

NEWFOUNDLAND & LABRADOR

Explore The Opportunities

Miles Cove Mine Copper - Gold



Map 1. Property Location Map

The **Miles Cove Property** consists of 69 claims located in northern Newfoundland on Sunday Cove Island approximately 0.5 km south west of the small community of Miles Cove. The Miles Cove Road and causeway connects Sunday Cove Island to Route 380, a paved highway which joins the Trans Canada Highway approximately 15 km to the southwest (Maps 1 and 2).

Regional Geology

The property lies within the Notre Dame Subzone (Dunnage Zone) of Central Newfoundland and is underlain by the Lushes Bight Group.

Local Geology

The Cambrian to Early Ordovician Lushes Bight Group consists mainly of sheeted diabase dykes and basaltic flows and minor pyroclastic and ultramafic rocks. The pillow basalt is further subdivided into diabase dykes, pillow breccia and intercalated tuffs and minor sediments. The Lushes Bight Group is host to numerous volcanogenic massive sulphide showings and prospects and, in the early 1900's, was one of the largest copper producing regions of the world. The group is also host to a number of epigenetic, structurally-controlled, vein-hosted occurrences. The volcanogenic mineralization generally occurs in chlorite schist zones within altered and deformed mafic volcanic rocks.

Mineralization

There are 12 historic mineral occurrences on the property and the most significant is the **Miles Cove Copper Mine**. The Mine operated in the late 1800's and records indicate that **190 tons of 10% Copper** were shipped to England at that time. In 1956 thirteen drill holes established a deposit of **130,00 tons at 1.55% Cu**. No further work was done on the prospect until a government soil survey in 1979 which outlined high copper values up to **2920 ppm** trending in a southerly direction away from the main zone for approximately 250 m. A CEM conductor was traced by vertical loop along an approximate southerly direction for about 400 m. This conductor closely parallels the trend of the copper (soil) anomaly. The conclusions of the government survey

was that the Miles Cove prospect is very attractive and that an anomalous area (geologically, geochemically, and geophysically) south of the known copper deposit and trending toward it has not been adequately tested by past drilling programs. The deposit consists of a chlorite schist zone which hosts pyrite, chalcopyrite, magnetite and minor amounts of gold and silver. The mineralization consists of blebs and stringers of pyrite and chalcopyrite associated with quartz veinlets in sheared, crinkled, iron-stained basalt. Subsurface mineralization, as logged by Ten Cate (1957) consists of stringers and veinlets of pyrite and chalcopyrite in sheared and drag-folded chlorite schist. Wide quartz-filled shear zones also occur above and below the ore zone. Diamond drill sections indicate the mineralized zone has a strike length of about 76 m and an average width of about 7 m. The vertical limits of the deposit have not been determined. Blocks of massive sulphide containing a high proportion of chalcopyrite, pyrite and minor amounts of magnetite, in a siliceous groundmass, have been noted in the mine dump. Later sampling of the ore dump indicates significant gold as well as copper. The **semi-massive to massive ore returned up to 15% copper, 1 % zinc**

Highlights:

Dormant Cu Mine: 130,000 tons resource (1956)
Cu-Au VMS style mineralization in chlorite schist/exhalite
Structurally-controlled Au in pyrite-bearing felsic schist
Zn-Ag-Cu-Au VMS mineralization in massive sulphide
Property is generally under-explored

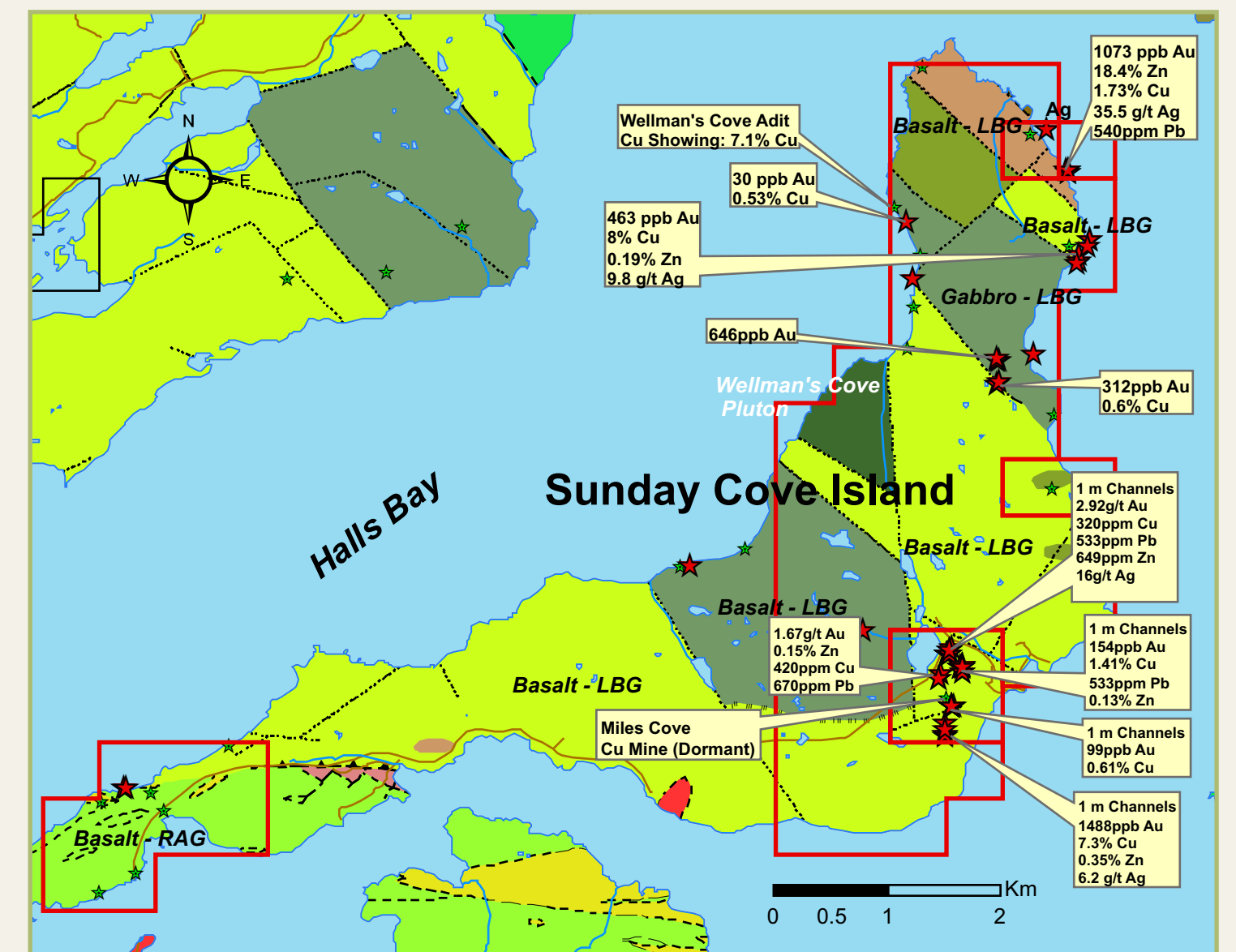
and 4.4 g/t gold. Drilling by Epoch Capital Corp in 1989, approximately 300 m north of the mine, returned **2.58% Cu over 1.3 m and 1.28% Cu over 5.5 m**. Strong geophysical conductors await testing by drilling.

At the Miles Cove Pond Au Showing, **three 1.0 m chip samples** taken along the roadcut in 1989 by Epoch Capital Corporation, returned **gold values of 1400 ppb, 2010 ppb and 860 ppb with associated elevated Cu and Zn values (360 ppm and 680 ppm respectively)**. A **5.5 ppm Ag** value was associated with the **860 ppb Au** value. **One 1.0 m chip sample hosting 15-20% pyrite and chalcopyrite assayed 5200 ppm Cu, 7400 ppm Zn and 194 ppb Au**. Approximately 200 m SSE of the Miles Cove Pond Showing (along strike) several 1.0 m chip samples, taken from the Lilly trenches, returned anomalous base metal values of **0.1 to 3.4% Cu and a Au value of 379 ppb** (Chataway, 1990). Mineralization is reported to consist of quartz-sulphide veins and disseminated pyrite in chlorite schists. Pyrite ranges up to 20% locally, \pm chalcopyrite. Similar style mineralization occurs in massive flows in the Lilly trenches 200 m along strike to the SSE. The ubiquitous and disseminated, for the most part, nature of the mineralization suggests a primary origin. Several other pyrite and chalcopyrite occurrences are present in the north of the property and occur as stringers and in quartz veins in chlorite schist. High grade Cu has also been discovered at several other showings in the northern part of the property (Map 2).

The most recent work on the property, carried out by High Tide Resources in 2012, indicates that there are potentially three types of deposits: i) Cu-Au VMS style mineralization in chlorite schist/exhalite; ii) structurally controlled Au in pyrite-bearing felsic schist; and iii) Zn-Ag-Cu-Au VMS mineralization in massive sulphide. Styles ii) and iii) have not previously been explored for, and sustained exploration for style i) has not been undertaken; the property is largely under-explored. High Tide made some new discoveries including the Headlands Showing (Map 2; NE of the property) in mineralized chlorite schist; grab samples from this area returned values up to **1.07 g/t Au, 35.5 g/t Ag, 18.4% Zn and 1.73% Cu**. A six m continuous channel sample in the ditch just north of the Miles Cove mine gave **1.412 g/t Au, 9.37 g/t Ag, .028% Cu and .044% Zn**

Mineralization Model

According to Dean's (1977) metallogenic classification of the Notre Dame Bay mineral occurrences, the Miles Cove Pond occurrences can be classed under "Betts Cove Type" which includes volcanogenic sulphide deposits that occur within mafic volcanic rocks, generally pillow lava and pillow breccia. The copper showings on Sunday Cove Island resemble many of the old mines and prospects (Whalesback, Little Deer, Rendell Jackman, Little Bay) which occur in mafic volcanics with associated chlorite schist zones in the Lush's Bight Group. More recent work indicates the potential for orogenic-type gold in felsic schists.



Map 2. Property Geology and Claims Location Map

Crisby-Whittle, L. V. J. (compiler) 2012: Bedrock geology dataset for the Island of Newfoundland. Newfoundland and Labrador Department of Natural Resources, Geological Survey, Open File NFLD/2616 version 7.0. Mineral Occurrence Source: Mineral Occurrence Database - Geological Survey, Department of Natural Resources Website: <http://www.gov.nl.ca/mines&en/geosurvey>

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