

Geophysical report on the
Waterloo C.G. Lot 4815,
Grizz 1-3 mineral claims

in the

Vernon Mining Division

82E/15E

49° 54' 118° 33'

Owner and operator

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March 14, 1979

7221

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Introduction

A program of geophysics was carried out on the Waterloo group of mineral claims during the period of March 10 to April 9, 1978 inclusive.

A total of 16,927 meters of line was run and approximately 600 Ronka E.M.-16 readings were taken.

The claims cover a shear zone or zones near an east west contact of limestone and granodiorite. Silver and gold mineralization is known to be associated with shearing on the Waterloo C.G.

Location, Access, Topgraphy

The Waterloo group of claims consisting of the Waterloo C.G. Lot number 4815 and three located claims -, Grizz 1-3 are located on the northwest flank of Lightning Peak at the headwaters of Rendell creek. Map No. 82E/15E.

Access to the property is by an old but still serviceable mine access road-locally called the Lightning Peak road. The turnoff to the south is approximately 100 km. east of Vernon on highway 6. The claims are at the end of the road 20 km. in from the highway.

The claims are on a gently sloping plateau with an elevation of approximately 1700 meters. At the time the survey was carried out 2 meters of snow was on the ground.

Temperatures varied above and below 0^oC. and thawing conditions made skidoo travel an onerous, time consuming, adventure.

History

The Lightning Peak area has been worked intermittently since about 1900. Attractive silver values was the main incentive to prospectors although gold-quartz veins also exist and did receive their share of attention.

Only the Waterloo C.G. was worked on an extensive basis. Several shipments of extremely high grade silver ore were made. In the late forties and early fifties a mill was constructed to treat the lower grade ore from underground and the dumps. This mill was not successful and was closed.

Claims

W.G. Botel is the owner of Grizz 1-3 mineral claims. W.G. Botel and H. Veerman are purchaseing the Waterloo C.G. Lot No. 4815.

Claim	Record No.	Date staked	Recorded	tag
Grizz 1	426	21 March 1978	18 April 1978	466198M
Grizz 2	427	" " "	" " "	466199M
Grizz 3	428	" " "	" " "	466200M

Geology

The geology of the Lightning Peak camp was mapped by C.E. Cairnes for the Geological Survey of Canada during 1930 and his report is published in Summary Report, 1930, Part A.

Locally the geology consists of white, crystalline limestone trending E-W sitting within metamorphosed volcanics which are intruded by dykes and apophyses of granodiorite from the granodiorite body on the south side of the limestone.

A strong shear runs approximately E-W through the limestone bodies and appears to be mineralized almost continuously although to varying degrees.

Work Done in 1978

A winter camp was established on the property and the Grizz 1-3 mineral claims were staked.

A grid was established with a central E-W baseline 1160 meters long. Side lines were run at right angles to the baseline at 60 meter intervals. A total of 17 lines were run in this manner with stations marked at 30 meter intervals. A Ronka E.M.-16 reading was taken at each station with intermediate readings taken in areas of change.

Geophysics

The instrument used for the survey was a Ronka V.L.F. E.M.-16 serial number 49. This particular instrument reads dip angle in degrees of slope. Its sensitivity is dependent on the particular station used. In this survey station N.P.G. 18.6 kHz. was selected because of the strong response of E.-W. conductors.

The readings are plotted on the enclosed map. Conductors are indicated by a dashed line are numbered and are discussed below.

Results

Several conductors were outlined, most are short and appear to be shear zones.

Waterloo Vein Structure. No. 1

Depth indicated 60 to 90 meters.

Anomaly strength is good on line 24W otherwise fairly weak. Generally the conductor is thought to be the shear which is sometimes mineralized. The conductor dies out completely at line 16 W.

No. 2 Camp Area.

This conductor trends N 60 E but may swing southerly to west end of No. 1 conductor. It has moderate strength with an indicated length of 250 meters. Depth to the center of the conductor is 90 meters on line 22W and 60 meters on line 20W. No outcrop was seen but a semi parallel calcite vein has been mapped 60 meters to the NW. Due to its proximity to the Waterloo more work is warranted.

No. 3. AU Shaft.

Trends N 40 E, length 180 meters. The conductor axis cuts just north of the AU shaft which was sunk on a N-S striking quartz vein. the vein is mineralized with pyrite, minor galena and sphalerite. The vein was apparently cut off to the north. The conductor is weak and appears to have a depth of 100 meters however it may consist of two parallel zones in which case the depth is shallower.

No. 4. Mill Site.

Moderately strong E-W conductor which may be due to conductive overburden. Rendell creek and swamp is roughly parallel to this conductor thus it could also be an edge effect.

No. 5.

Strike N 40 W, length 730 meters but broken near lines 10W and 16W. This conductor is a shear. Of interest is a series of old trenches at 6W and 8W. These trenches occur near a flexure of the conductor axis.

No. 6.

Similar in strike to No. 5 but only one half as long. It is probably another parallel shear with the same attitude.

No. 7.

Length 300 meters; depth 60 meters. The conductor is weak but concise. It parallels the E fork of Rendell creek and may indicate a fault. However due to its similar strike to the Waterloo vein/shear it should be investigated more thoroughly.

No. 8.

Strike N 40 W, length unknown. This is a moderately strong conductor with an indicated depth of 60 meters on line 30 W. Gulleys with similar strike occur in the area so it is probably a fault. Conductor No. 7 probably intersects No. 8 on line 30W at about 10N.

The shortness of most of the conductors leads me to believe that they are fault or shear segments possibly

offset by N-S faults, which, because of the location of the transmitting station N.P.G. would not be picked up.

Conclusions

The geophysical survey did respond to the Waterloo vein/shear and did indicate other shear zones in the area. Of interest is that of the 8 conductors outlined No. 1 contains the Waterloo deposit, No. 2 is in the AU shaft site and No. 5 is in an area of numerous old trenches.

Recommendations

More prospecting with trenching in strategic locations should result in enough information to evaluate the potential value of the conductors outlined in the survey.



William G. Botel P.Eng.

Statement of Expenditures

Labour; W.G. Botel, instrument operator. 30 days at \$200..	120	3600	deduct 2400
R.J. Botel, helper 30 days at \$50.		\$1500.	
Mileage. 1305 miles at \$.20		\$ 261.	
Rentals. Truck and trailer 30 days at \$10.		\$ 300.	
Skidoo 30 days		\$ 200.	
Ronka E.M.-16 30 days at \$10.		\$ 300.	
Camp equipment, topophil, string, flagging, power saw		\$ 150.	
Repairs. Skidoo, shaft, belts, welding, etc.		\$ 200.	
Gas and oil for skidoo		\$ 125.	
Groceries		\$ 305.	
Travelling expenses while setting up camp. 5 days		\$ 150.	
Report preparation		\$ <u>400.</u>	
		Total	\$9891.

Waterloo group percentage $\frac{16775m}{26077m} \times \$9891 = \$6362.75$

Rob l percentage $\frac{9150m}{26077m} \times \$9891 = \$3470.59$

$\frac{16775}{26077} \times 2400 = \frac{1543.88}{4818.87}$ deduct


Statement of Qualifications

I, William G. Botel, am a registered Professional Engineer
in the Province of British Columbia and that;

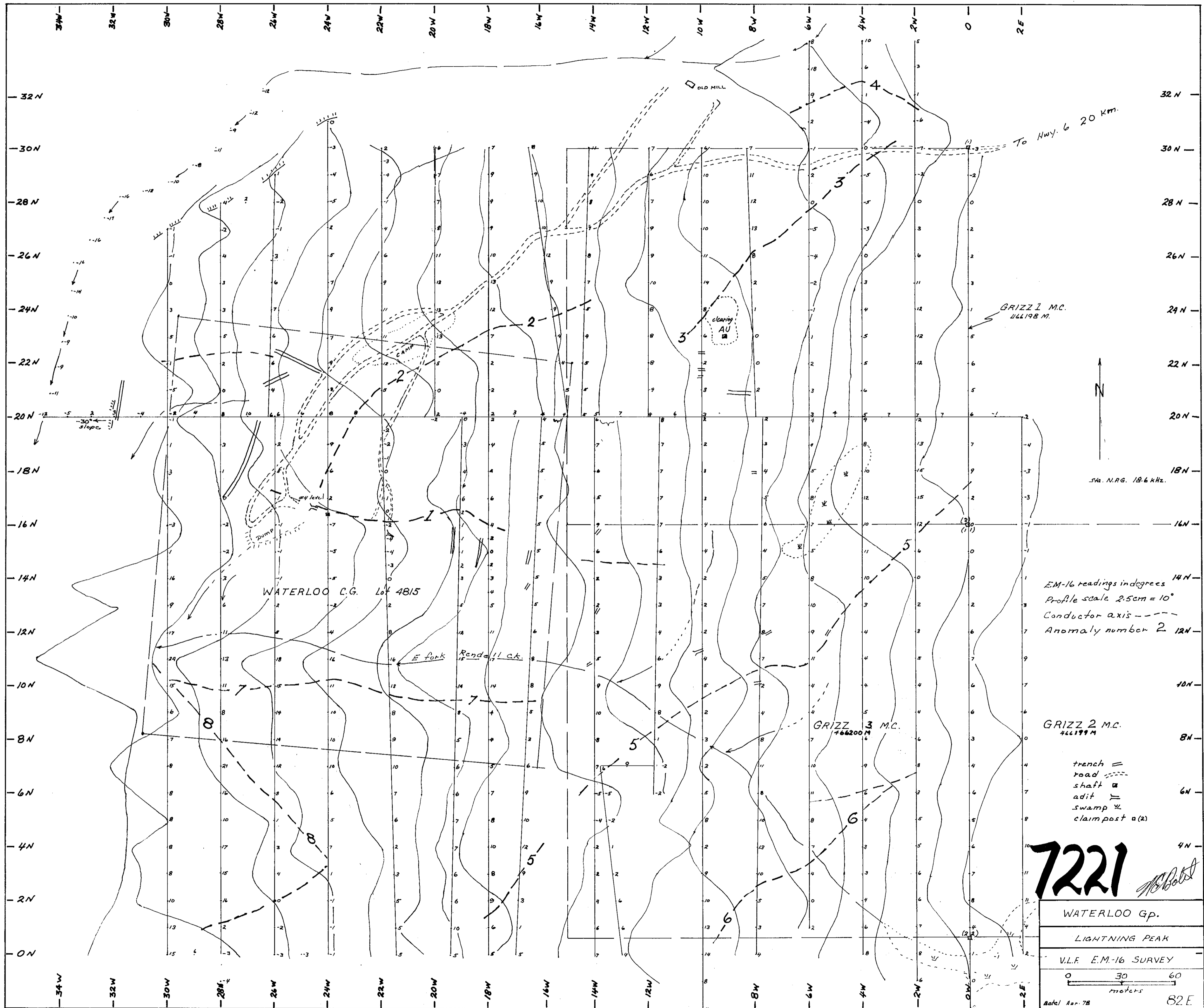
I have practised my profession for at least twelve years,

I feel confident that I can operate and interpret data
derived from the Ronka E.M.-16 instrument.

My helper Robert Botel worked under my direction and is
quite capable of running compass line and marking same.

A handwritten signature in cursive script, appearing to read 'W.G. Botel', written in dark ink.

William G. Botel P.Eng.



EM-16 readings in degrees
 Profile scale 2.5cm = 10°
 Conductor axis - - - -
 Anomaly number 2

GRIZZ 2 M.C.
 466198 M.

trench =
 road =
 shaft =
 adit =
 swamp =
 claim post = (2)

7221 *Babel*

WATERLOO Gp.
 LIGHTNING PEAK
 V.L.F. E.M.-16 SURVEY
 0 30 60
 meters
 Babel Apr. 78 82E