



Location/Identification

MINFILE Number: 092JNE063
Name(s): **BIRKENHEAD**
HELL CREEK

Status: Past Producer
Mining Method: Open Pit
Regions: British Columbia
BCGS Map: 092J089
NTS Map: 092J16W
Latitude: 50 49 30 N
Longitude: 122 16 20 W
Elevation: 2062 metres
Location Accuracy: Within 500M
Comments: In headwaters of Hell Creek, 28 kilometres west-northwest of Lillooet (Geological Survey of Canada Paper 72-53 pp. 43-44).

Mining Division: Lillooet
Electoral District: Fraser-Nicola
Resource District: Cascades Natural Resource District

UTM Zone: 10 (NAD 83)
Northing: 5630617
Easting: 551259

Mineral Occurrence

Commodities: Jade/Nephrite, Talc, Gemstones

Minerals

Significant: Nephrite, Talc
Associated: Tremolite, Serpentine
Associated Comments: Plus some "opaque minerals" not identified.
Alteration: Serpentine, Talc, Tremolite
Alteration Type: Serpentin'zn, Rodingitiz'n
Mineralization Age: Unknown

Deposit

Character: Massive
Classification: Replacement, Metamorphic, Hydrothermal, Industrial Min.
Type: Q01: Jade
Shape: Tabular
Modifier: Fractured
Dimension: 300x2x0 metres
Strike/Dip: 130/75S
Trend/Plunge: 065 70
Comments: Nephrite mass in tabular wedge, 2.4 metres wide trending northwest for 300 metres. Cross fractures trend 65 degrees and plunge 70 degrees east.

Host Rock

Dominant Host Rock: Metaplutonic

Stratigraphic Age	Group	Formation	Igneous/Metamorphic/Other
Paleozoic-Mesozoic	Bridge River	Undefined Formation	-----
Paleozoic	-----	-----	Shulaps Ultramafic Complex

Isotopic Age	Dating Method	Material Dated
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271 Ma	Potassium/Argon	Hornblende

Lithology: Serpentinite, Jade, Argillaceous Sediment/Sedimentary, Sediment/Sedimentary

Comments: Bridge River Complex ranges from Mississippian to Middle Jurassic in age. Radiometric dating of Shulaps Complex from Fieldwork 1990 p. 80.

Geological Setting

Tectonic Belt: Coast Crystalline

Physiographic Area: Chilcotin Plateau

Terrane: Bridge River, Methow

Metamorphic Type: Regional

Grade: Greenschist

Comments: Border between Pavillion Ranges and Pacific Ranges.

Inventory

No inventory data

Summary Production

	Metric	Imperial
Mined:	100 tonnes	110 tons
Milled:	100 tonnes	110 tons
Recovery	Jade/Nephrite	100,000 kilograms 220,462 pounds

Capsule Geology

Jade outcrops at the head of Hell Creek, a northeastern flowing tributary of Bridge River, 28 kilometres west-northwest of Lillooet.

A mass of nephrite is fault bounded by serpentinite of the Permian and older Shulaps Ultramafic Complex on the west and by slightly metamorphosed argillaceous sediments of the Mississippian to Jurassic Bridge River Complex on the east. The tabular shaped mass is 2.4 metres wide and trends northwest for 300 metres to where it is cut by a granitic intrusion. The deposit dips 75 degrees south. The east contact is bordered by a talc zone 0.3 metre wide. Cross fractures pervade the nephrite, trending 065 degrees and plunging 70 degrees southeast. The nephrite is described as good to fair quality, the quality being decreased by the presence of coarse tremolite patches, talc and opaque minerals.

The deposit was held and quarried by Oscar Messeser of B.C. Gem Supply Ltd. in the early 1970's. Birkenhead Jade produced 100 tonnes of nephrite in 1973.

Bibliography

EMPR BULL 32 (Map)

EMPR FIELDWORK 1974, p. 35; 1985, pp. 303-310; 1986, pp. 23-29; 1987, pp. 93-130; 1988, pp. 105-152; 1989, pp. 45-72; *1990, pp. 75-83

EMPR GEM 1970-499; 1971-464; 1972-598; 1973-547

EMPR OF 1987-11; 1988-3; 1989-4; 1990-10

GSC P *72-53, pp. 43, 44; *78-19

WWW http://www.infomine.com/index/properties/HELL_CREEK.html

EMPR PFD 802125, 520280

Date Coded:	1985/07/24	Coded By:	BC Geological Survey (BCGS)	Field Check:	N
Date Revised:	2021/03/16	Revised By:	Sarah Meredith-Jones (SMJ)	Field Check:	N