GEOPHYSICAL REPORT ON E.M. AND MAGNETIC SURVEYS OF THE FETISH PROPERTY (KINK 1-8 MINERAL CLAIMS) WOLVERINE LAKE AREA, WATSON LAKE MINING DISTRICT YUKON TERRITORY

61°25'N; 130°07'W
N.T.S. 105-G-8E

OWNER: ARCHER, CATHRO & ASSOCIATES (1981) LTD.
OPERATOR: ESSO MINERALS CANADA

By: G. COOPER
Date: January 17, 1983
This report has been examined by the Geological Survey of Canada under Section 58 - 1 of the Mining Act and is offered as representation work in the amount of $500.00.

[Signature]

Regional Manager, Exploration and Geological Services for Commissioner of Yukon Territory.
MAKE OATH AND SAY, THAT:

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.

2. I have done, or caused to be done, work on the following mineral claim(s):

   (Here list claims on which work was actually done by number and name)

   Kink 1 - 8 YA69007-014

   situated at 1500 m SE of Wolverine Lake Claim Sheet No. 105G/8

   in the Watson Lake Mining District, to the value of at least $5,500.00 dollars, since the 7th day of September 1982.

   to represent the following mineral claims under the authority of Grouping Certificate No. (Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

   Kink 3 YA69009

   one claim x 5 years = 5 claim years

3. The following is a detailed statement of such work: (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shown by Section 53.)


Sworn before me at Whitehorse, Y.T.

this 23 day of August 1983

[signature]

Notary Public

# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Property</td>
<td>1</td>
</tr>
<tr>
<td>Location and Access</td>
<td>1</td>
</tr>
<tr>
<td>History</td>
<td>1</td>
</tr>
<tr>
<td>Geophysical Surveys</td>
<td>2</td>
</tr>
<tr>
<td>Discussion of Results</td>
<td>2</td>
</tr>
<tr>
<td>Conclusions</td>
<td>3</td>
</tr>
<tr>
<td>References</td>
<td>4</td>
</tr>
<tr>
<td>Cost Statement</td>
<td>5</td>
</tr>
<tr>
<td>Statement of Qualifications</td>
<td>6</td>
</tr>
</tbody>
</table>

## FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1</td>
<td>Location Plan - Scale 1:1,000,000</td>
<td>1</td>
</tr>
<tr>
<td>Figure 2</td>
<td>Drill Section - Hole F1</td>
<td>2</td>
</tr>
<tr>
<td>Figure 3</td>
<td>Drill Section - Hole F2</td>
<td>2</td>
</tr>
</tbody>
</table>

## MAPS

<table>
<thead>
<tr>
<th>Map</th>
<th>Description</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Map 1</td>
<td>HLEM Survey - West Grid</td>
<td>1:2500</td>
</tr>
<tr>
<td>Map 2</td>
<td>HLEM Survey - East Grid</td>
<td>1:2500</td>
</tr>
<tr>
<td>Map 3</td>
<td>Magnetometer Survey - West Grid</td>
<td>1:2500</td>
</tr>
<tr>
<td>Map 4</td>
<td>Magnetometer Survey - East Grid</td>
<td>1:2500</td>
</tr>
<tr>
<td>Map 5</td>
<td>Compilation</td>
<td>1:5000</td>
</tr>
</tbody>
</table>
INTRODUCTION

From August 28 to September 9, 1982 12.85 km of HLEM and 12.85 km of magnetometer surveying were carried out on the Fetish property, located in the Yukon (figure 1). The survey target was a Besshi-type Cu-Zn massive sulphide deposit. The purpose of the HLEM survey was to locate EM conductors which might be caused by massive sulphides. The purpose of the magnetometer survey was to outline banded iron formations known to occur on the property. The property was revisited on September 25, 1982 for the purpose of a geological assessment of the geophysical data.

PROPERTY

<table>
<thead>
<tr>
<th>Claims</th>
<th>Record Nos.</th>
<th>Date of Record</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kink 1-8</td>
<td>YA69007-YA69014</td>
<td>September 7, 1982</td>
</tr>
</tbody>
</table>

All of the Kink claims are located in the Watson Lake Mining District.

LOCATION AND ACCESS

The property is located at latitude 61°25'N, longitude 130°07'W, approximately 16 km south of Milepost 130 on the Robert Campbell Highway (see Figure 1 following Page 1). Access is by helicopter or by a 2.0 km trail from Fetish Lake, at the south end of Wolverine Lake. Both of these lakes are suitable for float-equipped aircraft.

HISTORY

The Fetish property was discovered in June, 1973 by Archer, Cathro & Associates Ltd. on behalf of Finlayson Joint Venture (FJV), comprised of Chevron Canada Limited, Union Oil Company of Canada Ltd., Marietta Resources International Ltd., and Messrs. L.T. Clay and Harris Clay. FJV explored the showing with mapping, hand pitting, and geochemical sampling and magnetic
surveys in 1973 and two drill holes (705 feet) in 1974. Drilling was necessary to determine the type of mineralization present since the host rocks have weathered deeply and recessively and all sulphides have been leached at surface. The 1974 drilling showed that banded copper-zinc-lead sulphides are conformable with foliation in a talcose schist and suggested that this occurrence might have a volcanogenic origin.

GEOPHYSICAL SURVEYS

The HLEM survey was carried out with a Scintrex SE88 Genie EM system, using a coil spacing of 100 metres and transmitting frequency ratios of 3037.5/112.5, 1012.5/112.5 and 337.5/112.5. The data is presented in profile form on maps 1 and 2.

The magnetometer survey was carried out with a Geonics G816 proton precession magnetometer. The data was corrected for diurnal variations, and is plotted in profile form on maps 3 and 4.

DISCUSSION OF RESULTS

The magnetometer survey has outlined 5 anomalies (labelled A to E on maps 3, 4 and 5). The source of these anomalies is banded iron formations.

The HLEM survey has outlined 6 conductive features (labelled 1 to 6 on maps 1, 2 and 5). The interpreted depth to these features is 12 metres. Features 1, 2 and 3 are multiple conductors which are probably caused by graphitic sediments. Features 4, 5 and 6 are single conductors. Conductor 4 has been drill tested by hole F1, which was one of two holes put down in 1974 to test geochem anomalies (see map 5, figure 2). This conductor occurs where the two shale units, encountered in hole F1, would outcrop.

No EM response is found where the sulphide mineralization would outcrop. There is also no EM response to mineralization encountered in hole F2 (see map 5, figure 3). From the description of the mineralization found in drill logs, no EM
Figure 2

KINK (FETISH) CLAIMS

DRILL SECTION - HOLE FI
DRILL SECTION - HOLE F2

KINK (FETISH) CLAIMS

FIGURE 3
response would be expected. The two conductors (4, 5) on line 2+00E (figure 3) which is 50 m west of the drill section, occur where the shale units encountered in hole F2 would outcrop. Therefore the shale unit is conductive and is the source of conductors 4, 5 and 6.

CONCLUSIONS

The magnetometer survey was successful in outlining banded iron formations. The EM conductors are probably caused by graphitic sediments, rather than massive sulphides.

W.G. Cooper

Gord Cooper

GC/dk
COST STATEMENT
Kink 1-8 Mineral Claims

For work done from September 7-September 9, 1982 and September 25, 1982.

LABOUR

Geophysicist 1 day at $146.00/day 146.00
Geophysical operator 4 days at $138.00/day 552.00
Geophysical assistant 3 days at $81.00/day 243.00

TOTAL 941.00

TRANSPORTATION

Fixed Wing - B.C. Yukon Air Services Ltd. 1489.44
Helicopters - Frontier Helicopters Ltd. 1264.50
- Highland Helicopters Ltd. 1050.00
Fuel - 193.19

TOTAL 3997.13

CAMP

Groceries - Campground Services Ltd. 166.98

REPORT

Geophysicist 3 days at $146.00/day 438.00

TOTAL 5543.11
STATEMENT OF QUALIFICATIONS

I attended the University of Waterloo, Waterloo, Ontario between 1975 - 1979 graduating with a B. Sc. (Honours) degree in Earth Sciences. From 1975 to 1979 I was employed during the summer months by Esso Minerals Canada to conduct Magnetic, Electromagnetic, Gravity and Induced Polarization surveys. Since graduating I have been employed by Esso Minerals as a geophysicist.

W. R. Cooper

W. Gordon Cooper