REPORT ON
A TURAM ELECTROMAGNETIC SURVEY
FOTO CLAIM GROUP
FARO AREA, YUKON TERRITORY
ON BEHALF OF
DYNASTY EXPLORATIONS LIMITED

105M2

by

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and

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November 9, 1972

CLAIMS:

Name	
FOTO	15 - 52, 61 - 74, 76, 78, 79 - 94, 101 - 116, 122, 124, 126 - 136, 167 - 176, 198 - 200 (inclusive)

LOCATION:

About 12 miles east-southeast of the Peak of Mt. Nye, Yukon Territory
Whitehorse Mining Division
132° 62° SW

DATES:

July 19 to September 1, 1972

CONTENTS

FIGURES AND PLATES

SUMMARY

Several zones of anomalous responses were located within the Foto Grid. The most interesting of these lie along an arcuate structure, likely a major fold. Zones within this area warrant additional exploratory attention.

It is recommended that the present electromagnetic results be correlated with known geology, magnetics, geochemistry, etc. of the Foto property.

Subject to such correlations, fourteen diamond drill holes totalling 6600 feet are suggested.

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INTRODUCTION

During the period July 19 to September 1, 1972, a geophysical field party carried out a Turam electromagnetic survey in the Faro area, Yukon Territory on behalf of Dynasty Explorations Limited. The field work was under the direction of Mr. Tony Guernier, an experienced geophysical operator on staff with Scintrex Surveys Limited. Overall supervision was provided by the writers.

As shown on Figure 1, the survey area is located about 12 miles east-southeast of Mt. Nye. Access is by float plane from Faro. The property is swampy. During the course of the survey the weather was somewhat extremely poor.

The claims covered, in whole or part, by the present survey are listed on the front page of this report and are shown on Plate 2 (scale 1" = 1320').

DESCRIPTION OF METHOD AND INSTRUMENTATION

The Turam method was employed for the present survey since, in comparison with other electromagnetic techniques, it is relatively unaffected by orientation errors caused by rough topography, it provides deep penetration and allows accurate interpretation of anomaly characteristics.

Electromagnetic methods detect massive sulphide bodies by measuring the secondary electromagnetic field produced by eddy currents induced in

such bodies by a transmitted or primary electromagnetic field. The Turam method employs a large closed loop of wire as transmitter; the field strength ratio and phase difference, at two nearby observation points, are measured by means of two receiver coils.

The presence of a subsurface conductor is indicated by abnormal field strength ratios and phase differences. Typically, anomalies show a correspondence between positive values of the field strength ratio and negative phase differences.

A Sinctrex SE-71 instrument was employed for the survey. The receiver coil separation was 100'. Eighteen transmitting loops of the following dimensions were utilized:

2000' X 2400' (1 loop)
1500' X 3200' (2 loops)
3000' X 3200' (10 loops)
3000' X 4000' (5 loops)

The locations of their leading edges are shown on Plate 1.

An energizing frequency of 400 Hz was generally employed, though readings were also taken at 200 Hz on some lines.

Approximately 61 line miles of profile were covered. Readings were taken every 100' along thirty-five lines oriented east-west as illustrated on Plate 2.

GEOLOGY AND PURPOSE OF SURVEY

The writers are not familiar with the geology of the survey area. It has been studied by personnel of Dynasty Explorations Limited and is the subject of their reports.

The purpose of the present survey was to search for economic massive sulphide deposits similar to others in the area, for example,

the Anvil ore body at Faro and the conductors at Vangorda Creek and in the Swim Lakes region.

PRESENTATION OF RESULTS

The results of the present survey are presented on Plate 1 (Sheets 1 and 2) on the uniform scale of 1" = 400'. Sheet 1 contains the data measured over L-88 N - L-208 N inclusive; Sheet 2 contains the data over L-64 S - L-80 N inclusive. The Reduced Ratios and Phase Differences have vertical scales of 1" = 20% and 1" = 10° respectively.

Where anomalous field distortion occurs on the electromagnetic profiles the location and depth of the main current flow has been derived from the curve shapes. This location is noted on the profile sheets by a circle at the appropriate point. Anomalies have, where feasible, been connected between lines to obtain the projection of the current pattern. These "conductor axes" are chosen on the basis of depth σt values and other characteristics of the electromagnetic curve.

Conductivity X thickness (σt) values have been determined where possible. Highly conducting bodies (massive sulphides or graphite) generally have high σt values ($>$ 100 mhos). Poorly conducting bodies (overburden, etc.) usually have low σt values ($<$ 10 mhos).

To facilitate the final evaluation of the geophysical data the electromagnetic distortions are classified as Weak, Moderate or Strong. Strong anomalies are first priority exploration targets and are represented by well defined conductors of good conductivity. Weak anomalies, on the other hand, are generally poorly defined and are, on the basis of the geophysical data, of questionable merit.

TABLE I

Anomaly	Selected Peak Locations	σt & Depth Ranges	Comments
A	L-24 N; 55 E (117%; -5°) L-40 N; 48 E (120%; -7°) L-64 N; 43 E (122%; -11°)	5 - 20 mhos; 160 - 300 ft.	Strike N 25° W to N 10° W. More than 5000' long. A generally well defined clean anomaly. The double-peaked effect on some profiles suggests more than one conductor. The dip is likely grid E. Moderate conductivity - probably electronic conductor (sulphides or graphite).
B	L-120 N; 14 + 50 E (120%; -10°) L-136 N: 11 + 50 E (118%; -10°) L-152 N; 11 + 50 E (119%; -5°)	3 - 8 mhos 150 - 250 ft.	Strikes NS to N 15°W - arcuate and convex grid E. Converges with Anomaly C on L-160 N. Double peaked reflecting two conducting horizons 150 - 200 ft. apart. Likely dipping grid E. Well defined strong amplitudes. Moderate conductivity - probably electronic conductor (sulphide or graphite)
C	L-144 N; 20 + 50 E (130%; -8°) L-160 N: 10 + 50 E (141%; -4°)	3 - 50 mhos 150 - 250 ft.	Strikes about N 25° W. Very well defined with strong amplitudes. Converges with B on Line 160 N. Double-peaked at some intersections. Conductivity excellent on L-160 N, moderate elsewhere. Again likely dips grid E.

Anomaly	Selected Peak Locations	σc & Depth Ranges	Comments
D	L-184 N; 3 W (119%; -4°) L-192 N: 15 + 50 W (119%; -2°)	30 - 80 mhos. 200 - 400 ft.	Apparently an excellent conductor - sulphides or graphite. Probably northwest continuation of Anomalies B and C. Multiple conductor
E	L-176 N; 56 + 50 W (123%; -5°) L-192 N; 43 W (113%; -2°)	17 - 25 mhos. 350 ft.	Multiple conductivity. Apparently moderate - good conductivity but poor definition. Possibly the continuation of zones B - C and D.
F	L-114 N; 87 + 50 W (120%; -2°) L-144 N; 68 + 50 W (116%; -3°) L-160 N; 76 + 50 W (122%; -2°) L-168 N; 69 W (128%; -3°)	20 - 200 mhos. 200 - 300 ft.	Probably SW continuation of Anomaly E and same series of conductors. Multiple peaks suggesting several conducting horizons. Strong ratios, weak phase differences. Apparent conductivities are excellent suggesting electronic conduction - grpahite or sulphides. Likely dips grid west.
G	L-160 N; 45 W (115%; +1°) L-168 N; 46 W (128%; -3°)	17 - 100 mhos. 200 - 225 ft.	Multiple conductor. Good conductivity. Well defined on L-168. Apparently dips grid E. Interesting Anomaly in view of its apparent isolation and excellent geo-electric properties.

Anomaly	Selected Peak Locations	σt & Depth Ranges	Comments
H	L-200 N; 55 W (109%; -5°)	6 mhos.	Possibly part of Zone E. Multiple conductor poorly defined. Moderate conductivity. Open grid N and NW.
	L-208 N; 51 + 50 W (109%; -7°)	350 ft.	
J	L-152 N; 23 + 50 W (116%; -2°)	20 mhos.	Single line occurrence. Good definition. Good Conductivity
K	L-136 N; 11+ 50 W (108%; -6°)	-	Multiple poorly defined conductors. No reliable depth and conductivity estimates possible
L	L-48 S; 4 + 50 W (120%; -8°)	20 - 25 mhos. 250 - 300 ft.	Good conduction on L-48 S (sulphides or graphite). Possibly two conductors as shown. Several conductors of secondary importance nearby. Open to the south.
M	L-34 S; 49 + 50 E (121%; -3°)	100 mhos. 150 ft.	Strong single peak, excellent σt value. May extend NW to L-24 S and L-40 S. Shallow.
N	L-56 S; 39 + 50 E (93%; +5°)	-	Group of reversed Anomalies. Possibly a large flat conductor, (eg. swamp). Definition good.
	L-64 S; 48 + 50 E (110%; +6°)	-	
P	L-48 S; 68 E (104%; -3°)	-	Weak ratios and strong phase response indicating poor conduction.
	L-56 S; 66 + 50 E (105%; -5°)		

Anomaly	Selected Peak Locations	σt & Depth Ranges	Comments
Q	L-16 S: 15 + 50 W (89%; -2°)	-	Reversed ratios, normal phase differences. Possibly resulting from a combination of loop location and conductor attitude of residual interest.
R	L-64 N; 18 + 50 E (106%; -8°)	2 mhos. 100 ft.	Single point occurrence. Well defined conductivity. Shallow.
S	L-8 S; 47 + 50 E (107%; -6°)	13 mhos. 160 ft.	Fair anomaly on L-8 S. Moderate conductivity. Single line occurrence.

DISCUSSION OF RESULTS

Several zones of anomalous electromagnetic distortion have been outlined on Sheets 1 and 2. These are designated A - H inclusive, J - N inclusive and P - S inclusive. For convenience and brevity all of these zones are listed below in Table I along with selected peak locations, conductivity X thickness and depth ranges, and comments relevant to the various anomaly characteristics.

Zones A, B, C, D, E and F all lie along a major arcuate structure (Sheets 1 and 2) which likely represents a major fold (axial strike about north-south). From the postulated dips of the Turam anomalies this fold is likely a north plunging anticline and the conducting zone on its flanks (A, B, C, D, E and F) are likely formational (bedded horizons). Zones S, M and P are possibly the southern extensions of A.

Zones G, J and K lie within and close to the nose of the postulated fold.

The region of reversed anomalies lying on the east end of L-168 N - L-192 N inclusive likely reflects a flat lying conductor (swamp, etc.).

CONCLUSIONS AND RECOMMENDATIONS

Several anomalous electromagnetic responses were observed within the Foto Grid. These are delineated on Plate 1 (Sheets 1 and 2) by appropriate conductor axes, zonal designations, etc.

Several of the zones (of generally weak-moderate conductivity) appear to be distributed along a major arcuate structure which is interpreted to be a major fold striking north-south.

All of the anomalous zones observed within the area warrant additional exploratory attention. Of particular interest of course are

those exhibiting relatively high conductivity X thickness (σt) products which reflect relatively high conductivity material. Initial exploratory attention should be paid to such zones.

It is recommended that the present electromagnetic results be carefully correlated with the known geology, geochemistry, mineral occurrences and geophysics (magnetics, etc.) of the Foto property. Subsequent decisions on the relative merits of the various anomalies would be subject to such correlation.

The following diamond drill holes would be suitable to investigate the source of the main conductors within the Foto Grid.

Anomaly A

DDH #1 Collar at L-64 N Station 46 E. Drill grid west at 45° for a distance of 600'

DDH #2 Collar at L-40 N Station 50 E. Drill grid west at 45° for a distance of 400'

DDH #3 Collar at L-24 N Station 57 E. Drill grid west at 45° for a distance of 400'

Anomaly B

DDH #4 Collar at L-120 N Station 17 E. Drill grid west at 45° for a distance of 400'

DDH #5 Collar at L-152 N Station 13 E. Drill grid west at 45° for a distance of 400'

Anomaly C

DDH #6 Collar at L-144 N Station 22 E. Drill grid west at 45° for a distance of 400'

DDH #7 Collar at L-160 N Station 13 + 50 E. Drill grid west at 45° for a distance of 400'

Anomaly

DDH #8 Collar at L-192 N Station 12 E. Drill grid west at 45° for a distance of 500'

Anomaly E

DDH #9 Collar at L-192 N Station 45 + 50 W. Drill grid east at 45° for a distance of 500'

Anomaly F

DDH #10 Collar at L-168 N Station 72 W. Drill grid east at 45° for a distance of 600'

DDH #11 Collar at L-160 N Station 80 W. Drill grid east at 45° for a distance of 600'

Anomaly G

DDH #12 Collar at L-168 N Station 47 W. Drill grid east at 45° for a distance of 500'

Anomaly L

DDH #13 Collar at L-48 S Station 6 + 50 W. Drill grid east at 45° for a distance of 500'

Anomaly M

DDH #14 Collar at L-34 S Station 50 + 50 E. Drill grid west at 45° for a distance of 400'

Further drilling and/or geophysical coverage of the Foto grid would be predicated upon the results of the above drilling programme.

In order to respond to electromagnetic survey techniques sulphide bodies must exhibit conductivities many times higher than normal rocks. This may require as much as 25% by volume of sulphide mineralization. Such bodies are termed "massive sulphides". It is possible therefore that mineralized bodies which do not fall into the "massive sulphide" specification may lie undetected within the present survey grid. Further geophysical investigations of this area may be best executed using the Induced Polarization method which can detect small percentages by volume of metallically conducting mineralization under suitable conditions of body size and depth of burial.

Respectfully submitted,

SCINTREX SURVEYS LIMITED

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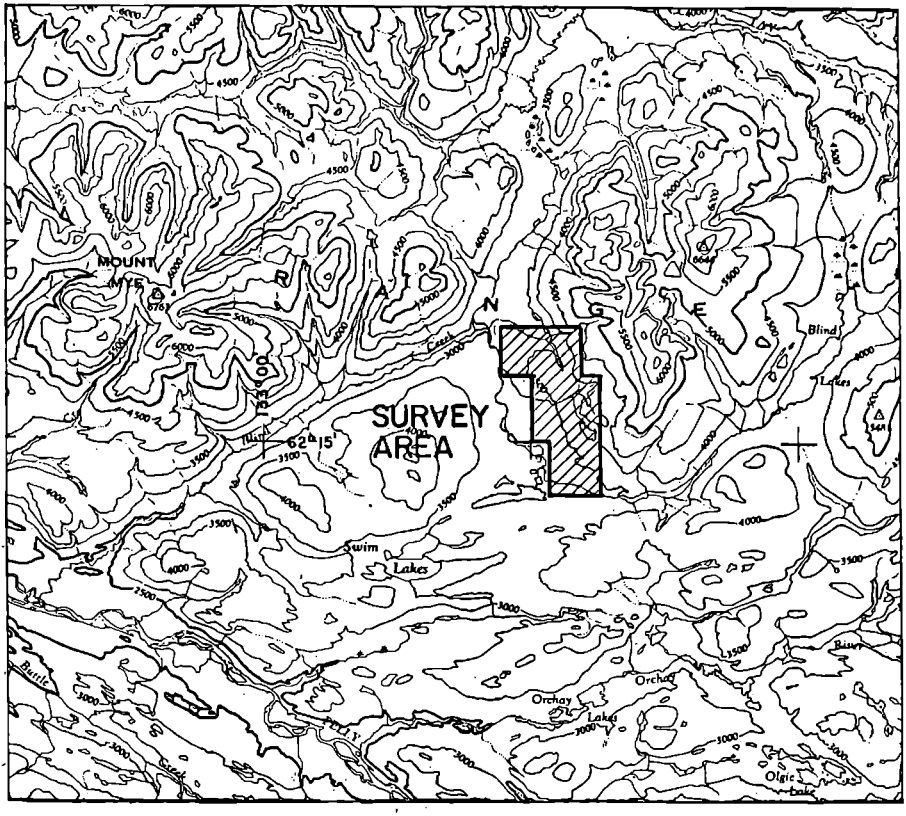

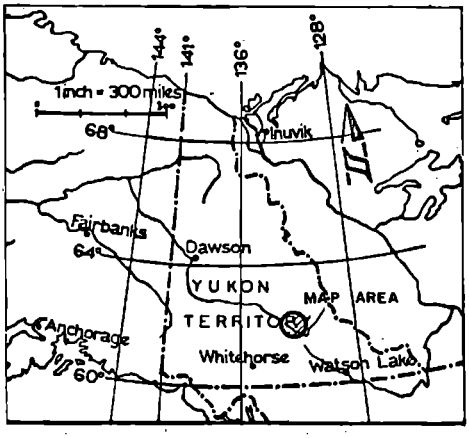

DYNASTY EXPLORATIONS LTD.

LOCATION MAP

FOTO GROUP

FARO AREA, YUKON TERRITORY

SCALE 1 : 250,000

4miles 0 4miles

Survey by
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FIG. 1