

Location/Identification

MINFILE Number:	082ENE022	National Mineral Inventory Number:	082E15 Ag2
Name(s):	<u>MORNING</u> MORNING NO. 2, CORDOVA, ONTARIO, DIRECTOR, DIRECTOR 5, PAYCHECK, MORNING 1, MORNING 2, ROB 1, XEN 1, LIGHTNING PEAK CAMP, WINNIFRED CREEK		
Status:	Past Producer	Mining Division:	Vernon
Mining Method	Underground	Electoral District:	Okanagan-Vernon
Regions:	British Columbia	Resource District:	Okanagan Shuswap Forest District
BCGS Map:	082E098		
NTS Map:	082E15E	UTM Zone:	11 (NAD 83)
Latitude:	49 56 17 N	Northing:	5532935
Longitude:	118 34 37 W	Easting:	386842
Elevation:	1720 metres		
Location Accuracy:	Within 500M		
Comments:	Shaft, located about 7.3 kilometres northwest of Lightning Peak (Property File - Ven Huizen, 1986). See also the WATERLOO (082ENE017) and DICTATOR (082ENE023) occurrences.		

Mineral Occurrence

Commodities:	Gold, Silver, Lead, Zinc		
Minerals	Significant:	Pyrite, Sphalerite, Galena, Arsenopyrite	
	Associated:	Quartz	
	Alteration:	Pyrite	
	Alteration Type:	Pyrite	
	Mineralization Age:	Unknown	
Deposit	Character:	Shear, Vein, Disseminated	
	Classification:	Hydrothermal, Epigenetic	
	Type:	105: Polymetallic veins Ag-Pb-Zn+/-Au	
	Dimension:	43x2x0 metres	Strike/Dip: 000/75W
	Comments:	Attitude of north-south striking MORNING vein. Dimensions of the shear zone.	

Host Rock

Dominant Host Rock:	Plutonic		
Stratigraphic Age	Group	Formation	Igneous/Metamorphic/Other
Middle Jurassic	-----	-----	Unnamed/Unknown Informal
Isotopic Age	Dating Method	Material Dated	
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Lithology:	Granodiorite, Quartz Porphyry Dike		

Geological Setting

Tectonic Belt:	Omineca	Physiographic Area:	Okanagan Highland
Terrane:	Plutonic Rocks		

Inventory

Capsule Geology

The MORNING showing is located in the upper watershed of Dictator Creek, approximately 7.3 kilometres northwest of Lightning Peak. The showing is approximately 200 to 300 metres west of the DICTATOR (082ENE023) showing, and includes several showings that were previously considered separate MINFILE occurrences. These are the DIRECTOR 5 (082ENE018), CORDOVA (082ENE060) and ONTARIO (082ENE061) occurrences.

The showing is hosted by granodiorite of an unnamed Middle Jurassic intrusion which is cut by quartz porphyry dikes. The MORNING quartz vein is hosted by a north-south striking shear zone which is roughly parallel to that of the DICTATOR showing. The vein contains small streaks and disseminations of pyrite, sphalerite and galena. The gold and silver values reported are associated with pyrite and galena.

A 1930 report describes the workings on the MORNING property, which, at that time, consisted of 2 pits, 30 metres apart, and a trench. The pits exposed a quartz vein, approximately 50 centimetres wide, which strikes north-south and dips 75 degrees west. The vein contains about 2 per cent sulphides, which are, in relative order of abundance; pyrite, sphalerite and galena. Local concentrations of sulphides range up to about 10 per cent. The wallrock is heavily pyritized, extending about 1 metre in the footwall and somewhat less in the hangingwall. A trench, 16 metres north of the pits, exposes a 1.2-metre wide vein. It is sparsely mineralized, but a narrow vein in the hangingwall is described as heavily mineralized. The main vein is reported to have been traced for about 200 metres south of the trench.

In 1933, the MORNING property was optioned to Dictator Gold Mines Limited and the shear zone traced for about 43 metres by a series of shallow pits, shafts and trenches. The shear zone, up to 2.4 metres wide, includes an 83 to 106 centimetre wide quartz vein. Chip samples over the vein width assayed from 5.4 to 6.8 grams per tonne gold and from 68 to 239 grams per tonne silver, with variable, but unassayed, amounts of lead and zinc (Minister of Mines Annual Report 1933, page A152). Pyrite, arsenopyrite, galena and sphalerite were noted, as was the association between quartz veining and quartz porphyry dikes.

To the south and east of the MORNING showing quartz float and boulders mineralized with pyrite, galena and sphalerite were found, suggesting an extension of the shear zone. This area was referred to as the CORDOVA showing. To the north of the MORNING showing, quartz float was found which returned high gold, silver and lead assays. This area was referred to as the ONTARIO showing. Both the ONTARIO and CORDOVA showings are now included in the MORNING showing. A 1933 sketch map of the Lightning Peak area indicates that the CORDOVA showing is located to the west of the DICTATOR (082ENE023) Crown grant, and that the MORNING showing is north of the CORDOVA showing (Minister of Mines Annual Report 1933, page A152).

In 1934, Dictator Gold Mines Limited sunk a 35-metre shaft on the Dictator property, which included the DICTATOR Crown grant, MORNING NO. 2, CORDOVA, ONTARIO and 21 other contiguous claims. The shaft was sunk on the MORNING shear zone and is located approximately where the 1933 sketch map plotted the CORDOVA showing. It is referred to in later reports as the MORNING shaft. Underground development in the MORNING shaft began on the 30 metre level. A 5.4-metre crosscut was driven eastward and 2 workings were driven on the shear zone, one to the north for 15.8 metres and the other to the south for 18.2 metres. It is recorded that the quartz found in the shaft was of low (gold and silver?) grade, but that a gradual improvement took place in both the north and south drifts. High gold and silver assays are noted; including 226 grams per tonne gold and 1444 grams per tonne silver over 10 centimetres, and 8.5 grams per tonne gold and 25.7 grams per tonne silver over 61 centimetres (Minister of Mines Annual Report 1934, page D4).

In 1948, Paycheck Mining and Development Company Limited held the WATERLOO mine (082ENE017), and the DICTATOR, DIRECTOR and PAYCHECK claims. No work is recorded on the claims, but 2 trial shipments were made from the DIRECTOR dump. The shipments are attributed to the DIRECTOR 5 claim; however, it is probable that the DIRECTOR dump, is actually the old dump from the MORNING shaft. The amount of the shipments is unknown. It may have been part or all of the production recorded for the WATERLOO mine in 1948, which amounted to 8.6 tonnes of ore with a gross metal content of 1.86 grams of gold, 7309 grams of silver, 735 kilograms of lead and 2094 kilograms of zinc (Minister of Mines Annual Report 1948, page A150). In 1949, another small shipment of dump ore was made and it is recorded as production from the WATERLOO mine, although the location of the dump is not identified. A total of 2.26 tonnes of dump ore was shipped with a gross metal content of 622 grams of silver, 1183 kilograms of lead and 171 kilograms of zinc (Minister of Mines Annual Report 1949, page A138).

In 1966, Bralorne Pioneer Mines Limited held an option on the DICTATOR, MORNING and WATERLOO properties. No work was done on the MORNING showing at that time. In 1974, K.L. Daughtry carried out a magnetometer survey over the MORNING 1 & 2 claims. The survey identified a north-south structure believed to be the MORNING shear zone. In 1979, W.G. Botel carried out a ground electromagnetic survey of the same area, which was staked as the ROB 1 claim. A northwest-southeast trending anomaly was identified to the north of the MORNING shaft. It was concluded that the area was structurally too tight to host an east-west shear zone like that of the WATERLOO mine.

In 1983-84, L.A. Bayrock carried out two small geochemical surveys over the KEN (082ENE073) claim, which surrounded the MORNING showing. These surveys identified weak gold and silver anomalies in soils from lineaments. In 1986, Amulet Resources Corporation staked the area surrounding

the DICTATOR (082ENE023) Crown grant and ROB 1 claim. They trenched a number of lineaments to the south and southeast of the MORNING showing. The lineaments were identified from aerial photographs. Anomalous gold and silver assays were obtained from quartz veins. An induced polarization and resistivity survey was also carried out in 1986. Resistivity anomalies were associated with lineaments. In 1987, Amulet Resources undertook a program of prospecting, geological mapping, geophysical surveys (induced polarization, VLF-EM and magnetometer surveys) soil geochemistry, trenching, and 576 metres of diamond drilling in 5 holes. This work was carried out on the AZZA and the AZZA 2 (082ENE072) claims which surround, but do not cover, the MORNING showing.

The ROB 1 claim, covering the MORNING showing, expired in 1989 and the showing was re-staked as the XEN 1 claim for Annax Ventures Inc. In 1989, a small program of rock and soil sampling was carried out around the MORNING showing. Rock grab samples collected from the MORNING dump returned high gold and silver assays. A 60-centimetre chip sample of a 1.5-metre wide quartz vein, exposed in a pit 40 metres south of the MORNING shaft, assayed 20.8 grams per tonne silver, 0.385 per cent zinc and 0.331 per cent lead (Assessment Report 19010).

Bibliography

EMPR AR 1919-N167; *1933-A150,A152; *1934-D4; 1948-A150; *1949-A138;

1950-A118; 1951-A133; 1953-A109; 1966-191

EMPR ASS RPT 5200, 7220, 13528, 15217, 16216, 18009, *19010

EMPR EXPL 1979-51; 1985-C31; 1986-C39; 1987-C36; 1988-C25

EMPR GEM 1974-65

EMPR INDEX 3-194

EMPR OF 1994-8

EMPR PF (In General File - Sketches of Lightning Peak Area 1919, 1933 and unknown; Unknown (1919-03-31): Sketch Map of the Lightning Peak Camp 1919; *Ven Huizen, G.L. (1987-06-30): Prospectus Report on the Azza Mineral Claims; Ven Huizen, G.L. (1989-12-11): Prospectus Report on the Winnifred Creek Property - Carol and Xen Claims; Westex Exploration Ltd. (1996-06-04): RE: Director 5 Mineral Occurrence; Westex Exploration Ltd. (1996-06-04): RE: Ontario Mineral Occurrence; Westex Exploration Ltd. (1996-06-04): RE: Cordova Mineral Occurrence; Prospectors Report 1996-10 by William Welsh)

EMPR RGS 29

GSC MAP 6-1957; 1701A; 1712A; 1713A; 1714A; 1736A

GSC OF 409; 637; 736; 1969

GSC SUM RPT *1930A, p.80A,96A

EMPR PFD 689, 691, 695, 836, 837, 851, 853, 672513, 672514, 673296

Date Coded:	1985/07/24	Coded By:	BC Geological Survey (BCGS)	Field Check:	N
Date Revised:	2014/11/12	Revised By:	Laura deGroot (LDG)	Field Check:	N