

Geophysical Report ⁸¹⁻²⁰⁴⁸
on a ¹¹⁴⁸⁻¹⁰⁰⁶⁸
Electromagnetometer & Magnetometer Survey
EMERALD STAR MINING EXPLORATION LTD.
ORB claims 16 miles south of Princeton B.C.
Lat. 49°15'N Long. 120°33'W
N.T.S. 92 H/7
AUTHOR: Glen E. White, B.Sc., P.Eng.,
Consulting Geophysicist
DATE OF REPORT: December 01, 1981

part 2
of 2

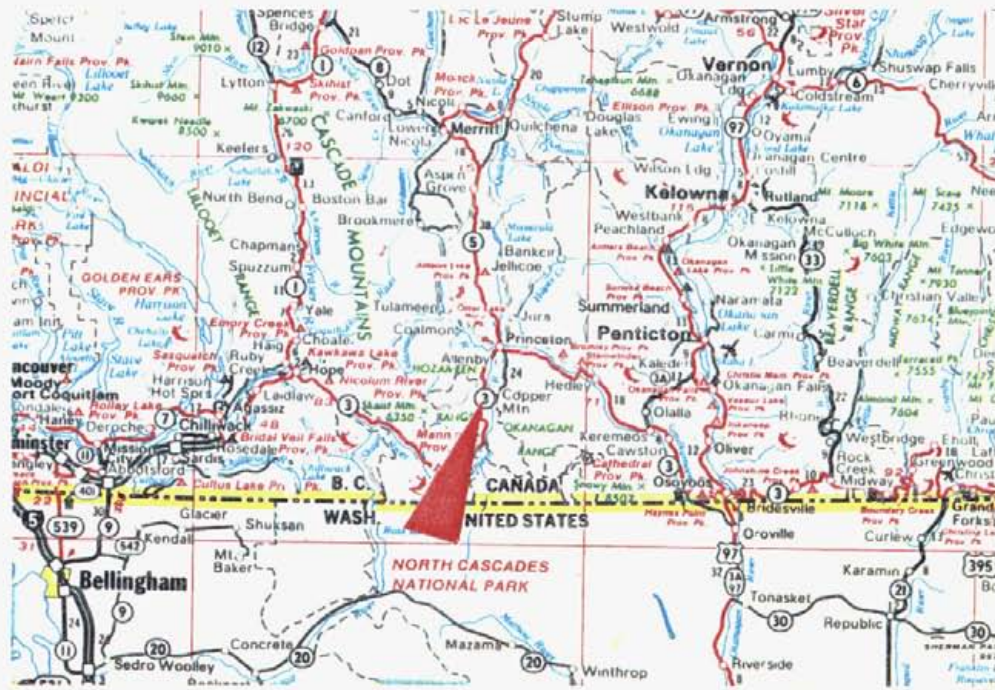
ALBERTA MINING BRANCH
REPORT
10,068

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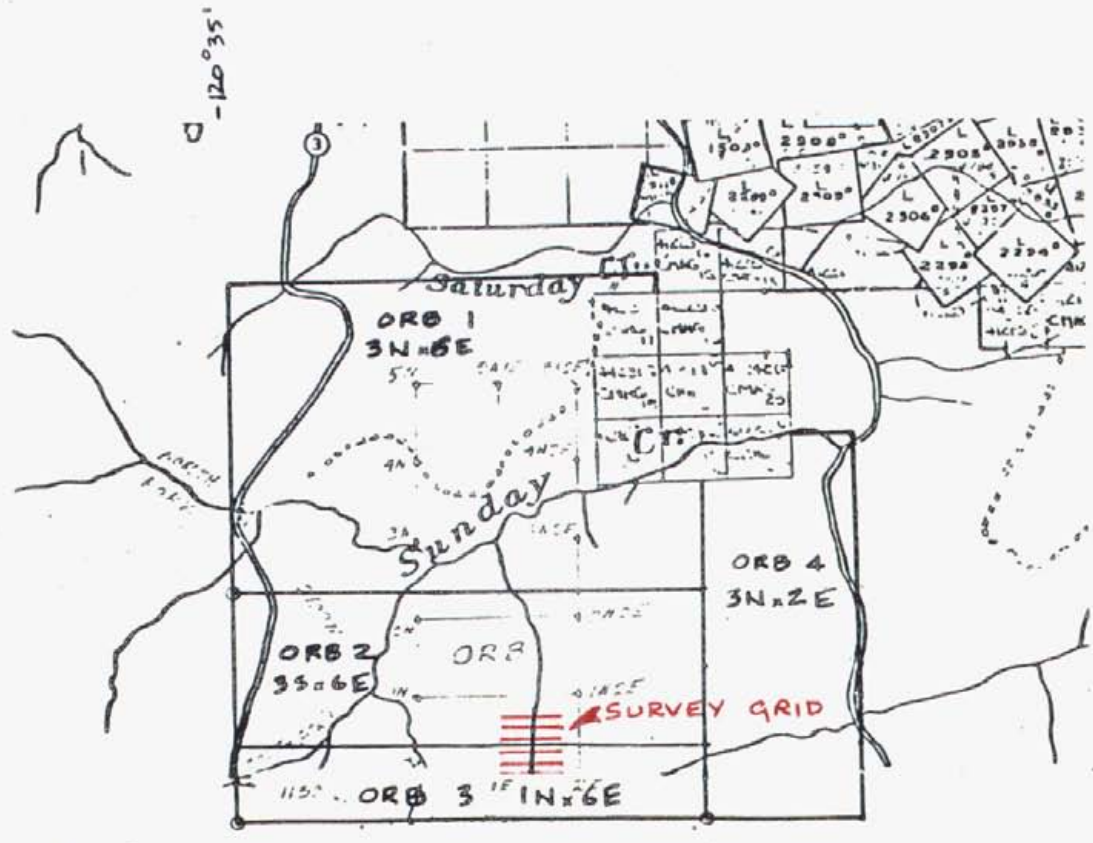
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N.T.S. 92 H/7E



EMERALD STAR MINING EXPLORATION LTD.
 - ORB CLAIMS -
 LOCATION AND CLAIMS MAP

INTRODUCTION

This report is written at the request of Mr. T. Proskin of Emerald Star Mining Exploration Ltd. It is a summary geophysical report for assessment purposes on data provided by Emerald Star Mining Exploration Ltd. The work was completed during the summer of 1981.

PROPERTY

The property consists of the ORB 1, 2 and 3 claims as illustrated on Figure 1.

LOCATION AND ACCESS

The mineral claims are located some 25 km due south of Princeton B.C. covering Sunday Creek between highway 3 and the Similkameen River. Lat. $49^{\circ}15'N$, Long. $120^{\circ}33'W$, N.T.S. 92 H/7.

GENERAL GEOLOGY

The general area of Sunday Creek is shown on geology map 888A Princeton at a scale of 1" = 4 miles. The property is shown to be underlain by rocks of the Princeton group. The grid appears to overlay a series of varicolored andesite and basalt which overlay a sedimentary sequence of shale, sandstone, conglomerate and coal. The regional magnetic map 8530G 92 H/7 for this area shows no anomalous features.

MAGNETOMETER SURVEY

The magnetometer survey was conducted using a scintrex MF-2 Fluxgate magnetometer. This instrument measures the vertical component of the earth's magnetic field to an accuracy of 10 gammas. Corrections for diurnal variation were made by tying into previously established base stations at intervals not exceeding one and one half hours. Readings were taken at 25 m intervals along the traverse lines.

ELECTROMAGNETOMETER SURVEY

A phoneix VLF-2 electromagnetometer was used for this survey. Dip angle readings were taken at 25 m intervals along the lines.

DISCUSSION OF RESULTS

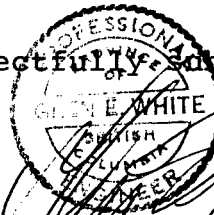
The survey grid was established by Emerald Star Mining Exploration Ltd. and consists of some 2 km of traverse line orientated in an east-west direction.

The author is not aware of any previous work nor the reason why this particular area was surveyed. Figure 2 shows line profiles of the vertical magnetic intensity data. No defined low or high trends are indicated. Figure 3 depicts the VLF-EM dip angle responses. A conductor trend is illustrated which trends north south across the survey grid. The conductor parallels a small creek which would suggest topographic control. Thus the conductor likely reflects a fault zone. However since the survey grid covers the Princeton series it may also be due to a conductive shale horizon.

CONCLUSION AND RECOMMENDATIONS

This report briefly discusses ground magnetometer and VLF-electromagnetometer data from the ORB mineral claims as provided by Emerald Star Mining Exploration Ltd. The survey data located a small VLF-EM conductor which parallels a creek and may relate to a fault or shear zone. Thus since the VLF-EM response is from relatively near surface a minimum amount of prospecting and soil sampling should indicate its significance.

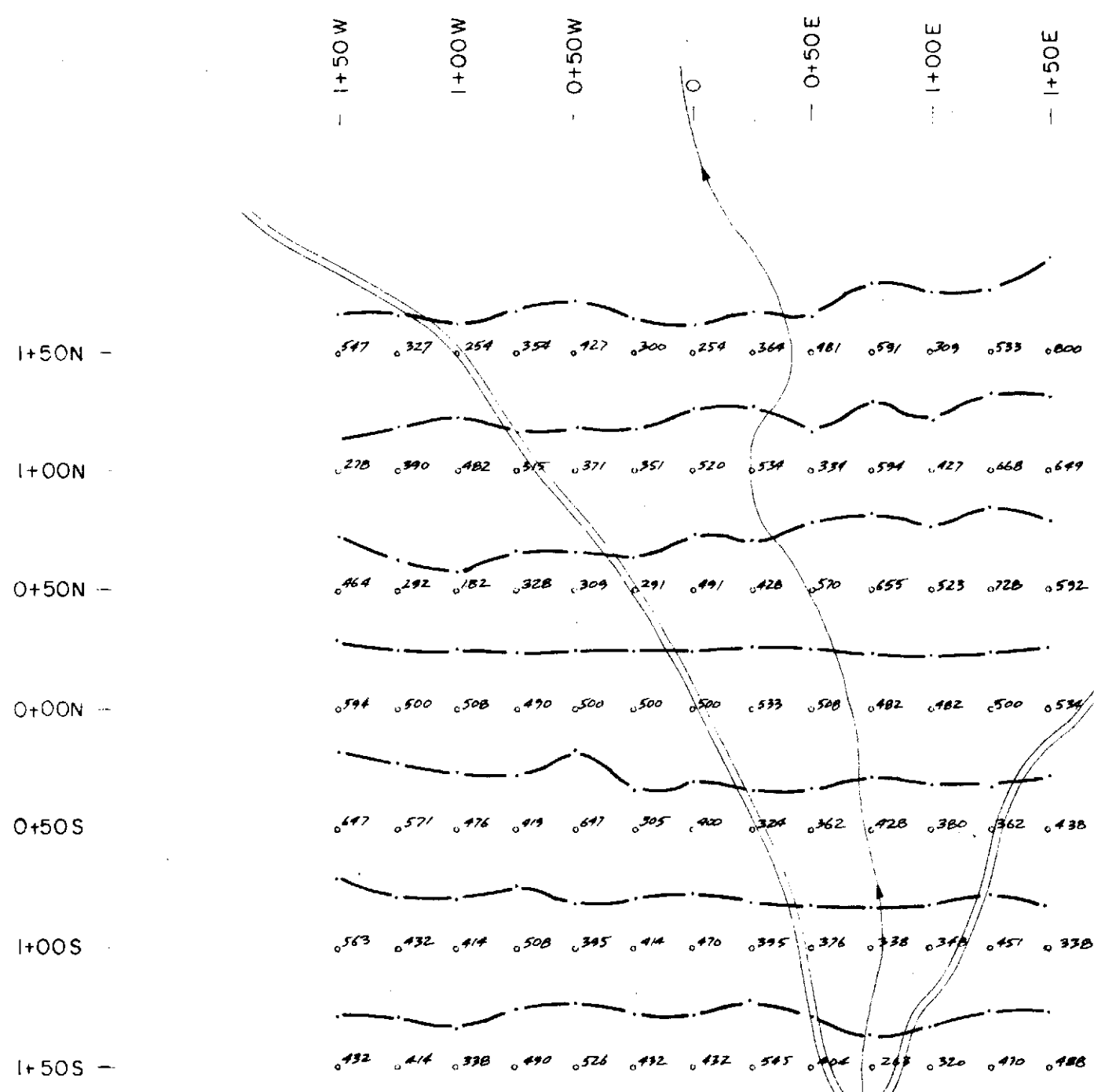
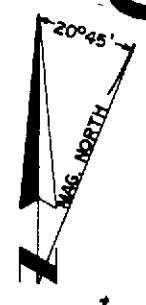
Respectfully submitted,



Glen E. White, B.Sc., P.Eng.,
Consulting Geophysicist

part 2 of 3

AMERICAN INSTITUTION OF SURVEYORS
 REPORT NO. **10,068**



LEGEND:

- Vertical Magnetic Intensity Profiles, Gammas
- Grid Stations
- 1000 λ
- 500 λ
- 0 λ Vertical Scale, 1cm. = 500 λ

INSTRUMENT: Scintrex Portable MF-2-100 Fluxgate Magnetometer



To Accompany Geophysical Report on
 ORB CLAIMS
 Date N.O.V. / 81
 By GLEN E. WHITE - B.Sc. GEOPHYSICIST

N.T.S. 92 H/7E

EMERALD STAR MINING EXP. LTD.
ORB CLAIMS
 SIMILKAMEEN MINING DIVISION BRITISH COLUMBIA

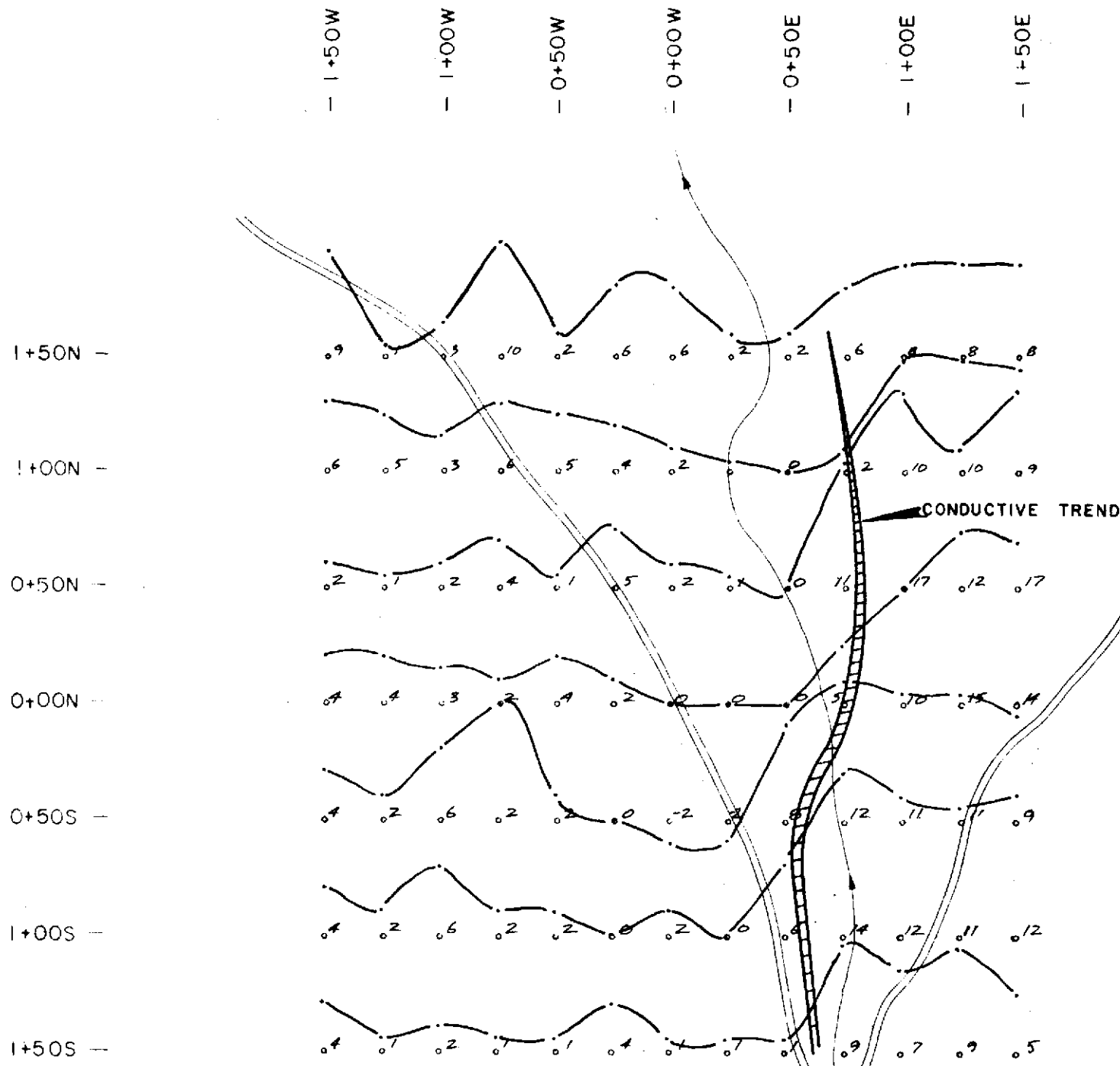
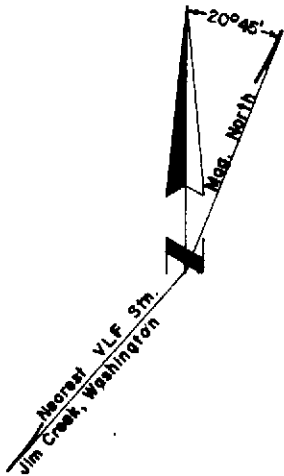
**VERTICAL MAGNETIC INTENSITY
 (GAMMAS)**

Glen E. White
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N.L.P.
G.E.W.
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2

ANDREW BRITISH COLUMBIA
 19068
 NO.

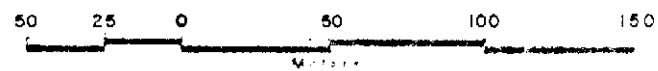
part 2
 of 3



LEGEND:

- Inphase Dip Angle Profiles, Dip Angle %
- Grid Station
- 5%
0
-5% Vertical Scale, 1cm = 5%

INSTRUMENT: Phonex VLF-2 Electromagnetometer



NTS. 92 H/7E

EMERALD STAR MINING EXP. LTD.
ORB CLAIMS
 SIMILKAMEEN MINING DIVISION - BRITISH COLUMBIA

VLF-ELECTROMAGNETOMETER SURVEY
 INPHASE DIP ANGLE

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DRAWN BY: N.L.P.
CHECKED BY: G.E.W.
DATE: NOV/81
FIG. NO. 3



To Accompany Geophysical Report on
ORB CLAIMS
 Date: NOV./81
 By GLEN E. WHITE - B.Sc. GEOPHYSICIST

STATEMENT OF QUALIFICATIONS

NAME: WHITE, Glen E., P.Eng.

PROFESSION: Geophysicist

EDUCATION: B.Sc. Geophysicist - Geology
University of British Columbia.

PROFESSIONAL ASSOCIATIONS: Registered Professional Engineer,
Province of British Columbia.
Associate member of Society of Exploration Geophysicists.
Past President of B.C. Society of Mining Geophysicists.

EXPERIENCE: Pre-Graduate experience in Geology -
Geochemistry - Geophysics with Anaconda
American Brass.
Two years Mining Geophysicist with
Sulmac Exploration Ltd. and Airborne
Geophysics with Spartan Air Services
Ltd.
One year Mining Geophysicist and Technical
Sales Manager in the Pacific
north-west for W.P. McGill and Associates.
Two years Mining Geophysicist and
supervisor Airborne and Ground Geophysical
Divisions with Geo-X Surveys
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Two years Chief Geophysicist Tri-Con
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of Canada.