Geophysical Report

# on a

V.L.F. - E.M. SURVEY

on the

KING CLAIM GROUP

for

## BENN EXPLORATIONS LTD.

Property: 43 miles west of Lillooet B.C. N.T.S. 92J/16E.

Work done: March 31 to April 3, 1977

MINERAL	RESOUR	CES	BRANCH
ASSE	SSMENT	REP	ORT

NO.\_\_\_\_\_

May 4, 1977

L. Sookochoff, P.Eng.

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# ILLUSTRATIONS

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# SCALE

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INDEX MAP	1" = 2650 ft.
, */ V.L.F E.M. SURVEY MAP	1" = 100  ft.

#### INTRODUCTION

This report is on a V.L.F. - E.M. survey performed on the King 51 claim of the King Claim Group held by Benn Explorations Ltd. The work was performed by the writer and an assistant during March 31 to April 3, 1977.

The object of the V.L.F. - E.M. survey was to locate and delineate any potential areas of mineralization within north-south and east-west shear structures.

#### PROPERTY

The property is comprised of nine contiguous located mineral claims. They are as follows:

<u>Claim Name</u>	Record Number	Expiry Date
King 1-4	24544-24547	June 30, 1977
Mineral King 21	26181	May 16, 1977
Mineral King 23-24	26183-26184	May 16, 1977
King 51	26206	May 25, 1977
King 52	96	May 27, 1977

#### LOCATION AND ACCESS

The claims are located between Carpenter Lake and Mission Ridge, 43 miles by road west of Lillooett, B.C. and 100 miles by air north-east of Vancouver, B.C.

The property is accessible by good gravel road from Lillooett. A year-round maintained road to a micro-wave tower atop Mission Mountain traverses the property and provides access to most of the shavings.

#### HISTORY OF PREVIOUS WORK

With the discovery of gold in the Cariboo and Bridge River area in the early 1900's and the construction of the P.G.E. railway through Lillooett from 1910 to 1917.

The veins on the King claims were discovered in 1930 at the 5100 foot elevation. A 50 foot adit was driven on this vein along with exploration by open pits for 1200 feet or to the 5800 foot elevation.

During 1966-1967 localized anomalous areas of lead zinc, silver and copper were located on the King claims through a limited reconnaissance sampling program completed by Benn Explorations.

To 1976, additional work included the cleaning out of old pits, excavation of the sloughed material at the portal of the lower tunnel.

#### GEOLOGY

The claim group covers a contact zone of Coast Range granites abutting Devonian quartzites and limestones. A stock of granite outcrops to the west thus, sandwiching the sediments between the intrusives and creating large scale east-west fault trends.

Locally on Mission Mountain a pronounced north-south fault parallels the contact zone with a series of smaller scale east-west trending faults striking into the granites. As a result of the cross faulting, the limestone is brecciated, creating favorable structures for the containment of mineralizing fluids.

#### V.L.F. - E.M. SURVEY

The instrument used for the survey was a V.L.F. - E.M. Receiver, Model 27, manufactured by Sabre Electronic Instruments Ltd. of Burnaby, B.C. The U.S. Navy submarine transmitter located at Seattle, Washington, transmitting at 18.6 KHz was used to measure low frequency electromagnetic field.

The V.L.F. - E.M. instrument measures the distortion caused by the primary magnetic field produced by the transmitter and the secondary magnetic field produced  $b_2^{-}$  a conductive mass such as a sulphide body.

The V.L.F. - E.M. instrument also can detect areas of much lower conductivity and thus clay beds, electrolytefilled fault or shear zones and porous horizons, graphite, or lithological contacts can be detected.

#### SURVEY PROCEDURE

Readings were taken every 100 feet along 1500' northsouth lines and along lines at 100 foot intervals from 1E to 9E. The stations were marked with red flagging tape.

#### COMPILATION OF DATA

The field readings were reduced by applying the Frazer filter. The resulting data were plotted between the stations as indicated on the accompanying map. The positive fil-tered values were contoured at intervals of 5°.

#### DISCUSSION OF RESULTS

Within the survey area east-west or north-south structures would be significant in localizing potential zones of mineralization. If such structures were present, an indication of such would be represented by proportionate degree in the positive filtered values of the survey.

The indicative positive values were localized and not to a degree where the results can be classed as encouraging. There is no continuous correllation for more than two parallel lines.

Anomaly A indicates a potential area for mineralization, however there is no surface indication of encouraging struc-

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ture, alteration or mineralization.

#### RECOMMENDATIONS

As the V.L.F. - E.M. survey over the specific area of the King claims has not indicated any significant structure or massive sulphides, and the geology as observed in a reconnaisance survey has not indicated favorable structures or mineralization, additional surface exploration in this area is not recommended.

Respectfully submitted

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Laurence Sookochoff, P.Eng.

May 4, 1977

## AFFIDAVIT OF EXPENSES

The following costs were incurred in carrying out a V.L.F. - E.M. survey on the King claims of Benn Explorations Ltd. in the Lillooett Mining Division, British Columbia.

## Field Work

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Instrument operatoer and he March 31 to April 3, 19		\$1,200.00
Vehicle Rental		440.00
Room and Board		132.85
Gas		48.56
Field Supplies		7.69
Report		400.00
Instrument Rental		60.00
	Total	\$2,289.10

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Laurence Sookochoff, P.Eng.

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