Location/Identification

MINFILE Number: 092INW054
National Mineral Inventory Number: 092I11 Gyp1
Name(s): **SPATSUM**
HART, FLORA, MARIE, BELLE, TOM, LOFAR, ORION, HIFAR, SOFAR, MARS
Status: Prospect
Mining Division: Kamloops
Electoral District: Yale-Lillooet
Regions: British Columbia
Resource District: Kamloops Forest District
BCGS Map: 092I054
NTS Map: 092I11W
UTM Zone: 10 (NAD 83)
Latitude: 50 33 28 N
Northing: 5602025
Longitude: 121 18 11 W
Easting: 620199
Elevation: 366 metres
Location Accuracy: Within 500M
Comments: Adit, just west of Highway 1 and opposite the Spatsum station on the Canadian Pacific Railway, about 18.5 kilometres south of the community of Ashcroft (Assessment Report 6918).

Mineral Occurrence

Commodities: Copper, Zinc, Lead, Gypsum

Minerals
Significant: Chalcopyrite, Sphalerite, Galena, Gypsum
Alteration: Gypsum, Pyrite, Silica, Barite, Talc
Alteration Type: Silicific'n, Leaching, Pyrite
Mineralization Age: Unknown

Deposit
Character: Stratiform, Disseminated, Massive
Classification: Hydrothermal, Volcanogenic, Industrial Min.
Type: G06: Noranda/Kuroko massive sulphide Cu-Pb-Zn

Host Rock

Dominant Host Rock: Metavolcanic

Stratigraphic Age	Group	Formation	Igneous/Metamorphic/Other
Permian-Triassic	Undefined Group	Kutcho	------

Isotopic Age	Dating Method	Material Dated
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Lithology: Rhyolite Tuff, Rhyolite, Dacite Tuff, Dacite, Granite, Andesite Tuff, Andesite, Limestone, Diorite, Chert

Geological Setting

Tectonic Belt: Intermontane
Physiographic Area: Thompson Plateau
Terrane: Quesnel

Metamorphic Type: Regional
Grade: Greenschist

Inventory

No inventory data

Capsule Geology

Felsic volcanic and intrusive rocks which occur between the Martell and Bonaparte faults, near Ashcroft, are tentatively correlated with the Permo-Triassic Kutcho Assemblage, rather than the Upper Triassic to Lower Jurassic Nicola Group. Mafic volcanic rocks assigned to the Nicola Group occur both to the east and west of the Bonaparte fault. The presence of Upper Triassic fossils imply that this correlation is valid for basaltic rocks which occur east of the Bonaparte fault. However, the age of basaltic rocks that occur west of the Bonaparte fault, in proximity to, and possibly interbedded with rhyolite tuffs, is not constrained. These basaltic rocks may be contemporaneous with Lower Triassic felsic rocks, rather than the younger Nicola Group lavas. The presence of rocks of Kutcho Assemblage age and affinity raises the potential for Kutcho Creek-equivalent Cu-Zn volcanogenic massive sulphide mineralization (Fieldwork 1996).

The Spatsum property covers calcalkaline andesite to rhyolite metavolcanics and related chemical and clastic metasediments. They occur as a north to north-northwest striking, west dipping monoclinal sequence that has been metamorphosed to the mid-greenschist facies. The volcanics and sedimentary units have been locally intruded by diorite, granite, dacite and rhyolite plugs and dikes. Most of the intrusions are thought to be subvolcanic equivalents of the volcanic units. The metavolcanics include primarily andesite, dacite and rhyolite tuffs and tuff breccias and the metasediments consist of thin limestone and chert beds.

The most significant mineralization occurs where the rhyolite and locally the dacite units have been variably leached, silicified and pyritized and empregnated with gypsum, trace talc and barite, and very small amounts of chalcopyrite, sphalerite and galena. The mineralized and altered zones are heavily gossaned and pyrite concentrations are difficult to estimate due to the intense surface weathering and leaching. Gypsum occurs in significant concentrations in the zones as massive and/or disseminated clots commonly distributed throughout the altered rhyolite pyroclastics. Two mineralized gypsum-rich zones are about 600 metres apart and stand out prominently as large white masses. The larger and more southerly gypsum outcrop occurs over a strike length of 60 metres and a vertical height of 90 metres and strikes north-northeast with a moderate dip to the northwest. In 1913, an 8-metre exploratory adit was driven at the base of the southerly exposure; from the end of the adit a winze was sunk to a depth of 9 metres. The adit intersected a band of nearly pure white massive gypsum, 1.5 metres wide, which analysed 32.70 per cent CaO, 46.72 per cent SO3, 20.60 per cent H2O and 0.04 per cent insolubles (CANMET Report 714).

The alteration zones, because of the abundance of gypsum, are interpreted to represent a facies which commonly develops adjacent to many base metal-bearing Kuroko-type massive sulphide deposits. It is felt that base metal-bearing massive sulphide concentrations may exist along strike or downdip adjacent to these alteration zones. The only other mineralization observed on the property includes minor disseminated pyrite which occurs locally in some rhyolite units (Assessment Report 6918).

The Spatsum gypsum showings were first staked about in 1896 by a prospector named Munro, who did a small amount of development work, but allowed the lease to lapse. It was then taken up about 1906 by Messrs. Sinclair and Spencer, who staked four mineral claims called the Hart, Flora, Marie and Belle; the claims were surveyed in 1907. Work conducted by the El Paso Mining and Milling Company in 1972 comprised geological mapping and a soil geochemical survey. In 1978, D.H. Wilson prospected the Orion claim which covered the gypsum showings. In 1978-80, geological mapping, soil geochemical survey, induced polarization, VLF-EM and magnetic surveys, and percussion drilling of eight holes totalling 594 metres were performed by Cominco Ltd. In 1987-88, geological mapping and an induced polarization survey were completed on behalf of P.G. Dasler who interprets that the gypsum showings are vein gypsum and part of the zoning of an epithermal event. In 1995, prospecting was performed by D. Javorsky and F.M. Smith to evaluate the epithermal potential.

Bibliography

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EMPR PFD 811586

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Date Revised:	2014/11/27	**Revised By:**	Laura deGroot (LDG)	**Field Check:**	N