Location/Identification

MINFILE Number: 082ESW047
National Mineral Inventory Number: 082E5 Au8
Name(s): **ACACIA (L.694S)**
ACADIA (L.695S), WHITE GROUSE (L.551S), APEX (L.659S), UTOPIA (L.692S), AUSTRALIAN (L.690S), GOLDSMITH (L.1101S), NELSON (L.1102S), NELSON FRACTION (L.1103S), DEANNA, MINERAL LEASE M-107, MINERAL LEASE M-116, MINERAL LEASE M-120

Status: Past Producer
Mining Division: Osoyoos
Mining Method Underground
Electoral District: Yale-Lillooet
Regions: British Columbia, Kootenay Region
Resource District: Okanagan Shuswap Forest District
BCGS Map: 082E031
NTS Map: 082E05W
UTM Zone: 11 (NAD 83)
Latitude: 49 22 17 N
Northing: 5472802
Longitude: 119 54 18 W
Easting: 289119
Elevation: 1920 metres
Location Accuracy: Within 500M
Comments: The approximate location of the No. 2 adit and 100 level on the Acacia (Lot 694s) Reverted Crown grant (Assessment Report 12783). Includes Australian (formerly 082ESW048).

Mineral Occurrence

Commodities: Gold, Copper, Silver, Tungsten

Minerals
Significant: Chalcopyrite, Pyrrhotite, Scheelite, Arsenopyrite
Significant Comments: Scheelite is minor.
Associated: Pyrite, Quartz, Calcite, Pyroxene, Garnet
Associated Comments: Pyrite occurs in hostrocks.
Alteration: Quartz, Calcite, Pyroxene
Alteration Type: Skarn
Mineralization Age: Unknown

Deposit
Character: Stratabound, Concordant, Massive
Classification: Skarn
Type: K01: Cu skarn, K04: Au skarn
Dimension: 6x0x0 metres **Strike/Dip:** 045/30E
Comments: Skarn horizons, in limestone, are up to 6 metres thick in a sequence that strikes northeast and dips 30 to 60 degrees southeast.

Host Rock

Dominant Host Rock: Metasedimentary

Stratigraphic Age	Group	Formation	Igneous/Metamorphic/Other
Upper Triassic	Undefined Group	Independence	------
Jurassic	------	------	Okanagan Intrusions

Isotopic Age	Dating Method	Material Dated
------	------	------
------	------	-

Lithology: Marble, Skarn, Greenstone, Limestone, Rhyolite Tuff, Dacite Tuff, Graphitic Chert, Basalt

Geological Setting

Tectonic Belt: Intermontane
Physiographic Area: Thompson Plateau

Terrane: Okanagan, Plutonic Rocks

Metamorphic Type: Regional, Contact **Relationship:** Pre-mineralization, Syn-mineralization

Grade: Greenschist, Hornfels

Inventory

Ore Zone: TUNNEL **Year:** 1983

Category: Assay/analysis **Report On:** N

NI 43-101: N

Sample Type: Chip

Commodity	Grade
Gold	6.3000 grams per tonne
Copper	0.1000 per cent

Comments: Sample R83-F11, taken over 3.75 metres from the 100 level.

Reference: Assessment Report 11934.

Summary Production

		Metric		Imperial	
Mined:		99	tonnes	109	tons
Milled:		0	tonnes	0	tons
Recovery	Gold	5,754	grams	185	ounces
	Silver	1,680	grams	54	ounces
	Copper	689	kilograms	1,519	pounds

Capsule Geology

The Acacia occurrence is located on the north slopes of a prominent east-west ridge between Apex Mountain and Beaconsfield Mountain. The Acacia occurrence consists of gold-bearing, pyrrhotite, stratabound mineralization covering Apex Mountain and surrounding area. These showing have been intermittently explored on the Apex claim group consisting of the Independence (Lot 256s), former White Grouse (Lot 551s), Apex (Lot 659s), Australian (Lot 690s), former Alpha (Lot 691), Utopia (Lot 692s), Acacia (Lot 694s), Acadia (Lot 695s), Goldsmith (Lot 1101s), Nelson (Lot 1102s), Nelson Fraction (Lot 1103s) Reverted Crown grants and the Nighthawk, Keystone, Standard and Deanna claims.

The first recorded work occurred on the Acacia occurrence in 1902, under the ownership of McMillan and associates. Small surface cuts were made. In 1903, further cuts were made and a 6-metre shaft sunk. Between 1905 and 1906, B.C. Copper Co. sunk an 18-metre shaft. This is thought to be the No. 2 inclined shaft on the Acacia (Lot 694s) Reverted Crown grant, from which production occurred later in 1945. The property was obtained by Pickard, Rogers and Shatford in 1912. A drift tunnel (100 level) was developed from the bottom of the No. 2 shaft in 1913. Between 1921 and 1922, a 1.5-metre shaft and 10.7-metre adit were completed on the Nelson claim. Hedley Gold Mining Co. optioned the property between 1926 and 1928. A 12-metre shaft was completed but stopped where mineralization ended. The owner, J. McNulty, drove an adit in the vicinity of the shaft in 1928. Between 1938 and 1939, Kelowna Exploration Co. Ltd. held the property and drove the Main adit for 487 metres on the Nelson claim, to test the underground continuity of surface gold-bearing showings. The property was optioned to Hunston and McLeod in 1945. Ninety-nine tonnes of ore was stoped from the No. 2 adit and 100 level. Apex Exploration and Mining Co. obtained the property in 1966. Property exploration included several underground drillholes from the Main adit. In 1979, Union Carbide optioned the property from owner, G. Willis, who later sold the claims to S. Brewer. Between 1980 and 1982, Union Carbide conducted a comprehensive exploration program on the property and surrounding area. The option was dropped and Cominco Ltd. acquired an option on the property in 1983. Further property exploration was conducted until 1985.

The area between Nickel Plate Lake and Keremeos, contains a sequence of Triassic volcanic and sedimentary rocks that have been intruded by granitic Okanagan intrusions. Larger intrusions are composed of granite and granodiorite, while smaller stocks are composed of diorite and gabbro. Numerous sills, dikes and apophyses are associated. Triassic rocks are assigned to the Nicola Group, which have been subdivided in the Apex Mountain area into the Triassic Shoemaker Formation, the Old Tom Formation of the Apex Mountain Complex and the Upper Triassic Independence Formation. These rocks form the eastern limb of a large anticlinal fold with fold axes striking roughly north. The Independence Formation consists of interbedded, dark grey to black chert (commonly rusty or red stained), chert breccia, and siliceous greenstone containing disseminated pyrite and pyrrhotite or pyrite and arsenopyrite. The Shoemaker consists of cherts, greenstone and minor argillite. The cherts of the Shoemaker Formation are commonly lighter coloured (buff, pink, grey, grey-green) and commonly show a saccharoidal texture. The area contains numerous stratabound gold-bearing, pyrrhotite skarn-type mineralization.

The Australian showing is underlain by rocks of the Independence Formation. Within this area, rhyolite to dacite tuffs and interbedded black, graphitic cherts containing up to 5 per cent disseminated pyrrhotite. They are overlain by a fine grained, unmineralized marble unit but locally metasomatically altered to quartz-calcite-pyroxene skarn. The marble unit is about 8 metres thick. Fine grained, dark grey, barren basalt and black cherts overlie the marble unit. Basalt flows range from 7 to 15 metres thickness. This stratigraphic sequence strikes northeast and dips 30 to 60 degrees southeast. A weak metamorphic foliation is developed parallel to bedding.

Within the skarn, mineralization consists of up to 15 per cent disseminated pyrrhotite, 2 per cent chalcopyrite and minor scheelite. The skarn appears to be best developed near the marble-felsic tuff, chert contact, ranging up to 6 metres thickness. Rhyolite and dacite tuffs also contain up to 5 per cent disseminated pyrrhotite with minor pyrite and chalcopyrite.

During property exploration by Cominco Ltd. in 1984, geological mapping and rock chip sampling was carried out around the Nos. 2 and 3 adits on the Acacia (Lot 694s) Reverted Crown grant. Of 35 rock chip samples collected within and near the No. 2 adit, three underground chip samples contained gold higher than 3.08 grams per tonne (Assessment Report 11934). Sample R83-C12 yielded 11.18 grams per tonne gold and 0.27 per cent copper (Assessment Report 12783). The sample was taken across 1 metre of skarn down the east wall of the 100 level, 14 metres from the shaft. Sample R83-E8 yielded 6.31 grams per tonne gold (Assessment Report 12783). The sample was taken across 2.25 metres of marble down the west wall of the 100 level, 34 metres from the shaft. Sample R83-F11 yielded 6.03 grams per tonne gold and 0.10 per cent copper (Assessment Report 12783). The sample was taken horizontally across 3.75 metres of skarn and marble, 28 metres from the shaft.

A select sample taken in 1902 yielded 7.7 per cent copper, 96.00 grams per tonne silver and 96.00 grams per tonne gold (Minister of Mines Annual Report 1902, page 185). A sample obtained from the 1.5-metre shaft on the Nelson claim yielded 107.66 grams per tonne gold, 30.86 grams per tonne silver and 0.22 per cent copper (Minister of Mines Annual Report 1922, page 163).

Of 118 trench samples taken in 1984 on the White Grouse claim, the mean values were 0.09 gram per tonne gold, 4.0 grams per tonne silver and 0.07 per cent copper (Assessment Report 12783).

The Acacia occurrence produced 99 tonnes of ore in 1945, from which 5754 grams of gold, 1680 grams of silver and 689 kilograms of copper were recovered. The ore was reported shipped to a Tacoma smelter.

Bibliography

EMPR AR 1900-885; 1901-1158; 1902-185; 1903-177; 1904-227; 1908-251;
1911-179; 1912-326; 1919; 170; 1922-163; 1926-448; 1945-43,92;
*1967-217-219
EMPR ASS RPT 9473, 10926, *11934, *12583, *12783, 18204
EMPR BC METAL MM00331
EMPR BULL 101, p. 212
EMPR GEM 1969-352
EMPR INDEX 3-188
EMPR PF (Starr, C.C. (1936-06-23): Report of Examination of the Nelson Group, including the Independence Claim; D.M.F. (10/1/1966): Map of Ground Geo-Magnetometer Survey - Apex; Apex Exploration and Mining Co. Ltd. (1966-12-06): Prospectus Report on the Apex Mineral Claim; Giddy, N.E. (1967-10-12): Presidents Annual Report - Apex)
GSC MAP 341A; 538A; 539A; 541A; 628A; 15-1961; 1736A; 2389
GSC MEM 38; 179
GSC OF 481; 637; 1505A; 1565; 1969
GSC P 72-53
Starr, C.C. (1936): Report of Examination of the Nelson Group
including the Independence (6 pages); Sketch of claims.

EMPR PFD 1550, 1551, 1552, 1553, 1554, 906047, 906133, 906692, 880264, 880265, 823293, 800535, 824967, 824968, 824970, 843366

Date Coded:	1985/07/24	**Coded By:**	BC Geological Survey (BCGS)	**Field Check:**	N
Date Revised:	2008/02/22	**Revised By:**	Karl A. Flower (KAF)	**Field Check:**	N