GEOPHYSICAL REPORT

On

ACE CLAIM GROUP

at

TAY RIVER, YUKON
(62° 22'N, 132° 52'W)

for

ANVIL MINING CORP. LTD.

by

EXPLORATION GEOPHYSICS (YUKON) LTD
WHITEHORSE, YUKON

NOVEMBER 1966

REPORT BY: M.O. Hampton
Geologist for
ANVIL MINING CORP LTD

APPROVED BY:

R.S. Adamson, P.Eng.
Chief of Exploration for
ANVIL MINING CORP LTD.

PROPERTY SURVEYED: June 1-20th, July 13-16th, 1966

GEOPHYSICAL SURVEY

ACE CLAIM GROUP

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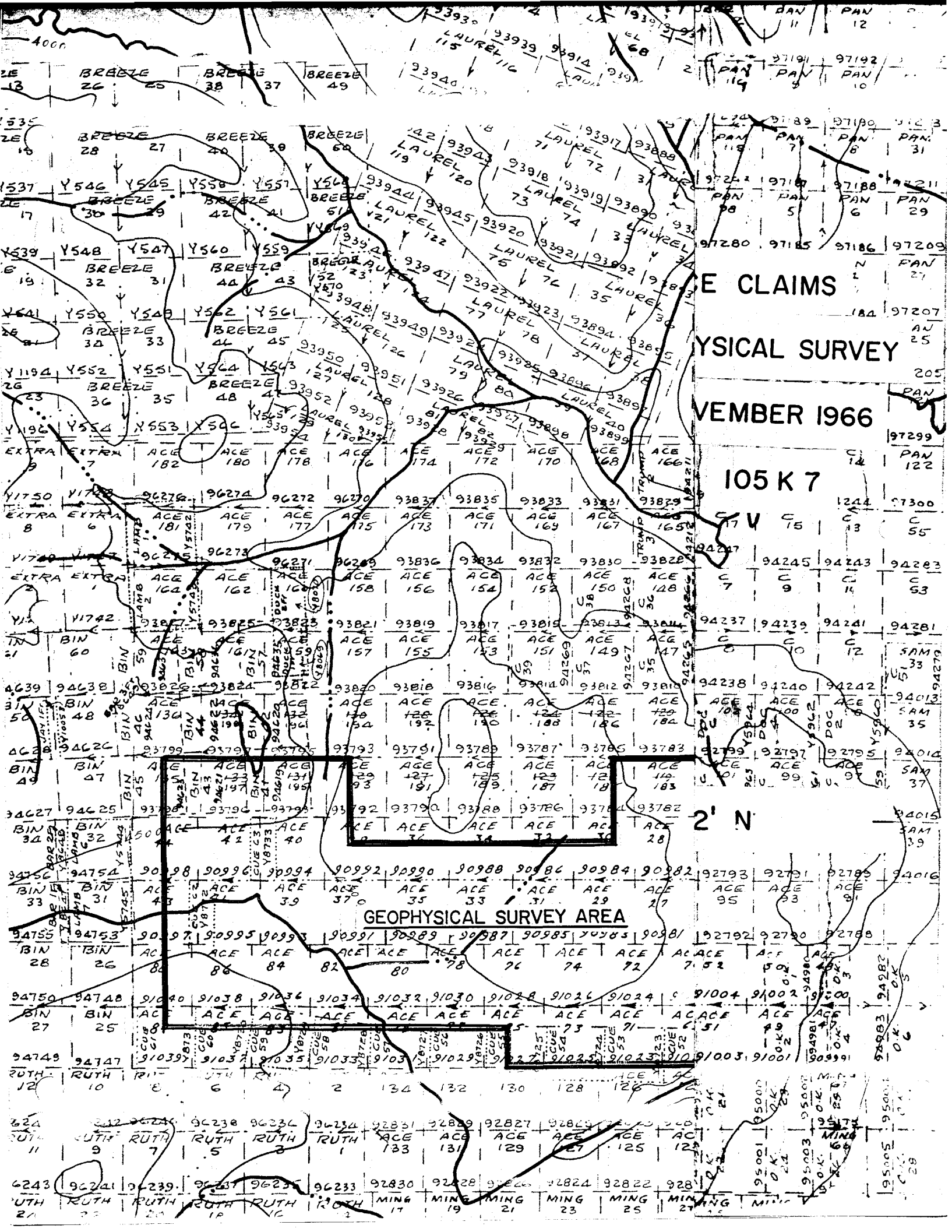
E CLAIMS
YSICAL SURVEY
VEMBER 1966
105 K 7
2' N
GEOPHYSICAL SURVEY AREA

INTRODUCTION

A combined magnetic and electromagnetic geophysical survey was carried out by Exploration Geophysics (Yukon) Limited for Anvil Mining Corporation Ltd. on mineral claims ACE 21-44 inclusive, 61-86 inclusive, 122, 124, 126, 128, 135, 136, 163, 187-198 inclusive.

Preparatory line cutting was done by contract linecutters of White, Hosford, and Impey Ltd. of Whitehorse.

Access to the property by all people involved with the survey was by helicopter.

The object of the ground survey was to follow up magnetic and electromagnetic anomalies detected from an airborne geophysical survey done in September of 1965.

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 40 degrees and 1 inch to 800 gammas for electromagnetics and magnetics respectively.

Rocks in the survey area are phyllites and schists. These rocks are included in map unit 7 on the preliminary 4 mile to 1 inch map of regional geology of the TAY RIVER map sheet by Dr. J.A. Roddick and Dr. L.H. Green of the Geological Survey of Canada. Map unit 7 contains the known ore bodies on the southwest of the ANVIL batholith.

SURVEY SPECIFICATIONS

Grid System

Baselines were laid out with a transit and picket lines were turned off at 400 foot intervals along baselines by transit. Stations were established along the picket lines at 100 foot intervals.

Magnetometer Survey

A Sharpe's MF-1 Fluxgate type vertical component magnetometer was used during the entire magnetic survey. This instrument is hand held and needs only coarse leveling and no orientation. The magnetometer has a maximum sensitivity of 20 gammas per scale division on 1000 gamma range and a readability of 5 gammas per scale division.

Readings were taken at 400 foot intervals along the base line and 100 foot intervals along picket lines. Baseline stations were looped and re-read within every two hours as a means of controlling drift and diurnal variations.

Electromagnetic Survey

A CRONE JEM (18 volt) unit was employed for the electromagnetic survey. 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 fields, it is dual

frequency (480 and 1800 c.p.s.) and may be used either as a vertical or horizontal loop system.

In contrast to the magnetometer survey no checking back to previously established base line stations is required. A 400 foot separation of the coils was used and readings were taken at 100 foot station intervals along the picket lines.

RESULTS and INTERPRETATION

Magnetometer Survey

Each reading was corrected for diurnal variation and plotted on a plan of the grid (1 inch = 400 feet). Profiles of each line were drawn to a 1 inch = 800 gamma scale and contours were drawn using a 100 gamma contour interval.

A broad belt of anomalously high readings extends east-west for the full length of the surveyed grid. This belt is coincident with the anomaly outlined by the airborne magnetic survey.

A magnetic high, off the wide belt, extends from Line 192 + 00 W, 7 + 00 N to 200+00 W, 10+00 N and has close agreement to a conductor. A second isolated magnetic high on line 268+00 W, 17+00 N is also coincident with a conductor.

Electromagnetic Survey

High and low frequency electromagnetic readings were plotted on a plan of the survey grid (1 inch = 400 feet) and profiles of each line were drawn to a 1 inch to 40 degrees scale.

The electromagnetic survey outlines an anomalously conductive belt lying generally north of, adjacent to and paralleling the

high magnetic belt crossing the grid. This conductive belt was also outlined by the airborne electromagnetic survey.

Three, possibly significant, fair to good quality conductors exist within the main belt. The two are coincident with the above mentioned magnetic anomalies while the third and best quality conductor crosses line 216+00 W at 14+00 N.

CONCLUSIONS and RECOMMENDATIONS

The very large size and the orientation of the anomalous belts generally parallel to the regional strike of the schists and phyllites suggest geologic members with contrasting properties. The magnetic belt was originally thought to represent a volcanic horizon. However, subsequent mapping and drilling showed the magnetic belt to be underlain by phyllite with pyrrhotite along the foliation while the electromagnetic belt is underlain by graphitic phyllites generally striking 90° true Azimuth and dipping 40° N.

The two isolated coincident magnetic and electromagnetic anomalies on lines 192 W and 268 W were recommended for drilling as possible sulphide deposits but were found to be caused by the effects of graphite and disseminated pyrrhotite.

The isolated good quality electromagnetic anomaly at line 216+00 W, 14+00 N was also recommended for drilling and found to be caused by graphite.

M.O. Hampton, B.A.Sc.
Geologist for
ANVIL MINING CORP. LTD.

Approved by:
R.S. Adamson, P. Eng.
Chief of Exploration for
ANVIL MINING CORP. LTD.

APPENDIX I (1)

STATEMENT OF COSTS — Geophysical Survey ACE Group

(A)	**Linecutting**		
	Contract: White, Rosford & Impey Ltd.		
	Invoices submitted	$5,125.20	
	Transportation, helicopter (11 trips FARO-ACE & return = 7.33 hrs x $100. per hr.)	733.00	$5,858.20
(B)	**Geophysics Survey**		
	Contract: Exploration Geophysics (YUKON) Ltd.		
	Invoices submitted	$3,622.00	
	Transportation, helicopter (9 trips FARO-ACE & return = 6 hrs x $100. per hr.)	600.00	
	Maintenance: 71 man days @ $8.(w/cook)	$ 568.00	
	16 man days @ $6. (no cook)	96.00	
	Less $120. charged on invoice	- 120.00	
	(59 man days shown on invoices plus 20 days W. Cannon, 3 days G. Gamble, 1 day G. Cannon, 2 days M. Hampton, 2 days R. Adamson)		$4,766.00
(C)	**Compilation of Report**		$ 100.00
	Typing, clerical, drafting, printing	$ 65.00	
	Writing	35.00	
(D)	**Supervision**		$ 160.00
	R.S. Adamson 2 days @ $45.		
	M.O. Hampton 2 days @ $35.		
	Total:		$10,884.20

APPENDIX I (ii)

PERSONNEL

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

(B) Geophysics - Exploration Geophysics (YUKON) Ltd.
Contract

W. Cannon	Party Chief	Box 1188,	Whitehorse,	Y.T.
G. Cannon	E.M.& Mag. Operator	"	"	"	"
J. Rollins	E.M.& Mag. Operator	"	"	"	"
G. Gamble	Mag. Operator	"	"	"	"
D. Gamble	E.M.& Mag. Operator	"	"	"	"
V. Lund	E.M. Operator	"	"	"	"
S. Milne	E.M. Operator	"	"	"	"
J. Gehring	Mag. Operator	"	"	"	"
B. Shillington	E.M. Operator	"	"	"	"

(C) Compilation of Report

M.C. Hampton	Geologist	Box 2470,	Whitehorse,	Y.T.
S. Moore	Draughtsman	"	"	"	"
I. Stretch	Clerk-Typist	"	"	"	"

(D) Supervision

R.S. Adamson	Chief of Exploration	"	"	"	"
M.C. Hampton	Geologist	"	"	"	"

APPENDIX I (iii)

A F F I D A V I T

SUPPORTING STATEMENT OF COSTS
Geophysical Report
June 1-20th, July 13-16th, 1966

I, Murray O. Hampton, Geologist for ANVIL MINING CORPORATION LIMITED, have compiled the statement of costs as presented in this report "Geophysical Survey of ACE Claim Group", 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 representative work on the ACE 28-35 inclusive, 37-44 inclusive, 77-88 inclusive, 111, 113, 115, 117, 118, 135, 147-154 inclusive, 165-169 inclusive, 171, 172, 174, 177-197 inclusive, LAUREL 29-40 inclusive, 69-82 inclusive, 116-130 inclusive, CUE 50-63 inclusive, DUCK 1 Fr. & DUCK 2 Fr. mineral claims.

Murray O. Hampton

Murray O. Hampton, B.A.Sc.
Geologist for
ANVIL MINING CORP LTD.

SWORN before me in the City of Whitehorse, Yukon Territory

this.....day of.....NOV. 16. 1966....., 1966.

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

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Baseline No. 1

292W 288W 284W 280W 276W 272W 268W 264W 260W 256W 252W 248W 244W 240W 236W 232W 228W

224W 220W 216W 212W 208W 204W 200W 196W 192W 188W 184W 180W 176W 172W 168W 164W 160W 156W 152W 148W 144W 140W 136W 132W 128W 124W

480 CPS

1800 CPS

..... SOUTH EDGE OF CONDUCTIVE BELT

—— —— POSSIBLE SIGNIFICANT CONDUCTORS

ANVIL MINING CORP.

WHITEHORSE

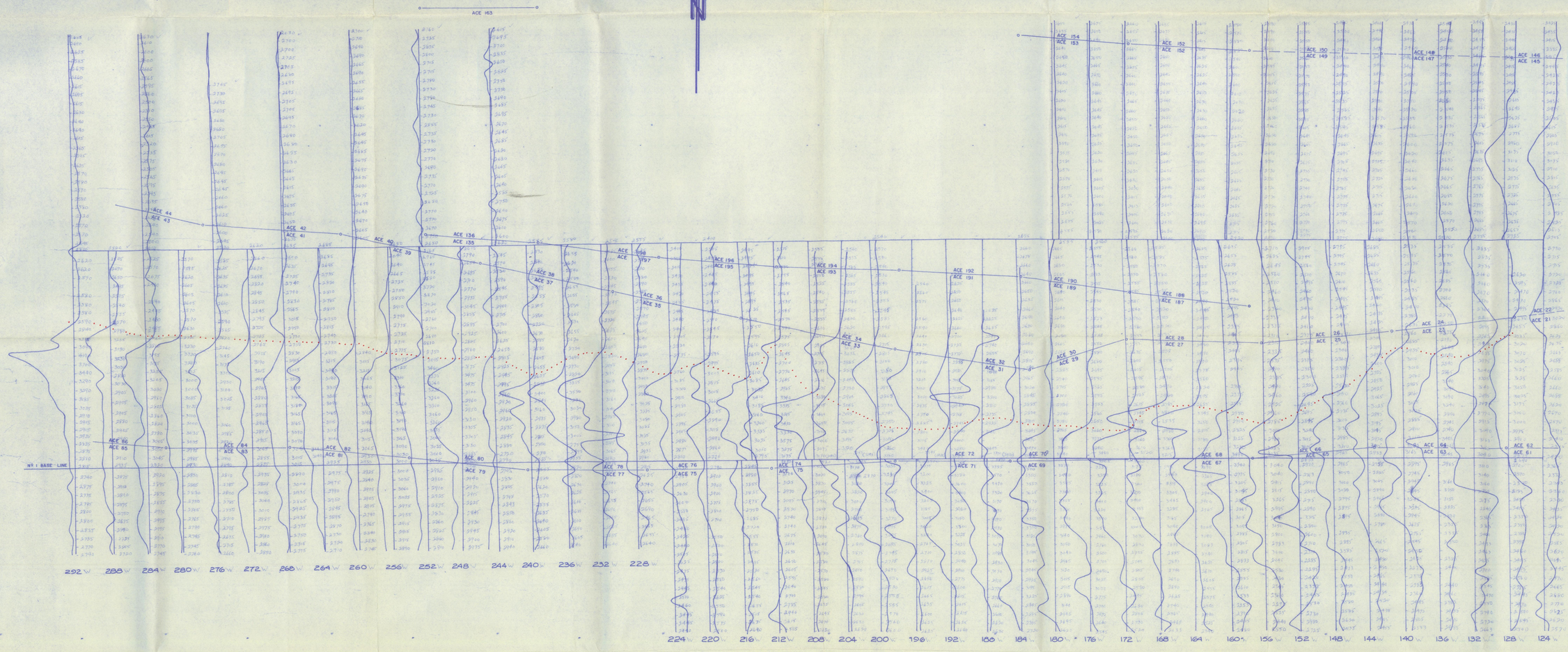
ACE GROUP

ELECTROMAGNETIC SURVEY

EXPLORATION BY GEOPHYSICS (YUKON) LTD.

SURVEY DATE	MAY. 31 - JUNE 23 1966
OPERATORS	LUND, MILNE, GAMBLE
PROFILE SCALE	1"=40'
RDG. INTERVAL	100'
INST. SPACING	400'

DATE : AUG. 25, 1966	DWG. N° :
SCALE : 1"=400'	
DR'N : W.C	
PLOTTED : W. CANNON	FILE :
INTERPRETED :	



..... NORTH EDGE OF HIGH MAGNETIC BELT

ANVIL MINING CORP.

WHITEHORSE

ACE GROUP

MAGNETOMETER SURVEY

BY

EXPLORATION GEOPHYSICS (YUKON) LTD.

SURVEY DATE	APRIL 25 : MAY 31 : 1966
OPERATORS	D. GAMBLE G. CANNON
PROFILE SCALE	1" = 800 γ (+)
MAG. DATUM	2700 (+) γ
RDG. INTERVAL	100'

DATE : AUG. 25 1966	DWG. N° :
SCALE : 1" = 400'	
DRN. : D.J.G.	
PLOTTED : W. CANNON	
INTERPRETED :	FILE :

N

Baseline No. 1

292W 288W 284W 280W 276W 272W 268W 264W 260W 256W 252W 248W 244W 240W 236W 232W 228W

224W 220W 216W 212W 208W 204W 200W 196W 192W 188W 184W 180W 176W 172W 168W 164W 160W 156W 152W 148W 144W 140W 136W 132W 128W 124W

ANVIL MINING CORP.

– WHITEHORSE –

·· ACE GROUP ··

MAGNETOMETER SURVEY BY

EXPLORATION GEOPHYSICS (YUKON) LTD.

SURVEY DATE	JUNE 1ST - JUNE 23RD 1966
OPERATORS	D. GAMBLE, J. GEHRING
INST. TYPE	MF-1
RDG. SPACING	100 FT.
CONTOUR INTERVAL	100 γ
DATE	AUG. 16 1966
SCALE	400 : 1"
DR'N	D.J.G.
PLOTTED	
INTERPRETED	W. CANNON

DWG. N° WX-

FILE: