REPORT ON

A MAGNETIC AND ELECTROMAGNETIC SURVEY

AT ROSE CREEK, YUKON

(62°17' N, 133°20' W)

FOR

ANVIL MINING CORPORATION LIMITED

BY

EXPLORATION GEOPHYSICS (YUKON) LTD.

WHITEHORSE, YUKON

APRIL 1966

Report by: R.S. Adamson, B.A.Sc., P.Eng.,
Chief of Exploration for
Anvil Mining Corporation Ltd.

April 18th to 24th, 1966.

GROUND GEOPHYSICAL INVESTIGATIONS

GAL CLAIM GROUP

TABLE OF CONTENTS

GROUND GEOPHYSICAL INVESTIGATIONS
GAL CLAIM GROUP

INTROUDCTION

Between April 18th and April 24th, 1966, a combined magnetic and electromagnetic geophysical survey was carried out by Exploration Geophysics (Yukon) Limited, for Anvil Mining Corporation Limited. The survey area was covered by 14 mineral claims (GAL 28, 30, 32, and 34 to 44 inclusive) located in the Rose Creek area in the Whitehorse Mining District of the Yukon Territory (62°17'N, 133°20'W).

The geophysical crew was supervised by Mr. Robert Chaplin and Mr. John S. Brock, both of Exploration Geophysics (Yukon) Limited. Survey decisions were made in consultation with Mr. Robert S. Adamson. The geophysical crew consisted of Mr. G. Cannon, Mr. A Rolston, and Mr. G. Grady. Draughting and typing were done in the Whitehorse Office of Anvil Mining Corporation Limited.

The geophysical survey covered 12.8 line miles of magnetometer surveying and 10.0 line miles of electromagnetic surveying.

Considerably more linecutting was done on the GAL 1-44 claim block in order to prepare grids for further geophysical work later on during the 1966 season, should it be deemed necessary in the light of results obtained on this present geophysical survey.

In all, a total of 17,160 feet on base line was cut and surveyed, and 124,500 feet of picket line cut and chained.

All geophysical data is presented in the form of profiles, using a distance scale of 1 inch to 400 feet. Vertical scales are 1 inch to 20 degrees and 1 inch to 333 gammas for electromagnetics and magnetics respectively.

The only available published data of the Rose Creek area is a preliminary 4 mile to the inch map of the regional Geology of the Tay River map sheet done by Mr. J.A. Roddick and Mr. L.H. Green of the Canadian Geological Survey.

SURVEY SPECIFICATIONS

Grid System

A base line, 17,160 feet long was cut and surveyed for the entire length of the GAL 1-44 claim group. Picket lines were turned off by transit perpendicularly at 400 foot intervals along the base line. Grids were established over areas known to be anomalous as a result of previous airborne magnetic and electromagnetic surveys. Stations were established at 100 foot intervals along the picket lines that were cut and chained over these areas. Picket line cutting and chaining totalled 124,500 feet. Only a portion of the cut grid has been used for geophysical surveys so far.

Magnetometer Survey

A Sharpe's MF-1 Fluxgate type vertical component magnetometer was used during the entire magnetic survey. The instrument is hand held and needs only coarse levelling and no orientation. The magnetometer has a maximum sensitivity of 20 gammas per scale division on 1,000 gamma range and a readibility of 5 gammas per scale division.

Readings were taken at 400 foot intervals along the base line and 100 foot intervals along the picket lines. Prior to the actual survey, readings were taken at the intersection points of each picket line with the base line. These stations were looped and re-read every hour as a means of controlling drift and diurnal variations. A total of 12.8 line miles of magnetic survey was run.

Electromagnetic Survey

For the electromagnetic survey a Crone Jem unit (18 volt) was employed. The instrument is a modification of the original JEM unit designed by CRONE in 1963; the power supply has been increased thus increasing effective depth penetration to approximately 300 feet under normal operating conditions using the horizontal loop method. The CRONE measures resultant dip angles of the primary and secondary field, is dual frequency (480 and 1,800 cps) and may be used either as a vertical or horizontal loop system.

In contrast to the magnetometer survey which was run along the base line as well as the picket lines, only the picket lines were run with the EM. A 400 foot separation of the coils was used and readings were taken at 100 foot station intervals.

RESULTS AND INTERPRETATION

Magnetometer Survey

After each gamma value was corrected for diurnal variation, they were plotted on a plan of the survey grid (1 inch = 400 feet). Profiles of each line were drawn to a standard scale (see map in folder).

Magnetically there is nothing of any anomalous significance. What little magnetic reflection was revealed occurs on lines 52+00W, 56+00W, 60+00W, and 64+00W from approximately 800 North to 1,500 North (Grid north). Background is about 500 gammas and these small anomalies range from 50 gammas to 300 gammas in magnitude.

Electromagnetic Survey

The electromagnetic results were plotted using the same scale and grid pattern as used for the magnetics. Profiles were drawn to a standard scale (map folder).

A very well defined zone of highly anomalous conductivity occurs on GAL claims 36 and 38. It is approximately 1,000 feet wide, extends for 1,600 feet northwesterly, and remains open at

both ends. The resultant dip angle of this very impressive anomaly averages -25°.

CONCLUSIONS AND RECOMMENDATIONS

In that no positive magnetics coincides with the highly conductive anomaly the conclusion is that if this reflects sulphide mineralization then the sulphides would be pyrrhotite-(or magnetite)-barren. However, known sulphide bodies discovered in the Anvil camp to date all contain pyrrhotite; hence have usually some positive magnetic reflection.

It may be, however, that massive ore bodies do occur with pyrite rather than pyrrhotite so that significant electromagnetic anomalies should not be totally negated on a magnetic basis.

It is recommended that, rather than drill this anomaly, which is probably a graphitic schist formation, a soil sampling survey be carried out over the anomalous area to see if potentially economic sulphides do occur in the area's vicinity.

R.S. Adamson

Robert S. Adamson, B.A.Sc., P.Eng.
Chief of Exploration for
Anvil Mining Corporation Limited.

APPENDIX I (i)

STATEMENT OF COSTS:- Ground Geophysical Surveys,
GAL 1-44 Mineral Claims.

(A) Contract Linecutting:

1) Baseline cut and surveyed 17,160 ft
(80 W to 92 E)
Cost at $250 per line mile . . . . . $ 812.00

2) Picket lines cut and chained 124,500 ft.
Cost at $77.50 per line mile 1,828.00

TOTAL Linecutting (contract) cost . . . . . $ 2,640.00

(B) Contract Geophysics:

(Combined magnetics and electromagnetics)
Invoice submitted . . . . . $ 859.00

(C) Geophysical Crew Maintenance

4 men for 7 days at $8 per day . . . . . $ 224.00

(D) Reduction of data and preparation of report . . . $ 200.00

(E) Camp Erection . . . . . $ 300.00

(F) Transportation

Helicopter, bombardier, truck . . . . . $ 300.00

TOTAL . . . . $ 4,513.00

APPENDIX I (ii)

(A) Linecutting Contract - White, Hosford and Impey Ltd.

D. Nielsen	-	Party Chief,	Box 1188,	Whitehorse,	Yukon.
F. Charlie	-	Linecutter,	"	"	"
M. Ladue	-	"	"	"	"
M. Shorty	-	"	"	"	"
J. Ollie	-	"	"	"	"
L. Johnny	-	"	"	"	"
V. Johnny	-	"	"	"	"
M. Johnny	-	Cook,	"	"	"

(B) Geophysical Contract - Exploration Geophysics (Yukon) Ltd.

R. Chaplin	-	Supervisor,	Box 1188,	Whitehorse,	Yukon.
G. Cannon	-	E.M. Operator,	"	"	"
A. Rolston	-	E.M. Operator,	"	"	"
G. Grady	-	Magnetometer,	"	"	"

(C) E. Gray - Cook, Box 2470, Whitehorse, Yukon.

(D) R. S. Adamson - Chief of Exploration, Box 2470, Whitehorse, Yukon.

(E) F. Foran - Field Expeditor, Box 2470, Whitehorse, Yukon.

N. McCreesh - Labourer, Box 2470, Whitehorse, Yukon.

APPENDIX I (iii)

A F F I D A V I T

Supporting Statement of Costs,
Geophysical Surveys,
GAL 1-44 Mineral Claims -
April 18th to 24th, 1966.

I, ROBERT S. ADAMSON, Chief of Exploration for ANVIL MINING CORPORATION LIMITED, have compiled the statement of costs as presented in this report "Magnetic and Electromagnetic Survey of the GAL 1-44 Mineral Claims", DO MAKE OATH AND SAY AS FOLLOWS:

That to the best of my knowledge and belief, the statement of costs as presented, is true and an accurate representation of expenditures to be applied as representation work on the GAL 1-44 mineral claims.

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA R. S. ADAMSON

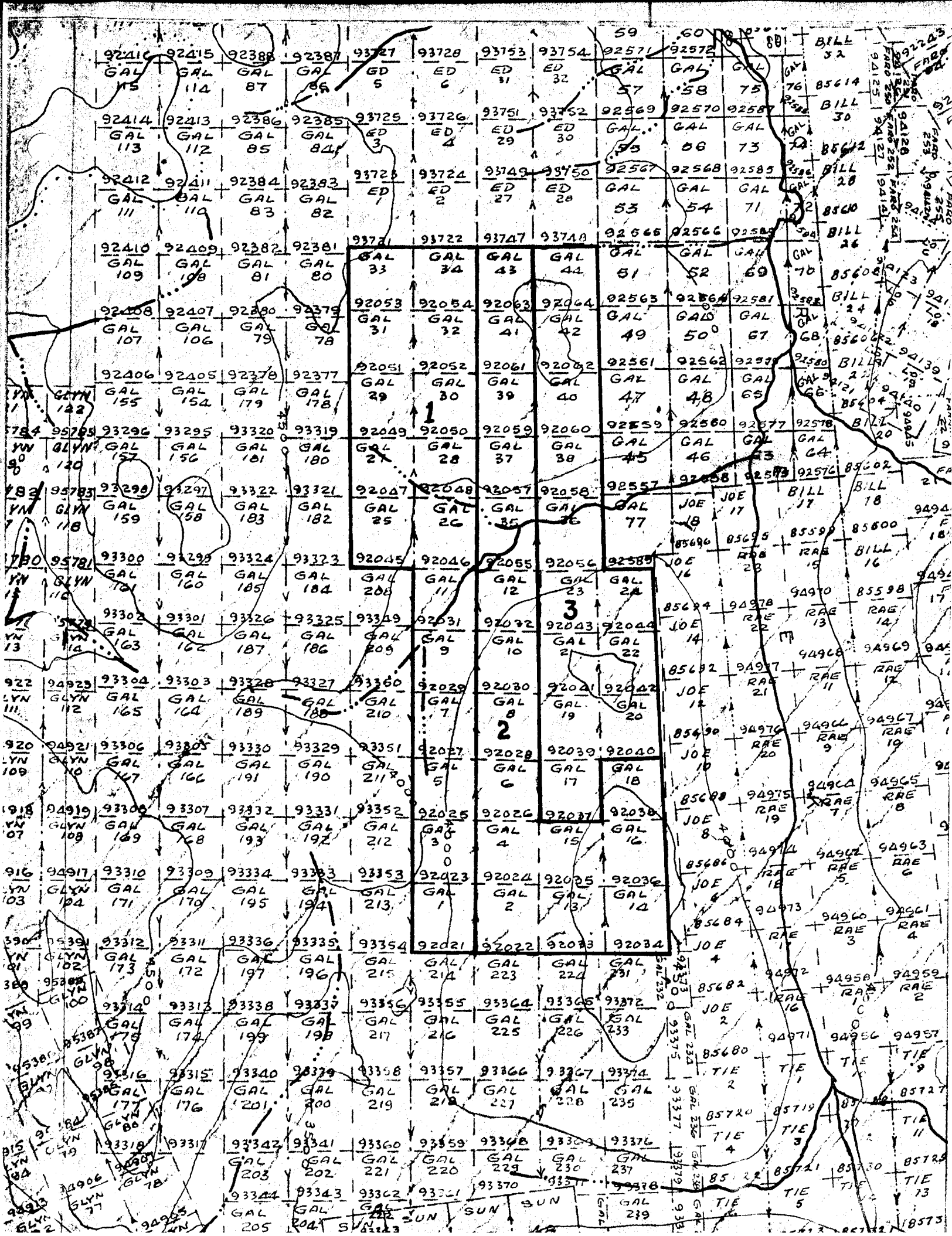
R. S. Adamson

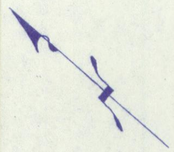
Robert S. Adamson, B.A.Sc., P.Eng.,
Chief of Exploration for
Anvil Mining Corporation Limited.

SWORN BEFORE ME

~~DATED~~ this 30 day of MAY 1966, in the City of Whitehorse in the Yukon Territory.

A Commissioner for taking Affidavits in and for the Yukon Territory.





	80+00W	76+00W	72+00W	68+00W	64+00W	60+00W	56+00W	52+00W	48+00W	44+00W	40+00W	36+00W	32+00W	28+00W	24+00W	20+00W	16+00W	12+00W	8+00W
.24N														450	370	480	460	450	540
.23N														490	380	500	440	440	500
.22N														450	380	520	460	450	480
.21N														470	380	440	470	440	500
.20N														470	340	500	460	460	540
.19N														500	350	540	460	450	510
.18N														450	410	500	440	430	480
.17N														510	430	500	480	420	470
.16N		490												490	550	500	480	420	480
.15N	490	500	490	570	600	540	320	500	510	480	490	450	410	450	430	460	480	460	490
.14N	480	480	510	500	470	540	800	520	490	440	500	450	420	450	350	490	460	480	490
.13N	470	480	490	520	780	520	640	550	470	470	510	450	410	450	490	460	490	500	460	520
.12N	470	570	490	540	670	460	480	540	470	460	500	450	410	470	390	490	470	560	460	520
.11N	450	530	460	570	640	600	460	490	480	480	510	450	410	450	470	480	560	560	440	480
.10N	470	470	590	560	620	660	480	490	470	480	570	440	430	470	410	560	490	460	460	500
.9N	480	510	530	590	620	640	450	500	480	490	480	440	460	480	370	500	460	450	460	510
.8N	500	510	530	590	580	560	480	520	480	490	510	450	470	470	370	490	520	450	460	490
.7N	480	480	510	620	590	580	450	480	450	490	530	450	450	480	370	520	480	470	470	490
.6N	490	480	530	600	580	580	480	500	500	480	490	450	450	470	330	480	480	490	460	500
.5N	450	480	520	600	580	540	455	500	500	490	520	430	450	480	380	480	460	500	470	480
.4N	470	500	550	580	580	570	450	520	490	470	500	450	450	480	510	460	470	460	470	480
.3N	500	480	480	580	580	570	480	500	490	480	490	470	440	500	440	520	460	470	480	470
.2N	480	480	520	600	580	580	440	540	490	490	460	460	430	490	400	480	470	460	460	480
.1N	550	470	510	580	580	580	470	500	480	470	510	450	430	490	410	480	470	460	480	480
00 Base Line	480	500	500	600	520	550	500	480	470	470	470	460	450	470	460	460	460	460	460	470
.1S	460	530	430	600	590	580	580	500	470	470	470	460	450							
.2S	480	520	510	600	600	580	570	520	470	480	470	470	440							
.3S	480	510	490	600	600	570	580	510	470	480	510	460	430							
.4S	500	510	490	600	600	560	560	500	470	470	490	450	440							
.5S	530	500	500	600	600	580	560	490	470	470	510	450	430							
.6S	530	500	490	600	600	560	540	500	490	480	510	450	450							
.7S	530	510	490	600	610	570	560	500	465	480	500	450	430							
.8S	520	510	530	580	580	570	550	480	470	510	510	450	450							
.9S	520	540	490	580	580	580	540	490	480	490	510	450	460							
.10S	490	500	490	580	580	560	540	480	470	470	500	460	450							
.11S	490	510	470	580	580	550	540	480	470	470	480	440	450							
.12S	510	500	490	580	580	550	550	500	480	470	530	450	450							
.13S	480	510	490	570	570	570	560	490	480	480	500	460	440							
.14S	490	470	490	560	560	560	560	490	490	490	490	450	440							
.15S	490	540		560	710	560	570	500	490	490	480	450	450							
.16S																				

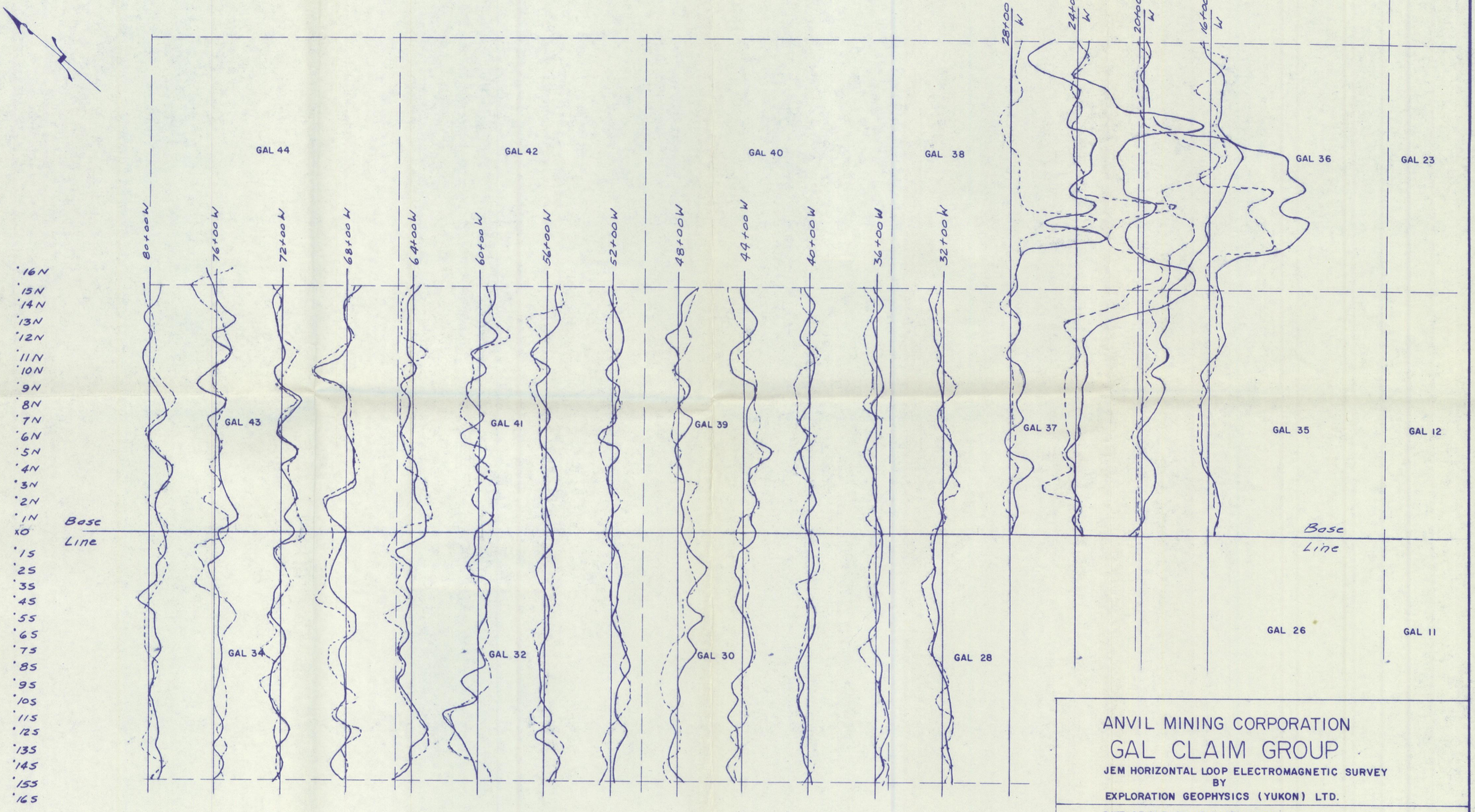
ANVIL MINING CORPORATION

GAL CLAIM GROUP

MAGNETOMETER SURVEY
BY
EXPLORATION GEOPHYSICS (YUKON) LTD.

DATE OF SURVEY: 18-24 APRIL 1966
OPERATORS: G. GRADY - A. RALSTON
SCALE: 400'=1 INCH
MAG. DATUM = 500(+) GAMMAS
MAG. PROFILE SCALE: 100 GAMMAS = 0.3"

PSW



ANVIL MINING CORPORATION

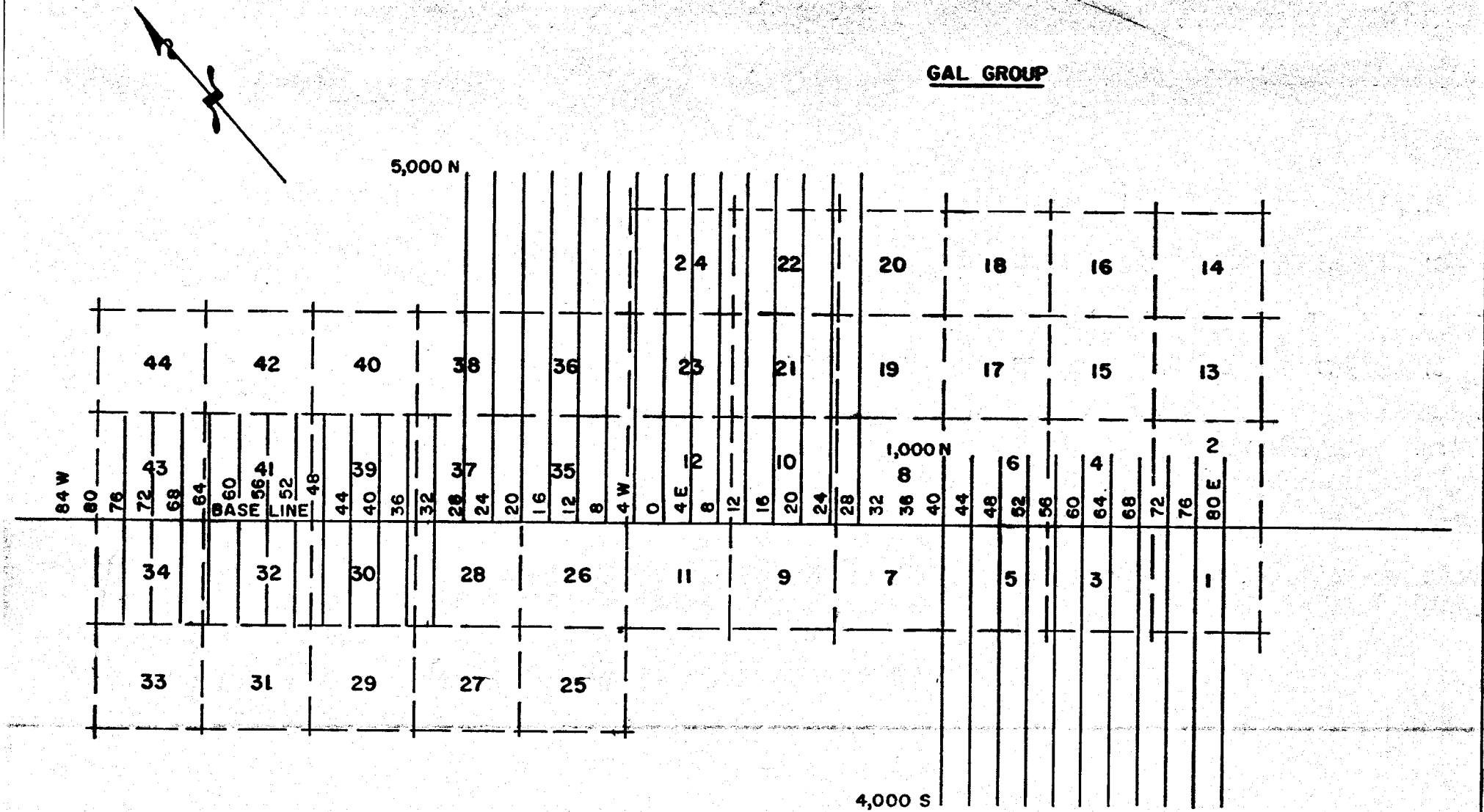
GAL CLAIM GROUP

JEM HORIZONTAL LOOP ELECTROMAGNETIC SURVEY
BY
EXPLORATION GEOPHYSICS (YUKON) LTD.

DATE OF SURVEY: 18-24 APRIL 1966
OPERATORS: G. CANNON - A. RALSTON
SCALE: 400' = 1 INCH
E.M. PROFILE SCALE: 1" = 20° RES. DIP

HIGH (1800 C.P.S.) FREQUENCY — + res. dip
LOW (480 C.P.S.) FREQUENCY — − res. dip

PGW



ANVIL MINING CORP.	
WHITEHORSE	
LINE CUTTING GRID	
DATE: 5-4-66 SCALE: 1"=2,000' DRAWN BY: JM	DRAWING Nº WD-6 FILE: