

The Heritage (Point May) prospect: Neoproterozoic low-sulfidation epithermal Au-Ag mineralization in the Avalon zone of Newfoundland, Canada

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The Heritage project is located on the southern shore of the Burin Peninsula, within a part of the Avalonian terrane increasingly recognized for its potential for epithermal precious metal deposits. Other significant prospects within this district include Big Easy (low-sulfidation Au-Ag), Hickey's Pond (high-sulfidation Au), and Stewart (high sulphidation Au/porphyry-Cu). First discovered in 2011, the 4.5 km by 2 km Point May epithermal system (PMES) contains both multi-episode vein breccias and discrete veins. Drilling on the PMES has intersected two parallel mineralized zones, with the best intercept to date yielding 44 g/t Au and 10 516/t Ag.

The High Beach Andesite (HBA) is the host of the PMES; it consists of a thick succession of tuff, tuff breccia, and coarse pyroclastic rocks. These lithologies, as well as the presence of flow-banded rhyolite – are interpreted as broadly indicative of an arc-type volcanic environment during a protracted period of active magmatism. Interestingly, the abundance of jasperoidal fragments and fracture fillings in parts of the HBA implies a shallow sub-aqueous paleo-environment during emplacement of some of the volcanic rocks.

The PMES appears to be structurally controlled, with mineralization in close proximity to parallel shear zones. It has been suggested that these structures could be attributed to extensional forces during (incipient) back-arc rifting, which is further implied by the presence of a large scale horst-like structure identified on the property.

The PMES is a low-sulphidation epithermal system, as evidenced by banded and crustiform veins and bladed silica-adularia, accompanied by clay-chlorite-adularia alteration. Surface alteration is characterized by an outer silica – phengite zone, which surrounds an inner chalcedony – adularia – illite – chlorite zone. Surface sampling of the PMES has identified two discrete NNE-trending mineralized vein-breccia zones located on the eastern and western boundaries of the inner alteration zone (the Eagle and Pinnacle zones, respectively). Mineralized quartz veins are identified in core by the presence of ginguero style mineralization, comprising black 'sooty' irregularly serrate stringers, or coatings on fragments, which contain a characteristic mineral assemblage: native silver and acanthite, with lesser naumannite, electrum, galena, clausthalite, chalcocopyrite, and/or sphalerite.