84-#883 - 13145
8/85

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,145

REPORT

on

ASSESSMENT WORK (GEOLOGICAL & GEOPHYSICAL)

on the

GOOD (4155), MUCH (4149), PRO (4150)

AND (4148), FIT (4151), PROSPECTS (4147)

and DAR (4154) Claims

GOLDWAY PEAK, JOHANSON LAKE,

OMINECA MINING DIVISION, BRITISH COLUMBIA

(56° 31'N, 126° 15'W)

N.T.S. 94D 9 E/W

for

LARAMIE MINING CORPORATION (Owner and Operator)

by

RICHARD E. GAME, B.A.Sc.

Vancouver, B.C.

September 1, 1984

Richard E. Game
101-736 Granville St.
Vancouver, B.C.
(604) 687-5995

Sept. 1, 1984

The Directors
Laramie Mining Corp.
Vancouver, B.C.

Gentlemen :

At the request of Mr. J.P. Stevenson, I have prepared a geophysical report on your Goldway Peak property located near Johanson Lake, B.C. During a short period in August of this year, a VLF electromagnetic survey was undertaken. The following report documents the results of this investigation.

This report, together with a series of geophysical and geological maps, is attached.

Respectfully submitted

Richard E. Game

REG/
Attch.

CONTENTS

FIGURES

LARAMIE MINING CORPORATION

B.C. LOCATION MAP

Sept, 1984

1

SUMMARY AND RECOMMENDATIONS

The Goldway Peak property, located near Johanson Lake, B.C. displays a range of volcanic suites. The southern edge of the property is dominated by meta-andesites, while the northern edge is primarily diorite.

Chalcopyrite, pyrite, azurite, galena, and free gold can be found in scant quantities in northwesterly striking quartz veins. Two veins in particular, the "A" and "C" veins, have known economic values of gold.

The VLF EM 16 survey, which was undertaken to determine the extension on these veins, provided little evidence in this regard. The scant mineralization within the quartz veins was not sufficient to ellicit a suitable response from this technique.

Given the ruggedness of topography and barreness of the quartz veins, an extended program of prospecting, trenching, and short hole drilling will likely be more successfull; thus this is the recommended course of action.

INTRODUCTION

1.1 General Statement

The gold bearing quartz veins in the vicinity of Goldway Peak, near Johanson Lake, B.C. have attracted the attention of prospectors since the late eighteen hundreds.

Laramie Mining Corporation staked and optioned the Goldway Peak properties in 1979 with hopes of discovering economic reserves of gold.

During a short period in August of 1984, a grid was flagged, and a VLF electromagnetic survey was undertaken. The objective of this program was to determine if the gold bearing quartz veins had significant extension.

1.2 Location and Access

The Goldway Peak properties, consisting of 70 mining claims in the Omineca Mining Division, is about 370 kilometers northwest of Prince George, B.C. (Figure 2.). The claims are on map NTS 94D near 56^{o} 30' north and 126^{o} 15' west. The area of interest is situated on the south slope of Goldway Peak about one kilometer above the Goldway Creek valley.

The property is accessible from an unsurfaced road originating at Fort St. James and terminating at Johanson Lake, seven kilometers to the north-east. A helicopter is required for the completion of the journey. Northern Mountain Helicopters Inc. is conviently located at Johanson Lake.

LARAMIE MINING CORP.	
Location Map	
Sept, 1984	Figure 2

1.3 Topography

The terrain consists of typical mountain glacier topography. U-shaped valleys, very steep peaks, glaciers and glacier lakes, and abundant rock talus characterize the property.

Vegetation is very limited on the claims as the property, situated at 1870-2070 meters, is above treeline. Also, no buildings exist on the claim. Plenty of water is available from Goldway Creek for a drilling program.

1.4 History

"The area in which the Goldway Peak property is located was first explored by Simon Fraser in 1806 and subsequently the Hudson's Bay Company established Fort Connelly in 1826 on Bear Lake, 60 kilometers southwest of the property.

In 1899 placer gold was discovered at the mouth of McConnell Creek, 30 kilometers northwest of Goldway Peak. This led to extensive exploration work in 1907/1908 and again in 1932. The deposits proved to be rather limited in extent. A few kilometers to the north at McConnell Lake, the King George deposits of massive pyrite was found in 1932. This area was extensively prospected in 1966 by the Houston Mining Ltd. and a number of chalcopyrite bearing veins were found over an area measuring 800 ft by 300 ft. The principal showing consists of a spectacualar chalcopyrite vein that is from 5 to 11 ft wide and 50 ft long. The best chip sample assayed 7.60% Cu, 2.92 oz Ag, and 0.08 oz Au per ton across 10.0 ft. Some diamond drilling was carried in 1972.

Gold bearing quartz veins were found east of Goldway Peak by members of the Geological Survey of Canada during regional mapping in June of 1945. These veins were staked in 1946 by J. Burton, J. Lawlor and C. French, and

the property was known as the Bruce group. Trenching and sampling was carried out and assay maps of this work are available today.

In 1946, Springer Sturgeon Gold Mines Ltd held the Solo group of claims one mile northwest of the Bruce group (presently known as the Goldway Peak property). Mineralization consists of northwesterly striking quartz veins with some gold within meta-volcanics.

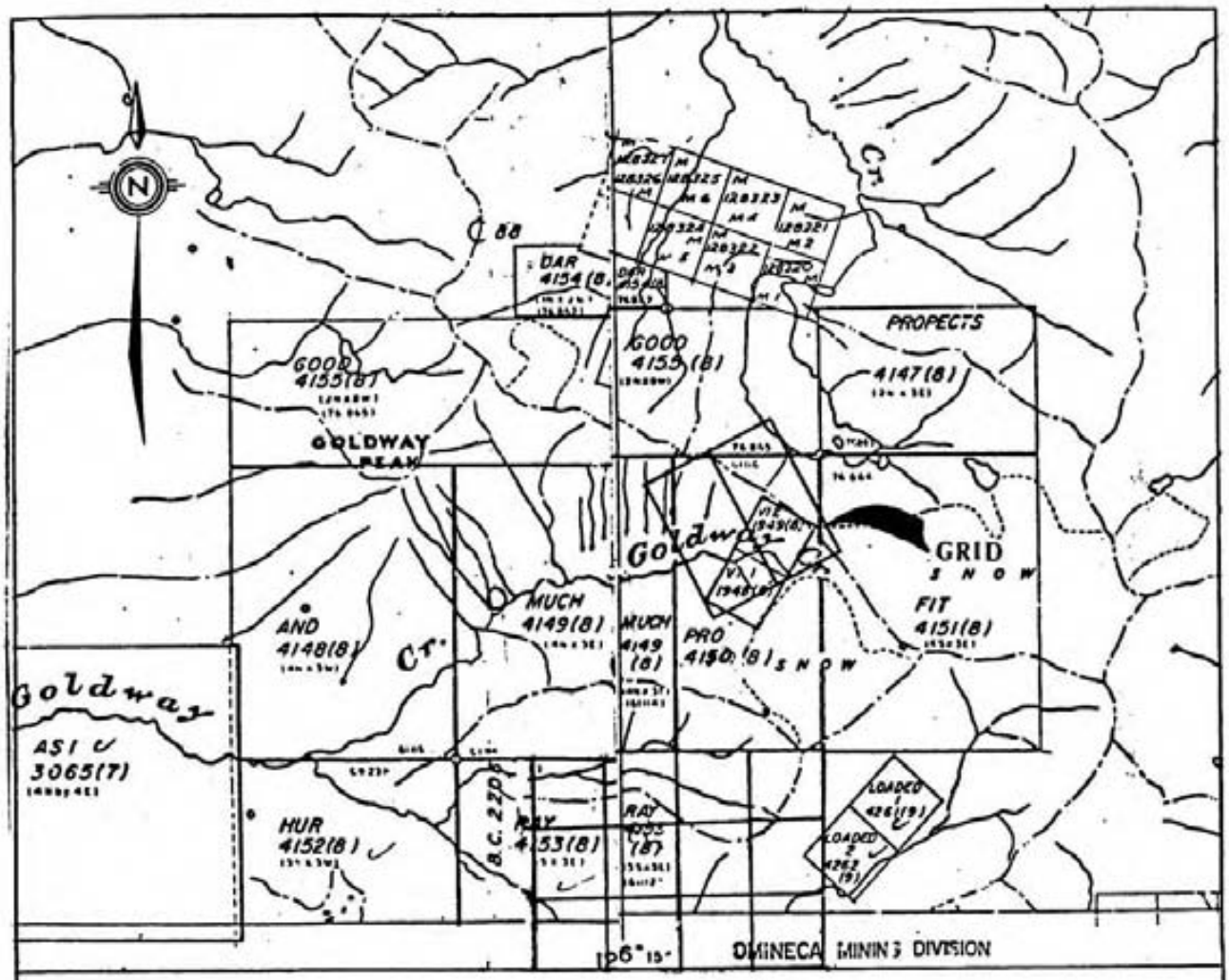
In 1979, C.S. Powney staked the Vi 1 and Vi 2 claims and optioned them to Laramie Mining Corp. Additional claims wre staked. In 1982 a geochemical survey was carried out in the valley bottom, downslope of the Goldway Peak veins, under the direction of G. Van Rosen, P.Eng.

In 1983 a program of trenching and sampling was carried out under the supervision of R.W. Phendler, P. Eng." (Phendler, R.W.;1983)

1.5 Land Status

The Goldway Peak property, which was staked in 1979, consists of the following mining claims (Figure 3.)

Name	Record #	Units
Vi 1	1948	1
Vi 2	1949	1
And	4148	12
Much	4149	8
Pro	4150	12
Fit	4151	6
Dar	4154	2
Good	4155	12



LARAMIE MINING CORP.	
Claim/Grid Map	
Sept, 1984	Figure 3.

2.0 GEOLOGICAL SETTING

The consolidated rocks in the vicinity of Goldway Peak range from the Upper Triassic volcanics to the Upper Jurassic and/or Cretaceous intrusives.

The volcanic rock is primarily andesitic, and shows varying metamorphic development. The rock can be described as dark green, medium grained, with abundant hornblende, epidote, and chlorite. Metamorphic development ranges from negligible at the north of the property to quite advanced at the south where the rock has developed a marked schistose appearance. This formation forms a broad syncline with the northerly striking axis passing about three kilometers east of Goldway Peak. This results in dips of 40 to 70 degrees to the east in the volcanics.

The intrusive rock forms part of the Omineca Intrusions. The rock can be described as a quartz diorite which is a dark colored, medium grained rock. About 50% of the rock appears to be mafic with hornblende the predominant mineral. The felsic minerals are characterized by quartz (20%) and abundant plagioclase.

Mineralization consists of limited pyrite, chalcopyrite, azurite, galena, and visible gold in steeply dipping, northwesterly striking quartz veins. These veins appear to be mainly associated with the quartz diorite stock. However, the southern tail of the "A" vein is hosted by the meta-volcanics and claims to the northwest also host quartz veins in the volcanics. An interesting abundance of massive and disseminated sulphides was found throughout diorite and meta-volcanic talus; a characteristic of many porphyry deposits...

The geology, with the grid as a reference, is plotted with figure 4.

3.0 VLF INTERPRETATION AND RESULTS

Introduction

This report discusses the survey procedure, compilation of data, and the interpretation of a very low frequency electromagnetic (VLF-EM) survey carried out on the Goldway Peak Property during the 1984 field season using a Geonics EM-16.

The primary purpose of the VLF-EM survey was to locate potential veins and structures for localizing mineralization. As with most VLF-EM surveys, an abundance of minor conductors and topographic effects were noted; these likely account for the anomaly which parallels the ridgetop. Otherwise, the property is very "quiet" with little response elicited from the quartz veins, a possible exception being portions of the "A" vein. The quiet response was to be expected because the veins have very little mineralization connected with them. Thus, generation of a strong secondary electromagnetic field is unlikely.

Instrumentation and Theory

A standard VLF-EM receiver was used for the survey. This instrument is designed to measure the magnetic component of a very low frequency (VLF) electromagnetic field. The U.S. Navy submarine transmitter located at Seattle, Washington, and transmitting at 18.6 KHz, was used.

In all electromagnetic exploration, a transmitter produces an alternating magnetic field (primary) by a strong alternating current usually through a wire coil. If a conductive mass such as a sulphide body is within this magnetic field, a secondary alternating current is induced within it which in turn induces a secondary magnetic field that distorts the primary magnetic field. It is this distortion that the EM receiver measures. The VLF-EM uses a frequency range from 16 to 24 KHz whereas most EM instruments use frequencies ranging from a few hundred to a few thousand Hz. Because of its relatively high frequency, the VLF-EM can pick up bodies of low conductivity and therefore is more susceptible to clay beds, electrolyte-filling fault shear zones and porous horizons, graphite, carbonaceous sediments, lithological contacts as well as sulphide bodies of too low a conductivity for the other EM methods to pick up.

Consequently, the VLF-EM has additional uses in mapping structure and in picking up sulphide bodies of too low a conductivity for conventional EM methods and too small for induced polarization. However, its susceptibility to lower conductive bodies results in a number of anomalies, many of them difficult to explain and, thus, VLF-EM preferably should not be interpreted without a good geological knowledge of the property and/or other geophysical and geochemical surveys.

Survey Procedure

The VLF-EM survey was run on a flagged grid (Figure 3) with the baseline approximately parallel to the strike of the quartz veins - 330°. Readings were taken every 25 meters and stations are marked with survey flagging with co-ordinates marked with felt pen. Care was taken in regard to technique to compensate for the steep terrain. Due to extremely rugged topography, survey points within the grid are ragged. However, reasonable care was taken to ensure that the survey covered the ground on strike with the quartz veins. All readings were taken facing Seattle.

Compilation of Data

The readings were reduced by applying the Fraser Filter and plotted at a scale of 1:2500 (Figure 4). Filtered data, as shown on the accompanying map, are plotted between the reading stations. The positive filtered values were contoured at intervals of 5° starting at 5°.

The Fraser Filter is essentially a 4-point difference operator which transforms zero crossings into peaks, and a low pass smoothing operator which reduces the inherent high frequency noise in the data. Therefore, the noisy, non-contourable data are transformed into less noisy, contourable data. Another advantage of this filter is that a conductor that does not show up as a cross-over on the unfiltered data quite often will show up on the filtered data.

4.0 CONCLUSION

The Goldway Peak property displays a range of volcanic and intrusive suites ranging in age from Upper Triassic to Cretaceous.

Small amounts of chalcopyrite, pyrite, azurite, galena, and free gold are found in northwesterly stiking quartz veins. Two veins in particular, the "A" and "C" veins, have known economic values of gold.

The VLF EM 16 survey, which was undertaken to determine the extension on these veins, provided little evidence in this regard. The scant mineralization within the quartz veins was not sufficient to ellicit a suitable response from this technique.

4.2 Comment

Given the ruggedness of topography and barrenness of the quartz veins, an extended program of prospecting, trenching, and short hole drilling will likely be more successfull; thus this is recommended.

5.0 CERTIFICATION

I, R.E. Game, of the City of Kamloops, Province of British Columbia, hereby certify as follows:

(1) I am a junior Geological Engineer residing at 664 Seton Pl., Kamloops, B.C., and with office at 101-736 Granville St., Vancouver, B.C.

(2) I am a graduate of the University of British Columbia with a Bachelor of Applied Science in Geological Engineering (1984).

(3) I have practiced mining exploration for three years, most of which was based in the Province of British Columbia.

(4) I am NOT a Professional Engineer; I am registered as an Engineer-in-Training and am a member in good standing of the Canadian Institute of Mining.

(5) I have no interest, direct or indirect, in Laramie Mining Corp. or the Goldway Peak property.

(6) This report is based on an examination of the Goldway Peak property, together with a review of pertinent data.

Respectfully submitted

R.E. Game, B.A.Sc.

6.0 REFERENCES

Phendler, R.W., P. Eng.; Report on Assessment Work on the Good, Much, Pro, And, Fit, Prospects and Dar claims,Goldway Peak. 1983

Phendler, R.W., P. Eng.; Progress Report-Goldway Peak Property. 1983

Phendler, R.W., P. Eng.; Summary Report-Goldway Peak Property, B.C. 1984

Lord, C.S.; McConnell Creek Map Area, Cassiar District, British Columbia. G.S.C. Memoir 251, 1948.

7.0 APPENDICIES

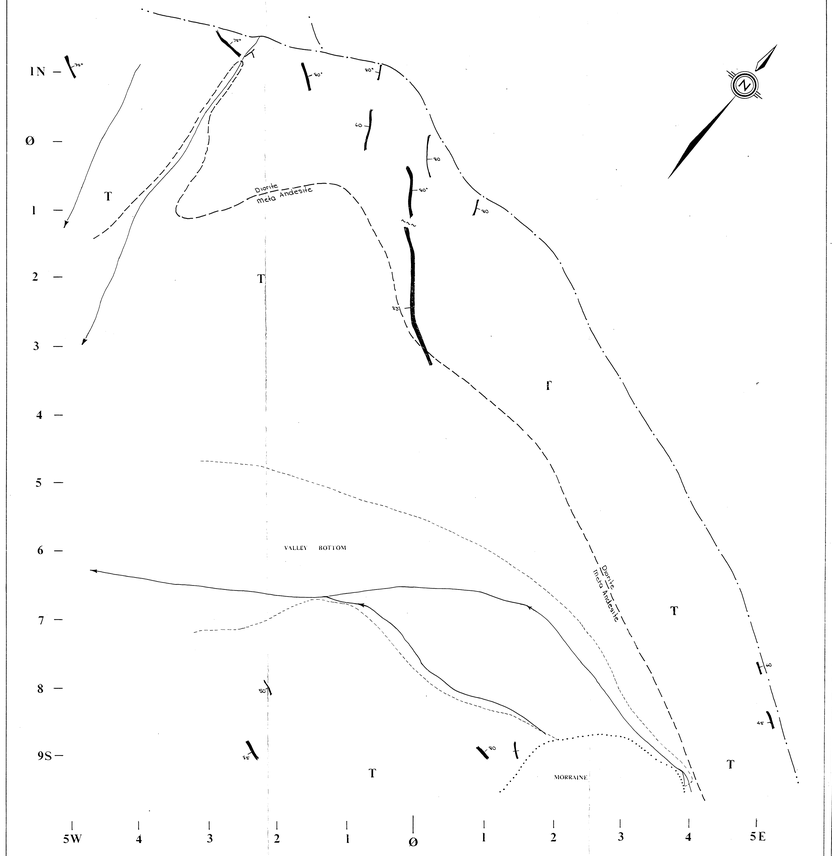
STATEMENT OF COSTS FOR GEOLOGY AND GEOPHYSICS (EM Survey)

Goldway Peak Property, Omineca Mining Division

R. Game - 12 days at $200 per day	$ 2,400.00
B. Sauer - 10 days at $150 per day	1,500.00
receipted expenses, including helicopter	1,229.79
fixed wing aircraft rental	900.00
EM-16 rental - 8 days at $40 per day	320.00
vehicle expense - Vancouver to property to Vancouver	500.00
	$ 6,849.79

Verified by:

_____



Legend

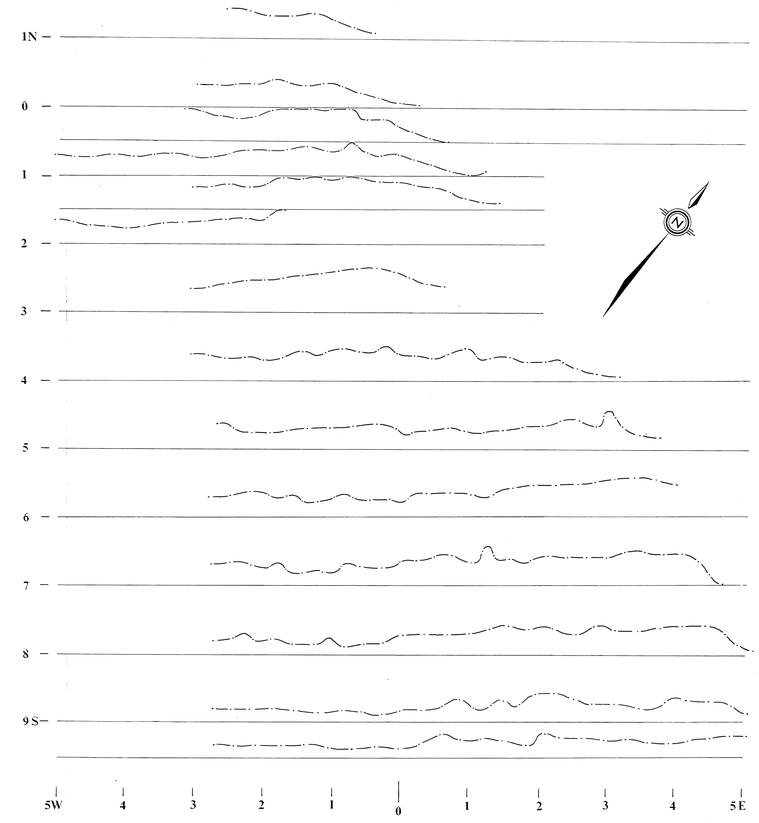
- Drainage
- Fault
- Contact
- Ridgetop
- Quartz vein
- T Talus slope

GEOLOGY

Goldway Peak Property | Laramie Mining LP

0 ——— 50 M.

R. Game Sept. 1984



VLF TILT ANGLE

Goldway Peak Property | Laramie Mining LP

0 ——— 50 M.

VERT. SCALE 1cm = 10°

R. Game Sep. 1984

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,145

FRASER FILTERED VLF TILT ANGLE

GOLDWAY PEAK PROPERTY | LARAMIE MINING CP.

VLF EM 16 TRANSMITTER SEATTLE

SCALE 1 cm = 25 m 0 ——— 50 M

CONTOURS 6°

R. GAME SEP., 1984