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Map 2: Claims Location and Geology

Highlights:

Historic galena vein occurrence Grab Samples up to 74% Pb, 44 g/tAg, 136 ppbAu **Spatial association with regional late faults**

The **Belle Property** consists of 2 licenses, located 2 and 3 km east of Southern Harbour on the Avalon Peninsula, straddling and adjacent to the the Trans Canada Highway (NTS) 1N/12), (Maps 1 and 2).

Regional Geology

The area lies within the Avalon Tectonostratigraphic Zone of the Newfoundland Appalachians and is underlain by the Late Proterozoic Connecting Point Group, which comprises turbidites and associated sedimentary rocks. The structure of the northwest Avalon Peninsula is characterized by a complex series of anticlines and synclines which are cut by large faults. These faults and folds form part of the Isthmus Horst System of McCartney (1967), a poorly understood system of tear, normal and reverse faults. The faults generally trend in two directions: northeast-southwest and northwest-southeast.

Local Geology

The Connecting Point Group in this area comprises green, gray and black shale, siliceous siltstone and sandstone; minor green conglomerate; numerous mafic dikes and sills.

Mineralization

The Little Southern Harbour Pb vein was discovered in 1983, by a Department of Mines and Energy stream sediment sampling crew (A. Howse and K. Freake). The survey was part of a barite evaluation project (Howse and Collins, 1983). In 1983, Department of Mines and Energy geologists ran two VLF-EM lines normal to the surface strike of the vein. A weak response was noted, but no conductor was recorded over the vein. The vein has a maximum exposed width of 80 cm but appears to pinch rapidly on both sides of a stream. The barite and associated galena occur as pods, blebs, and stringers within the fractured and brecciated host rock (siltstone). One such pod, about 20 cm in diameter, was estimated to contain 60% barite and 40% galena. Grab samples returned up to **74%**

Pb, 56% Ba, 704 ppm Cu and 44 g/t Ag. The galena occurs mainly as coarse crystal aggregates in a barite and calcite gangue but isolated patches were also observed. The vein, which appears to be along a NE-trending fault zone dips vertically. Plate 1. Belle Pb-Ba veins Further work was carried out by prospector Jason White (2006) who noted mineralization approx 100 m east of the recorded historic occurrence. The present owner recently staked the property and took 10 grab samples from mineralized outcrop (same location as noted by Jason White, above). The samples returned up to 21% Pb, 26 g/t Ag, 0.67% Ba, 136 ppb Au and 407 ppm Cu (Plate 1).

Mineralization Model

The Belle Pb-Ag vein is one of several epigenetic veins in the area. The most significant vein is the Carboniferous to Permian La Manche Lead Prospect 3 km to the south (Map 2), which is spatially associated with a vertical fault within sedimentary rocks. Its mineralogy is predominantly galena with additional sphalerite and chalcopyrite in a gangue of calcite, fluorite and smithsonite with minor quartz and barite. Opal has also been noted in the vein by previous workers. The La Manche mine site is located in a long linear valley, reflecting the fault zone along which the vein was deposited. This fault system can be traced over a distance of > 3500 m. The vein has an average mineralized width of between 0.9 and 2.5 m in developed sections. Underground workings indicate that the vein is up to 4 m thick. Recent geochemical work (White, 2004) underscores the polymetallic nature of the veins. Grab samples of galena (mine dump) returned 92.5 g/t Ag and 0.2 % Sb. A grab sample of banded sphalerite with calcite (mine dump) returned 140 g/t Ag and anomalous levels of REEs. A third mine dump calcite/galena sample returned 0.4% combined light REE's. Tonnage estimates for the La Manche vein have been given as: 1930: Hatch and Palmer estimates of 500,000 tons (450,000 tonnes) grading 15% Pb; 1.5% Zn; 0.8 oz/t Ag.

These late vein systems are typically associated with faults. Further work is required to determine if the mineralization at the Belle Property is more extensive.



Belle - Pb-Ag



Map 1. Property Location Map



