## Location/Identification

**MINFILE Number:** 082ESW113
**National Mineral Inventory Number:** 082E5 Au6,Mn2
**Name(s):** **OROFINO MOUNTAIN**
MO, KING SHOWING, HILL

**Status:** Past Producer
**Mining Method** Underground
**Regions:** British Columbia
**BCGS Map:** 082E022
**NTS Map:** 082E04E, 082E05E
**Latitude:** 49 15 46 N
**Longitude:** 119 41 35 W
**Elevation:** 1370 metres
**Location Accuracy:** Within 500M

**Mining Division:** Osoyoos
**Electoral District:** Yale-Lillooet
**Resource District:** Okanagan Shuswap Forest District

**UTM Zone:** 11 (NAD 83)
**Northing:** 5460158
**Easting:** 304072

**Comments:** The approximate location of the Lower and Upper King adits (Assessment Report 9933). See also Grandoro (082ESW010) and Twin Lakes (082ESW011). Includes Mo (formerly 082ESW137).

## Mineral Occurrence

**Commodities:** Gold, Silver, Lead, Copper, Zinc, Rhodonite, Gemstones

**Minerals**
**Significant:** Pyrite, Chalcopyrite, Galena, Gold, Rhodonite
**Associated:** Quartz
**Mineralization Age:** Unknown

**Deposit**
**Character:** Vein, Discordant
**Classification:** Hydrothermal, Epigenetic, Industrial Min.
**Type:** I01: Au-quartz veins, I05: Polymetallic veins Ag-Pb-Zn+/-Au, F01: Sedimentary Mn, Q02: Rhodonite
**Shape:** Irregular **Modifier:** Faulted
**Dimension:** 400x1x0 metres **Strike/Dip:** 042/90
**Comments:** The vein exposed in the Lower King adit is 0.6 to 1.2 metres wide and has been traced 400 metres along strike by trenching. The vein strikes 042 degrees and dips near vertical.

## Host Rock

**Dominant Host Rock:** Metaplutonic

| Stratigraphic Age | Group | Formation | Igneous/Metamorphic/Other |
|---|---|---|---|
| Paleozoic-Mesozoic | Undefined Group | Shoemaker | ------ |
| Upper Paleozoic | Kobau | Undefined Formation | ------ |
| Middle Jurassic | ------ | ------ | Nelson Intrusions |
| Jurassic | ------ | ------ | Oliver Plutonic Complex |

| Isotopic Age | Dating Method | Material Dated |
|---|---|---|
| ------ | ------ | ------ |
| ------ | ------ | ------ |
| ------ | ------ | - |
| 152+/-3 Ma | Uranium/Lead | Zircon |

**Lithology:** Hornblende Gabbro, Biotite Diorite, Biotite Schist, Quartzite

**Comments:** The Kobau Group is of Carboniferous to Permian age and the Shoemaker, Carboniferous to Triassic age. Age data; Fieldwork 1988, pp. 19-25.

## Geological Setting

| | | | |
|---|---|---|---|
| **Tectonic Belt:** | Intermontane | **Physiographic Area:** | Okanagan Highland |
| **Terrane:** | Okanagan | | |
| **Metamorphic Type:** | Regional | **Relationship:** | Pre-mineralization |
| **Grade:** | Greenschist | | |
| **Comments:** | Metamorphism is pre-quartz vein mineralization. | | |

## *Inventory*

**No inventory data**

## *Summary Production*

| | | Metric | Imperial |
|---|---|---|---|
| | **Mined:** | 0 tonnes | 0 tons |
| | **Milled:** | 3 tonnes | 3 tons |
| **Recovery** | Gold | 31 grams | 1 ounces |
| | Silver | 29 grams | 1 ounces |
| | Lead | 3 kilograms | 7 pounds |
| | Zinc | 3 kilograms | 7 pounds |

## *Capsule Geology*

The Orofino Mountain occurrence is located 1.5 kilometres north of the peak of Orofino Mountain, 12 kilometres northeast of Keremeos, British Columbia. It is one of three main occurrences forming the historic Orofino Mountain gold camp.

Orofino Mountain gold camp activity began shortly after the Fairview camp was discovered in the 1880s. Considerable development work was carried out between 1930 and 1941. The occurrence was part of the King claim group, which in its early days was known as the King showing. The first reported activity on the King showing occurred in 1938 under lease to J. Wukelick from Gold Standard Fairview Mining Co. Ltd. Two 9.1-metre shafts and an adit were developed and sorted ore was shipped. The Lower King adit is about 50 metres length and the Upper King adit is 25 metres long. Another shipment of sorted ore is reported made in 1940. Interest in the property was revived in 1973 when the King showing was restaked as the Hill 2-5 claims by D.W. Wieweger. A geochemical soil sampling program was carried out by Cripple Creek Resources Ltd. on the Hill 3 and 5 claims. The property was restaked as the Mo claim in 1976 by G. Crooker. Trenching revealed rhodonite mineralization. The King claim group was subsequently staked around the Mo claim. DRC Resources Corp. carried out an extensive exploration program between 1981 and 1984. In 1986, Grandex resources Ltd. optioned the property and conducted extensive property exploration in 1986 and 1987. In 1998-99, G.F. Crooker collected stream sediment samples from the major drainages on the property, and a grid was established over a portion of the King 5 mineral claim and magnetic and VLF-EM surveys carried out. The 1999 work program consisted of completing the grid and magnetic and VLF-EM surveys on the King 5 mineral claim.

The Orofino Mountain property is located within the Intermontane tectonic belt near its eastern boundary with the Omineca crystalline belt. The property is underlain by complexly deformed metamorphic rocks of the Carboniferous to Permian Kobau Group, and west and northwest trending sequences of quartzite, chert and greenstone belonging to the Carboniferous to Triassic Shoemaker and Old Tom formations. These are intruded by gabbroic to granitic rocks of the Middle Jurassic Nelson plutonic complex and Similkameen batholith, Jurassic Oliver plutonic complex and Jurassic to Cretaceous Fairview intrusion. Eocene vesicular basalts of the Marron Formation, Penticton Group are block faulted against older rocks on the north and west sides of the property.

On the northwestern slopes of Orofino Mountain, the oldest rocks are quartzite of the Kobau Group. Light grey, massive to thinly bedded quartzites of the Shoemaker Formation form two relatively narrow bands which strike west and northwest, and dip mainly to the southwest at 70 to 80 degrees. These rocks are adjacent to altered dioritic rocks, varying from massive coarse-grained hornblende gabbros and biotite diorite, to fine-grained biotite schist. Near the quartzite-diorite contact, mineralized quartz veins strike north to northeast and dip moderately to steeply to the southeast or steeply to the west.

The best mineralized veins in the Orofino Mountain gold camp appear to strike north to northeast and dip 45 degrees southeast to near vertical. Trenching and drilling in 1987 have revealed a complex fault pattern which displaces veins left-laterally by steep northeast faults or shallow faults. The intersection of these faults with veins appears to structurally control gold values.

The Lower King adit was driven 50 metres in a southerly direction. The vein strikes 042 degrees, dips nearly vertical and varies from 0.6 to 1.5 metres width. Approximately 30 metres inside the adit a 2-metre wide fault, west striking and dipping 57 degrees to the north, offsets the vein 5 metres.

Quartz veins host pyrite, chalcopyrite, galena and native gold. In 1987, trenching has established a strike length of 400 metres.

The Upper King adit is 27 metres long and follows a vertical, 0.1 to 1.4 metre wide quartz vein striking 015 degrees along a shear zone. On the surface the vein is up to 2.7 metres wide and can be traced for 95 metres. The vein is mainly white quartz with pyrite. Chalcopyrite, galena and native gold are also present. The vein has been traced over a strike length of 100 metres by trenching in 1987.

A 0.9-metre chip sample from the Lower King adit assayed 370 grams per tonne gold and 48 grams per tonne silver (Assessment Report 9933). A similar sample from the Upper King adit, S2, assayed 8.4 grams per tonne gold (Assessment Report 11480). The sample was taken 20 metres from the upper adit portal. Several significant intersections were encountered in seven drillholes during 1987 diamond drilling. Drillhole 87-1 intersected 0.23 metre of 9.22 grams per tonne gold over the interval 50.65 to 50.88 metres (Assessment Report 16648). Drillhole 87-2 intersected 3.46 grams per tonne gold over the 1.53 metre interval between 63.26 and 64.79 metres (Assessment Report 16648). The best intersection was from drillhole 89-5, which yielded 22.28 grams per tonne gold over the 1.00 metre interval between 23.00 and 24.00 metres (Assessment Report 16648). Values of up to 38.0 grams per tonne gold (30-003) were obtained in surface trenches (Assessment Report 16648). Geophysical and geochemical surveys indicated the extension of the structure.

In 1976, rhodonite was discovered on the Mo claim. The rhodonite occurs with quartz as irregular replacement zones in the Shoemaker Formation. The largest lens is 75 metres long by up to 1 metre wide.

The total production from the Orofino Mountain occurrence is unknown. An estimated 1000 to 2000 tonnes ore was mined from the Lower King adit in 1933 and/or 1934 but not recorded. Production in 1938 and 1940 is included with Grandoro (082ESW010). Production records indicate a 3-tonne ore shipment to the Trail smelter in 1976. Recovery included 31 grams of gold, 69 grams of silver, 3 kilograms of lead and 3 kilograms of zinc.

## *Bibliography*


EMPR AR 1938-D35; 1940-A24; 1976-103
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EMPR BC METAL MM0378
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EMPR EXPL 1981-159; 1983-33; 1984-15; 1985-C15; 1986-C24
EMPR GEM 1973-46
EMPR PF (Grandex Resources Ltd. (1987-05-01): Prospectus Report on Orofino Mountain Project; Brightwork Resources Inc. (1989-09-25): Prospectus Report on Orofino Mountain Property)
GSC MAP 341A; 538A; 539A; 541A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 37-21
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V STOCKWATCH May 22,1987

EMPR PFD 1611, 1612, 903219, 904750, 886266, 886267, 824918, 672527, 680071


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|---|---|---|---|---|---|
| **Date Coded:** | 1985/07/24 | **Coded By:** | BC Geological Survey (BCGS) | **Field Check:** | N |
| **Date Revised:** | 2008/04/09 | **Revised By:** | George Owsiacki (GO) | **Field Check:** | N |