

82-104-10168

REPORT ON THE
VLF AIRBORNE SURVEY

on behalf of

LANSDOWNE OIL & MINERALS LTD.

LEAN - TO, LEAN - TO FR, LEAN - TO FR#1

and

RICHARD HOWETT

OxA, OxB, OxC CLAIMS

Lat. 53° 39' N Long. 127° 05' W

Date of Work: May 11 - 12

Date of Report: January 27, 1982

by

JAMES G. AGER, B.Sc.

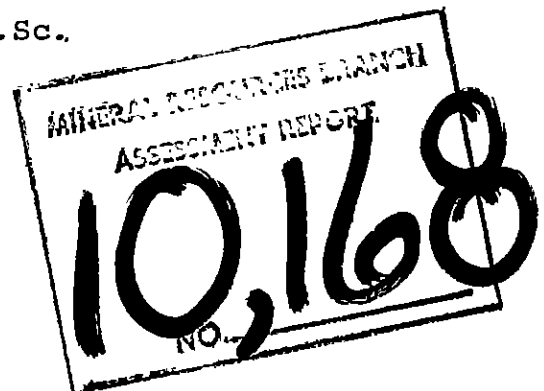


TABLE OF CONTENTS

INTRODUCTION	Page 1
LOCATION MAP	1a
CLAIM MAP	1b
GEOLOGY	2
AIRBORNE VLF EM	3
CONCLUSIONS AND RECOMMEND.	5
INSTRUMENTATION	6
QUALIFICATIONS	7
COST	8
MAP - Horizontal field strength 1:20 000	Pocket

1.

INTRODUCTION

Ager, Berretta and Associates Inc. flew a VLF electromagnetic survey over the Lean-To Claims and Ox ABC Claims south of Tahtsa Reach, Omineca Mining Division.

The objective of the VLF survey was to locate contacts, shear-zones or other geological structures which might be associated with mineralization.

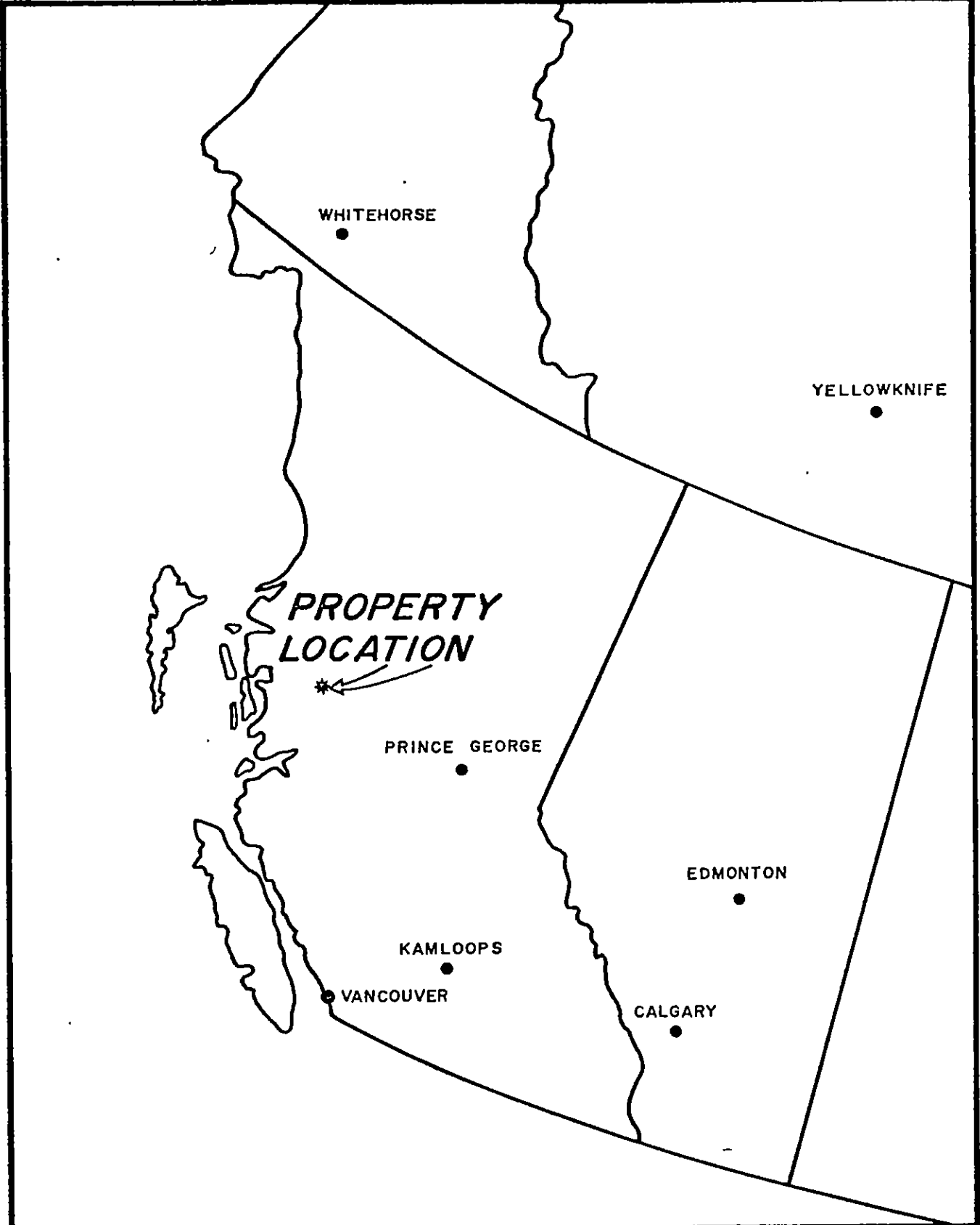
PROPERTY

The property is located approximately fifty-five miles southwest of Houston, B.C. and consists of the Lean-To, Lean-To 1-4, Lean-To Fr, Lean-To Fr#1, OxA, OxB, and OxC claims.

<u>CLAIM</u>	<u>RECORD NO.</u>	<u>RECORDING DATE</u>
Lean-To	2721	April 15, 1980
Lean-To 1	3399	November 19, 1980
Lean-To 2	3400	November 19, 1980
Lean-To 3	3401	November 19, 1980
Lean-To 4	3402	November 19, 1980
Lean-To Fr	3543	January 29, 1981
Lean-To Fr#1	3544	January 29, 1981
OxA	3732	May 11, 1981
OxB	3733	May 11, 1981
OxC	3734	May 11, 1981

LOCATION AND ACCESS

The claims are located in the Omineca Mining Division east of Kasalka Creek on the lower north slope of the Whitesail Mountain Range at 53°39'N Latitude, 127°05'W Longitude.

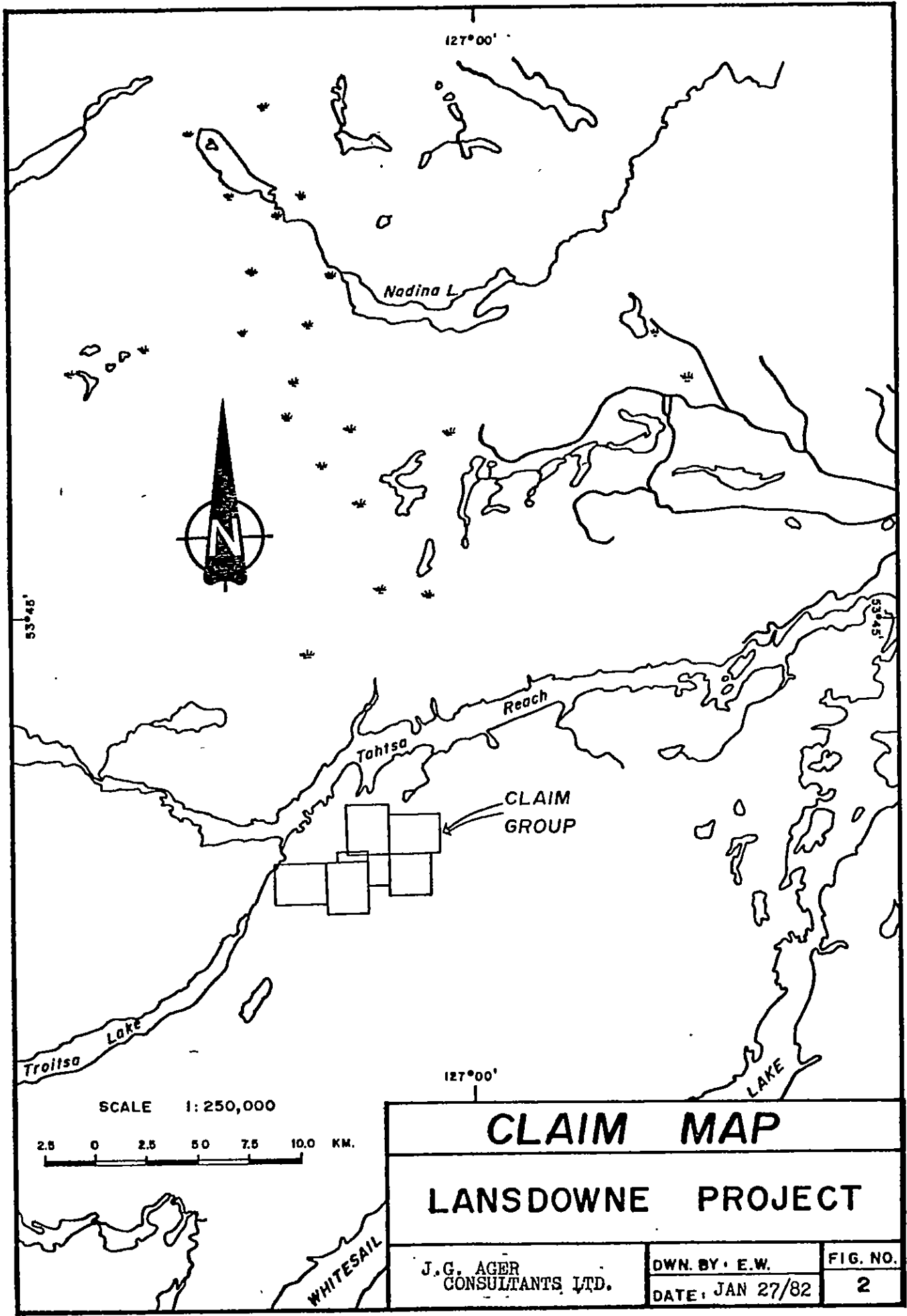


0 100 200 300 Mi

0 200 400 Km

LOCATION MAP	
LANSDOWNE PROJECT	
DATE: JANUARY 27 1982	J.G. AGER CONSULTANTS LTD.

FIGURE 1



CLAIM MAP

LANSDOWNE PROJECT

J.G. AGER
CONSULTANTS LTD.

DWN. BY: E.W.
DATE: JAN 27/82

FIG. NO.
2

Access is by helicopter from Houston B,C, or by gravel road to Tahtsa Reach, boat across to Kasalka Creek, then four wheel drive road (overgrown) and foot trail to the claims.

GENERAL GEOLOGY

The area in the northwest of the claims is underlain by a large intrusive complex. In places the intrusives are in contact with or partially covered by Hazelton volcanics and/or sediments. Both intrusive and the Hazelton rocks have been extremely altered and replaced.

The Lean-To claim area is described by Regional Geological Mapping completed by the Geological Survey of Canada (Ref. "B.C. Dept. of Mines & Petroleum Resources", G.E.M. 1969, page 97). The underlying rocks are of types included in the Hazelton group of middle Jurassic age. The most common characteristics of this group consist of volcanic tuffs, breccias and lava flow of adesitic and basaltic composition. These latter are porphyritic rocks containing phenocrysts of feldspar 1/8 to 1/4 inch in length. The flows range from 7 to 10 meters thick and vary in color from green to black.

Exposed sedimentary rocks are comprised of fine grained black agillite, minor impure limestone, thin bedded grey-green chert and tuffaceous greywacke.

Intrusive rocks such as quartz porphyry, monzonite and/or red granite have intruded these host rocks.

The volcanic, sedimentary and igneous rocks in this area have all been subjected to intense hydrothermal alteration. Massive replacement has introduced tourmaline, sericite and secondary quartz as recrystallized matrix. This alteration

generally obliterated primary rock textures and makes identification difficult.

AIRBORNE VLF ELECTROMAGNETIC SURVEY

The survey was flown from Alpine Helicopters' base in Houston. Flight lines are oriented east west with north south tie lines at approximately 2 kilometre intervals (Figure 3). East west lines are 200 metres apart and were flown at an altitude of approximately 60 metres above ground. Average height above ground increased in the southern part of the survey area where steep terrain made it difficult to maintain a constant height above ground. Airspeed during the survey was approximately 100 km per hour.

The survey was flown on May 11th, in a Bell 206 Jet Ranger chartered from Alpine Helicopters. A total of 176 kilometres were covered within the survey area. Flight navigation was visual. Fiducial marks were recorded on a 1:20,000 aerial photograph and simultaneously on the data output sheet. VLF equipment specifications are contained in Appendix I. Both Seattle and Annapolis VLF stations were received.

Test lines were run across the south end of Ox Lake in order to determine the type of response received from the mineralized zone at Ox Lake. VLF responses were obtained on flight lines 1, 2 and 3 (Figure 3) south of Ox Lake and a strong, wide response was obtained on the north end of line B (anomaly 1 Figure 3). These traverses have shown the form of signature to be expected from an Ox Lake type geologic horizon.

Further VLF anomalies were located as follows:(refer to Fig.3)

a) Anomaly 2 is a distinct signature on the edge of a field

strength high. The area within the zone marked at 2 records as an area of higher field strength on lines 16 through 19 inclusive. A strong sharp response was recorded on the east edge of the high on lines 17 and 18. This is a high priority ground target.

- b) Anomaly 3 is over a previously located mineralized zone. The response at 3a may be related to the known mineralization at 3. The area around 3 and 3a warrants further investigation.
- c) Number 4 runs parallel to a river bed and may be related to the river or a fault in which the river lies. The distinct characteristic of the response suggests further investigation is warranted.
- d) Anomaly 5, to the north end of the claims, gave a very distinct signature on both Seattle and Annapolis receivers. Further investigation is warranted.
- e) Area 7 includes a number of north south trending faults, the western-most of which may be connected to anomaly 2 above. These responses are all at right angles to the base of the hills. This area should be further investigated.
- f) Response 6 is primarily an Annapolis response and has no continuation on adjacent lines. The most likely cause is an east west trending fault. This is a low priority target.
- g) Area 8, which includes most of the area south of line 20 and east of line C, is characterized by a noisy, erratic VLF response. This is indicative of steeply dipping sediments. The contact between these sediments and the volcanics to the north is of more interest than the sediments.

- h) A number of other low priority responses have been located on Figure 3. Each one should be further examined if time permits.

CONCLUSIONS AND RECOMMENDATIONS

The survey has been successful in that known mineralized zones have yielded distinct signatures and a number of high priority targets have been delineated. Further ground investigations, including VLF, should be carried out to determine the precise locations and sources of the airborne anomalies.

APPENDIX I

INSTRUMENT SPECIFICATIONSSabre Electronics Airborne VLF Electromagnetic System

The bird, towed 15 metres below the aircraft, contains two, simultaneously operating omni-directional VLF receivers and amplifiers tuned to separate very low frequency submarine/long range radio transmitting stations. This unit is currently tuned to the following two stations:

Seattle, Washington	18.6 KHz
Annapolis, Maryland	21.4 KHz

The instrument measures horizontal field strength of the very low frequency electromagnetic fields initiated from designated radio stations. The primary electromagnetic field propagated in undisturbed areas is horizontal. Conductivity contrasts within the earth create secondary fields resulting in variations in net field strength. These field strength variations yield the VLF anomalies which are recorded by this instrument.

Sensors: ferrite antennae coils, one for each frequency, mounted in bird.

Output: 0-100 percent field strength analog meters, one for each frequency;

: terminals for data output to any desired data recording system;

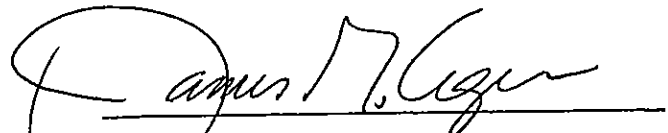
: analog strip chart recorder with variable scale deflection (standard setting is 100% for full scale) and separate pens for each frequency.

STATEMENT OF QUALIFICATIONS

I, James G. Ager, B.Sc., of Vancouver, British Columbia, do hereby state that:

1. I am a Consulting Geologist. I graduated from the University of British Columbia, Canada in 1972.
2. I have worked in the exploration field as follows:
 - Jayco Syndicate; summer season, 1967.
 - Magnetron Mining Ltd.; May, 1968 - September, 1970.
 - Magnetron Mining Ltd.; summer season, 1971.
 - Sibola Mines Ltd.; May, 1972 - October, 1974.
 - Self-employed Consulting Geologist; October, 1974 to present, as Geologist and Project Supervisor for various Mining Companies throughout British Columbia and the Yukon including Pryme Energy Resources Ltd., Azora Minerals Inc., Petersfield Oil & Minerals, and Lansdowne Oil & Minerals Ltd.

DATED at VANCOUVER, B.C. this 27th day of January, 1982



 JAMES G. AGER, B.Sc.
 Consulting Geologist

AGER, BERRETTA & ASSOCIATES INC.

Telephone: (604) 669-7748

CONSULTING
GEOPHYSICISTS

206 - 595 Howe Street
Vancouver, B.C., Canada
V6C 2T5

J.G. Ager Consultants Ltd
#1318-510 W. Hastings St.,
Vancouver, B.C.

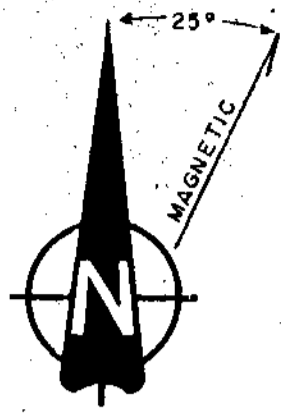
August 11, 1981

Lansdowne Oil & Mineral Ltd.
Richard Howett
Damascus Resources Ltd.

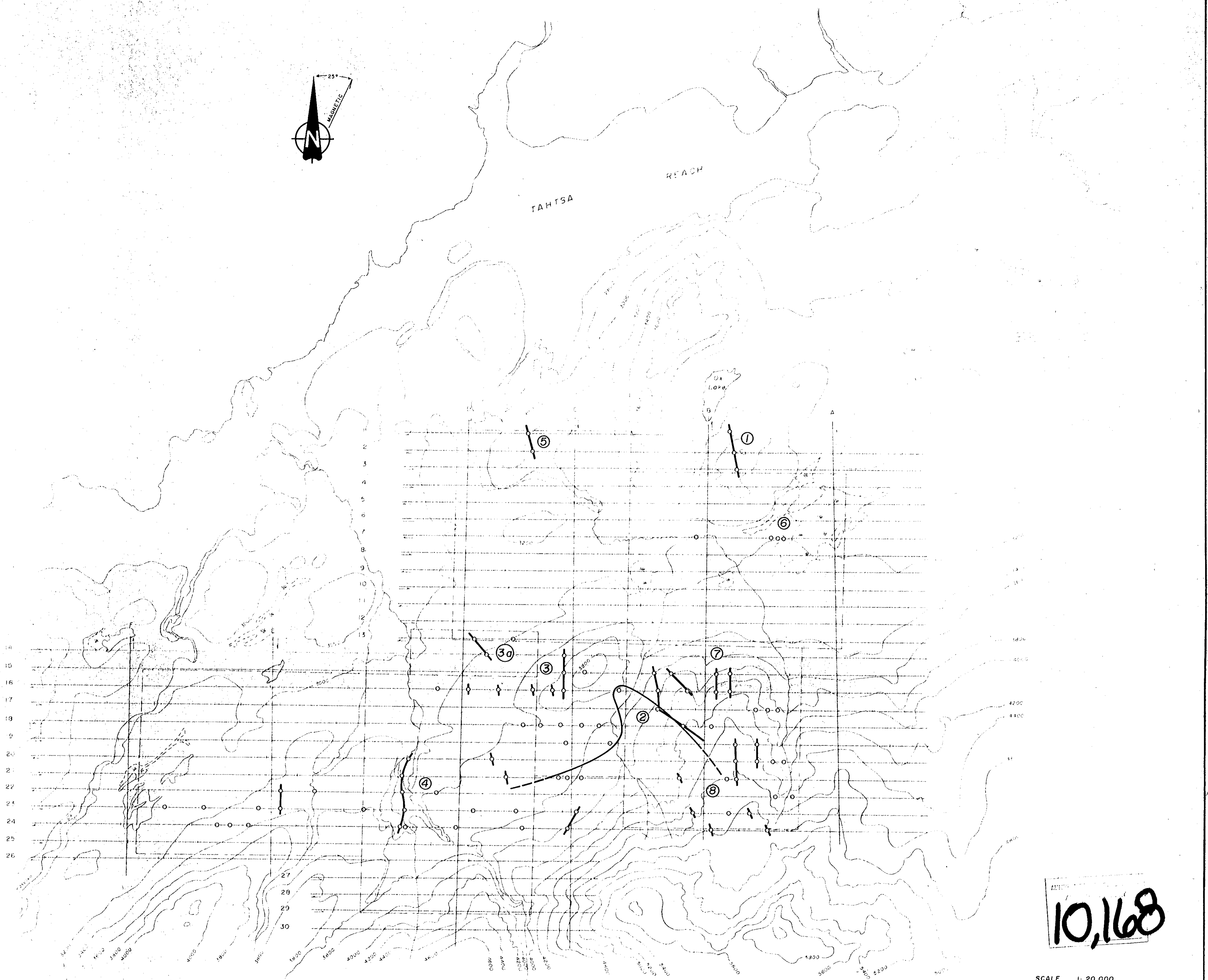
Invoice: RE: Airborne VLF Survey

Omineca Mining Division

Helicopter Charter	\$1989		
Airfares		\$432.00	
Airfreight		\$138.50	
Room, Board		\$130.00	
Total x 1.15%		\$2689.51	<u>\$3092.93</u>
Survey and report			
176 km @ \$25 per km		\$4400	<u>\$4400.00</u>
Total rendered & payable			<u>\$7492.93</u>

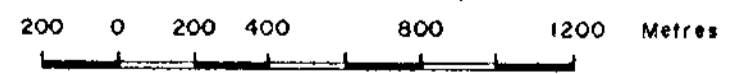


TAHTSA REACH



10,168

SCALE 1: 20,000



LEGEND

- APPROXIMATE CLAIM BOUNDARIES
- +---+ FIDUCIAL MARK
- > FLIGHT LINE DIRECTION
- O EM RESPONSE
- EM CONDUCTOR
- HIGHER FIELD STRENGTH

NOTE: - BASE MAP MADE FROM AERIAL PHOTOGRAPHS,
POSSIBLE DISTORTION.

- CONTOUR INTERVAL 200 FEET

J.G. AGER CONSULTANTS LTD.

OMINECA MINING DIVISION - BRITISH COLUMBIA

**AIRBORNE VLF - EM
HORIZONTAL FIELD STRENGTH (%)**

Ager, Berretta & Associates
Vancouver, B.C.

DWN. BY E.W.
CHK. BY
DATE: Jan. 27, 1982

FIG. NO
3