

520573

REPORT ON A
HELICOPTER E.M. AND MAGNETOMETER SURVEY

ON THE

PESO CLAIMS
CARIBOO MINING DIVISION

NTS 93 A 12

LATITUDE 52° 35'N LONGITUDE 121° 28'W

FOR OWNER OPERATOR

AQUARIUS RESOURCES LTD.

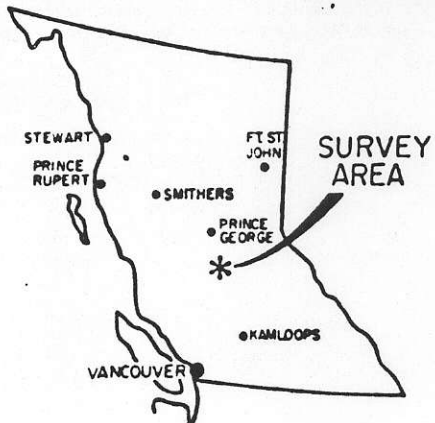
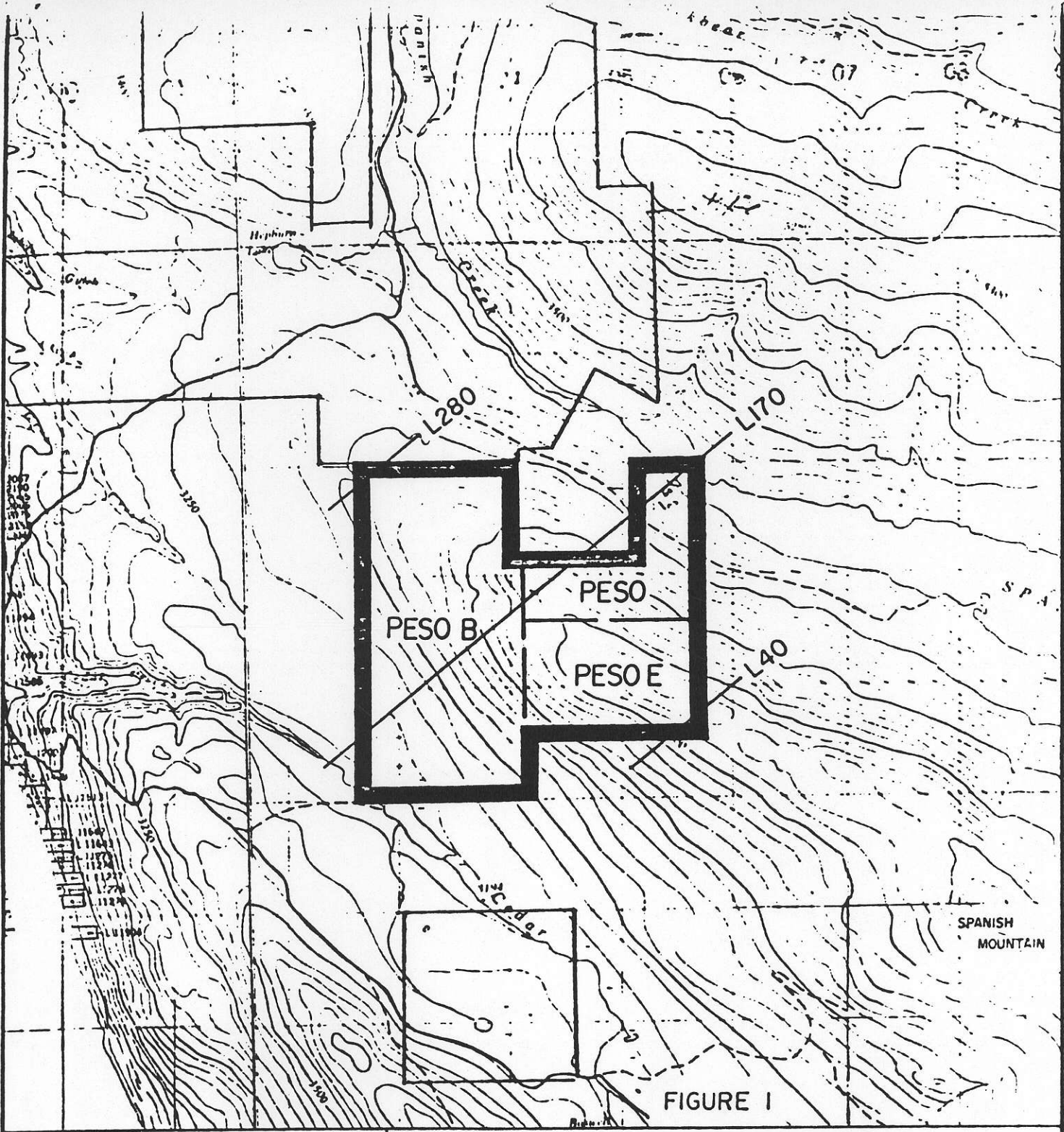
SURVEY DATE: February 24, 1981

May 15, 1981
Vancouver, B.C.

Apex Airborne Surveys Ltd.
Ronald P. Sheldrake, B.Sc.

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SURVEY AND CLAIMS LOCATION MAP

PESO CLAIMS
CARIBOO MINING DIVISION
BRITISH COLUMBIA
SCALE 1:50,000

AQUARIUS RESOURCES LTD.

APEX AIRBORNE
 SURVEYS LTD.

DATE: APRIL, 1981

1. SUMMARY

The survey has not delimited any E.M. responses that are identifiable as targets for mineralization. However, two magnetic lineaments have been mapped that may be signposts to structures that may contain mineralization. Geological mapping has been recommended as follow-up evaluation.

2. INTRODUCTION

This report describes the results of a combined helicopter-borne electromagnetic and magnetic survey undertaken on behalf of AQUARIUS RESOURCES LTD.

The survey over the PESO CLAIMS consisted of 70 linear kilometres over terrain ranging in elevation from 760 metres to 1500 metres.

The geophysical data was collected on the PESO CLAIMS February 24, 1981 as part of traverses that were flown over adjoining ground for other companies.

A mean terrain clearance of 30 to 40 metres (for the e.m. sensor) was maintained where possible.

The Geonics 33-1 Electromagnetometer is a solid state system especially designed for helicopter transport.

It consists of two coaxial coils, one serving as a transmitter and the other as a receiver, which are mounted 6 metres apart, in a rigid "bird" with their axes horizontal and in the direction of flight. The bird is towed 30 metres below the helicopter by means of a suitable cable which also carries the electrical signals and power to and from the bird.

The system operates at 918 hertz. Changes in the alternating magnetic field at the receiver coil, caused by eddy currents in the subsurface rock, are recorded. These changes are expressed in ratios of the normal undistorted primary field. They are so small as to be expressed in parts per million or p.p.m.

The magnetometer used on this survey was a Geometrics 803. It is a total field nuclear precession instrument which measures the magnetic field strength with a sensitivity of one gamma. The sensor is toroidal and is positioned half way between the helicopter and the E.M. 33-1 bird.

Appendix I gives details of the geophysical equipment used for this survey. Appendix II describes the flight record and flight path recovery process.

CLAIMS

<u>CLAIM</u>	<u>RECORD NUMBER</u>	<u>ANNIVERSARY</u> <u>DATE</u>
Peso 9 units	487	Sept. 21
Peso B 18 units	488	Sept. 21
Peso E 6 units	481	Sept. 21

LOCATION AND ACCESS

The Likely Group is situated on the northwest flank of Spanish Mountain, between Cedar Creek and Spanish Creek, approximately 8 km east of Likely, in the historic Cariboo area of central British Columbia.

Good access is by truck from Highway 97, and 150 Mile House, thence 75 km north northwest along a good gravel road to Likely. The property is then 8 km east on a good logging road.

GENERAL GEOLOGY*

' Figure 2 shows the basic elements of the regional geology for the Likely District, B.C. The gold showings at Likely are found largely in a northwesterly trending Permian-Tertiary basin that includes a major volcanic belt (Takla rocks). Auriferous showings are also found to the northeast side of the belt in a fault-contact block of Lower Cambrian rocks of low metamorphic grade.

An eroding Cambrian landmass was undoubtedly a source of sediment (conglomerate and silty carbonates) in the tectonic Permian-Tertiary basin, but the main basin fill came from probably widespread sources of submarine volcanic flows and pyroclastics. Mount Warren (4,000 feet) with an impressive agglomeratic pile in its summit region, is identified as one local volcanic vent source (Fig. 2). A second volcanic source is indicated just east of Quesnel Forks. The thick pile of agglomerates at Mount Warren points to an explosive, central vent type eruption, and interbedded or blanketing pillow lavas establish a submarine environment. These two volcanic centres may be directly related to the intersection of two regional fault systems (volcanic rifts) which trend northeasterly and northwesterly.

* Godfrey, J.D., "A Survey of the Mineral Prospects in the Likely District".
Private Report for Aquarius Resources Ltd. and Carolin Mines Ltd. March 1980.

There appear to have been deeper, quieter parts of the Permian-Tertiary basin where argillaceous limy sediments accumulated. More proximal sections of the basin received polymictic conglomerates, probably reflecting the mixed igneous-metamorphic lithologies of the Cambrian block undergoing erosion to the northeast.

Although not noticeably metamorphically altered, the Permian-Tertiary rocks have been subjected to deformation and are tightly folded and faulted.

The composition of the flows appears to range from basic-intermediate to distinctly acidic; pillow lavas, agglomerates, explosion breccias, and flow banding are all found in the Likely District.

Hydrothermal alteration, closely related to important auriferous mineralization in the Likely District, may be controlled by volcanic vent sources in combination with volcanic rift zones.

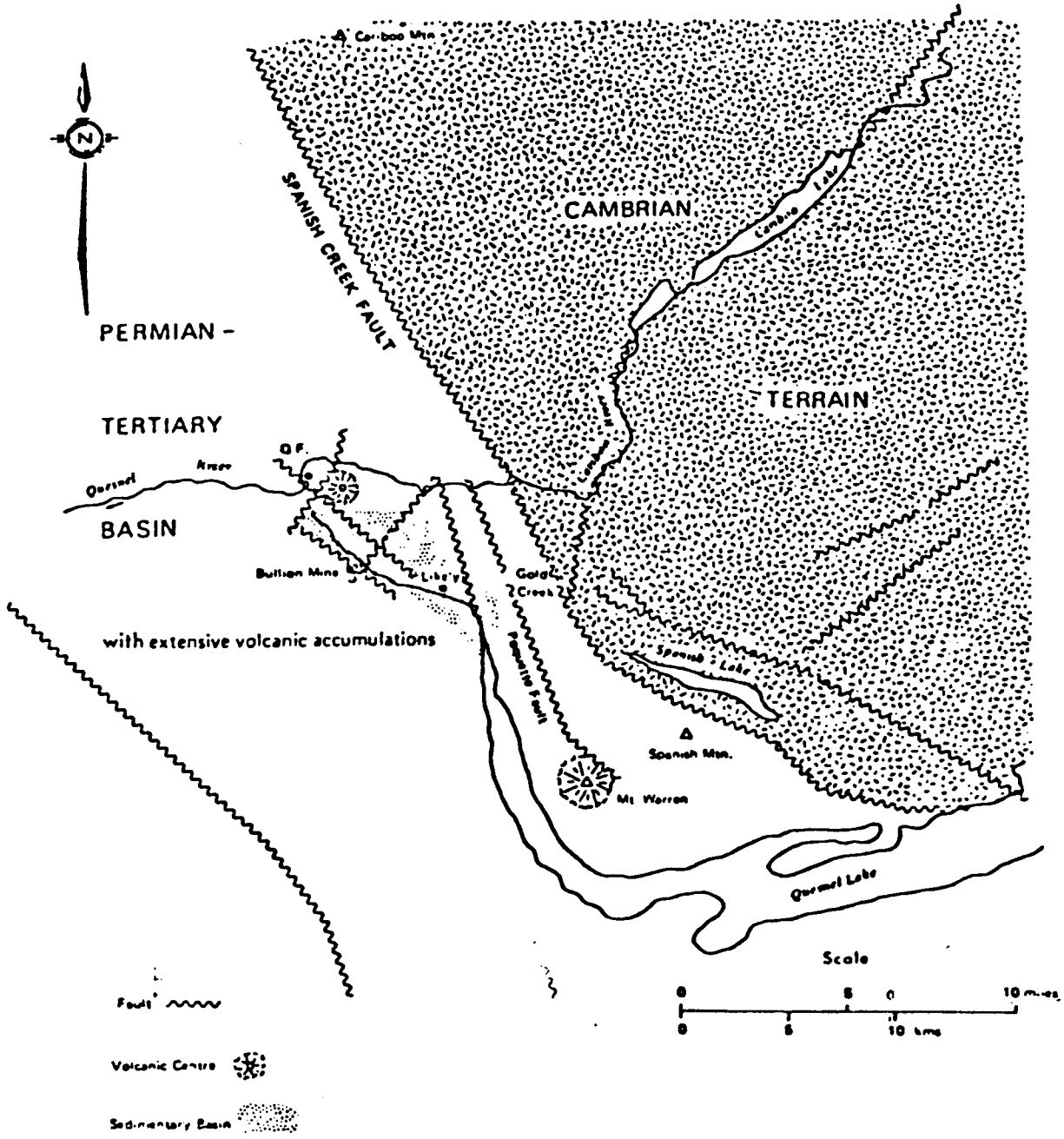


FIGURE 2 Regional geological setting of Likely district, B.C.

3. DATA PRESENTATION

3.1 Electromagnetics (Plate I)

The Electromagnetic Survey Profiles Map shows the profiles of inphase and quadrature E.M. responses along the flight lines. The E.M. profiles are transcribed and plotted from the digital chart recorded in flight, after assigning a suitable base level value.

3.2 Magnetics (Plate II)

The Total Field Magnetic Map shows contours of the total magnetic field uncorrected for regional variation. The maps are plotted from the digital chart recorded in flight, and contoured at an interval of ten gammas. The 50 gamma contours are "weighted" for clarity.

3.3 Interpretation Map (Plate III)

The Interpretation Map provides a summary of the interpreted information. Formational responses, rock types, contact zones and photo-lineaments are displayed as well as target conductors that may be suitable for massive sulphide exploration.

4. INTERPRETATION

Both Magnetic and Electromagnetic Maps can be interpreted to reveal areas underlain by different rock types and lineaments which could indicate contact or fault zones. Magnetic Maps can reveal the location of orebodies which contain higher percentages of magnetite or pyrrhotite than the surrounding rocks.

Conductivity thickness is the "parameter-pair" measured with the electromagnetometer. Materials which conduct electronically, metallic sulphides and graphite, have higher conductivity -thickness values than electrolytic conductors such as clays (in overburden) and ion-rich sloughs or creeks, however, there is considerable overlap.

In general, the electromagnetic responses encountered by an electromagnetic survey are of four main types.

1. Bedrock conductors: including formational graphitic responses and massive sulphide targets.
2. Surficial conductors: overburden and lake responses.

3. A combination of 1 and 2: when a conductive material overlays a bedrock conductor the response due to the bedrock is superimposed on the response of the overburden or lake response. Depending upon the conductivity contrasts, and the thickness of the overburden, some bedrock conductors can be recognized through the surficial layer.

4. "Negative" magnetic effects: When conductors are also magnetic, the electromagnetic responses can become distorted. The distortion tends to decrease the inphase response, often reversing the sign of the E.M. anomaly. Apparent depths and conductivity-thickness products, in this case, are generally not representative.

5. DISCUSSION OF RESULTS

The geophysical data indicate the PESO Claim group is underlain with rocks typical of a sedimentary basin. Formational responses, probably due to graphite in shale formations are evident over large areas of the claim group.

None of the E.M. conductors are considered anomalous or targets for mineralization.

See PLATE III for a generalized interpretation of the geophysical data.

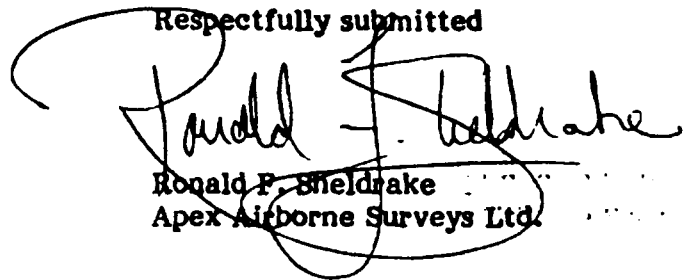
The magnetic lineaments indicated on PLATE III may be considered as anomalous, however, no conductive responses are coincident with them. They indicate distortions in the underlying rocks and be signposts to mineralized structures.

6. CONCLUSIONS AND RECOMMENDATIONS

The data has provided a general overview of the conductivity and magnetic susceptibility responses over the PESO Claims.

Magnetic lineaments detected by the survey may be signposts to mineralized structures and these ought to be geologically evaluated.

Respectfully submitted

A large, stylized handwritten signature in black ink, which appears to read "Ronald F. Shieldrake". The signature is written over the typed name and company name.

Ronald F. Shieldrake
Apex Airborne Surveys Ltd.

BIBLIOGRAPHY

Godfrey, J.D.,

"Survey of the Mineral Prospects in the Likely District,

British Columbia"

Private Report for Aquarius Resources Ltd. and Carolin Mines

Ltd., March 1980.

Cochrane, D.R.,

"Geochemical Assessment Report on The Likely Group"

November, 1979.



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February 17, 1983

NEWS RELEASE

AQUARIUS RESOURCES LTD. ANNOUNCES SALE OF LIKELY AREA MINING CLAIMS FOR \$100,000 AND 25,000 SHARES OF CAROLIN MINES STOCK.

Approval from the TSE concludes a deal giving \$100,000 cash and 25,000 shares of CAROLIN MINES LTD. stock to AQUARIUS RESOURCES LTD. This transaction greatly enhances the working capital position of Aquarius from the increases to be reflected on the balance sheet as well as being released from an estimated \$400,000 work commitment.

This news release has been prepared by the undersigned, who claims responsibility for its factuality. The VSE or any other regulatory body has neither approved nor disapproved the information contained herein.

AQUARIUS RESOURCES LTD. is a Mining Exploration Company whose shares trade on the Alberta and Vancouver exchange (Stock symbol AQR) and in the United States on NASDAQ (Symbol AQRLF)

K. Warren Geiger -30-

FROM: Dr. K. Warren Geiger
President
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