

ARCHER, CATHRO & ASSOCIATES LTD.

CONSULTING GEOLOGICAL ENGINEERS

P.O. BOX 1051
WHITEHORSE, YUKON

REPORT ON

AIRBORNE & GROUND GEOPHYSICAL SURVEY

GEOCHEMICAL SURVEY

AND

GEOLOGICAL SURVEY

BREEZE CLAIM GROUP

ACE CREEK AREA

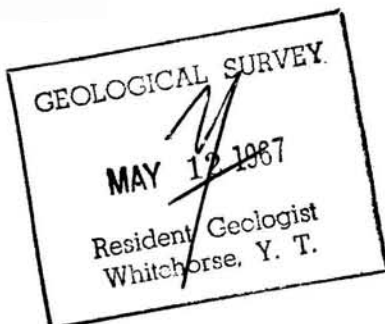
ANVIL-VANGORDA DISTRICT, YUKON.

Claim Sheet 105-K-7

for

DYNACORE EXPLORATIONS LTD.

Toronto.



This report has been examined by
the Geological Evaluation Unit.
Approved as to technical worth by:

D.C. Gillies
RESIDENT GEOLOGIST

Approved as to cost in the amount
of \$ *10,213.00*

H.E. Dabben
RESIDENT MINING ENGINEER

Accepted as representation work
under Section 50(4) Yukon Quartz
Mining Act.

[Signature]
COMMISSIONER OF YUKON Administration

R.J. Cathro, P. Eng.

July 1, 1966- Feb. 20, 1967

TABLE OF CONTENTS

	<u>page</u>
Introduction	1.
Airborne Geophysical Survey	1.
Geological & Geochemical Survey	3.
Ground Geophysical Survey	4.
Summary & Conclusions	5.
Recommendations	6.
Appendix I	7.
Appendix II	8.
Appendix III	9.

MAPS

Figure 1-	Kep Map
Figure 2-	Airborne EM Survey
Figure 3-	Airborne Mag Survey
Figure 4-	Geology
Figure 5-	Copper Geochemistry
Figure 6-	Lead Geochemistry
Figure 7-	Zinc Geochemistry
Figure 8-	Airborne Geophysical Interpretation Overlay.

INTRODUCTION

During the 1966 field season, an airborne geophysical survey and combined geochemical and geological survey was conducted on the BREEZE claim group of Dynacore Explorations Ltd. under the direct supervision of the writer. In January and February, 1967, linecutting and a ground Mag and EM survey was conducted in the southeast quarter of the claim block.

These 52 contiguous claims adjoin the Laurel property of Anvil Mining Corp. and the Jaye Exploration property in the Ace Creek area, claim sheet 105-K-7. The property can only be reached by helicopter or by a new winter road which extends to the claims from the Ace camp and winter road.

The exploration techniques used in this program were patterned after the successful approach developed in this district by Dynasty Explorations Ltd., and were selected to locate any mineralized zones which are present on the property.

AIRBORNE GEOPHYSICAL SURVEY

A combined magnetometer (Mag) and electromagnetometer (EM) survey was conducted under contract by Lockwood Survey Corp. Ltd. on July 5, 1966. The equipment was mounted in a Bell 204 B turbine helicopter on charter from Okanagan Helicopters Ltd. A total of ~~33~~⁴⁴ line-miles was surveyed.

Rylo

2.

The survey equipment consisted of a continuous-reading Gulf magnetometer and EM coils with a primary current of 400 cycles per second, which were mounted in a bird which was towed beneath the aircraft by a 100 foot long cable. An air-photo mosaic of the claim group was used for navigation and a continuous strip photo record of the flight path was made. The aircraft was kept as close as possible to a mean terrain clearance of 200 feet by means of a radio altimeter and this was recorded on an APN tape. The mean terrain clearance of the bird was thus about 100 feet. The survey recording equipment and camera were mounted in the cabin of the helicopter and produced graphical tape records of the Mag, EM and elevation profiles. Flight lines were spaced at 1000 foot intervals.

A preliminary plot of the Mag and EM data was made in the field, on contract, by Explorations Geophysics (Yukon) Ltd., and interpreted by Dr. D.W. Smellie, consulting geophysicist, of that firm. The preliminary plotting and interpretation, which was based on uncorrected data, was made to detect top priority anomalies which required immediate follow-up before the end of the summer. It was anticipated that final data reduction by Lockwood would take some time and it was not received until December. The results of this survey are shown in Figures 2 and 3.

GEOLOGICAL AND GEOCHEMICAL SURVEY

The BREEZE claims are centered on a low mountain; the flat top of which lies just above timberline. Outcrop is somewhat more abundant than in the district as a whole. Mapping revealed a massive volcanic belt trending northeast through the centre of the property which separated slate on the west from metamorphic rocks, mainly phyllite and quartzite, on the east. The slate resembles rocks lying to the northeast of the property which were mapped by the G.S.C. as Devonian, while the volcanic and metamorphic rocks are typical of the favourable Mississippian formation. Figure 4 shows the results of this mapping.

Dips are gentle and indicate a syncline striking east-west through the centre of the property. Some evidence of minor faulting was seen and this is probably related to a major northeast striking fault, which is thought to occupy the contact between the volcanic and metamorphic rocks on the property, and a major northwest-striking fault, parallel to the Tintina Fault, which is known to cross the northeast corner of the claims. This latter fault separates mainly Devonian and older rocks to the northeast from mainly Mississippian rocks to the southwest and continues to the southeast across Anvil's Ace property.

Reconnaissance geochemical sampling was conducted along the claim base lines, using a 400 foot sample interval. A total of ~~529~~²³⁹ samples were collected and analyzed.

Control for the sampling was provided by aerial photographs, tape and compass. Sample locations were marked with plastic flagging. Sampling was done with a mattock grub-hoe and wherever possible the B 1 horizon was sampled. In a few cases permafrost prevented the taking of an ideal sample, free from organic matter or volcanic ash. However, since geochemical targets in this district are large and the spacing of the samples was fairly close, it is felt that nothing significant has been missed.

The samples were collected in individual small kraft bags and sent to Atlas Testing Labs, Edmonton, for analysis. Analysis consisted of hot aqua regia extraction of heavy metal ions from the creened and ried sample, and metal content determination by atomic absorption. All samples were analyzed for copper, lead and zinc. Figures 5,6 and 7 show the plotted values for copper, lead and zinc respectively.

GROUND GEOPHYSICAL SURVEY

Some 18.35 miles of line were cut and surveyed with a Crone Jem EM unit and a Jalander magnetometer. The field work was only completed on Feb. 20, 1967 and maps and interpretation have not yet been received from the contractor, Explorations Geophysics (Yukon) Ltd. The crew was moved in with a D-7 bulldozer.

SUMMARY & CONCLUSIONS

The results of the soil sampling can be briefly summarized as follows:

- (a) Copper- background was generally low with isolated weakly anomalous values. The highest single value was from the quartzite-phyllite area in the southeast corner, on a timbered, moderately steep slope. Some detailed sampling was done in this vicinity later but results were all lower.
- (b) Lead- background in the sedimentary and metamorphic rocks was low while in the volcanics, particularly in the central and northeast part of the property, background was considerably higher. The best results were in the northeast corner, near a volcanic outcrop and in an overburden covered area thought to be underlain by volcanic rocks. One isolated high value was obtained from the volcanic-metamorphic contact zone near the south boundary.
- (c) Zinc- background was high from all rocks, particularly the central part of the volcanic belt and the metamorphic rocks in the southeast corner.

The airborne EM results were quite complex with several conductors containing ratios of in-phase to quadrature

components of 4.0 or better. The best conductors were within the schist in the southeast corner and at the south boundary near the volcanic-slate contact. No significant amount of graphite was seen on the Breeze property but it is possible that graphitic horizons occur with the slate.

Aeromag response was gentle with a broad high centered on the metamorphic rocks in the southeast corner.

The volcanics were surprisingly less magnetic and no magnetic minerals were noted anywhere on the property.


The ground geophysical results are still unavailable at this date.

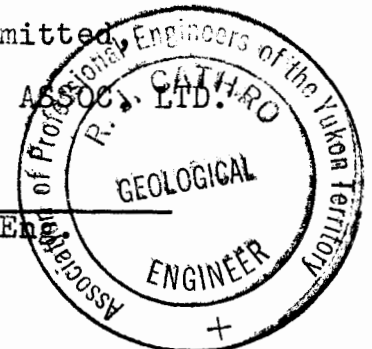
RECOMMENDATIONS

The quartzite and phyllite found in the southeast corner is similar in appearance to the host rocks associated with major base metal deposits elsewhere in this area. Some weakly anomalous copper and copper and zinc values were also obtained in this area by reconnaissance soil sampling. If the ground Mag and EM survey indicates favourable targets, a gravity or I.P. survey and diamond drilling program will be justified.

Respectfully submitted,

ARCHER, CATHRO & ASSOC. LTD.


R.J. Cathro, P. Eng.




RJC:ps

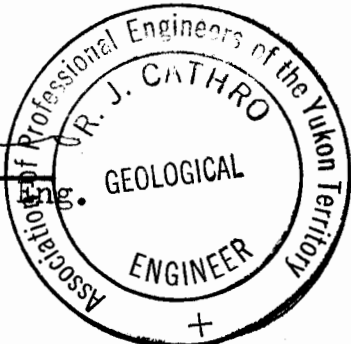
Appendix I

AFFIDAVIT

I, Robert J. Cathro, Consulting Geological Engineer,
of Whitehorse, agent for Dynacore Explorations Ltd.,
have compiled the statement of costs presented in
Appendix II of this report, and do hereby make oath
and say:


That to the best of my knowledge and belief, the
statement of costs as presented is a true and
accurate representation of expenditures, to be
applied as assessment work on the Breeze Claim
Group.


~~R. J. Cathro, P. Eng.~~



The seal is circular with the text "Association of Professional Engineers of the Yukon Territory" around the perimeter. Inside the circle, it reads "R. J. CATHRO" at the top, "GEOLOGICAL" in the middle, and "ENGINEER" at the bottom. A small cross symbol is at the very bottom of the seal.

Sworn and subscribed to at
Whitehorse this 9 day of
March 1967.


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

Appendix II

STATEMENT OF COSTS

A. Airborne Geophysical Survey- 44 line-miles (LM)

1. Helicopter rental- Okanagan Helicopters Ltd.	
-surveying lines- 1:04	
-mobilization, fuel ferry- :08	
Total- 1:12 @ \$450.00	\$540.00
2. Crew accomodation @ avg. cost/LM	102.00
3. Prelim. plotting, interpretation @ \$3.00/LM	132.00
4. Air photos, mosaic preparation; maps	135.00
5. Management @ \$3.00/claim	156.00
6. " expenses- travel, office	62.00
7. Equipment & operator rental- Lockwood	330.00
8. Data Reduction @ \$15.00/LM	660.00
Sub-total	\$2117.00

B. Geolgoical and Geochemical Survey

1. Transportation (Klondike, G.N.A.)	862.00
2. Camp rental, supplies, mobilization	251.00
3. Wages- 15 mandays	436.00
4. Analysis- 239 samples @ \$1.95 plus freight	495.00
5. Office expenses- drafting, blueprinting	346.00
6. Supervision, reports	1025.00
Sub-total	\$3415.00

C. Ground Geophysical Survey

1. Linecutting- 18.35 LM	2087.25
2. Mag and EM Survey- 18.35 LM @ \$125.00	2293.75
3. Drafting and interpretation	100.00
4. Management- Archer & Cathro	200.00
	\$4681.00

Total \$10,213.00

Appendix III

PERSONNEL

A. GEOPHYSICAL SURVEY

T.R. Gurr	pilot	Okanagan Helicopters, Vancouver.
H. Sandau	operator	Lockwood Survey Corp. Toronto.
D. Gamble	technician	Expl. Geophysics (Yukon) Ltd. WH.
D. Smellie	geophysicist	" " " " "
R. Cathro	geological eng.	Archer, Cathro & Assoc. Ltd. WH.

B. GEOLOGICAL AND GEOCHEMICAL SURVEY

D. Lyman	student geol.	Archer, Cathro & Assoc. Ltd. WH.
B. Smaill	soil sampler	" " " " " "
R. Cathro	consult, eng.	" " " " " "
A. Archer	" "	" " " " " "

C. GROUND GEOPHYSICAL SURVEY

M. Curry	geophys, helper	Explor. Geophys. (Yukon) Ltd. WH.
J. Lerner	assistant	" " " " "
P. White	engineer	" " " " "
J. Brock	geophysicist	" " " " "

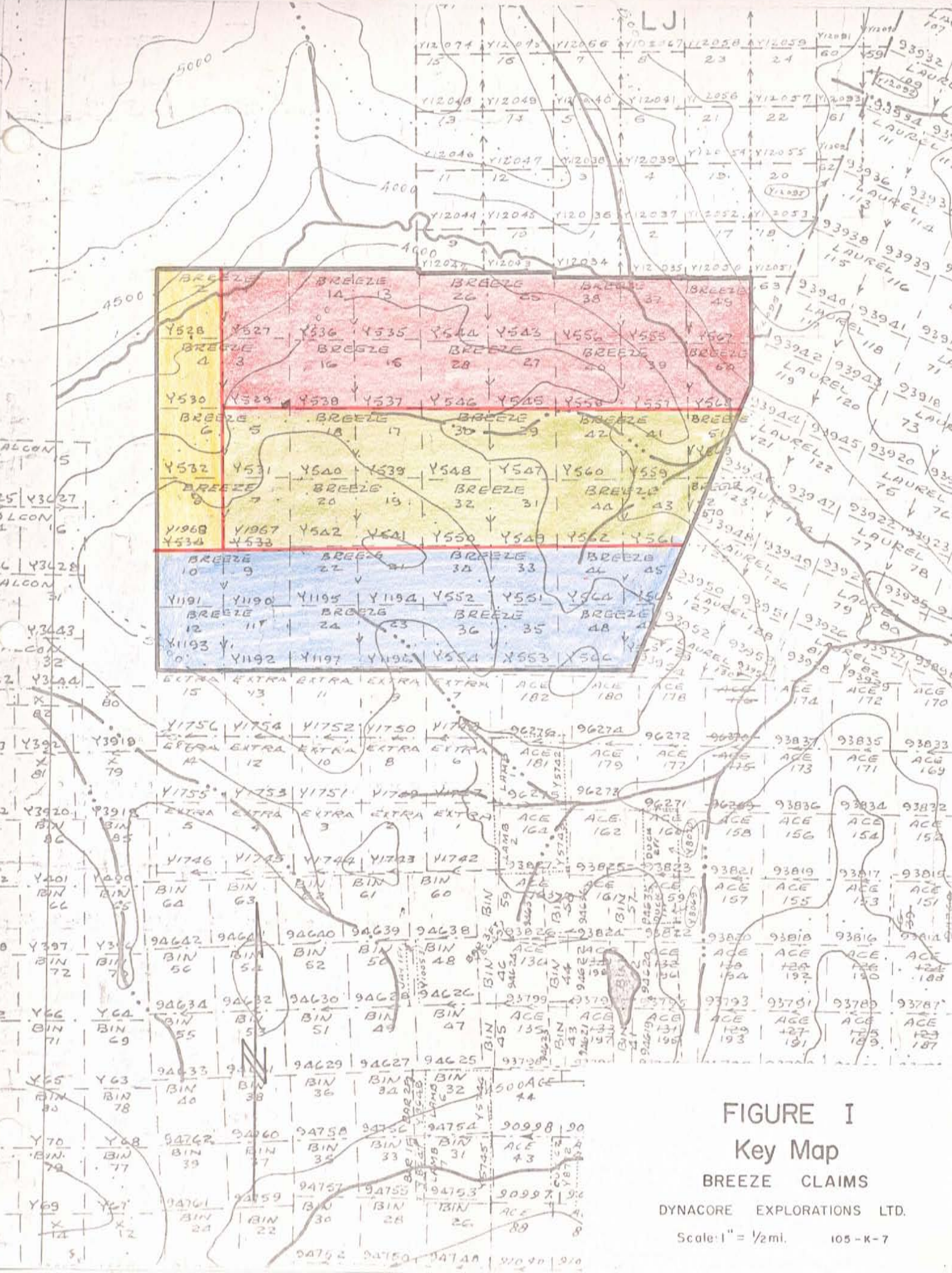


FIGURE I
Key Map



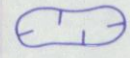
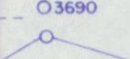
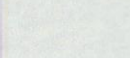
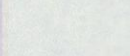
BREEZE CLAIMS

DYNACORE EXPLORATIONS LTD.

Scale: 1" = 1/2 mi. 105-K-7

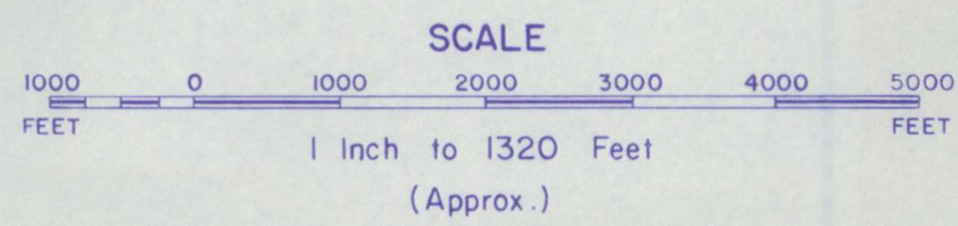
DYNACORE EXPLORATIONS LIMITED
AIRBORNE GEOPHYSICAL SURVEY



- CONTOUR INTERVAL ----- 20 GAMMA
- MEAN FLIGHT LINE SPACING ----- 1000 FEET
- MEAN TERRAIN CLEARANCE ----- 200 FEET
- 500 GAMMA CONTOUR ----- 
- 100 GAMMA CONTOUR ----- 
- 20 GAMMA CONTOUR ----- 
- MAGNETIC LOW ----- 
- FIDUCIAL POINTS -----  03690
- FLIGHT LINES ----- 

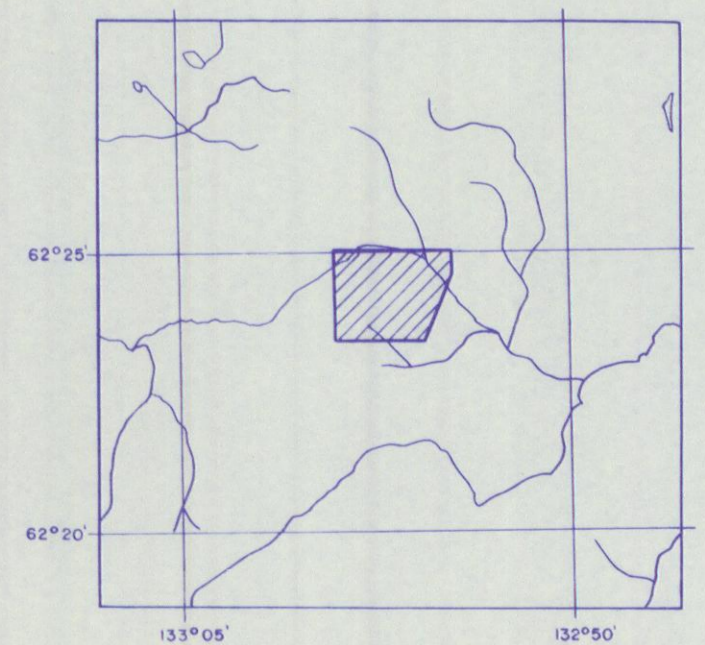
BREEZE GROUP
YUKON TERRITORY

Flown and Compiled by
LOCKWOOD SURVEY CORPORATION LIMITED
TORONTO, CANADA
1966

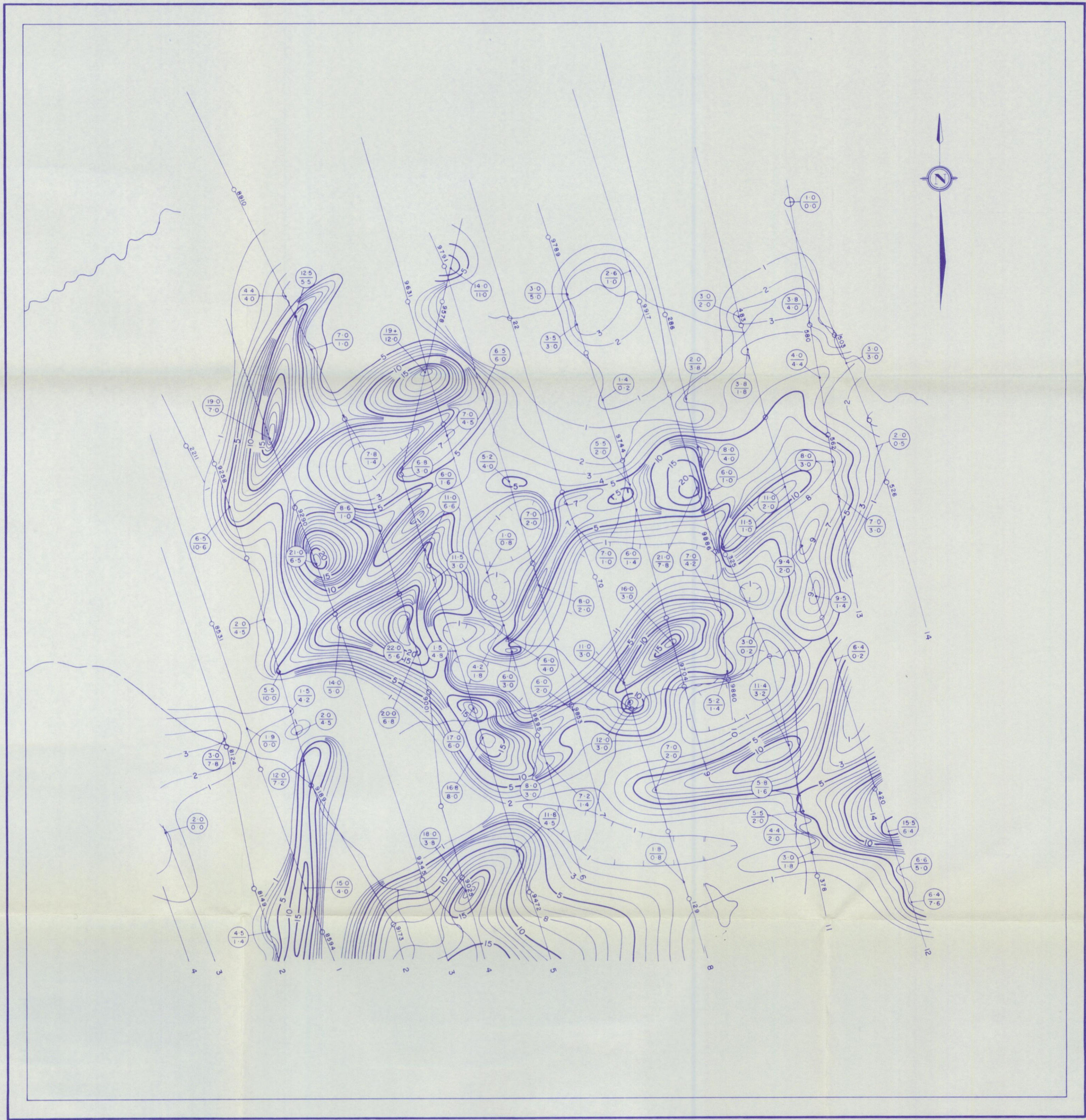


AEROMAGNETIC MAP

Fig. # 2



DYNACORE EXPLORATIONS LIMITED
AIRBORNE GEOPHYSICAL SURVEY



MEAN FLIGHT LINE SPACING ----- 1000 FEET
 MEAN TERRAIN CLEARANCE ----- 200 FEET
 ELECTROMAGNETIC CONTOURS 5, 10, 15 etc. -----
 1, 2, 3, 4 etc. -----
 NEGATIVE CONTOURS -5, -10 etc. -----
 -1, -2, -3, -4 etc. -----
 FIDUCIAL POINTS ----- O 3690
 FLIGHT LINES -----

The contours represent amplitude of in phase response of the resultant field expressed in parts per million of the primary
 The figures $\frac{2.3}{0.2}$ represent amplitude in phase component quadrature component
 The frequency of the primary current is 4000 cycles per second.

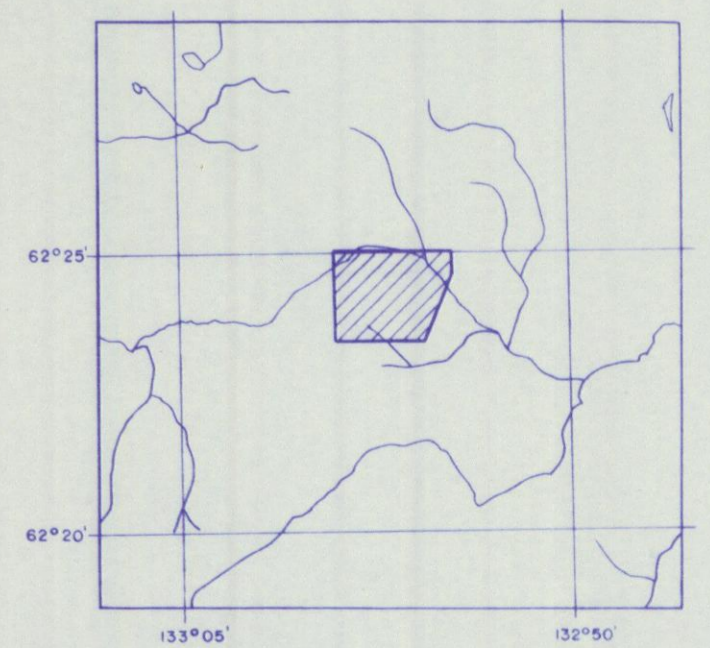
BREEZE GROUP
YUKON TERRITORY

Flown and Compiled by
LOCKWOOD SURVEY CORPORATION LIMITED
TORONTO, CANADA
1966

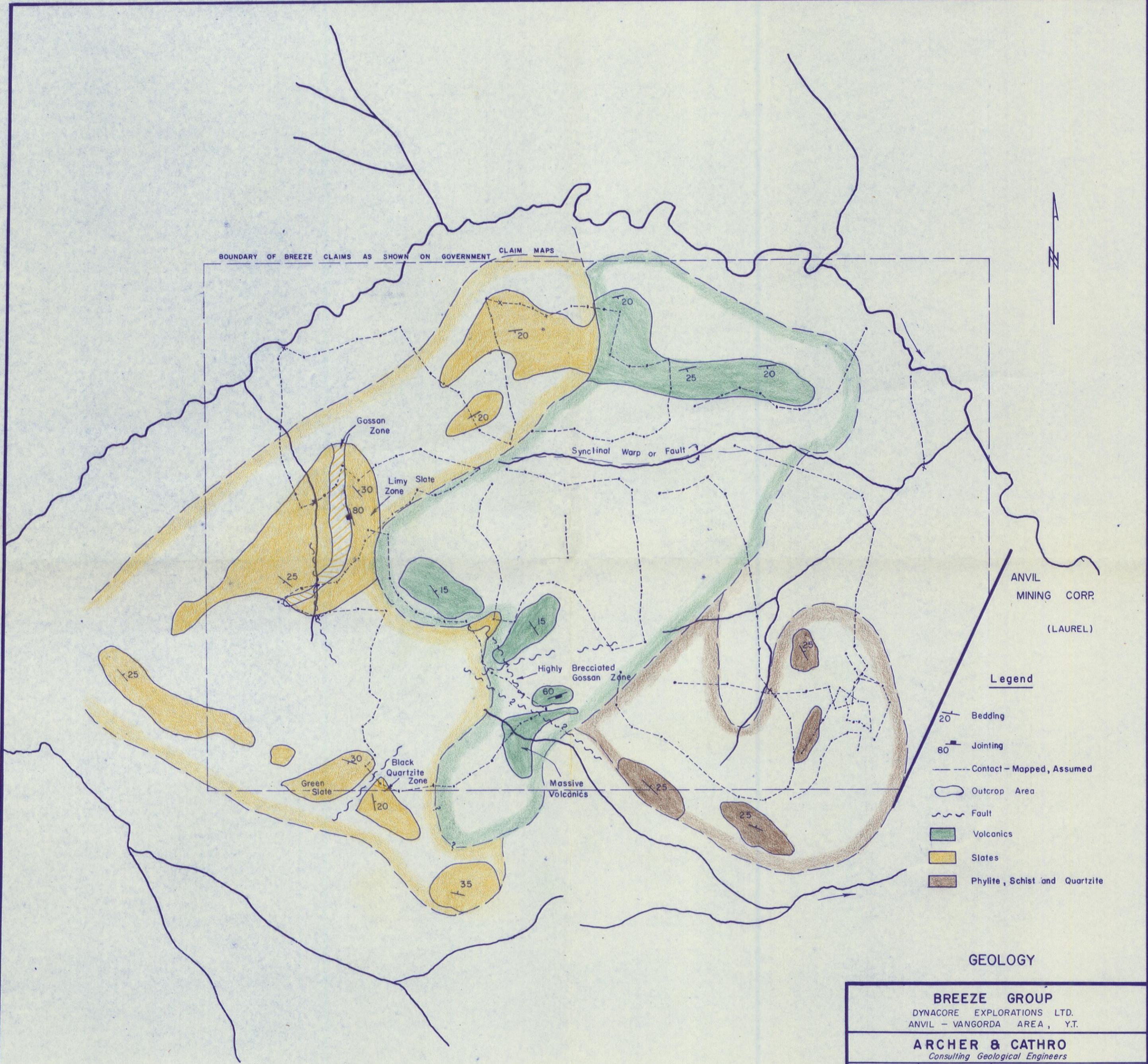
SCALE
1000 0 1000 2000 3000 4000 5000
FEET FEET
1 inch to 1320 Feet
(Approx.)

ELECTROMAGNETIC MAP

Fig. #3



BOUNDARY OF BREEZE CLAIMS AS SHOWN ON GOVERNMENT CLAIM MAPS



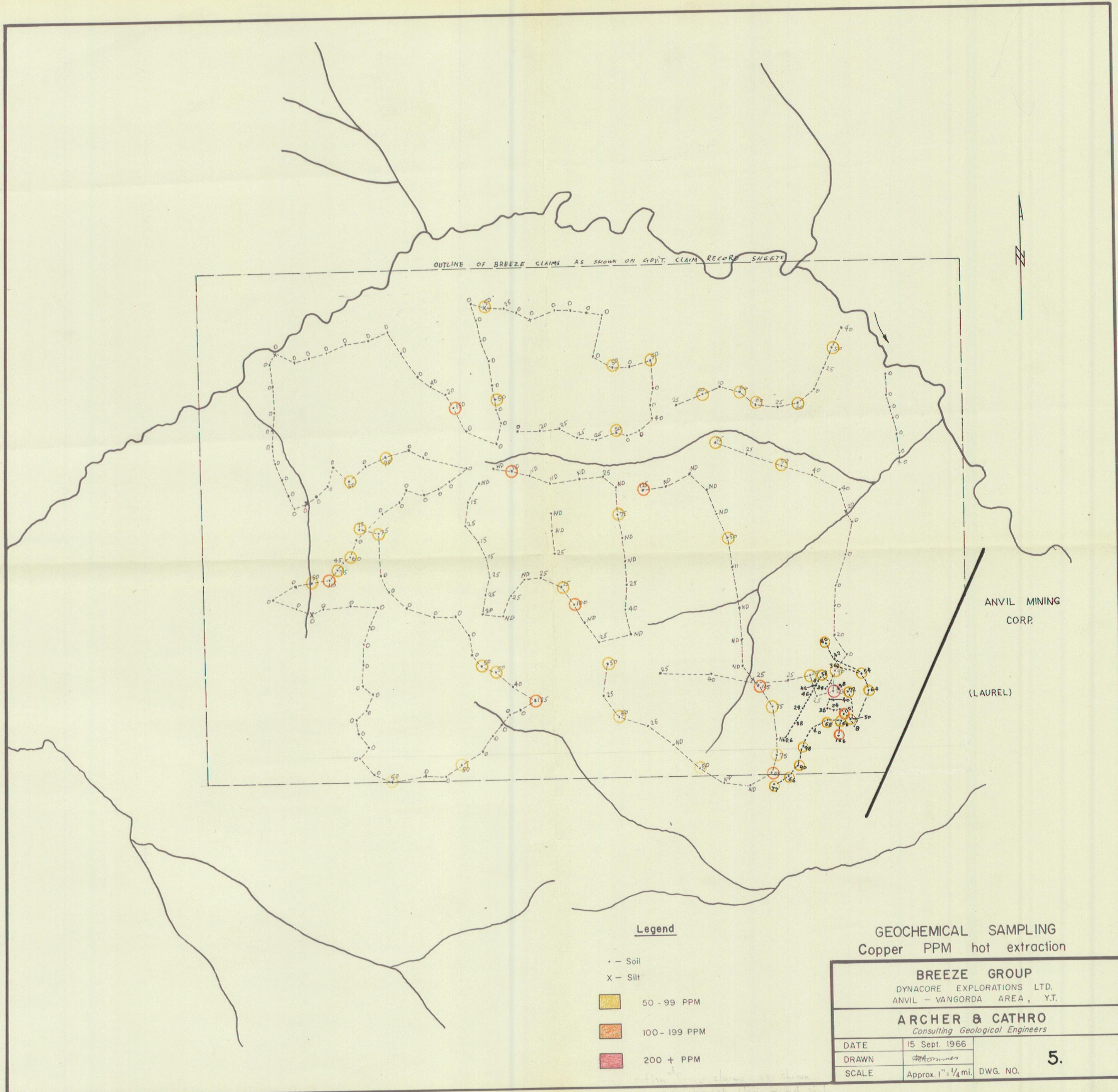
ANVIL
MINING CORP.
(LAUREL)

Legend

- 20 Bedding
- 80 Jointing
- Contact - Mapped, Assumed
- Outcrop Area
- ~ Fault
- Volcanics
- Slates
- Phylite, Schist and Quartzite

GEOLOGY

BREEZE GROUP	
DYNACORE EXPLORATIONS LTD. ANVIL - VANGORDA AREA, Y.T.	
ARCHER & CATHRO <i>Consulting Geological Engineers</i>	
DATE	15 Sept. 1966
DRAWN	<i>[Signature]</i>
SCALE	Approx. 1" = 1/4 mi. DWG. NO. 4.



OUTLINE OF BREEZE CLAIMS AS SHOWN ON GOV'T. CLAIM RECORD SHEETS

ANVIL MINING
CORP.

(LAUREL)

Legend

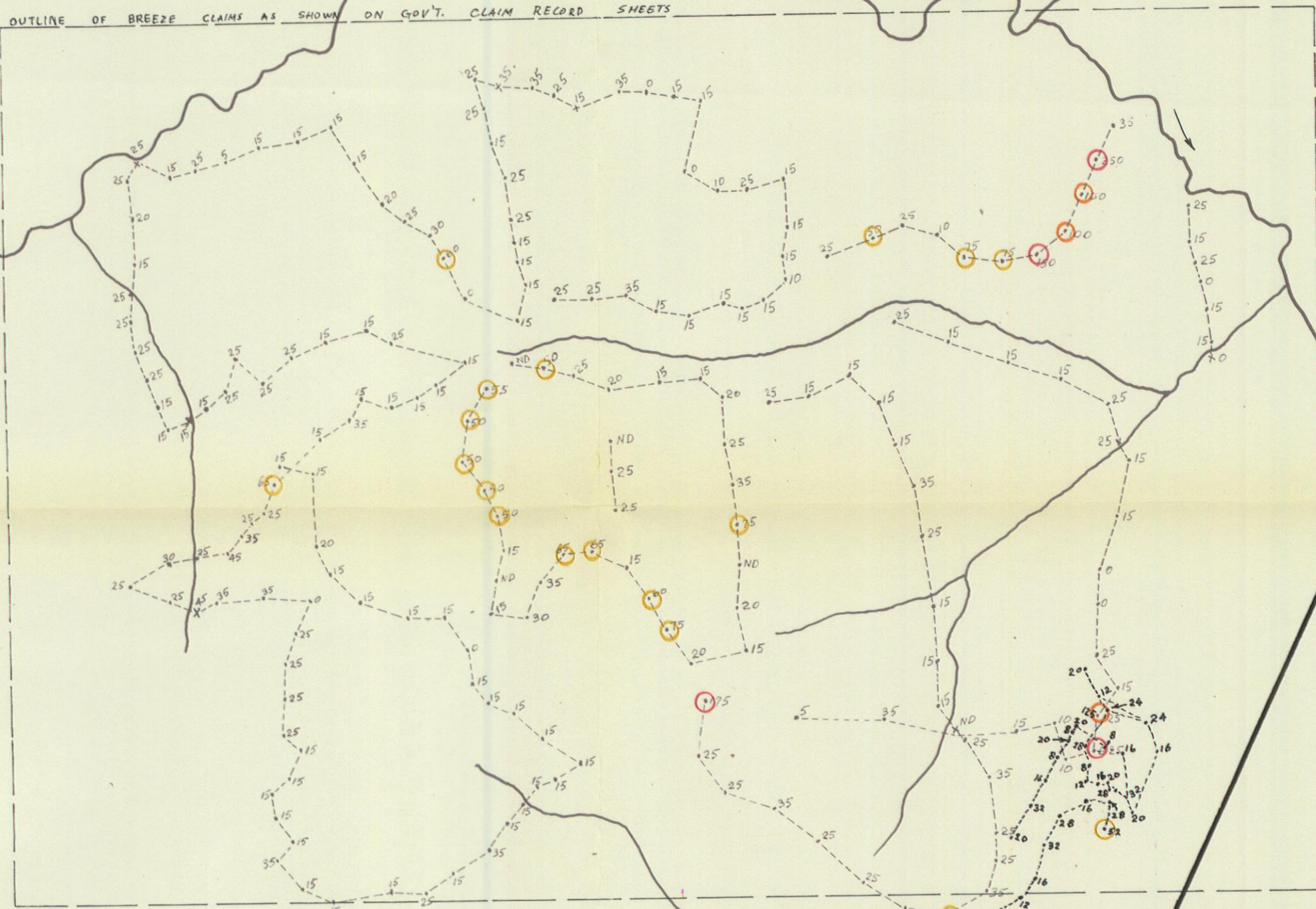
- - Soil
- X - Silt
- 50 - 99 PPM
- 100 - 199 PPM
- 200 + PPM

GEOCHEMICAL SAMPLING
Copper PPM hot extraction

BREEZE GROUP	
DYNACORE EXPLORATIONS LTD. ANVIL - VANGORDA AREA, Y.T.	
ARCHER & CATHRO Consulting Geological Engineers	
DATE	15 Sept. 1966
DRAWN	<i>Thommes</i>
SCALE	Approx. 1" = 1/4 mi. DWG. NO. 5.

outline of Breeze claims as shown on government claim record sheets

OUTLINE OF BREEZE CLAIMS AS SHOWN ON GOV'T. CLAIM RECORD SHEETS



ANVIL MINING CORP

(LAUREL)

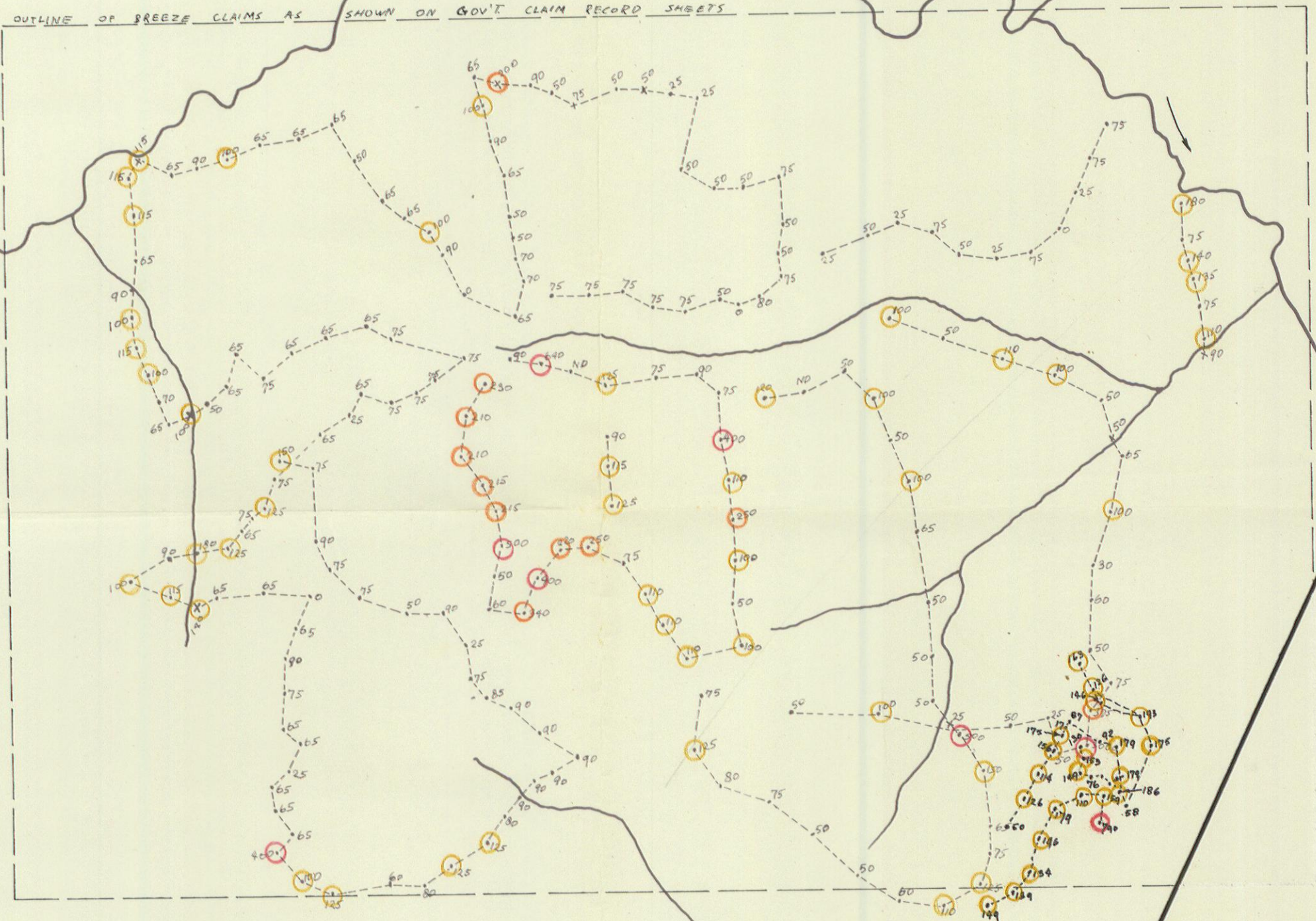
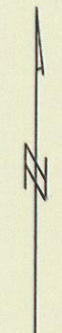
Legend

- - Soil
- X - Silt
- 50 - 99 PPM
- 100 - 149 PPM
- 150 + PPM

GEOCHEMICAL SAMPLING
Lead PPM hot extraction

BREEZE GROUP	
DYNACORE EXPLORATIONS LTD. ANVIL - VANGORDA AREA, Y.T.	
ARCHER & CATHRO Consulting Geological Engineers	
DATE	15 Sept. 1966
DRAWN	<i>Archives</i>
SCALE	Approx. 1" = 1/4 mi. DWG. NO. 6.

OUTLINE OF BREEZE CLAIMS AS SHOWN ON GOV'T CLAIM RECORD SHEETS



ANVIL MINING
CORR.
(LAUREL)

Legend

- - Soil
- X - Silt
- 100 - 199 PPM
- 200 - 399 PPM
- 400 + PPM

GEOCHEMICAL SAMPLING
Zinc PPM hot extraction

BREEZE GROUP
DYNACORE EXPLORATIONS LTD.
ANVIL - VANGORDA AREA, Y.T.

ARCHER & CATHRO
Consulting Geological Engineers

DATE	15 Sept. 1966
DRAWN	<i>Archives</i>
SCALE	Approx. 1" = 1/4 mi. DWG. NO.