VANCOUVER
434-1197

WHITEHORSE
667-4113

ARCHER, CATHRO & ASSOCIATES LTD.

CONSULTING GEOLOGICAL ENGINEERS

P.O. BOX 1051
WHITEHORSE, YUKON

REPORT ON

AIRBORNE GEOPHYSICAL SURVEY

LES, DORA, PETE AND GRAY CLAIM GROUPS

Anvil- Vangorda District, Yukon

Claim Sheets 105K-2, 6, 7, and 11.

for

ZIPPX SYNDICATE.

R.J. Cathro, P. Eng.

July, 1966- January, 1967

INDEX

page

Introduction . . . . . 1.

Interpretation of Helicopter Magnetic & Electromagnetic Survey, Anvil- Vangorda Area, Y.T., Zippx Syndicate by D.W. Smellie, P. Eng. . . . . 2.

Appendix I- Affidavit. . . . . 6.

Appendix II- Statement of Costs . . . . . 7.

Appendix III- Personael. . . . . 8.

MAPS

Figure 1- Location Plan- Anvil-Vangorda District 9

Figure 2- Key Map- Lees Group- Sheet 105K-2 10

Figure 3- " " Dora " " 105K-6 11

Figure 4- " " Pete " " 105K-7 12

Figure 5- " " Gray " " 105K-11 13

Pocket 1- Lees Group Airborne Maps (2)

Pocket 2- Dora " " " (2)

Pocket 3- Pete " " " (2)

Pocket 4- Gray " " " (2)

INTRODUCTION

During July, 1966 an airborne geophysical survey was organized by the writer and flown over four separate groups of claims owned by the Zippx Syndicate in widely scattered parts of the Anvil- Vangorda District. These claim groups, each of which is a contiguous block, are situated as follows (see Figures 1-5)

LESS	1-49	Sheet 105-K-2
DORA	1-32	" 105-K-6
PETE	1-86	" 105-K-7
GRAY	1-40	" 105-K-11

The same Lockwood system that proved so successful for Dynasty Explorations Ltd. was used on this survey. The equipment was mounted in a Bell 204 B turbine helicopter chartered from Okanagan Helicopters Ltd. A preliminary plot of the uncorrected data was made in the field by Exploration Geophysics (Yukon) Ltd., and interpreted byDr. D.W. Smellie, of that firm. Dr. Smellie's report, including a short discrption of the instrumentation of the Lockwood system, follows.

INTRODUCTION

A combined helicopter magnetic and electromagnetic survey has been carried out by Lockwood Survey Corporation Limited for the Zippx Syndicate. The survey was flown during July 1966 in the Anvil-Vangorda area of the Yukon Territory. The four claim groups surveyed were the Peter, Dora, Lees and Gray.

INSTRUMENTATION

The combined helicopter magnetic and electromagnetic installation consists of the Gulf Model III airborne magnetometer and the E.M. system developed by Hunting Survey Corporation (now Lockwood).

The E.M. system consists of coaxial transmitter and receiver coils mounted 30 feet apart in a "bird" that is suspended 100 feet below the helicopter when in operation. The instrument records the in-phase and quadrature components of the secondary field relative to the primary field at the receiver coil. The operating frequency is 4000 cycles per second.

FIELD PROCEDURE

The survey was flown at an average line spacing of 1000 feet and at 200 feet mean terrain clearance.

The flight path was recovered by plotting positions on the ground determined by a positioning camera that takes a sequence of exposures while the survey is in progress. The magnetic data were corrected for diurnal variation and plotted in the form of contours of equal magnetic intensity. The E.M. data were plotted as contours of in-phase amplitude in parts per million with respect to the primary. Anomalies are shown by circled figures representing the amplitudes of the in-phase and quadrature components.

RESULTS

The results are shown on four sets of maps at a scale of one inch equals 1320 feet.

Pete Group

The strongest E.M. anomaly on this group occurs at 11 (2445) and 12 (2660), the latter denoting line 12 at fiducial 2660. Another occurs at 1 (3486) and 2 (3368). Neither shows a

significant magnetic correlation. The quality of neither is such as to indicate a high probability of the source being sulphite mineralization as opposed to graphite. In spite of this reservation, both are recommended for ground magnetic, electromagnetic and geochemical surveys.

An electromagnetic anomaly of good quality occurs at 5 (2916), 6 (3435) and 7 (2340, 2345). Although the amplitude is lower than the above, the quality appears better. It is also recommended for ground follow-up.

Dora Group

No anomalies of good quality were noted.

Lees Group

A strong E.M. anomaly occurs at 2 (1999). This is recommended for ground magnetic electromagnetic and geochemical work.

Gray Group

No anomalies of good quality were noted.

Respectfully submitted

DWS:sd

D.W. SMELLIE, P.Eng.
for Exploration Geophysics
(Yukon) Ltd.

December 20, 1966

FIGURE I

ZIPPX SYNDICATE

ANVIL - VANGORDA CREEK — ROSS RIVER DISTRICT

Additional copies of this map may be obtained on application to Archer, Cathro & Associates Ltd., Box 1051, Whitehorse, Y.T.

Association of Professional Engineers of the Yukon Territory
R. J. CATHRO
GEOLOGICAL
ENGINEER

PETE GROUP
105-K-7

GRAY GROUP
105-K-11

DORA GROUP
105-K-6

LEES GROUP 105-K-2

ANVIL - VANGORDA AREA
YUKON

PREPARED BY
ARCHER, CATHRO & ASSOC. LTD.
WHITEHORSE

THIS MAP IS DRAWN FROM GOVERNMENT CLAIM MAPS AND IS BELIEVED TO BE CORRECT. INDIVIDUAL LOCATIONS AND OWNERSHIP ARE NOT CERTIFIED.

1 2 3 4 5 MILES

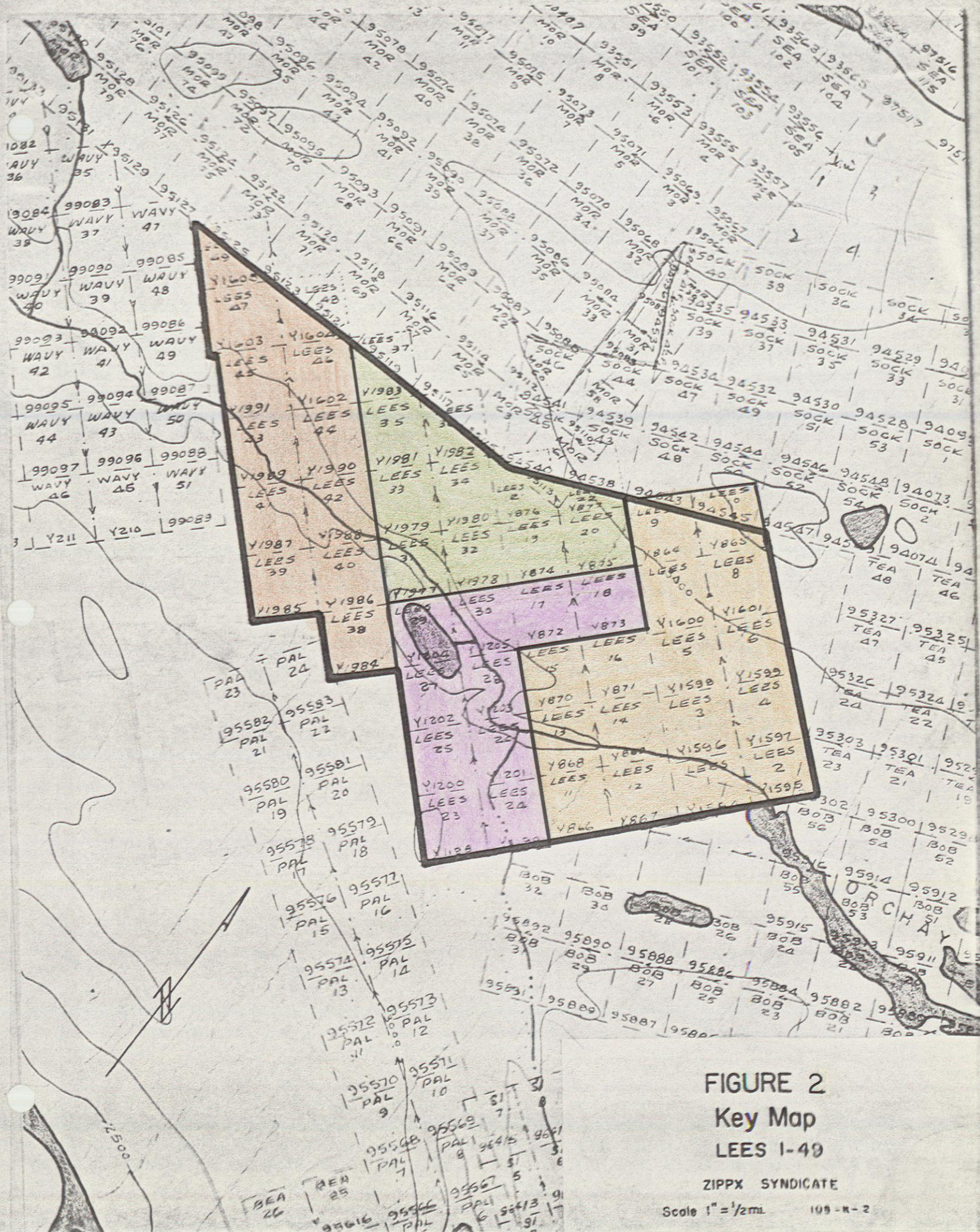


FIGURE 2

Key Map

LEES 1-49

ZIPPX SYNDICATE

Scale 1" = 1/2 mi. 109-K-2

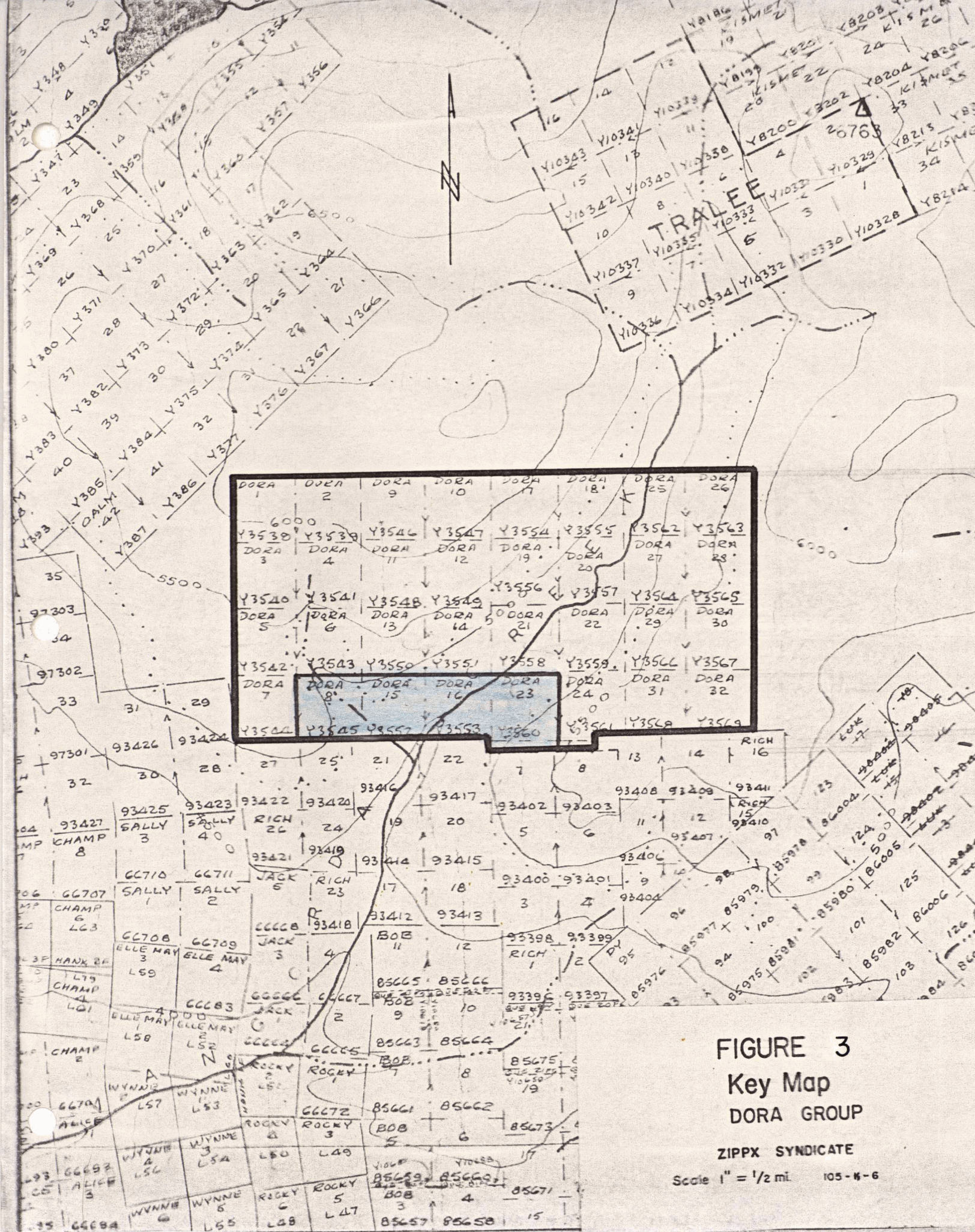


FIGURE 3

Key Map

DORA GROUP

ZIPPX SYNDICATE

Scale 1" = 1/2 mi. 105-16-6

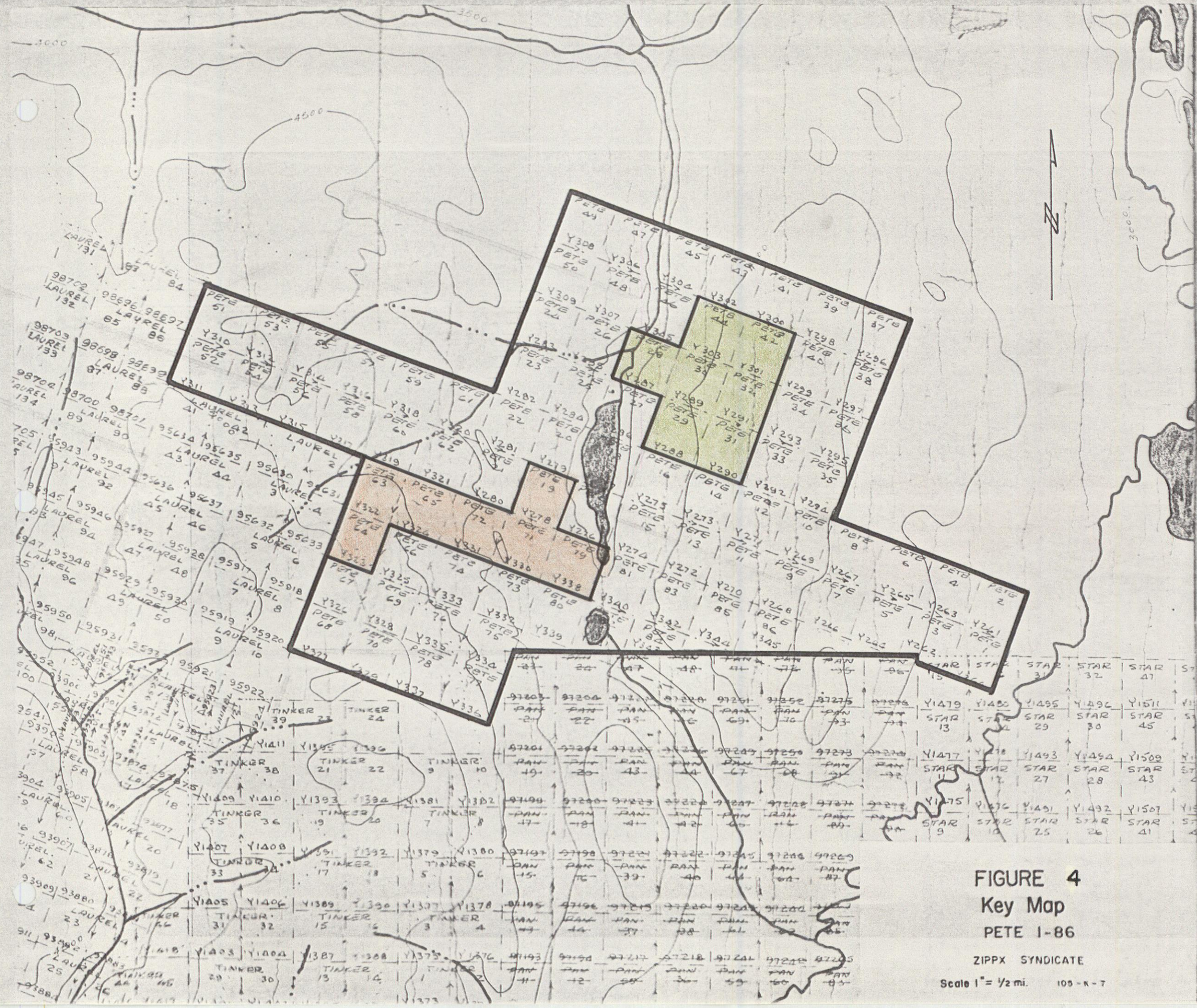


FIGURE 4
Key Map
PETE 1-86

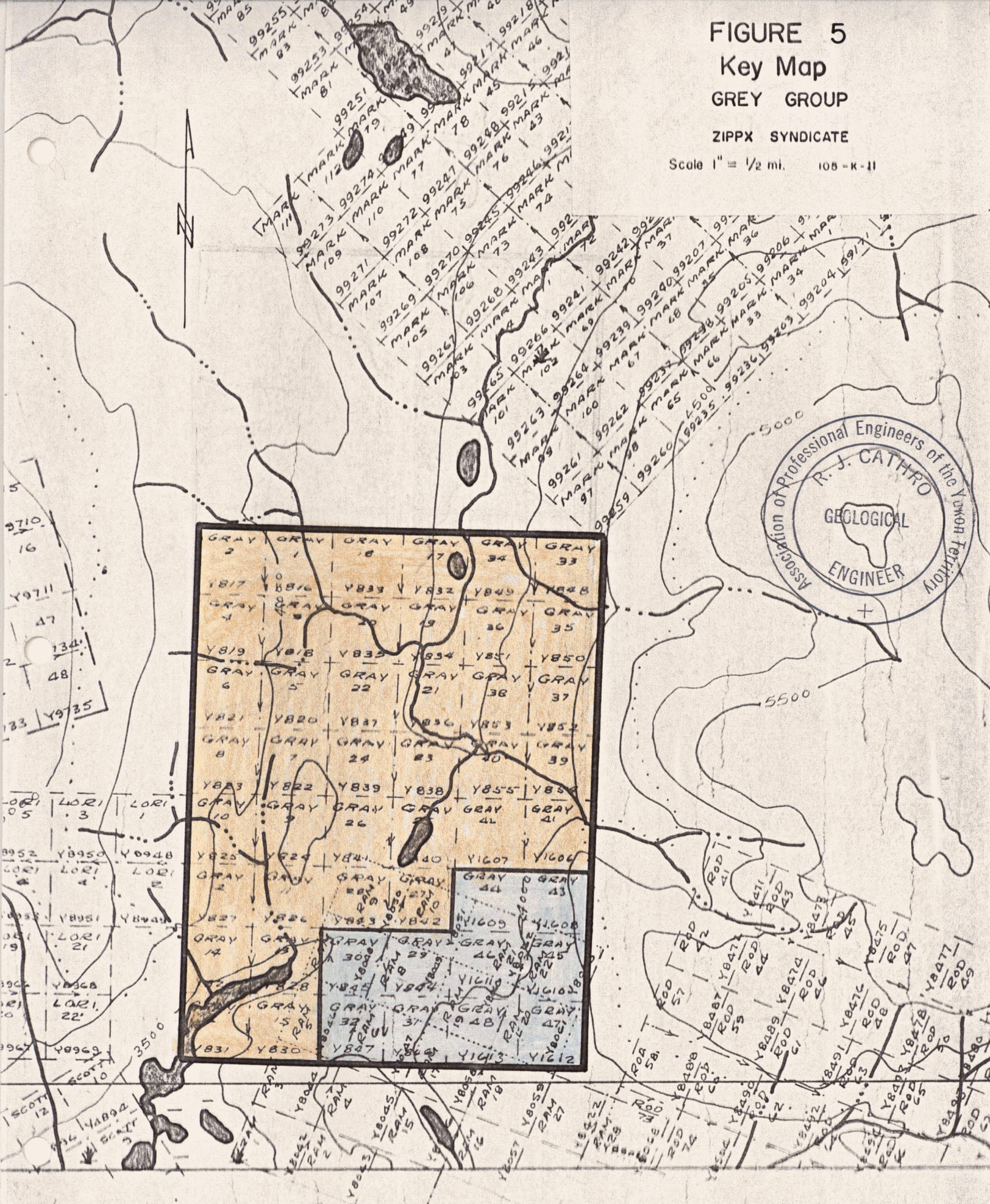
ZIPPX SYNDICATE

Scale 1" = ½ mi. 105 - K - 7

FIGURE 5
Key Map
GREY GROUP

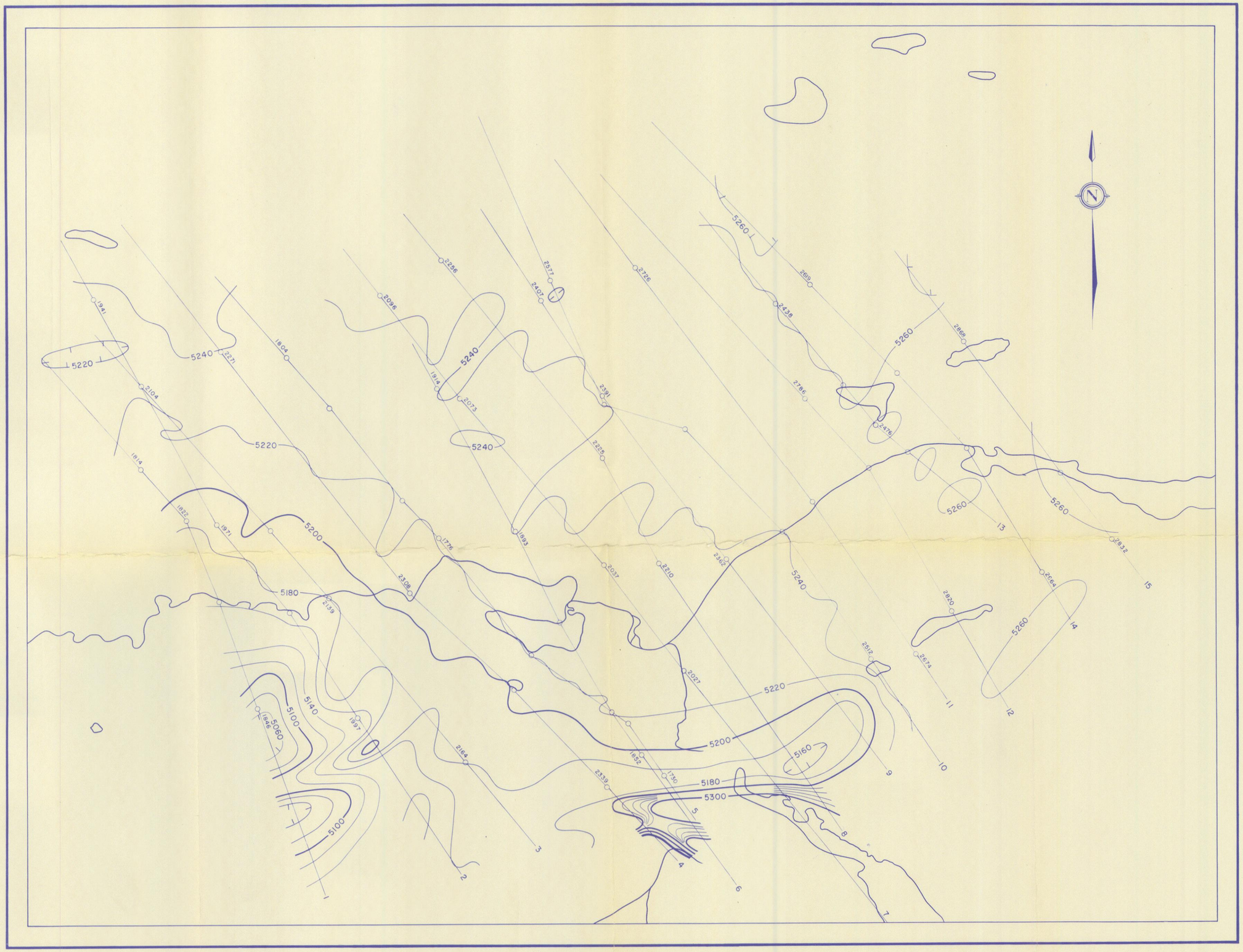
ZIPPX SYNDICATE

Scale 1" = 1/2 mi. 105-K-11



ZIPPX SYNDICATE

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 3690
FLIGHT LINES .....

LEES GROUP

YUKON TERRITORY

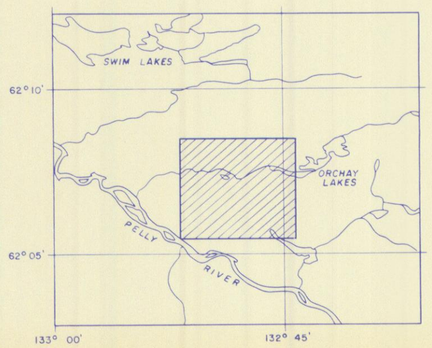
SCALE

1000 0 1000 2000 3000 4000 5000
FEET FEET

1 Inch to 1320 Feet
(Approx.)

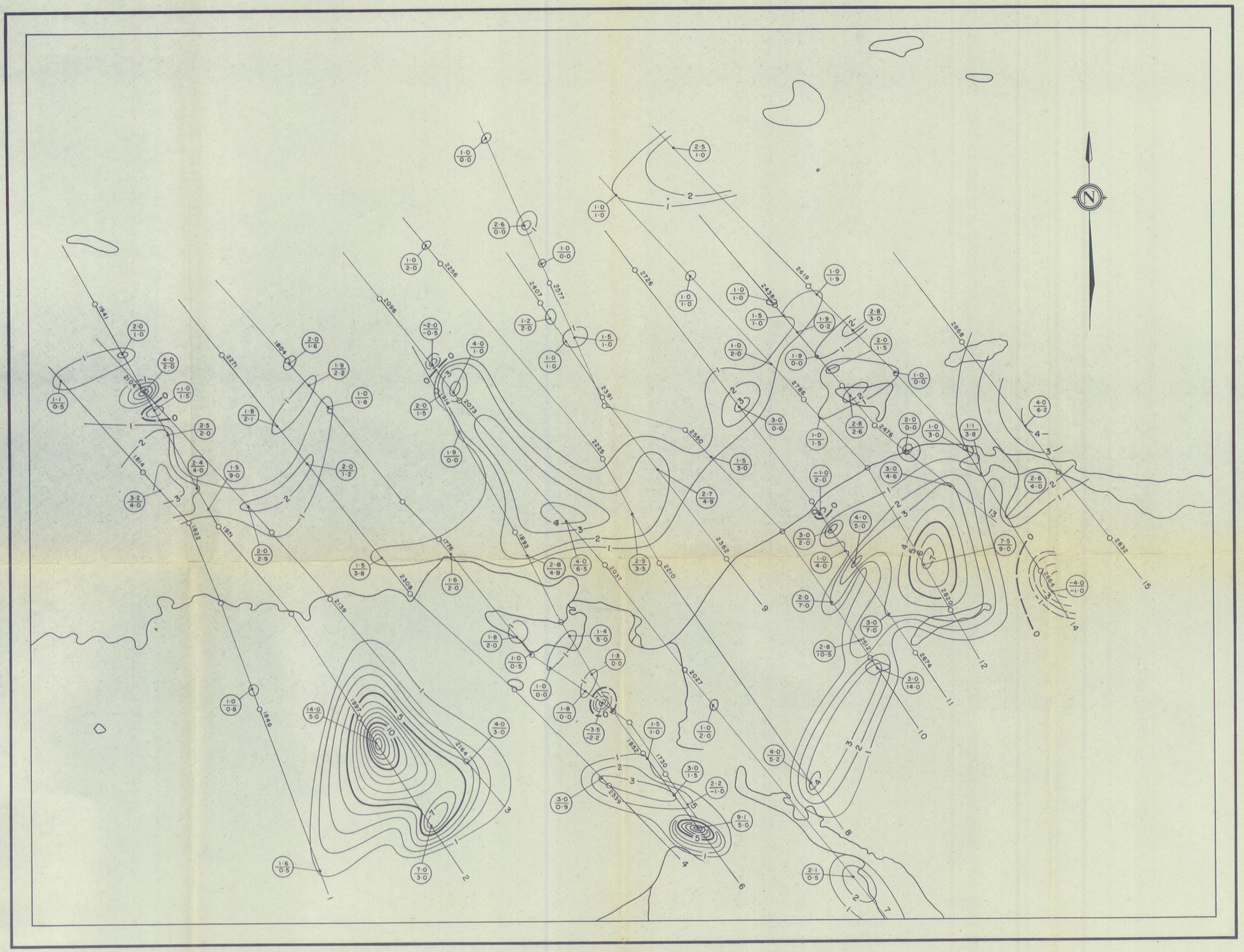
AEROMAGNETIC MAP

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



ZIPPX SYNDICATE

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 $\frac{\text{in phase component}}{\text{quadrature component}}$ The frequency of the primary current is 4000 cycles per second.

LEES GROUP

YUKON TERRITORY

SCALE

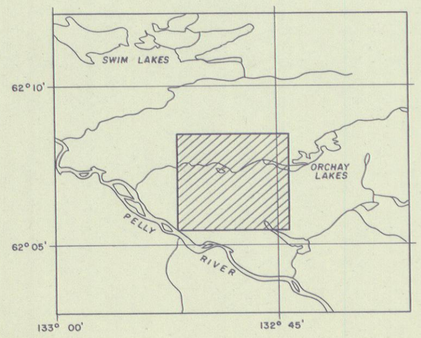
1000 FEET 0 1000 2000 3000 4000 5000 FEET

1 Inch to 1320 Feet

(Approx.)

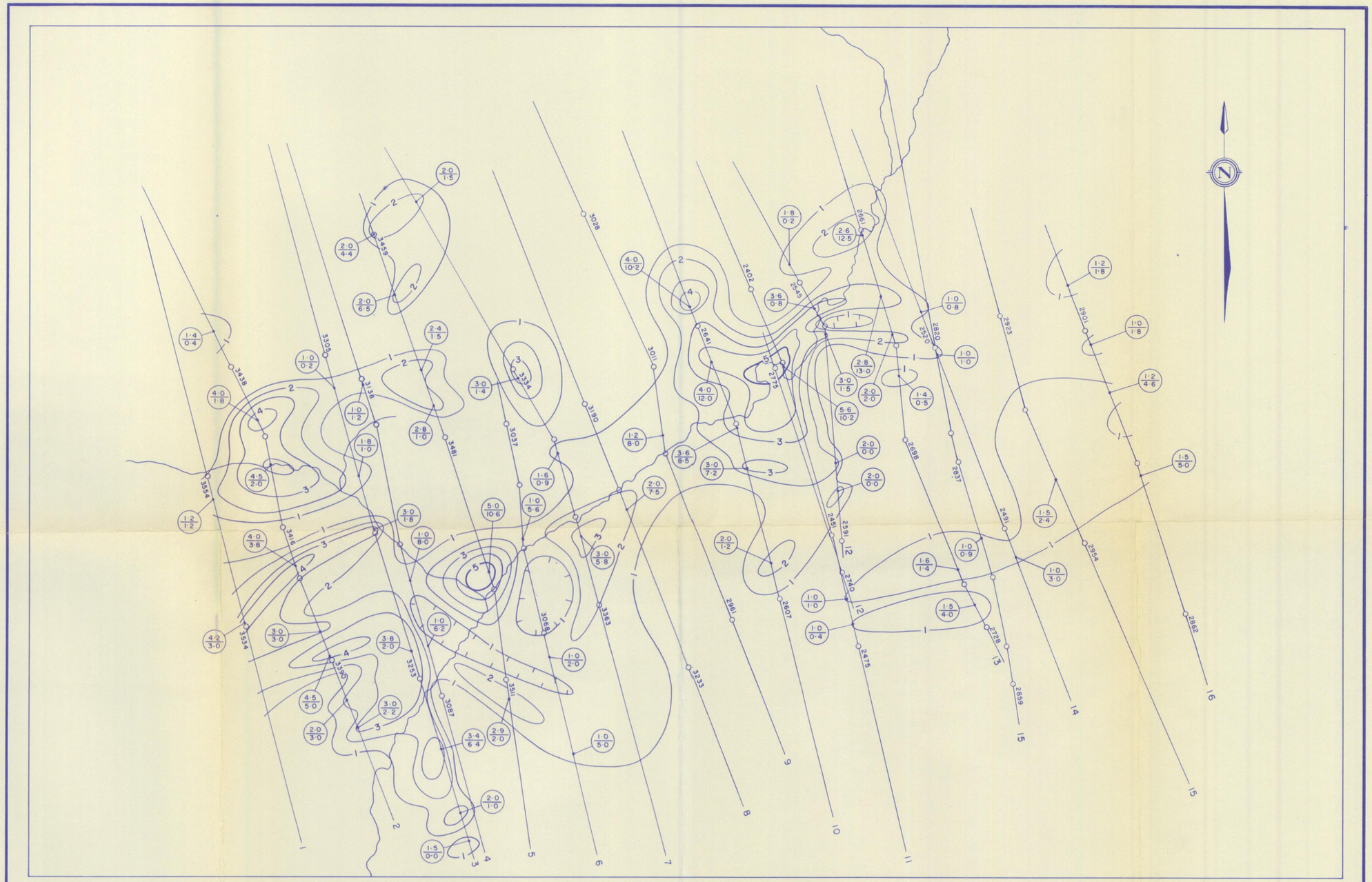
ELECTROMAGNETIC MAP

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



ZIPPX SYNDICATE

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. .....
FIDUCIAL POINTS 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 $\frac{\text{in phase component}}{\text{quadrature component}}$ The frequency of the primary current is 4000 cycles per second.

DORA GROUP

YUKON TERRITORY

SCALE

1000 FEET 0 1000 2000 3000 4000 5000 FEET

1 Inch to 1320 Feet

(Approx.)

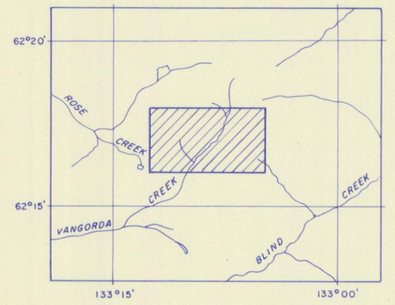
ELECTROMAGNETIC MAP

Flown and Compiled by

LOCKWOOD SURVEY CORPORATION LIMITED

TORONTO, CANADA

1966



ZIPPX SYNDICATE

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	3690
FLIGHT LINES	

DORA GROUP

YUKON TERRITORY

SCALE

1000 FEET 0 1000 2000 3000 4000 5000 FEET

1 Inch to 1320 Feet

(Approx.)

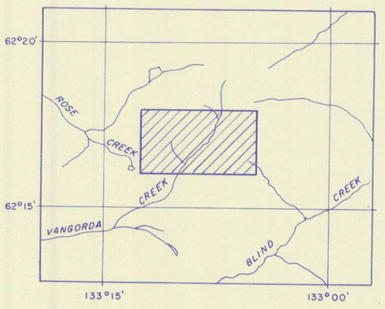
AEROMAGNETIC MAP

Flown and Compiled by

LOCKWOOD SURVEY CORPORATION LIMITED

TORONTO, CANADA

1966



ZIPPX SYNDICATE

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 3690
FLIGHT LINES .....

PETE GROUP

YUKON TERRITORY

SCALE

1000 FEET 0 1000 2000 3000 4000 5000 FEET

1 Inch to 1320 Feet

(Approx.)

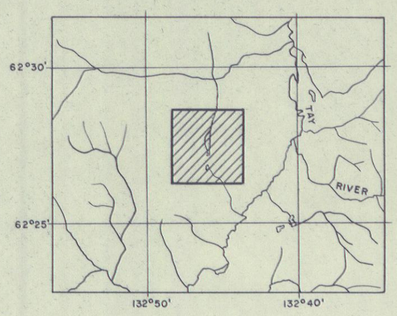
AEROMAGNETIC MAP

Flown and Compiled by

LOCKWOOD SURVEY CORPORATION LIMITED

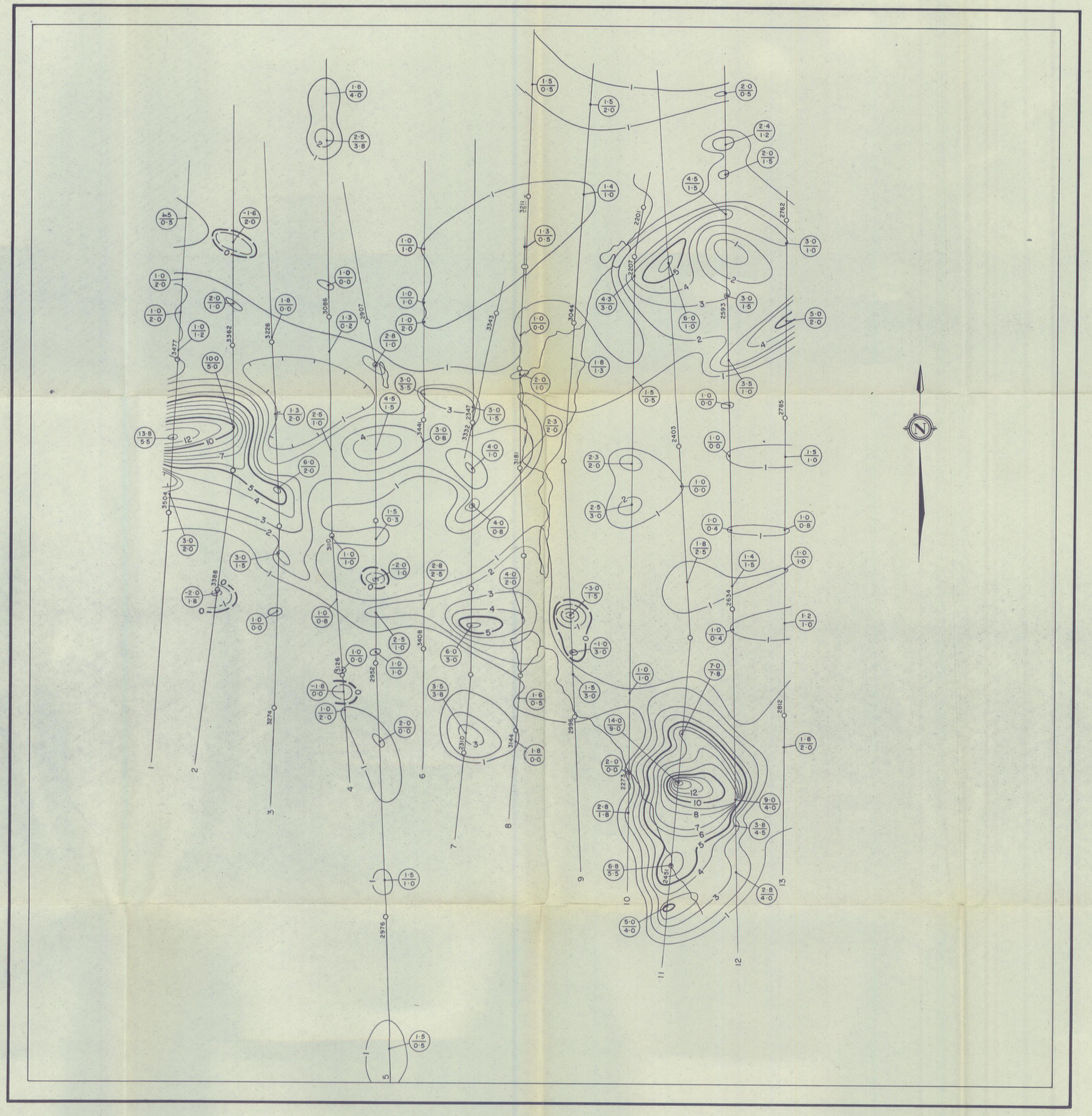
TORONTO, CANADA

1966



ZIPPX SYNDICATE

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 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 $\frac{\text{in phase component}}{\text{quadrature component}}$ The frequency of the primary current is 4000 cycles per second.

PETE GROUP

YUKON TERRITORY

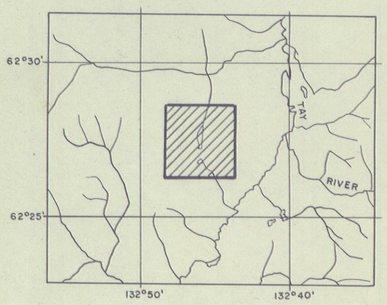
SCALE

1000 0 1000 2000 3000 4000 5000
FEET FEET

1 Inch to 1320 Feet
(Approx.)

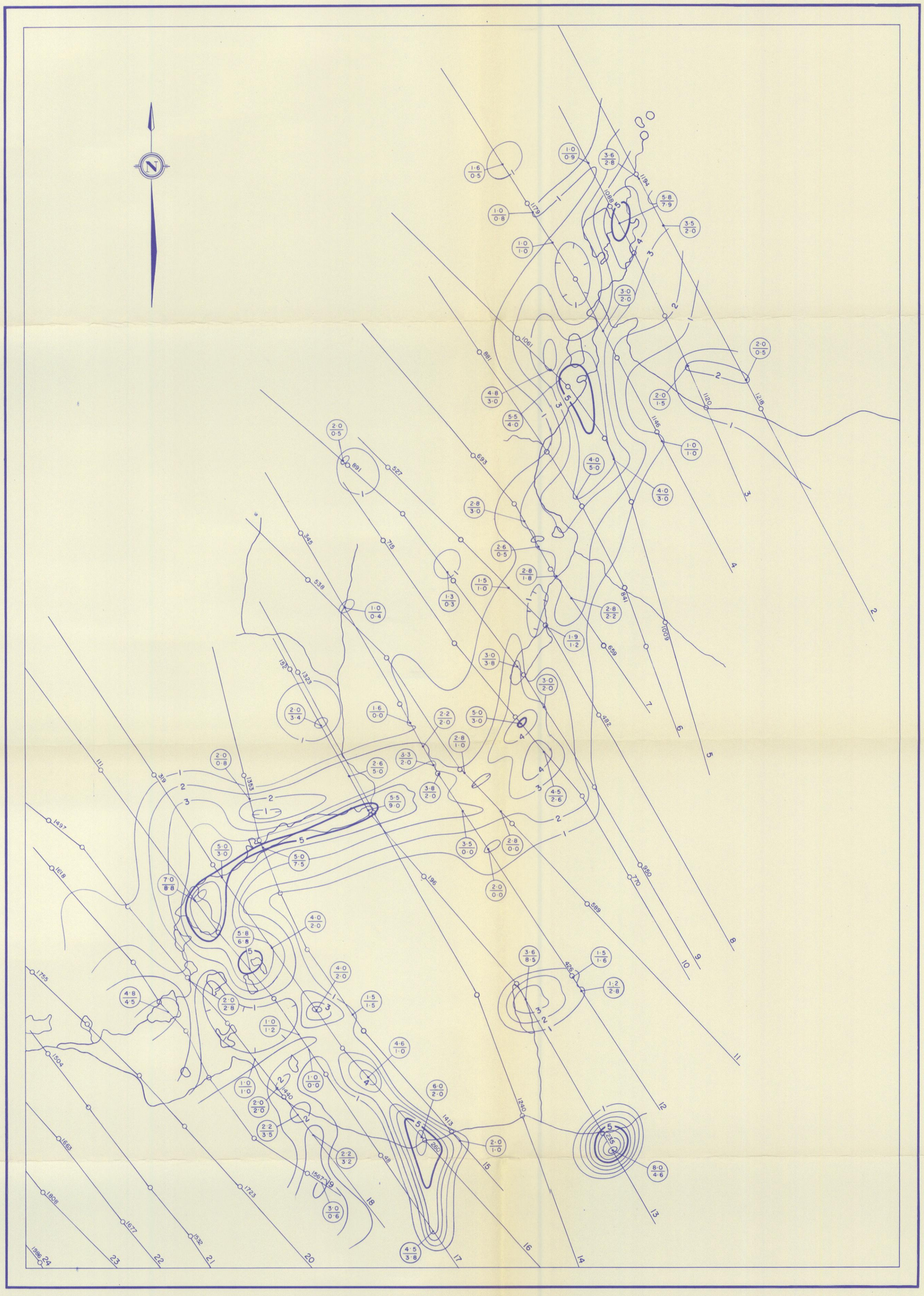
ELECTROMAGNETIC MAP

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



ZIPPX SYNDICATE

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 ---------- ○ 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 $\frac{\text{in phase component}}{\text{quadrature component}}$ The frequency of the primary current is 4000 cycles per second.

GRAY GROUP

YUKON TERRITORY

SCALE

1000 0 1000 2000 3000 4000 5000

FEET FEET

1 Inch to 1320 Feet

(Approx.)

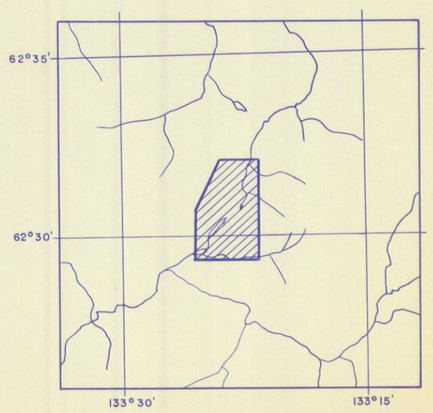
ELECTROMAGNETIC MAP

Flown and Compiled by

LOCKWOOD SURVEY CORPORATION LIMITED

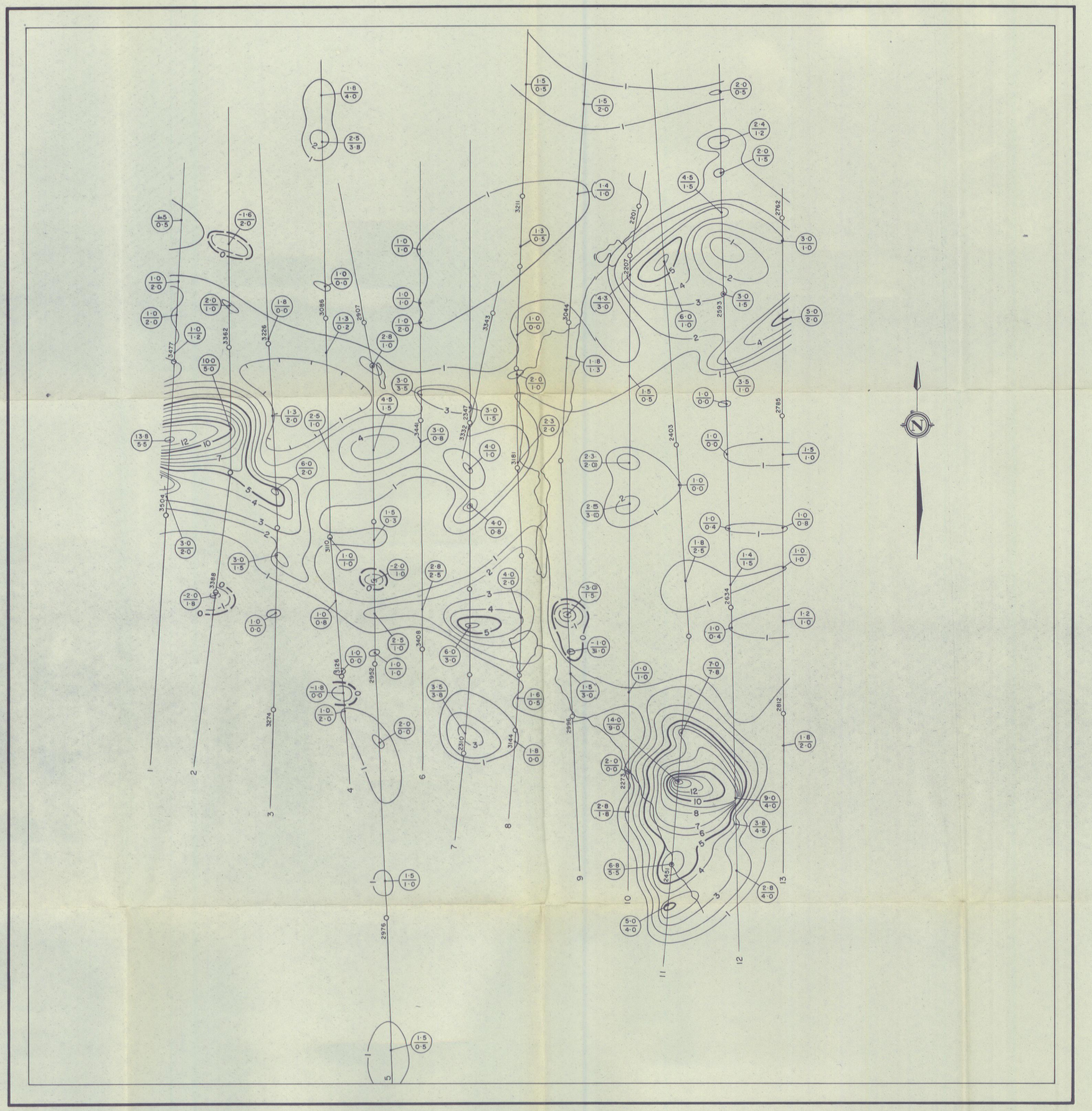
TORONTO, CANADA

1966



ZIPPX SYNDICATE

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 $\frac{\text{in phase component}}{\text{quadrature component}}$ The frequency of the primary current is 4000 cycles per second.

PETE GROUP

YUKON TERRITORY

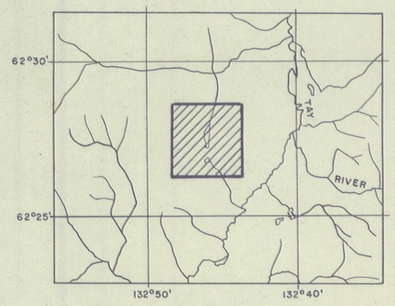
SCALE

1000 FEET 0 1000 2000 3000 4000 5000 FEET

1 Inch to 1320 Feet
(Approx.)

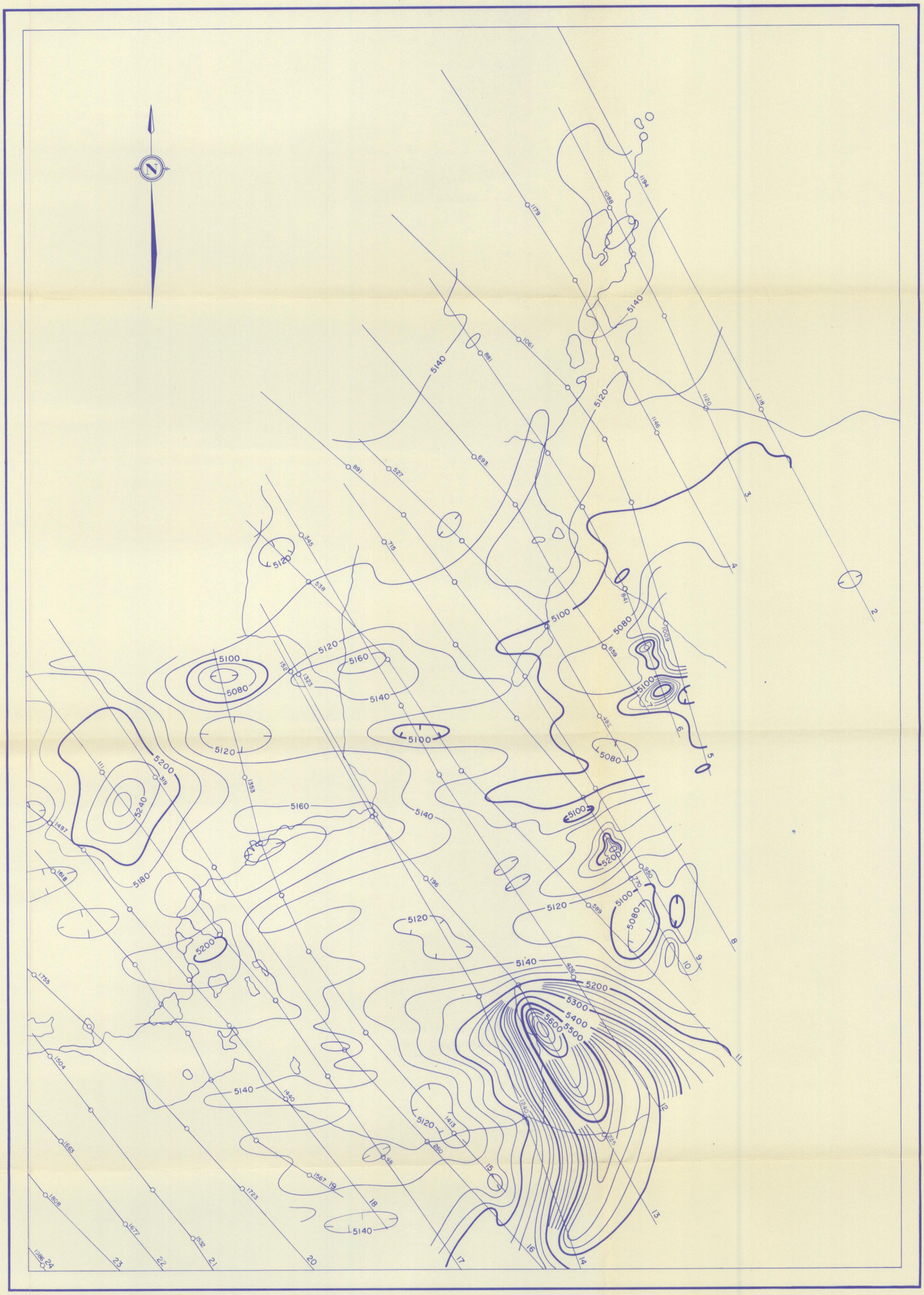
ELECTROMAGNETIC MAP

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



ZIPPX SYNDICATE

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 ---------- 3690
FLIGHT LINES ----------

GRAY GROUP

YUKON TERRITORY

SCALE

1000 0 1000 2000 3000 4000 5000
FEET FEET

1 Inch to 1320 Feet
(Approx.)

AEROMAGNETIC MAP

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