

PRODUCT GOLD  
PRODUIT

PROVINCE OR TERRITORY PROVINCE OU TERRITOIRE British Columbia

N.T.S. AREA 82 F/6  
RÉGION DU S.N.R.C.

REF. AU 5  
RÉF.

NAME OF PROPERTY  
NOM DE LA PROPRIÉTÉ

FERN

OBJECT LOCATED  
OBJET LOCALISÉ

UNCERTAINTY  
FACTEUR D'INCERTITUDE

Lat. 49°22'25"

Long. 117°16'50"

Mining Division Nelson  
Division minière

District  
District

Kootenay

County  
Comté

Township or Parish  
Canton ou paroisse

Lot  
Lot

Concession or Range  
Concession ou rang

Sec  
Sect.

Tp.  
Ct.

R.  
R.

OWNER OR OPERATOR/PROPRIÉTAIRE OU EXPLOITANT

DESCRIPTION OF DEPOSIT/DESCRIPTION DU GISEMENT

The country rocks are dark greenish, massive to schistose, augite porphyry of the Lower Jurassic Rosslund formation. They are cut by granite porphyry dykes, which may represent tongues from the underlying Nelson batholith. Nine or more quartz filled fissure veins have been found but most contain little or no mineralization. Most of the veins strike northeasterly and dip steeply northwest. The main vein, from a few inches to 8 feet in width, is slightly sinuous in strike and follows rather closely one of the dykes of granite porphyry. The vein strikes from N54°E to 74°E and has an average dip of 60°NW. At the southwestern end of the original workings the vein is faulted along a lamprophyre dyke which strikes S82°E and dips 80° north. The vein filling is quartz containing pyrite and free gold. The portions of the vein transversing augite porphyry alone were not favorable for ore deposition; the productive stretches of the vein lie along the contact with the granite porphyry. The ore shoots have irregular shapes and a tendency to pitch southwestward but this is not always the case. The high grade streaks vary from a few inches to over one foot in width and as a rule follow the hanging wall of the vein. Native gold is present, chiefly in the pyrite.

Associated minerals or products - Silver.  
Minéraux ou produits associés

HISTORY OF EXPLORATION AND DEVELOPMENT

HISTORIQUE DE L'EXPLORATION ET DE LA MISE EN VALEUR

This property is located at the 5,000 foot elevation on the south side of Hall Creek, 7 miles south of Nelson.

The ground was staked by a Captain Duncan in about 1894. Five claims, the Fern (Lot 374), Eureka, Hidden Treasure, Chicoie, and Foothill, were bonded to Frank Fletcher in about 1895; the Fern claim was Crown-granted in 1896.

The Fern Gold Mining and Milling Company Limited Liability was formed in 1897 to explore and develop the property. A 10 stamp mill was erected that same year and the mine and mill operated until the latter part of 1900. Lessee E. Rammelmeyer worked the mine intermittently from 1902 until about 1908. Other small scale, intermittent, lessee operations were carried on until 1927.

The Gold Fern Syndicate was formed by Buffalo and Toronto interests in 1933 to lease and operate the mine. Development work began in 1934. The syndicate formed Gold Fern Mines Limited in 1935 and the company continued exploration and development work into 1937 when all activity ceased. The property was acquired by C.E. and L.R. Hawley, of Spokane, in about 1939 and lessees worked in the mine until 1943.

Work on the property was resumed in 1945 by Harold Lakes and associates, who obtained an option on the mine. A diamond drilling program was begun and succeeded in finding the extension of the vein south of the fault which bounded the area stoped in the first mining operation. A new company, Fern Mine, Limited, was formed in March 1946 to develop and operate the property. The company was financed by Premier Border Gold Mining Company, Limited and Quatsino Copper-Gold Mines Limited. A crosscut adit was collared 100 feet below the outcrop of the vein extension and the vein was drifted on for 467 feet. Values of interest were found in the first 51 feet from the fault and again at 283 to 390 feet from it but the widths represented were too narrow for company operation.

The original mining operation was carried on in 4 adits between elevations of 5,040 and 4,850 feet, and includes some 1,400 feet of drifts and 255 feet of crosscuts. In 1934 a crosscut adit was started 800 feet below No. 4 level and driven 160 feet before work was suspended. No. 5 level is a crosscut, driven 50 feet of the estimated 100 feet required to reach the "B" vein. The 7th adit, began in 1946, was driven a total of 548 feet.

Weland Mining Ltd. acquired the property in 1965 and began a program of surface exploration and underground diamond drilling.

Mineral Policy Sector, Department of Energy, Mines and Resources, Ottawa  
Secteur de la politique minière, ministère de l'Énergie, des Mines et des Ressources, Ottawa

503800 \*

HISTORY OF PRODUCTION/HISTORIQUE DE LA PRODUCTION

From 1896-1942, 12,430 tons of ore shipped from this property. From this ore 6,316 ounces of gold, and 5.31 ounces of silver were recovered.

REFERENCES/BIBLIOGRAPHIE

Cockfield, W.E.; Lode Gold Deposits of Ymir-Nelson Area, British Columbia; Memoir 191, pp. 48-52, Geol. Surv. of Canada, 1936.

Drysdale, C.M.; Ymir Mining Camp, British Columbia; Memoir 94, pp. 137-146, Geol. Surv. of Canada, 1917.

Annual Reports, Dept. of Mines, B.C.: 1897, p. 531; 1900, p. 843; 1902, p. 161; 1910, p. 104; 1927, p. 318; 1935, p. E 27; 1937, p. E 45; 1939, p. 80; 1940, p. 66; 1941, p. 64; 1942, p. 61; 1945, p. 99; 1946, p. 140.

Mines Branch, Ottawa; Ore Dressing & Metallurgical Investigation No. 640; Gold Ore Fern Mines, Limited, Nelson, B.C.; Investigations in Ore Dressing and Metallurgy, Report No. 771, July-December 1935, pp. 30-35.

Mulligan, R.; Bonnington Map Area, British Columbia; Paper 52-13, p. 29, Geol. Surv. of Canada.

Mineral Policy Sector; Corporation Files: "Gold Fern Mines, Limited"; "Gold Fern Syndicate"; "Quatsino Copper-Gold Mines Limited"; "Calvert Gas and Oils Limited"; "Weland Mining Ltd."

MAP REFERENCES/RÉFÉRENCES CARTOGRAPHIQUES

Map 1090 A, Nelson (West Half), B.C., (Geol.), Sc. 1":4 miles - accomp. Memoir 308.

Map 175 A, Ymir, Kootenay District, B.C., (Geol.), Sc. 1":1 mile - accomp. Memoir 94.

Map 82 F/6 W, Nelson, B.C., (Topo.), Sc. 1:50,000.

REMARKS/REMARQUES

Comp./Rev. By Comp./rév. par	DMacR						
Date Date	05-67						