

Location/Identification

MINFILE Number:	092L 015	National Mineral Inventory Number:	092L2 Au17
Name(s):	<u>LONE STAR (L.1052)</u> REY ORO, C.D., K FRACTION (L.1751), J & E, AXE		
Status:	Past Producer	Mining Division:	Alberni
Mining Method	Underground	Electoral District:	North Island
Regions:	British Columbia, Vancouver Island	Forest District:	Campbell River Forest District
BCGS Map:	092L007		
NTS Map:	092L02W	UTM Zone:	09 (NAD 83)
Latitude:	50 01 24 N	Northing:	5543556
Longitude:	126 47 40 W	Easting:	657982
Elevation:	424 metres		
Location Accuracy:	Within 500M		
Comments:	Main adit on Lot 1052 located on Gold Valley Creek, 2.3 kilometres from its mouth, 6.2 kilometres northeast of Zeballos.		

Mineral Occurrence

Commodities: Gold, Silver, Lead, Zinc, Copper

Minerals	Significant:	Pyrite, Arsenopyrite, Sphalerite, Galena, Chalcopyrite
	Significant Comments:	Gold, silver mineralogy not known.
	Associated:	Quartz
	Alteration Type:	Leaching
	Mineralization Age:	Unknown

Deposit	Character:	Vein
	Classification:	Mesothermal, Epithermal, Epigenetic
	Type:	I06: Cu+/-Ag quartz veins, I05: Polymetallic veins Ag-Pb-Zn+/-Au
	Shape:	Tabular
	Modifier:	Sheared
	Dimension:	219x98x0 metres
	Strike/Dip:	045/90

Host Rock

Dominant Host Rock: Plutonic

Stratigraphic Age	Group	Formation	Igneous/Metamorphic/Other
Eocene	-----	-----	Catface Intrusions

Isotopic Age	Dating Method	Material Dated
38 +/- 14 Ma	Potassium/Argon	Biotite

Lithology: Quartz Diorite, Andesite Dike, Andesite

Comments: Age date on Zeballos biotite from Geological Survey of Canada Paper 74-8.

Geological Setting

Tectonic Belt:	Insular	Physiographic Area:	Vancouver Island Ranges
Terrane:	Wrangell, Plutonic Rocks		

Inventory

Ore Zone: VEIN	Year: 1938
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Sample Type: Channel

Commodity	Grade
Gold	145.6000 grams per tonne

Comments: Average over 55 metres strike length, 18 centimetres width.

Reference: Geological Survey of Canada Paper 40-12, page 24.

Summary Production

		Metric	Imperial
Mined:		5,645 tonnes	6,222 tons
Milled:		405 tonnes	446 tons
Recovery	Gold	143,074 grams	4,600 ounces
	Silver	44,322 grams	1,425 ounces
	Lead	2,982 kilograms	6,574 pounds
	Copper	470 kilograms	1,036 pounds

Capsule Geology

The Lone Star or Rey Oro property lies in the Zeballos gold camp, an area underlain by a Lower Jurassic Bonanza Group Island arc sequence of basaltic to rhyolitic volcanic rocks. Conformably underlying the Bonanza rocks are limestones and limy clastics of the Quatsino and Parson Bay formations, and the tholeiitic basalts of the Karmutsen Formation, all belonging to the Upper Triassic Vancouver Group. Dioritic to granodioritic Jurassic plutons of the Zeballos intrusion phase of the Island Intrusions have intruded all older rocks. The Eocene Zeballos stock, a quartz diorite phase of the Catface Intrusions, is spatially related to the gold-quartz veins in the area. Bedded rocks are predominantly northwest striking, southwest dipping, and anticlinally folded about a northwest axis.

Recorded production for the camp totals 9465 kilograms gold and 4119 kilograms silver, from 652,000 tonnes of ore mined (Fieldwork 1982, page 291). Most production came from the Spud Valley (092L 013, 092L 211) and Privateer (092L 008) deposits.

The occurrence, in which about eight veins are recognized, lies at the centre of the Eocene Zeballos quartz diorite stock covering an area of about 460 metres. A vertical 1.2 metre wide andesite dyke, striking 050 degrees, is the only other rock type present. The veins range from 1.0 to several centimetres in width. Assays range from less than 3 grams per tonne gold to 494 grams per tonne gold in the Number 4 vein (Bulletin 27, page 100). The veins are steeply dipping, striking between 045 and 074 degrees, generally occupying narrow shear zones. Mineralization consists of pyrite with lesser amounts of arsenopyrite, galena, sphalerite and locally chalcopyrite in a quartz gangue.

The Main Vein (or Number 4 Vein), which strikes 045 degrees and dips 80 degrees south has been traced horizontally over 219 metres and vertically for 98 metres. It was developed by the 1200, 1300 and 1400 level drifts and associated sublevels, raises and winzes. The vein was stoped from the surface to the 1400 level. Bulletin 27, page 98 reports 1938 to 1941 production of 6779 tonnes of ore from the Main Vein, containing 143 kilograms gold, 44 kilograms silver, 470 kilograms copper and 2982 kilograms lead.

On the 1200 level the vein follows a shear zone 5 to 45 centimetres wide. Vein material consists of quartz and pyrite, with minor arsenopyrite, sphalerite, galena and chalcopyrite. The vein ranges up to 12.5 centimetres wide but in places the shear is occupied by only sheared rock and gouge. Several diagonal veins are present, dipping vertically and striking east, suggesting that the northwest or hangingwall of the vein moved northeast and down. Also at the 1200 level, several quartz stringers parallel to the main vein are found in crosscuts. They are 5 to less than 0.5 centimetres wide. Narrow zones of bleaching envelope all veins.

A sample over 10 centimetres of high grade material on the 1200 level assayed 145.4 grams per tonne gold and 51.4 grams per tonne silver (Bulletin 27, page 98). Geological Survey of Canada Paper 40-12 (page 24) reports an average grade of 145.6 grams per tonne gold over an average width of 18 centimetres along a strike length of 55 metres, or a diluted 28.98 grams per tonne gold over a mining width of 76 centimetres.

Bibliography

EMPR AR 1938-A38,F57-60; 1939-40; 1940-27; 1941-A27,70
 EMPR BC METAL MM00086
 EMPR BULL 20-V, p. 18; *27, pp. 15,97-101
 EMPR FIELDWORK 1982, p. 290; 1983, p. 219

EMPR INDEX 3-191

EMPR P 1991-4, p. 188

EMPR PF (Starr, C.C. (1940): Notes of Preliminary Examination of the C.D. Mine, 4 p.; Assay Plan, CD Mine, 1:240; Plan, 1:1200, No. 4 vein, 1945; Plan, 1:180, No. 4 adit working; Longitudinal Section, No. 4 Vein, 1:240, 1941; Longitudinal Assay Section, Highgrade shoot, #14-1 Stope, 1:120, 1941; Sketches, Main Adit, 1945; Report on CD Mining Company, Ltd., 1941, P.E. Hopkins; Rey Oro Longitudinal Section, 1:240, C.C. Starr, Aug. 1940; Index Map, Rey Oro and Rimy (no scale or date); Trail Map to Rey Oro and Central Zeballos, 1:4800)

EMR MP CORPFILE (Rey Oro Mining Co. Ltd.)

GSC EC GEOL 1-1947

GSC MAP 4-1974; 255A; 1028A; 1552A

GSC MEM 204, p. 16; 272, pp. 48,63

GSC OF 9; 170; 463

GSC P 38-5; *40-12, p. 22; 69-1A; 70-1A; 72-44; 74-8; 79-30

GSC SUM RPT 1929A; 1932A

CIM Trans. Vol. 42, 1939, pp. 225-237; 1948, pp. 78-85; 72, pp. 116-125

N MINER Apr. 1938, pp. 39-45

Carson, D.J.T., (1968): Metallogenic Study of Vancouver Island with emphasis on the Relationship of Plutonic Rocks to Mineral Deposits, Ph.D. Thesis, Carleton University, Ottawa

Hudson, R. (1997): A Field Guide to Gold, Gemstone & Mineral Sites of British Columbia, Vol. 1: Vancouver Island, p. 180

Stevenson, J.S., (1938): Lode Gold Deposits of the Zeballos Area

Times Colonist, The New Islander, Feb. 8, 1998, pp. 6-7

Date Coded:	1985/07/24	Coded By:	BC Geological Survey (BCGS)	Field Check:	N
Date Revised:	1989/03/08	Revised By:	Wim S. Vanderpoll(WV)	Field Check:	N