

### **Occurrence Details**

Occurrence Number: 105G 102 Occurrence Name: Howdee Occurrence Type: Hard-rock

**Status:** Showing

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# **General Information**

Secondary Commodities: copper, gold, silver, tungsten

Deposit Type(s): Skarn W

Location(s): 61°15'20" N - -130°35'8" W

NTS Mapsheet(s): 105G07 Location Comments: .5 Kilometres Hand Samples Available: No

Last Reviewed:

## **Capsule**

#### Work History

Staked as Howdee cl 1-16 (YA45711) in Sep/79 by Chevron Canada Ltd, which explored with prospecting, mapping and geochemical surveys in 1978-1980.

Restaked as Goal cl 122-319 (YB60658) between Oct/95 and Feb/96 by Expatriate Resources Ltd which carried out soil sampling, and prospecting later in the year. In 1997 the company carried out further soil sampling and prospecting, and in 1998 geological mapping, hand trenching and follow-up soil sampling and prospecting.

### Capsule Geology

The Howdee occurrence lies within the Yukon-Tanana Terrane in the Finlayson Lake area. Geological mapping completed by Murphy and Piercey (1999) of the Yukon Geology Program shows that the occurrence area is predominantly underlain by the Devonian to Early Mississippian Fire Lake mafic metavolcanic unit (unit DMF). The mafic metavolcanics are overlain by the Mississippian Grass Lakes Succession comprised of carbonaceous phyllite (unit MKCp) and a small body of Kudz Ze Kayah felsic metavolcanic unit (unit MK). To the north and west, a large body of Devonian to Mississippian variably serpentinized ultramafic rock (unit DMum) intrudes the sequence near the base of unit DMF. Murphy and Piercey suggest that the ultramafic rocks are sills that flowed from dykes lying along the trend of thickness changes in unit DMF. A Cretaceous, granitic intrusion (unit Kg) intrudes the sequence to the east.

The occurrence consists of three mineralized areas, which Expatriate named (from south to north) the Chapman showing, the E1 zone and the E2 target area. The Chapman showing is one of two previously explored areas. It consists of scheelite mineralization within calc-silicate bearing, discontinuous limy bands. Scheelite and a trace of chalcopyrite were also found in two small, fault-related calc-silicate zones adjacent to quartz veins and silicified shear zones. Host rocks are quartz-muscovite schist and quartz-feldspar(± biotite) augen gneiss located near the margin of the Cretaceous intrusion. The 1978-80 work (mapping, soil sampling and soil panning) outlined tungsten anomalies associated with the Chapman showing and anomalies that could not be correlated to known mineralization. Analysis for tin produced only background values, but several samples returned between 20-317 ppb Au (Cathro and Schmidt, 1981).

The E1 zone, located about 1 km north of the Chapman showing, is defined by a 500 m long, copper soil anomaly (up to 430 ppm). The zone encompasses mineralization located in 1980, (Cathro, 1981) consisting of scheelite mineralization within a banded calc-silicate schist, apparently formed between the lime-rich host rock and a large quartz vein filled shear zone. Later work (Eaton, 1998) discovered malachite and azurite stained mafic metavolcanic float which yielded 1.4g/t Ag and 0.27% Cu. Minor disseminated pyrrhotite with trace amounts ofchalcopyrite, malachite and azurite, found in weakly limonitic quartz-biotite-muscovite schist and quartz-chlorite schist, yielded up to 1.4g/t Ag, 1 930 ppm Cu, 12 ppm Pb, 80 ppb Au and 2.800 ppm WO3 (Wengzynowski. 1999).

The E2 target area, located about 3 km north of the Chapman showing, covers a strong Cu +/- W soil anomaly and two mineralized showings, the Kel and the Crown. The Kel showing consists of disseminated pyrrhotite and scheelite in a narrow gabbroic dyke that returned 1.7% WO3 (Burgert, 1997). Later work (Eaton, 1999) noted localized concentrations of scheelite in quartz-actinolite veins, between 5-8 cm wide, within a southeast trending shear zone cutting across the dyke.

About 700 m west of the Kel showing, but still within the E2 target area, is the Crown Showing. It consists of a 600 m by 600 m soil anomaly which returned anomalous copper (<2 120 ppm) and tungsten (<480 ppm) values (Eaton 1999). The sample that yielded the peak values also returned 18.0 g/t Ag and 280 ppb Au. The area is underlain by chlorite schist and distinctive quartz-muscovite-chlorite schist. Both units are crosscut by quartz-actinolite +/-hornblende +/-tourmaline veins. Hand trenches dug on these veins, returned a high of 1 655 ppb Au, 99.8 g/t Ag, 2.29% Cu, 666 ppm Zn and 681 ppm Co from a 1-3 cm wide limonitic quartz rich horizon (Wengzynowski, 1999).

## References

CHEVRON CANADA LTD, Jan/81. Assessment Report #090732 by R.J. Cathro and U. Schmidt.

CHEVRON CANADA LTD, Jan/81. Assessment Report #090733 by R.J. Cathro and U. Schmidt.

EXPATRIATE RESOURCES LTD, Apr/97. Assessment Report #093573 by A. Burgert.

EXPATRIATE RESOURCES LTD, May/98. Assessment Report #093788 by W.D. Eaton

 ${\tt EXPATRIATE\ RESOURCES\ LTD,\ Jun/99.\ Assessment\ Report\ \#094016\ by\ W.A.\ Wengzynowski.}$ 

EXPATRIATE RESOURCES LTD, Jan/2001. Web Site: www.expatriateresources.com

MURPHY, D.C. AND PIERCEY, S.J., 1999. Geological map of Finlayson Lake (105G/7,8 and parts of 1,2, and 9) and Frances Lake (parts of 105H/5 and 12) map areas, southeastern Yukon (1:100,000 scale). Exploration and geological Services Division, Indian and Northern Affairs Canada, Open File 1999-4.

MURPHY, D.C. AND PIERCEY, S.J., 2000. Syn-mineralization faults and their re-activation, Finlayson Lake massive sulphide district, Yukon Tanana Terrane, southeastern Yukon. In: Yukon Exploration and Geology 1998: Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada. p. 55-66.

YUKON GEOLOGY AND EXPLORATION 1979-80, p. 182.

YUKON GEOLOGY AND EXPLORATION 1997, p. 16, 36. 1999, p. 29. 2000, p. 9, 25, 27.

Work History				
Date	Work Type	Comment		
12/31/1998	Geochemistry			
12/31/1998	Trenching			
12/31/1998	Other			
12/31/1997	Geochemistry			
12/31/1997	Other			
12/31/1996	Geochemistry			
12/31/1996	Other			
12/31/1979	Geology			
12/31/1979	Geochemistry			
12/31/1979	Other			
12/31/1979	Other			

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
<u>096515</u>	2013	2013 Satellite Mapping on the Fyre Lake Property	Orthophoto - Airphotography		
<u>094501</u>	2004	Assessment Report on Geological and Geochemical Surveys of the Fife 1-52 Claims	Silt - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology		
<u>094909</u>	2003	2003 Report on Field Activities on the Goal Claims, The Regal Ridge Project, Yukon Territory, Canada	Tunnelling - Development, Underground, Diamond - Drilling, Bulk Sample - Lab Work/Physical Studies, Mechanical - Trenching	14	628.68
<u>094016</u>	1998	Assessment Report Describing Geological Mapping, Prospecting, and Soil Geochemistry on the Goal Net Property	Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Backhoe - Trenching		
093788	1997	Assessment Report Describing Geological Mapping, Prospecting, and Soil Geochemistry on the Goal Net Property	Rock - Geochemistry, Soil - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Bedrock Mapping - Geology, Prospecting - Other, Backhoe - Trenching, Hand - Trenching		
<u>093573</u>	1996	Assessment Report Describing Geological Mapping, Prospecting, and Soil Geochemistry and Geophysical Surveys on the Goal Net Property	Electromagnetic - Airborne Geophysics, Magnetic - Airborne Geophysics, Soil - Geochemistry, Bedrock Mapping - Geology, Prospecting - Other		
<u>093325</u>	1994	1994 Assessment Report Rife and Tor Properties Linecutting, Ground Geophysics (HLEM, Mag and Gravity), Soil Geochemistry and Geological Mapping	Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, EM - Ground Geophysics, Gravity Survey - Ground Geophysics, Magnetics - Ground Geophysics, Line Cutting - Other		
090733	1980	Report on Geology, Panning and Geochemistry Howdee 1-16 Claims	Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology		