

Location/Identification

MINFILE Number:	082N 015	National Mineral Inventory Number:	082N5 Ag2
Name(s):	<u>TANGIER (L.3600)</u> WAVERLEY-TANGIER		
Status:	Developed Prospect	Mining Division:	Revelstoke
Mining Method	Underground	Electoral District:	Columbia River-Revelstoke
Regions:	British Columbia	Resource District:	Columbia Forest District
BCGS Map:	082N041		
NTS Map:	082N05W	UTM Zone:	11 (NAD 83)
Latitude:	51 27 04 N	Northing:	5700438
Longitude:	117 58 09 W	Easting:	432656
Elevation:	1463 metres		
Location Accuracy:	Within 500M		
Comments:	Shaft, located along Sorcerer Creek immediately below and west of the Waverly workings (082N 014), about 1 kilometre southeast of the confluence of Sorcerer and Holway creeks, on the west slope of Sorcerer Mountain, about 56 kilometres northeast of Revelstoke (Geological Survey of Canada Summary Report 1928 Part A, page 176).		

Mineral Occurrence

Commodities:	Lead, Silver, Zinc, Gold, Copper, Antimony		
Minerals	Significant:	Pyrite, Jamesonite, Galena, Sphalerite, Tetrahedrite	
	Associated:	Calcite, Carbonate, Quartz	
	Mineralization Age:	Unknown	
Deposit	Character:	Vein, Podiform	
	Classification:	Replacement	
	Type:	I05: Polymetallic veins Ag-Pb-Zn+/-Au, J01: Polymetallic manto Ag-Pb-Zn	

Host Rock

Dominant Host Rock:	Metasedimentary		
Stratigraphic Age	Group	Formation	Igneous/Metamorphic/Other
Lower Cambrian	Unnamed/Unknown Group	Unnamed/Unknown Formation	-----
Isotopic Age	Dating Method	Material Dated	
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Lithology:	Marble, Limestone, Carbonaceous Schist		

Geological Setting

Tectonic Belt:	Omineca	Physiographic Area:	Selkirk Mountains
Terrane:	Kootenay, Ancestral North America		

Inventory

Ore Zone:	DRILLHOLE	Year:	2009
Category:	Assay/analysis	Report On:	N

Sample Type: Drill Core

Commodity	Grade
Silver	190 grams per tonne
Gold	3.2 grams per tonne
Lead	0.28 per cent
Zinc	1.92 per cent

Comments:

Reference: Assessment Report 31427

Ore Zone: SAMPLE

Year: 2004

Category: Assay/analysis

Report On: N

NI 43-101: N

Sample Type: Bulk Sample

Commodity	Grade
Silver	1740 grams per tonne
Gold	13 grams per tonne
Lead	25.2 per cent
Zinc	10.02 per cent

Comments: 27-kilogram bulk sample from the Tangier dump.

Reference: Assessment Report 28144

Ore Zone: SAMPLE

Year: 2003

Category: Assay/analysis

Report On: N

NI 43-101: N

Sample Type: Grab

Commodity	Grade
Silver	3556 grams per tonne
Gold	5.5 grams per tonne
Copper	1.9 per cent
Lead	0.99 per cent
Zinc	9.9 per cent

Comments: Cut1 Grab sample from the Tangier Dump. Assay for lead was greater than 0.99 per cent and assay for zinc was greater than 9.9 per cent.

Reference: Assessment Report 28144

Capsule Geology

The Tangier occurrence is located along Sorcerer Creek on the west slope of Sorcerer Mountain, approximately 52 kilometres northeast of Revelstoke and approximately 1 kilometre southeast of the confluence of Sorcerer and Holway creeks. It is immediately below and to the west of the Waverley workings (MINFILE 082N 014).

At the Tangier workings, Lower Cambrian strata comprising a considerable thickness of pyritic black carbonaceous schist is in contact with a band of white-to-grey marble at least 36 metres wide. The marble strikes 330 to 325 degrees and dips very steeply east or is vertical and also contains at least two small bands of black carbonaceous schist. A vein-like oreshoot occurs in the marble, between two fault walls, at or near the marble-schist contact. The replacement mineralization is composed of calcite and some quartz and a fine-grained mixture of pyrite, jamesonite, galena, sphalerite and minor amounts of tetrahedrite. The width of the oreshoot varies from 0.4 to 1.8 metres, averaging 0.6 metre. Some mineralization occurs in the schist to the west of the oreshoot. Large calcite/quartz veins and lenses also occur and contain minor amounts of pyrite. The ore at Tangier differs from the Waverley occurrence (MINFILE 082N 014) in that there is not much evidence of oxidation.

Several hundred metres to the northwest of the Tangier shaft, which explores the mineralized zone, quartz veins and stringers across approximately 15

metres of limestone are mineralized with tetrahedrite and minor pyrite, sphalerite and galena.

The development on the Tangier property consists of a double-compartment shaft approximately 33 metres deep, 243 to 274 metres of tunneling in two drifts and an adit and a 30-metre winze.

Ore piled on a dump near the shaft amounts to several hundred tons, and consists of galena, sphalerite, pyrite and small amounts of tetrahedrite in a gangue of quartz, calcite and limestone. A grab sample from this large pile assayed 2.05 grams per tonne gold, 548.4 grams per tonne silver, 8.5 per cent lead and 5 per cent zinc. A separate pile (roughly estimated at 181 tonnes) near the shaft dump consists of black decomposed ore and apparently came from the winze below the 30-metre level. A grab sample of this material assayed 8.2 grams per tonne gold, 726.7 grams per tonne silver, 8.5 per cent lead and 15 per cent zinc (Minister of Mines Annual Report 1921, page G159).

It is reported that approximately 13 tonnes of carefully hand-picked sulphide ore was shipped to Wales and yielded 51.4 grams per tonne gold, 4456.4 grams per tonne silver and 25 per cent lead (Geological Survey of Canada Summary Report 1928 Part A, page 182).

Most of the underground work on the Waverley property was performed between 1896 and 1898 by Gold Fields of British Columbia, an English company. The operation was closed down in 1899 and was idle until 1918. Some development took place in the summer months between 1918 and 1921 by Waverly Mines Ltd.

From 1923 to 1929, Waverly Mines Ltd. conducted exploration on the property, which led to the discovery of replacement mineralization on the Tangier and Waverley veins (MINFILE 082N 014) that continued on strike toward the southeast.

In 1951, an effort was made to reopen the property at the head of Tangier Creek, but was shut down due to forest fires.

In 1987, Mandalla Resources Ltd. completed a small exploration program of grid layout and geological mapping.

In 2003, William Murray collected 6 grab samples from the Tangier dump. Highlights include Cut1 Grab sample, which assayed 1.9 per cent copper, greater than 0.99 per cent lead, greater than 9.9 per cent zinc, 3556 grams per tonne silver and 5.5 grams per tonne gold (Assessment Report 28144).

In 2004, William Murray of Silver Phoenix Resources Ltd. staked the claims encompassing the Tangier and Waverley (MINFILE 082N 014) workings. A 9-kilogram sample from the Tangier dump assayed 37.1 grams per tonne gold and 2537 grams per tonne silver and a 27 kilogram sample assayed 13 grams per tonne gold, 1740 grams per tonne silver, 25.2 per cent lead and 10.02 per cent zinc (Assessment Report 28144).

In 2005, Silver Phoenix Resources Ltd. conducted trail construction and property examinations.

In 2007, Silver Phoenix Resources Ltd. contracted River Rich Exploration Ltd. to complete a stream sediment survey and rock sampling program.

In 2009, Armadillo Resources Ltd. optioned the property from Silver Phoenix Resources Ltd. and completed a drill program totaling 761.6 metres. Highlights include drillhole T09-8, which assayed 3.2 grams per tonne gold, 190 grams per tonne silver, 0.28 per cent zinc, and 1.92 per cent zinc over 8.53 metres, including a 0.76 metre section that assayed 22.3 grams per tonne gold, 1310 grams per tonne silver, 1.5 per cent lead and 0.34 per cent zinc (Assessment Report 31427).

In 2013, Armadillo Resources Ltd. dropped their option of the property and the claims reverted to Silver Phoenix Resources Ltd.

Bibliography

EMPR AR 1896-544; 1898-1062; 1915-K117; 1919-N140; 1920-N127; *1921-G159; 1924-B204; 1925-A259; 1929-C333; 1951-A193

EMPR ASS RPT *28144, 29680, *31427

EMPR *BULL (1928, Report on Waverley-Tangier Property by J.D. Galloway, pp. 18,19)

EMPR PF (Mandalla Resources Ltd., Report on the Mineral Exploration and Mining of the Tangier – Waverley Project, 1987)

EMR MP CORPFILE (Waverley-Tangier Mines, Limited)

GSC MAP 237A; 4-1961; 43-1962

GSC OF 481

GSC P 62-32

GSC SUM RPT *1928 Part A, pp. 154, 175-182

Placer Dome File

PR REL Silver Phoenix Resources Inc., Mar. 22, 2013

EMPR PFD 750797, 750798, 600386, 861375, 861376, 674517, 520374

Date Coded:	1985/07/24	Coded By:	BC Geological Survey (BCGS)	Field Check:	N
Date Revised:	2014/02/11	Revised By:	Nicole Barlow (NB)	Field Check:	N