



MINFILE Detail Report
BC Geological Survey
Ministry of Energy, Mines and Petroleum Resources

Location/Identification

MINFILE Number: 082FNW137 **National Mineral Inventory Number:** 082F14 Ag67

Name(s): **METEOR (L.2893)**
METEOR MINE, OTTAWA NO. 5 (L.2892), CULTUS (L.2891), DEADWOOD (L.3576), PAYDAY

Status: Past Producer **Mining Division:** Slocan

Mining Method: Underground **Electoral District:** Nelson-Creston

Regions: British Columbia **Resource District:** Arrow Boundary Forest District

BCGS Map: 082F074

NTS Map: 082F14W **UTM Zone:** 11 (NAD 83)

Latitude: 49 45 33 N **Northing:** 5511915

Longitude: 117 21 19 W **Easting:** 474411

Elevation: 2115 metres

Location Accuracy: Within 500M

Comments: The Meteor property, comprising the Meteor (Lot 2893), Ottawa No. 5 (Lot 2892) and Cultus (Lot 2891) claims and fractions, is situated at the head of Tobin Creek on the northwesterly slope of the divide between Lemon and Springer creeks, 8 kilometres east of Slocan. Access to the property from the Slocan highway is via the Lemon Creek and Chapleau Creek roads. Adits are shown on the ridge above the headwaters of Tobin Creek, 8 kilometres east of Slocan (Assessment Report 9607).

Mineral Occurrence

Commodities: Silver, Gold, Zinc, Lead, Tungsten, Copper, Molybdenum

Minerals

Significant: Sphalerite, Galena, Tetrahedrite, Stephanite, Argentite, Silver, Scheelite, Chalcopyrite, Molybdenite

Associated: Quartz, Pyrite

Alteration: Sericite

Alteration Type: Sericitic

Mineralization Age: Unknown

Deposit

Character: Vein, Stockwork

Classification: Epigenetic, Mesothermal

Type: I05: Polymetallic veins Ag-Pb-Zn+/-Au, I01: Au-quartz veins, I12: W veins

Shape: Bladed **Modifier:** Faulted, Fractured

Strike/Dip: 105/35N

Comments: Meteor vein.

Host Rock

Dominant Host Rock: Plutonic

Stratigraphic Age **Group** **Formation** **Igneous/Metamorphic/Other**
Jurassic ----- Nelson Intrusions

Isotopic Age **Dating Method** **Material Dated**

Lithology: K-Feldspar Porphyritic Granite, Biotite Diorite Dike, Pegmatitic Dike

Geological Setting

Tectonic Belt: Omineca **Physiographic Area:** Selkirk Mountains

Terrane: Plutonic Rocks

Inventory

Ore Zone: DUMP
Category: Assay/analysis

Year: 1987
Report On: N
NI 43-101: N

Sample Type: Grab

Commodity	Grade
Silver	2300.0000 grams per tonne
Gold	4.3000 grams per tonne
Copper	0.0317 per cent
Lead	0.1350 per cent
Zinc	0.0830 per cent

Comments: Sample of dump material, JL-102.

Reference: Open File 1988-11.

Summary Production

		Metric	Imperial
	Mined:	2,652 tonnes	2,923 tons
	Milled:	1,764 tonnes	1,944 tons
Recovery	Silver	4,724,994 grams	151,912 ounces
	Gold	13,177 grams	424 ounces
	Zinc	679 kilograms	1,497 pounds
	Lead	661 kilograms	1,457 pounds

Capsule Geology

The Meteor property, comprising the Meteor (Lot 2893), Ottawa No. 5 (Lot 2892) and Cultus (Lot 2891) claims and fractions, is situated at the head of Tobin Creek on the northwesterly slope of the divide between Lemon and Springer creeks, 8 kilometres east of Slocan. Access to the property from the Slocan highway is via the Lemon Creek and Chapleau Creek roads.

The Meteor (Lot 2893) Crown-granted claim was staked in 1895. J.A. Finch & associates optioned the property in 1896 and the initial production of ore, amounting to about 70 tonnes, was shipped in 1897, yielding 1182 grams of gold and 466,545 grams of silver. Since this time mining continued intermittently, until 1985, achieving greatest production of 1,715 tonnes of ore in 1964. Total production from the Meteor mine is 2,659 tonnes of ore yielding 4,724,994 grams of silver, 13,177 grams of gold and a small amount of lead and zinc.

Three claims, the Cultus, Ottawa No. 5, and Meteor (Lots 2891-2893 respectively) were Crown-granted to Finch & associates in 1899. The vein was apparently not found in the lower adit and work ceased in about 1900. Lessees carried out intermittent exploration and development during the period 1905 to 1917. J.C. Buchanan acquired the property in 1919 and began driving No. 6 level adit; he continued the project in 1922 and 1923. Lessees worked the property in 1928 and intermittently from 1932 to 1940. Some ore shipments were made under the name Meteor Mining Company, which may have been an American incorporation. In the early 1930's the owners of the property were reported to be E. Murphy and M.S. Mayfield. Development work to that date comprised 6 adits, of which the three lower ones totalled over 426.7 metres of drifts and crosscuts.

Cultus Explorations Ltd. was incorporated in May 1963 to acquire the above Crown-grants, and the Deadwood claim (Lot 3576). No. 6 level was rehabilitated for 244 metres and stoping and underground diamond drilling carried out. A 50 ton-per-day mill, installed near No. 6 adit, was put into operation in 1964. Drifting, crosscutting and raising during the year totalled 123.4 metres. The mine closed in November 1964. Lessees carried out some underground exploration work in 1967 and 1970.

The area is dominated by granitic rocks of the Middle to Late Jurassic Nelson Intrusions. Host rock at the Meteor occurrence is a medium-grained potassium feldspar porphyritic granite, commonly crosscut by dykes of biotite diorite and pegmatitic granite phases. The dykes range from 10 centimetres to 3 metres in width, strike north-northeast and north-northwest with moderate to steep dips. Contacts with the granite country rock are sharp and shearing is common along these zones.

Faults, shear zones and joints are oriented predominantly in north and north-northeast directions with generally near vertical dips. North trending faults and shears commonly display strike-slip displacements, while north-northeast trending structures commonly display dip-slip displacements.

The workings of the Meteor mine consist of six adits that intersect a 5 to 50-centimetre wide vein that strikes 105 degrees and dips 35 degrees north. Vein mineralization is associated with the sheared upper contact of a 3-metre wide dike and narrow off-shoot fissures. Quartz veining is localized mainly at the sheared dyke contact but also occurs as narrow (1-2 centimetre) veinlets adjacent to the main vein. These veinlets constitute stockwork mineralization in the dyke up to 1 metre from the main vein. The dyke rock is pervasively sericitized in the zones of quartz veining and contains up to 2 per cent disseminated crystalline pyrite. Both the dyke and the quartz veining are dislocated by a series of nearly parallel vertical post-mineralization faults. Displacement along the faults is of a dip-slip nature with the southeastern side of the faulting being downdropped.

The vein is largely quartz carrying some sphalerite, galena, tetrahedrite, stephanite, argentite and native silver. Pyrite and chalcopyrite are also present and associated with significant gold values. Scheelite was discovered in the Meteor vein on No. 2 level as a wedge-shaped body approximately 3.6 metres long and 10 centimetres thick at the base. A small amount was also found on No. 4 level. Scheelite also occurs in the No. 6 level adit as disseminated grains along a moderately well-developed fracture striking 320 degrees and dipping 80 degrees northeast in the granite country rock (Assessment Report 9607). Examination of material from the Meteor dump in 1980 revealed molybdenite occurring locally within quartz stockwork hosted by sericitic granite, but was not found in the workings.

A sample of dump material taken in 1987 assayed 2300 grams per tonne silver, 4.3 grams per tonne gold, 0.135 per cent lead, 0.0317 per cent copper and 0.083 per cent zinc (Open File 1988-11). Yukon Minerals Corporation worked the property in 1987.

Bibliography

EMPR AR 1896-Bulletin 1, p. 72; 1897-535; 1899-845; 1902-H150; 1904- G168; 1905-J162; 1906-H146,H249; 1909-K115; 1910-K100; 1911-K154, K284; 1912-K150,K323; 1913-K126,K420; 1914-K289; 1915-K133; 1916- K199,K516; 1917-F190,F448; 1918-K171; 1919-N126,N127,N155; 1922- N203; 1923-A229; 1928-C297; 1932-A26,A160,A178; 1934-A26; 1935- A27,E32,G51; 1936-E49; 1938-A37; 1939-A40,A96; 1940-A26,A81; 1963- A50,79,80; 1964-A55,129,133; 1967-A55,249

EMPR ASS RPT *9607

EMPR BC METAL MM01305

EMPR BULL 10 (Revised), pp. 155,156

EMPR EXPL 1987-A21

EMPR FIELDWORK 1987, pp. 31-48

EMPR GEM 1970-447

EMPR INDEX 3-205; 4-123

EMPR INF CIRC 1988-1, p. 58

EMPR IR 1984-2, p. 102; 1986-1, p. 111

EMPR MAP 65 (1989)

EMPR MIN STATS 1985, p. 50

EMPR MINING 1975-1980, Vol. 1, pp. 32, 74

EMPR OF 1988-11; 1990-18; 1991-17

EMPR P 1989-5

EMPR PF (*Lakes, A. (1924): Report on the Meteor Mines)

EMR MP CORPFILE (Cultus Explorations Ltd.)

GSC ANN RPT 11

GSC BULL 129; 161

GSC MAP 3-1956, 1090A, 1091A

GSC MEM *184, pp. 179-180; 308

GSC OF 481; 1195

GSC P 84-1A

GSC SUM RPT 1916

EMPR PFD 2371, 2372, 20425, 750209, 822536, 800187, 800188, 800189, 800190, 21846

Date Coded:	1985/07/24	Coded By:	BC Geological Survey (BCGS)	Field Check:	N
Date Revised:	1997/07/22	Revised By:	B. Neil Church (BNC)	Field Check:	Y