



Location/Identification

MINFILE Number: 082KSE053
Name(s): SILVER KEY
KEY, SILVER, SOUTH FINDLAY

Status: Prospect
Mining Method: Underground
Regions: British Columbia
BCGS Map: 082K010
NTS Map: 082K01E
Latitude: 50 00 46 N
Longitude: 116 10 17 W
Elevation: 2320 metres
Location Accuracy: Within 500M
Comments: Location of adit.

Mining Division: Golden
Electoral District: Columbia River-Revelstoke
Resource District: Rocky Mountain Forest District

UTM Zone: 11 (NAD 83)
Northing: 5540380
Easting: 559368

Mineral Occurrence

Commodities: Silver, Zinc, Lead, Copper

Minerals

Significant:	Galena
Associated:	Quartz, Pyrite
Mineralization Age:	Unknown

Deposit

Character:	Vein, Shear
Classification:	Hydrothermal
Type:	I05: Polymetallic veins Ag-Pb-Zn+/-Au
Shape:	Tabular
Modifier:	Sheared
Strike/Dip:	180/45W

Comments: Mineralization follows narrow, north-trending shears in quartzite.

Host Rock

Dominant Host Rock: Metasedimentary

Stratigraphic Age	Group	Formation	Igneous/Metamorphic/Other
Helikian	Purcell	Lower Aldridge	-----

Isotopic Age	Dating Method	Material Dated
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Lithology: Quartzite, Quartz Arenite, Siltstone, Granodiorite, Quartz Wacke, Argillite
Comments: Granodiorite of the White Creek batholith.

Geological Setting

Tectonic Belt: Omineca
Terrane: Ancestral North America

Physiographic Area: Purcell Mountains

Metamorphic Type: Contact, Regional
Grade: Hornfels, Greenschist

Comments: Area has been affected by both regional and contact metamorphism.

Inventory

Ore Zone: SAMPLE
Category: Assay/analysis

Year: 1938
Report On: N
NI 43-101: N

Sample Type: Chip

Commodity	Grade
Silver	14.0000 grams per tonne
Lead	0.4000 per cent

Comments:

Reference: Minister of Mines Annual Report 1938, page E29.

Summary Production

		Metric	Imperial
	Mined:	29 tonnes	31 tons
	Milled:	29 tonnes	31 tons
Recovery	Silver	99,499 grams	3,199 ounces
	Lead	11,145 kilograms	24,571 pounds
	Zinc	887 kilograms	1,956 pounds

Capsule Geology

The Silver Key property is situated 4.5 kilometres southeast of Doctor Peak of the Purcell Mountain Range, at the headwaters of the east fork of Doctor Creek, a south tributary of Findlay Creek (Minister of Mines Annual Report 1935).

The occurrence is hosted within the lower division of the Aldridge Formation of the Proterozoic Purcell Supergroup of southeastern British Columbia.

In the vicinity of the occurrence, the Aldridge Formation consists of quartz wacke, quartz arenite, siltstone and lesser argillite that are intruded by thick gabbroic sills of the Proterozoic Moyie intrusions. The sedimentary rocks are characteristically rusty weathering, fine to medium grained and thin to medium bedded. Individual beds range from a few millimetres to 30 centimetres thick. Discontinuous horizons of intraformational conglomerate were noted in a number of localities. Finely disseminated pyrrhotite is common. The sedimentary rocks of the Lower Aldridge Formation have undergone both thermal and regional metamorphism to at least greenschist facies. Biotite alteration in the argillaceous units and quartz-sericite alteration in the arenite and wacke have generated widespread phyllitic and schistose textures.

The Moyie sills cutting the Lower Aldridge Formation are sill-like in overall form but often crosscut bedding or appear as irregular lenses. Some are in excess of 100 metres thick and can be traced almost 10 kilometres. The thicker sills have coarse grained gabbroic cores and finer dioritic margins. They are all primarily composed of hornblende and plagioclase phenocrysts set in a matrix of similar composition (Paper 1990-1).

The White Creek batholith is a well-differentiated Cretaceous granitic intrusion which cuts the Lower Aldridge rocks just southeast of the mineral occurrence. Along the northern border of the batholith, a megacrystic granodiorite phase is common. Plagioclase phenocrysts are commonly 3 to 5 centimetres long, set in a matrix of fine to medium-grained plagioclase, potassium feldspar, quartz and biotite. Magnetite and pyrite occur locally. Aplite and pegmatite dikes are common within the sedimentary rocks of the Lower Aldridge Formation (Geological Survey of Canada Memoir 369).

On the property, the Purcell sedimentary rocks strike 060 degrees and dip gently (25 degrees) northwest. Deformation of the strata is minimal but minor northwest trending symmetrical folds have been documented.

The occurrence consists of several opencuts and a small adit 130 metres long. Mineralization consists of disseminated galena and pyrite within structurally controlled quartz veins 2 to 5 centimetres wide that strike due north and dip 45 degrees west. The veins are within tightly folded and sheared quartzite. At least six veins are known to exist. A 1.2 metre wide chip sample taken across one of the exposed veins in the trenches assayed 14 grams per tonne silver and 0.6 per cent lead (Minister of Mines Annual Report 1938). In 1995, grab sampling returned 763.5 grams per tonne silver and 1.82 per cent lead (Assessment Report 24380).

The prospect is very close to the edge of the White Creek batholith, however, the relationship to the intrusion is unknown.

Bibliography

EMPR AR 1931-E11; 1934-E28; 1935-E11; *1938-E28; 1958-52; 1939-38; 1940-27
EMPR ASS RPT 6413, 24380

EMPR BC METAL MM00563
EMPR EXPL 2000-43-53
EMPR FIELDWORK 1989, pp. 29-37
EMPR GEOS MAP 1995-1; 1998-4
EMPR INDEX 3-202
EMPR OF 1990-20; 1990-26
EMPR PF (Sketch map; 82KSE General File - Geology map by P. Billingsley, 1958)
GSC MAP 1326A; 1712A; 1713A
GSC MEM 369
Pope, A.J. (1989): The Tectonics and Mineralization of the Toby-Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England
EMPR PFD 4107, 4199, 4200, 825290, 800612, 800665, 827887, 827889, 827910

Date Coded:	1985/07/24	Coded By:	BC Geological Survey (BCGS)	Field Check:	N
Date Revised:	2012/03/26	Revised By:	Karl A. Flower (KAF)	Field Check:	Y