

### Location/Identification

<b>MINFILE Number:</b>	092L 010	<b>National Mineral Inventory Number:</b>	092L2 Au12
<b>Name(s):</b>	<b>WHITE STAR</b> DON FR. (L.1033), WHITE STAR (L.1031), STAR FR. (L.1833), DONALDSON, GOLDPEAK, S. STAR		
<b>Status:</b>	Past Producer	<b>Mining Division:</b>	Alberni
<b>Mining Method</b>	Underground	<b>Electoral District:</b>	North Island
<b>Regions:</b>	British Columbia, Vancouver Island	<b>Forest District:</b>	Campbell River Forest District
<b>BCGS Map:</b>	092L006		
<b>NTS Map:</b>	092L02W	<b>UTM Zone:</b>	09 (NAD 83)
<b>Latitude:</b>	50 01 24 N	<b>Northing:</b>	5543526
<b>Longitude:</b>	126 48 30 W	<b>Easting:</b>	656988
<b>Elevation:</b>	284 metres		
<b>Location Accuracy:</b>	Within 500M		
<b>Comments:</b>	#3 adit, in the far east corner of Lot 1031 near the boundary with Lot 1033, is located 150 metres northeast of Spud Creek, 1.0 kilo- metres southeast of Zeballos River, 5.5 kilometres northeast of Zeballos.		

### Mineral Occurrence

<b>Commodities:</b>	Gold, Silver, Copper, Lead, Zinc		
<b>Minerals</b>	<b>Significant:</b>	Gold, Chalcopyrite, Galena, Sphalerite, Pyrite, Arsenopyrite	
	<b>Associated:</b>	Quartz	
	<b>Mineralization Age:</b>	Unknown	
<b>Deposit</b>	<b>Character:</b>	Vein	
	<b>Classification:</b>	Mesothermal, Epithermal, Epigenetic	
	<b>Type:</b>	106: Cu+/-Ag quartz veins	
	<b>Shape:</b>	Tabular	
	<b>Dimension:</b>	131x0x0 metres	<b>Strike/Dip:</b> 040/80S
	<b>Comments:</b>	Veins strikes 040 degrees, dips steeply southeast. #1 vein length is 131 metres long in adits.	

### Host Rock

<b>Dominant Host Rock:</b>	Plutonic		
<b>Stratigraphic Age</b>	<b>Group</b>	<b>Formation</b>	<b>Igneous/Metamorphic/Other</b>
Eocene	-----	-----	Catface Intrusions
<b>Isotopic Age</b>	<b>Dating Method</b>	<b>Material Dated</b>	
38 +/- 14 Ma	Potassium/Argon	Biotite	
<b>Lithology:</b>	Quartz Diorite, Feldspar Porphyry Dike		
<b>Comments:</b>	Age date for Zeballos (Geological Survey of Canada Paper 74-8).		

### Geological Setting

<b>Tectonic Belt:</b>	Insular	<b>Physiographic Area:</b>	Vancouver Island Ranges
<b>Terrane:</b>	Wrangell, Plutonic Rocks		

### Inventory

No inventory data

## Summary Production

		Metric	Imperial
	<b>Mined:</b>	1,293 tonnes	1,425 tons
	<b>Milled:</b>	0 tonnes	0 tons
<b>Recovery</b>	Gold	220,987 grams	7,105 ounces
	Silver	92,531 grams	2,975 ounces
	Lead	17,144 kilograms	37,796 pounds
	Copper	1,563 kilograms	3,446 pounds
	Zinc	30 kilograms	66 pounds

## Capsule Geology

The White Star mine 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 areas gold-quartz veins. 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, 211) and Privateer (092L 008) deposits.

Five veins are recognized at the White Star mine, all within quartz diorite intruded by north to north-northeast striking feldspar porphyry dykes all related to the Eocene Catface Intrusions. The veins lie 300 metres east of the quartz diorite contact with calc- silicate altered tuffs of the Lower Jurassic Bonanza Group.

The veins follow shear zones that dip steeply southeast and strike approximately 040 degrees. The shear zones are up to 15 centimetres wide, the quartz veins contained in them are somewhat narrower. Diagonal gash veins, commonly filled with comb quartz, are common.

The Number One (Donaldson) vein, which with Number Two accounted for most of the mine's production, follows in part a 1.8 metre wide feldspar porphyry dyke. The veins contain moderate amounts of pyrite, galena, sphalerite, arsenopyrite and free gold in quartz gangue. Sulphide banding is common. The Numbers 3, 4, and 5 veins, located 60 metres west of the Donaldson Vein, are much narrower, averaging less than 3 centimetres.

Production between 1935 and 1942 totalled 1283 tonnes averaging 171.7 grams per tonne gold, 71.7 grams per tonne silver (Bulletin 27, page 77). Production between 1935 to 1957, includes 220,987 grams of gold, 92,531 grams of silver, 17,144 kilograms of lead with 1563 kilo- grams of copper and 30 kilograms of zinc.

## Bibliography

- EM EXPL 2001-23-31  
EMPR AR 1935-F38,39; 1936-A37; 1937-A40; 1938-A38,F68; 1939-A41,42, 87; 1940-27,72; 1941-A27,69; 1942-A28,65; 1952-40,210; 1957-43,68  
EMPR BC METAL MM00115  
EMPR BULL 20-V, p. 18; \*27, pp. 15,77-79  
EMPR FIELDWORK 1982, p. 290; 1983, p. 219  
EMPR INDEX 3-218; 4-126  
EMPR P 1991-4, p. 188  
EMPR PF (Claim map 1:3600; Sections and Assay Pland #1 Vein, 1:480; Sketches, #1 and #2 Vein, 1:480, 1944; Zeballos Area Geology; Geology Spud Creek, 1:3600; Report on White Star Group, B.T. O'Grady, 1939; Starr, C.C. (1940): Report on the Gold Peak Group, (approximately 3 pages); Sketch showing veins, opencuts and assays, Scale 1"=300', 1940))  
EMR MP CORPFILE (Trans Ore Mines Ltd.)  
GSC EC GEOL 1-1947  
GSC MAP 4-1974; 255A; 1028A; 1552A  
GSC MEM \*204, pp. 14,15; \*272, pp. 48,61  
GSC OF 9; 170; 463  
GSC P 38-5; 40-12, pp. 12-14; 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. 178

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:** 1989/03/14

**Revised By:** Wim S. Vanderpoll(WV)

**Field Check:** N