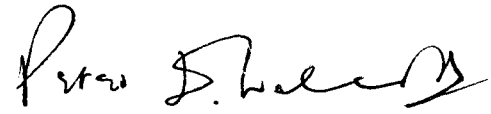
Magnetic response was observed associated with two conductors.

As a result the writer concludes that (1) most of the conductors are probably due to formational graphitic bands with some associated pyrrhotite in the case of those with magnetic response and (2) that no economic sulphide mineralization exists to a depth of 500 feet over the area surveyed.

He therefore recommends that any further work to be done on the property consist of deep drilling to test the possible source for the high geochemical values at depth.

Respectfully submitted,

PETER E. WALCOTT & ASSOCIATES LIMITED



Peter E. Walcott, P.Eng.
Geophysicist

Vancouver, B.C.
August 1972

APPENDIX

COST OF SURVEY

Peter E. Walcott & Associates Limited undertook the survey on a line mileage basis. Mobilization costs were extra so that the total cost of services provided by Peter E. Walcott & Assoc. Ltd. was $7,700.67.

PERSONNEL EMPLOYED ON SURVEY

Name	Occupation	Address	Dates
Peter E. Walcott	Geophysicist	Peter E. Walcott & Assoc. 605 Rutland Court Coquitlam, B.C.	July 4th - 11th Aug. 30th & 31st, 1972
L. Perreault	Geophysical Operator	" "	June 24th - July 10th, 1972
P. Charlie	Helper	Peter E. Walcott & Assoc. P.O.Box 4629, Whitehorse, Y.T.	"
C. Jackson	"	" "	"
J. Walcott	Typing	Peter E. Walcott & Assoc. 605 Rutland Court, Coquitlam, B.C.	Sept. 1st, 72
J. Davies	Drafting	" "	Aug. 15th - Aug. 31st, 72

CERTIFICATION

I, Peter E. Walcott of the Municipality of Coquitlam, British Columbia, hereby certify that:

1. I am a Graduate of the University of Toronto in 1962 with a B.A.Sc. in Engineering Physics, Geophysics Option.

2. I have been practising my profession for the last nine years.

3. I am a member of the Association of Professional Engineers of British Columbia, Ontario and the Yukon Territory.

4. I hold no interest, direct or indirect, in the securities or properties of Kangaroo Exploration Corporation, nor do I expect to receive any.

Peter E. Walcott, P.Eng.

Vancouver, B.C.
August 1972

TRY CLAIMS
(SPARTAN EXPL.)

AC

MX

AM

KD

TAF

TAF

MX

TIM

TAF

JET

MX

ZAN

MX

TAF

ANVIL MINE
5 Miles

FARO
CLAIMS
(ANVIL
MINING
CORP.)

A
CLAIMS

LO

MO

RAE

EOLA

PATTY

MUR CLAIMS
(SPARTAN EXPLOR.)

Lake

4500

5000

5500

6000

SCALE

1000 500 0 1000 2000 3000 4000 5000 6000 7000 8000 9000
FEET

1/2 0 1/2 1 1 1/2
MILES

KANGAROO EXPLORATION CORP.

MT. MYE PROJECT, YUKON

CLAIM MAP

DESIGNED		SCALE HOR.	1" = 1/2 Mile
DRAWN	C. L. C.	VERT.	
CHECKED	PETER E. WALCOTT		
DATE	DEC. 19	MAP NO	W-152-1

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA

Lake

Lake

Lake

Lake

CLAIM
OUTLINE

ANVIL MINE
5 Miles

SCALE

1000 500 0 1000 2000 3000 4000 5000 6000 7000 8000 9000
FEET

1/2 0 1/2 1 1 1/2
MILES

KANGAROO EXPLORATION CORP.

MT. MYE PROJECT, YUKON

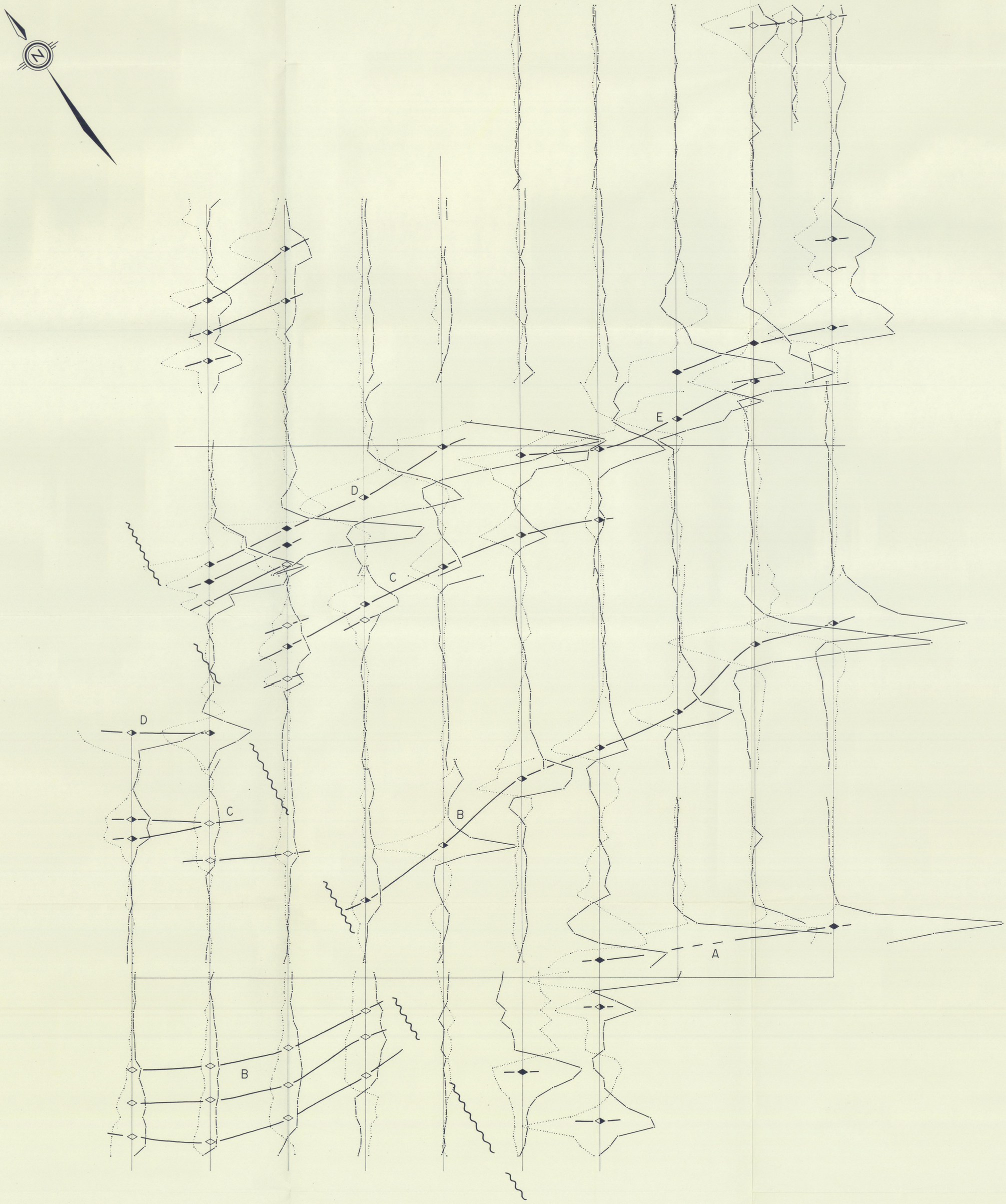
GRID MAP

DESIGNED		SCALE HOR.	1" = 1/2 Mile
DRAWN	C. L.	VERT.	
CHECKED	PETER E. WALCOTT		
DATE	DEC. 1971	MAP NO.	W-152-2

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA

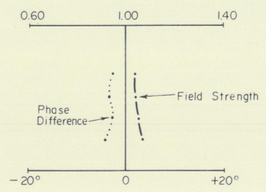
L 244 W — L 236 W — L 228 W — L 220 W — L 212 W — L 204 W — L 196 W — L 188 W — L 180 W — L 172 W

120 N — 110 N — 100 N — 90 N — 80 N — 70 N — 60 N — 50 N — 40 N — 30 N — 20 N — 10 N



LEGEND

- Poor Conductor
- Moderate Conductor
- Good Conductor
- Interpreted Fault



KANGAROO EXPLORATION CORPORATION

AM, KD, MX, TAF & TIM CLAIMS; MT. MYE AREA; WHITEHORSE M.D.; Y.T.

TURAM ELECTROMAGNETIC SURVEY

PROFILES OF FIELD STRENGTH & PHASE DIFFERENCE

f = 400 cps

SCALE : 1 INCH = 500 FEET

500 250 0 500 1000 1500

MAP NO. W-152-3
TO ACCOMPANY A REPORT BY
PETER E. WALCOTT P.Eng., DATED

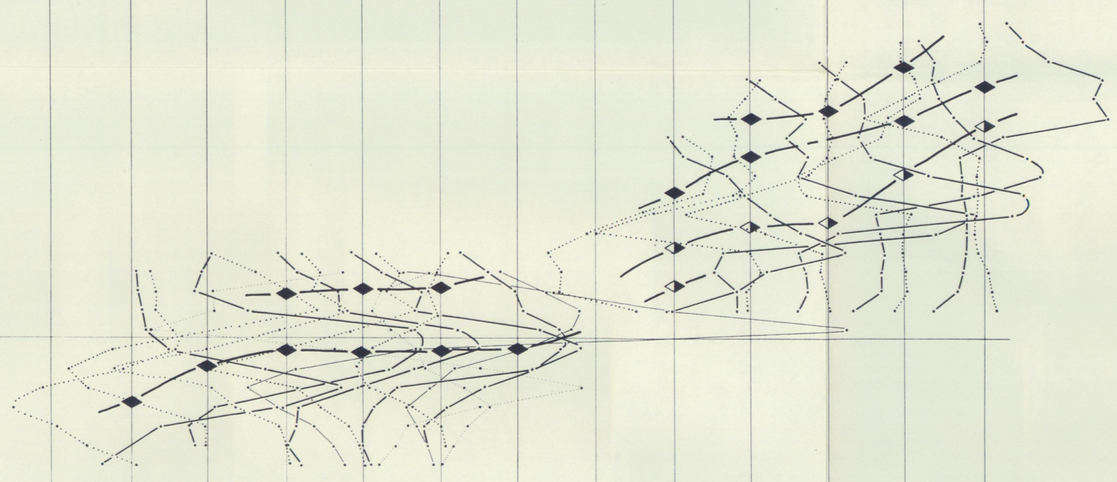
PETER E. WALCOTT & ASSOC. LTD.
JUNE - JULY 1972

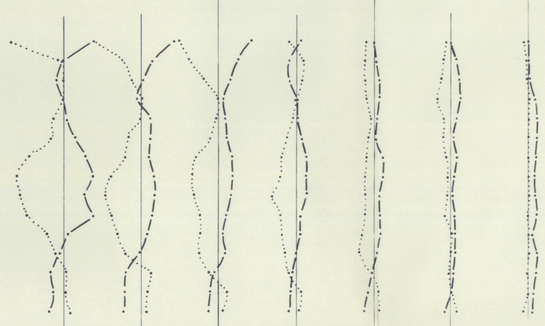
PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA

ALTAIR drafting

L 244 W
L 236 W
L 228 W
L 220 W
L 212 W
L 204 W
L 196 W
L 188 W
L 180 W
L 172 W

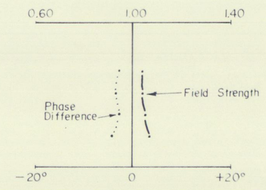
120 N
110 N
100 N
90 N
80 N
70 N
60 N
50 N
40 N
30 N
20 N
10 N





LEGEND

- Poor Conductor
- Moderate Conductor
- Good Conductor
- Loop to North



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AM, KD, MX, TAF & TIM CLAIMS; MT. MYE AREA; WHITEHORSE M.D.; Y.T.

TURAM ELECTROMAGNETIC SURVEY

PROFILES OF FIELD STRENGTH & PHASE DIFFERENCE

f = 400 cps

SCALE: 1 INCH = 500 FEET

500 250 0 500 1000 1500

MAP NO. W-152-4

TO ACCOMPANY A REPORT BY PETER E. WALCOTT P.Eng., DATED [illegible] 1972

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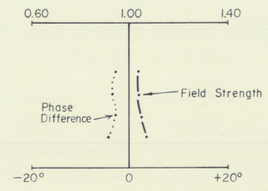
JUNE – JULY 1972

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA

ALTAIR drafting

L 244 W
L 236 W
L 228 W
L 220 W
L 212 W
L 204 W
L 196 W
L 188 W
L 180 W
L 172 W

120 N
110 N
100 N
90 N
80 N
70 N
60 N
50 N
40 N
30 N
20 N
10 N



KANGAROO EXPLORATION CORPORATION

AM, KD, MX, TAF & TIM CLAIMS; MT. MYE AREA; WHITEHORSE M.D.; Y.T.

TURAM ELECTROMAGNETIC SURVEY

PROFILES OF FIELD STRENGTH & PHASE DIFFERENCE

f = 800 cps

SCALE: 1 INCH = 500 FEET

500 250 0 500 1000 1500

MAP NO. W-152-5
TO ACCOMPANY A REPORT BY PETER E. WALCOTT P.Eng., DATED AUGUST, 1972

PETER E. WALCOTT & ASSOC. LTD.
JUNE – JULY 1972

PROFESSIONAL ENGINEER PETER E. WALCOTT BRITISH COLUMBIA

ALTAIR drafting

L 244 W

L 236 W

L 228 W

L 220 W

L 212 W

L 204 W

L 196 W

L 188 W

L 180 W

L 172 W

120 N

110 N

100 N

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80 N

70 N

60 N

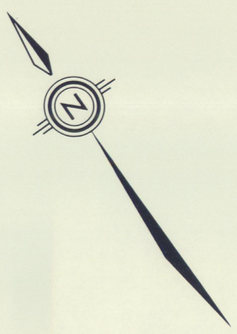
50 N

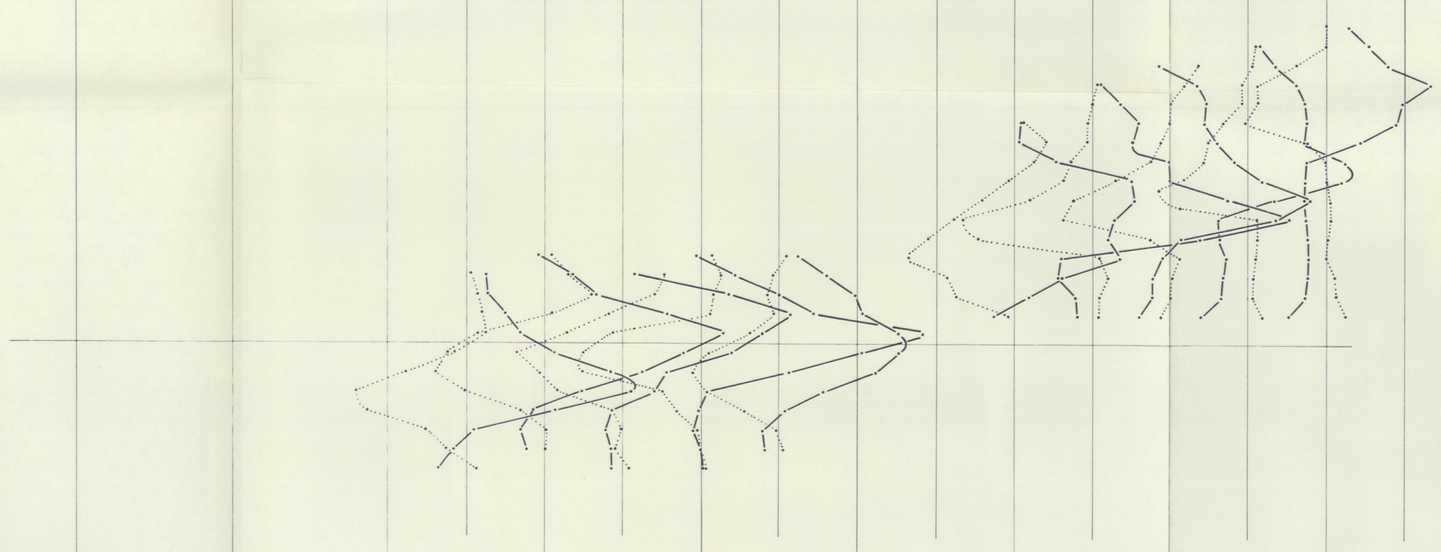
40 N

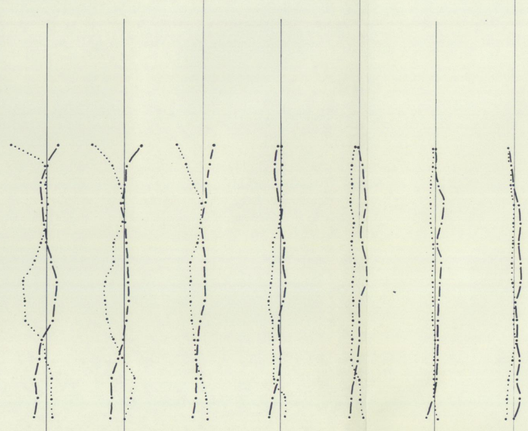
30 N

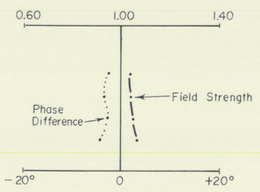
20 N

10 N









KANGAROO EXPLORATION CORPORATION

AM, KD, MX, TAF & TIM CLAIMS, MT. MYE AREA; WHITEHORSE M.D.; Y.T.

TURAM ELECTROMAGNETIC SURVEY

PROFILES OF FIELD STRENGTH & PHASE DIFFERENCE

f = 200 cps

SCALE 1 INCH = 500 FEET

250 0 500 1000 1500

MAP NO. W-152-6

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PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA PETER E. WALCOTT

ALTAIR drafting