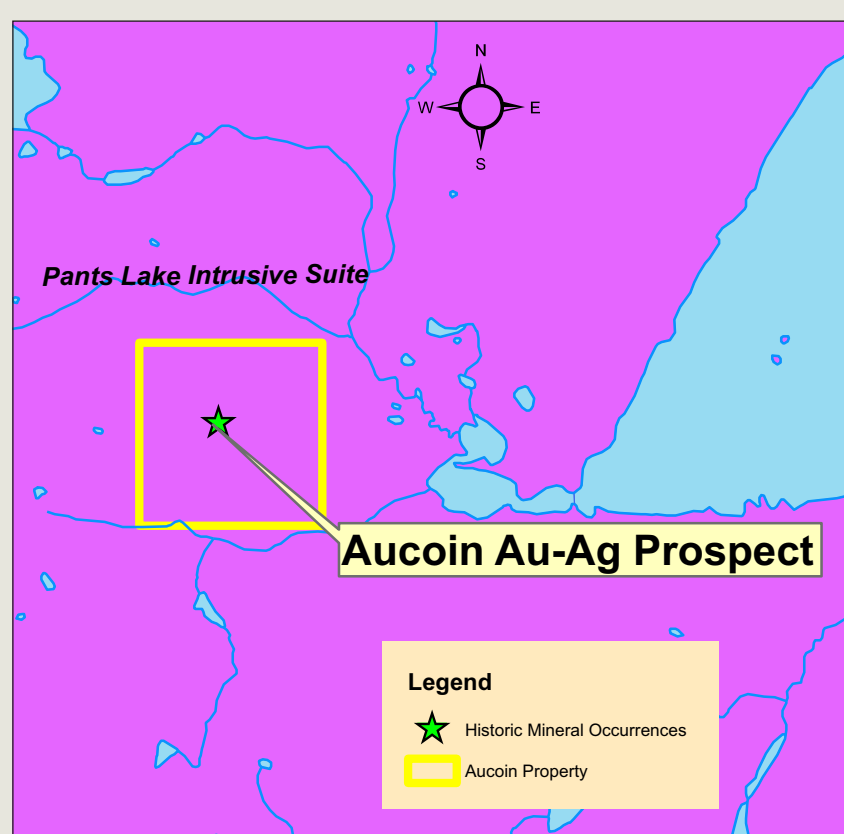


# NEWFOUNDLAND & LABRADOR

## Prospect • Discover • Develop



# Aucoin – Au-Ag-Te



Map 2: Claims Location and Regional Geology

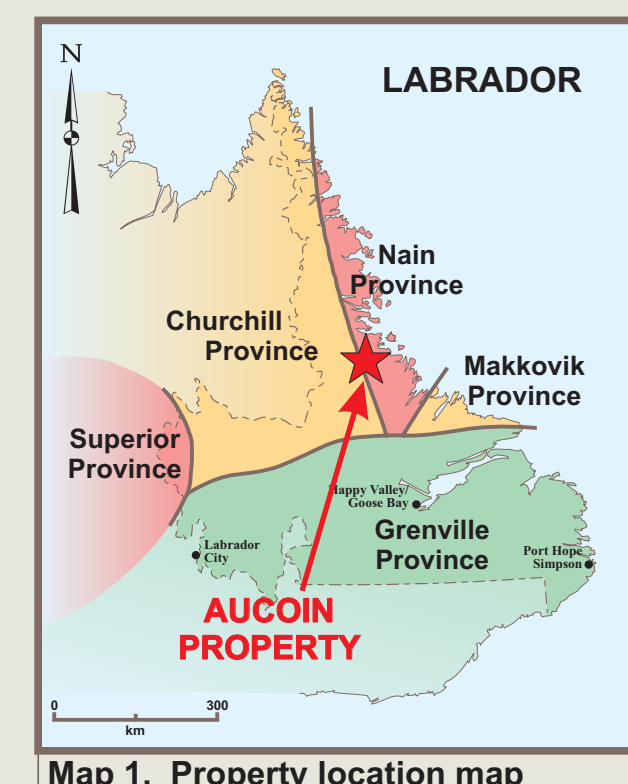
The **Aucoin Property** consists of 4 claims located in eastern Labrador, approximately 240 km NNW of Happy Valley-Goose Bay, 140 km SSE of Nain, (NTS sheet 13N/06). Access to the property is by helicopter or float plane, most conveniently from the community of Hopedale (75 km to the east). A float plane can land on a lake situated approximately 2.5 km east of the Aucoin Showing (Maps 1,2 and 3).

### Regional Geology

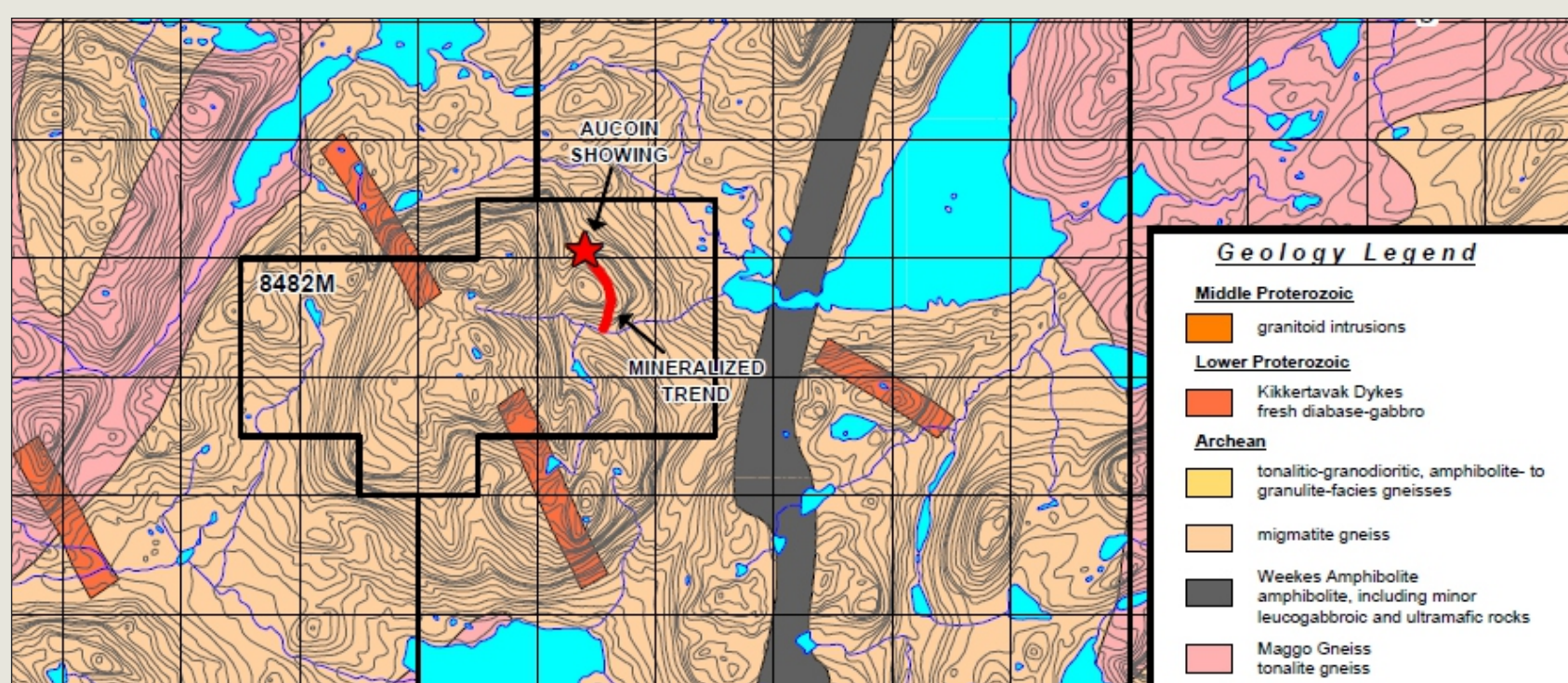
The Aucoin project lies in the Archean Hopedale Block of the Southern Nain Province. The Hopedale Block is bounded to the SE by the Makkovik Province along a mylonitic fault contact and to the west, by the Churchill Province, along a fault zone. The portion of the Hopedale Block underlying the Aucoin property is middle to late Archean in age and is generally composed of relict granulite facies rocks, migmatites and tonalite gneisses (Ermanovics, 1993).

### Local Geology

The hills immediately surrounding the Aucoin prospect are underlain by five distinct rock types (Sandeman and McNicoll, 2015). The oldest rocks are tonalitic Maggo orthogneiss containing schlieren of amphibolite inferred to represent dismembered Weekes amphibolite (Ermanovics, 1993). The Maggo gneiss is intruded by massive to weakly foliated syenite, which contains lenses or magmatic enclaves of monzodiorite. Immediately north and east of the Aucoin prospect is an irregular,  $\leq 50$ -m-thick, southeast-trending sill of hornblende–porphyritic, magnetite–ilmenite  $\pm$  clinopyroxene monzogabbro. The upper contact zone between the syenite and the monzogabbro sill comprises a sheared, quartz-veined and phengite+chlorite+ankerite $\pm$ epidote $\pm$ talc-altered zone that hosts much of the gold mineralization and is termed the Aucoin shear zone (ASZ; Sandeman and McNicoll, 2015).



Map 1: Property location map



Map 3: Detailed Geology (Hussey and Moore, 2005)

### Highlights:

- Only historic very high grade visible Au prospect in Labrador
- Grabs up to 477.46 g/t Au, >100 g/t Ag; up to 12.3 g/t Au over 1 m (DDH)
- Anomalous Te, minor base metal sulphides
- Wallrock alteration chlorite-ankerite-epidote-talc-phengite
- Mineralization over minimum distance of 700 m
- Shear zone associated

(Plate 1). Other than Au, Ag is the main anomalous metal, with minor Cu and Pb. Of note, is the overall lack of As in these veins, which may be important, should a resource ultimately be found on the property. The veins cut all lithologies including the diabase dykes, suggesting the mineralization is Proterozoic or younger in age. Mineralization consists of anastomosing, discontinuous, NE- and NW-trending orogenic quartz veins proximal to, and within, a  $\leq 5$ -m-thick, SE-trending shear zone associated with chlorite–ankerite–epidote–talc $\pm$ phengite alteration. Elevated gold correlates with Ag/Te, reflected by argentiferous electrum and petzite ( $\text{Ag}_3\text{AuTe}_2$ ) inclusions in sulphides and in rutile replacing ilmenite (Sandeman and McNicoll, 2015). Individual veins are typically up to 20 cm wide within wider zones of veining such as at the Aucoin Showing, which consists of a 1.5 m wide zone of parallel quartz veins ranging between 5 and 20 cm wide and making up 15% of the zone.

Gold mineralization is widespread over a 700 m long corridor extending south from the Aucoin showing (Map 3). The southern end may represent a significant exploration target as the size of the veins there remain to be determined and, based on assays to date, likely hosts free gold similar to the Aucoin Showing. Gold-bearing quartz veins are found in all mapped rock types and appear to be associated with late brittle structures. Also, all lithologies appear to host anomalous concentrations of gold without evidence of obvious quartz veining, as samples of mafic gneiss have returned assays of up to 9.4 ppb Au. Unmineralized pegmatitic granite dykes have also returned anomalous Au assays of up to 453 ppb. These observations suggest the gold mineralizing system may be significantly large and sufficiently robust to mineralize gold over a large area in multiple rock types within or outside of late brittle structures.

### FOR MORE INFORMATION CONTACT:

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### Economic Potential

Field relationships at the Aucoin Prospect indicate that the Au–Ag–Te mineralized quartz veins and associated alteration are hosted by four distinct rock types: syenite – monzogranite, monzodiorite, monzogabbro and NW-SE-trending diabase dykes. All of these rocks have been altered and locally veined and mineralized. Recent new geochemical and geochronological data

(Sandeman and McNicoll, 2015) indicate that the alkaline intrusive rocks exposed at the Aucoin prospect are not related to the mineralizing event as previously thought and the latter may represent a structurally controlled, orogenic-type system of Paleoproterozoic age that is fortuitously hosted by these unusual, late Archean alkaline intrusive rocks. The Paleoproterozoic, in particular the interval from 1900–1750 Ma is well recognized as a period of major orogenic gold mineralization (Groves et al., 2003). The Paleoproterozoic, ca. 1870 Ma age for Aucoin alteration and mineralization suggests the potential for the discovery of similar orogenic precious metal systems along the western margin of the Nain craton, proximal to the Torngat orogenic front (Sandeman and McNicoll, 2015).

Previous Work and Mineralization

The **Aucoin Showing** was discovered in 1995 by Ascot Resources while following up a 30 ppb Au-in-stream sediment anomaly: they conducted line-cutting, prospecting, geological mapping, geochemical and geophysical surveys and diamond drilling. Initial grab sampling of quartz veins yielded assays up to **7.23 g/t Au** with coarse visible gold hosted by a screen or dyke-like body of mafic gneiss. The best result from diamond drilling was an intersection of **2.07 g/t Au over 12.4 m, including 12.43 g/t Au over 1.05 m**. Cornerstone carried out preliminary sampling in 2002 and a grab sample returned an assay of **49.1 g/t Au**. Cornerstone then optioned the property from Lloyd Hillier in 2003. The best value from Cornerstone's sampling (2003) was **7.4 g/t Au** from an outcrop of Fe-carbonate altered dioritic gneiss located approximately 60 m NW of the Aucoin Showing. Two samples collected from quartz veins in altered mafic gneiss/intrusive (?), approximately 480 m SW of the Aucoin Showing, returned values of **6.5 and 6.3 g/t Au** (Hussey and Moore, 2005).

### Previous Work and Mineralization

In 2004, Cornerstone collected 13 rock samples: the best assays were **477.46 g/t Au and >100 g/t Ag** from the Aucoin Showing. In addition, a quartz vein located approximately 600 m south of the Aucoin Showing with minimum dimensions of 2 x 4 m returned an assay of **0.91 g/t Au**. The vein may be significantly wider than the exposed width and may be part of a much larger gold-bearing vein system. Mineralization on the property consists predominantly of deformed quartz veins with accessory pyrite and visible native Au



Plate 1: Aucoin Au showing consisting of tension quartz veins cutting mafic gneiss. Sample collected just below the field book in the foreground returned an assay of 477.46 g/t Au. Note brown iron carbonate alteration at vein margins (Hussey and Moore, 2006)

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