

Hall Lake (au, ag)

Also The Cretin property is located 50km west of Cranbrook, BC and consists of three contiguous claim blocks - the recently converted Legacy claim and two additional claim blocks acquired on Mineral Titles Online - totaling 1778.89 hectares. The claims, are owned 100% by Eagle Plains Resources Ltd. and carry no underlying royalties or encumbrances.

Hall Lake Project - Steep Terrain



In the late 1990s, the British Columbia Geological Survey (BCGS) recognized the potential of southern and southeastern British Columbia to host significant gold mineralization. Two major styles of gold mineralization were subsequently considered prospective in the region: distal sediment-hosted gold mineralization

similar to that found in Nevada (Carlin and related areas)(Lefebure et al., 1998), and more proximal intrusive-related gold mineralization similar to that found in Yukon and Alaska in the Tintina Gold Belt (Logan, 1999, etc.). This conclusion is based on distinctive similarities of the tectonic setting of all these regions and their location within pericratonic terranes - formed along the continental margin of the ancestral North American Craton - which have been intruded by Mesozoic magmas.

Further work of the BCGS led to identification of the mid-Cretaceous (90-115 Ma) Bayonne Plutonic Suite that forms the 50 to 75 km wide arcuate Bayonne Intrusive Belt extending roughly in a north northwest direction from the Canada-USA border. The Bayonne Suite is one of a number of Cretaceous plutonic suites of the Omineca tectonic belt that extends for more than 1600 km along the Canadian Cordilleran interior from Alaska through Yukon to British Columbia (Logan, 2001, 2002). The plutons of these suites are known to host or control large intrusive-related gold deposits, most notably within the Tintina Gold Belt in Yukon and Alaska (e.g., Donlin Creek, Fort Knox, Ryan Lode, True North, Pogo, Brewery Creek, Dublin Gulch, etc.)

On this basis, similarities between southern and southeastern British Columbia with the Tintina Gold Belt were suggested, including the presence of mid-Cretaceous granitic intrusions, solitary, stockwork and sheeted quartz veins with Au-W-Bi metal signatures, and RGS anomalies for pathfinder elements (Logan, 1999). A second intrusive suite, the Eocene (ca. 51 Ma) Coryell Syenite Suite accompanied by gold mineralization also occurs in southeastern British Columbia. The presence of both Cretaceous and Eocene plutonic suites indicates the possibility for the existence of two distinct events of gold mineralization in the region. This also resembles the possible occurrence of two (Cretaceous and Eocene) epochs of gold mineralization in the Great Basin, Nevada.

As a result of the work conducted above, the Cretin property was identified by Eagle Plains' personnel as an excellent grass roots exploration target for these types of deposits. The claims cover a large (7.5 square-km) Cretaceous-aged granitic intrusive known as the Hall Lake Stock, which is hosted by Aldridge and Creston formation sediments.

2004 fieldwork by Eagle Plains consisted of a rock geochemical survey and prospecting aimed to assess the geochemical character of the Hall Lake Stock as well as that of the host sediments. The most significant results from the 2004 geochemical survey and prospecting were the anomalous gold values collected from a large dyke in the sediments of the Creston Formation approximately 300 meters from the contact with the intrusive. One sample also returned anomalous values for silver. The total cost of the 2004 geochemical survey of the Cretin Property was \$ 11,435.61.

Based on results from the 2004 program, Eagle Plains carried out a field program at Hall Lake in late 2005. Work consisted of contour soil sampling and rock geochemical sampling. The total cost of the 2005 program was \$38,675.40.

History and Previous Work

To the best of the writers knowledge there has been no previous exploration work done on this site prior to Eagle Plains acquiring the project.

Regional Geology

Regionally the Cretin area is underlain by rocks of the Purcell Supergroup on the western flank of the Purcell Anticlinorium, a broad, north-plunging arch-like structure in Helikian and Hadrynian aged rocks. The anticlinorium is allocthonous, carried eastward and onto the underlying cratonic basement by generally north trending thrusts throughout the Laramide orogeny during late Mesozoic and early Tertiary time.

The oldest rocks exposed in the Cretin area are greenish, rusty weathering thin bedded siltites and quartzites of the greater than 4000m thick Lower Aldridge Formation, along with the facies-related, dominantly fluvial Fort Steele Formation (the base of which is unexposed). The Sullivan deposit is located some 20-30m below the upper contact of the Lower Aldridge Formation. Overlying the Lower Aldridge is a continuous section of Middle Aldridge quartz wackes, subwackes and argillites some 3000+ m thick. Within the Middle Aldridge formation, fourteen varied marker horizons can be correlated over

hundreds of kilometres. These represent the only accurate stratigraphic control. A number of aerially extensive, locally thick gabbroic sills are present within the Lower and Middle Aldridge Formations. These sills and dykes; the "Moyie Sills", locally were intruded into wet, unconsolidated sediments, and have been dated to 1445 Ma, providing a minimum age for Aldridge sedimentation and formation of the Sullivan deposit. The Middle Aldridge is overlain conformably by the Upper Aldridge, 300 to 400 meters of thin, fissile, rusty weathering siltite/argillite.

Conformably overlying the Aldridge Formation is the Creston Formation, comprising approximately 1800 meters of grey, green and maroon, cross-bedded and ripple marked platformal quartzites and mudstones. The Kitchener-Siyeh Formation, which includes 1200 to 1600 meters of grey-green and buff coloured dolomitic mudstone are shallow water sediments overlying the Creston Formation.

The upper portion of the Purcell Supergroup consists of the Dutch Creek and Mount Nelson Formations. The Dutch Creek formation consists of approximately 1200 meters of dark grey, calcareous dolomitic mudstones. Overlying the Dutch Creek formation is the Mount Nelson formation, 1000 meters of grey-green and maroon mudstone and calcareous mudstones. This unit marks the top of the Purcell Supergroup. The Purcell Supergroup in the Sullivan area was deposited along an active tectonic basin margin.

Dramatic thickness and facies variations record Purcell-age growth faults and contrast with gradual changes characteristic of most Purcell rocks elsewhere. These faults reflect deep crustal structures that modified incipient Purcell rifting, and led to the development of an intercratonic basin in middle Proterozoic time.

Property Geology

Geologic mapping at the Cretin property is limited to regional scale mapping by Hoy, T. and Jackaman, W. (2004). The property itself is dominated by a 2.5 km by 3.5 km upper Cretaceous porphyritic granitoid pluton that intrudes the conformable contact between moderately-dipping Middle and Upper Aldridge rocks to the east and overlying Creston Formation rocks to the west (Fig. 3); see regional geology for a detailed description of the host rocks. The pluton also appears to cross-cut north – south trending, sub-vertical, regional scale thrust faults (Fig. 3). The degree or presence of contact metamorphism, associated with intrusion of the stock, is not known; neither is structural relationship between intrusive phase and metasedimentary host rocks.

Exploration on the property was centered around a ~7 m wide NW-striking, sub-vertical felsic dyke which cross-cuts the main intrusive body (B. Robison, pers. comm.) and can be traced for over 1.5 km.

Neither the degree of contact metamorphism, nor the structural relationships between the dyke and country rocks have been established. The light-grey to rusty-orange weathering dyke is very-fine-grained to aphanitic with rare 0.5 mm quartz eyes. The texture of the dyke is massive. Sulphide mineralization consists of rare mm-scale euhedral py cubes; minor disseminated, medium-grained arsenopyrite prisms and needles; and medium-grained euhedral arsenopyrite needles to fine-grained, massive, arsenopyrite common along fracture surfaces. Arsenopyrite bearing, light- to dark-grey, sugary quartz veins which average 0.5 cm in width, cross-cut the dyke.

Larger 3 - 10 cm medium- to coarse-grained, rusty, quartz veins intrude the host metasedimentary rocks; veins can contain muscovite and form minor stockworks. Sulphide mineralization includes coarse-grained euhedral galena, coarse-grained euhedral pyrite cubes and associated pseudomorphs (limonite?), as well as fine-grained disseminated arsenopyrite.

This project is available for option

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