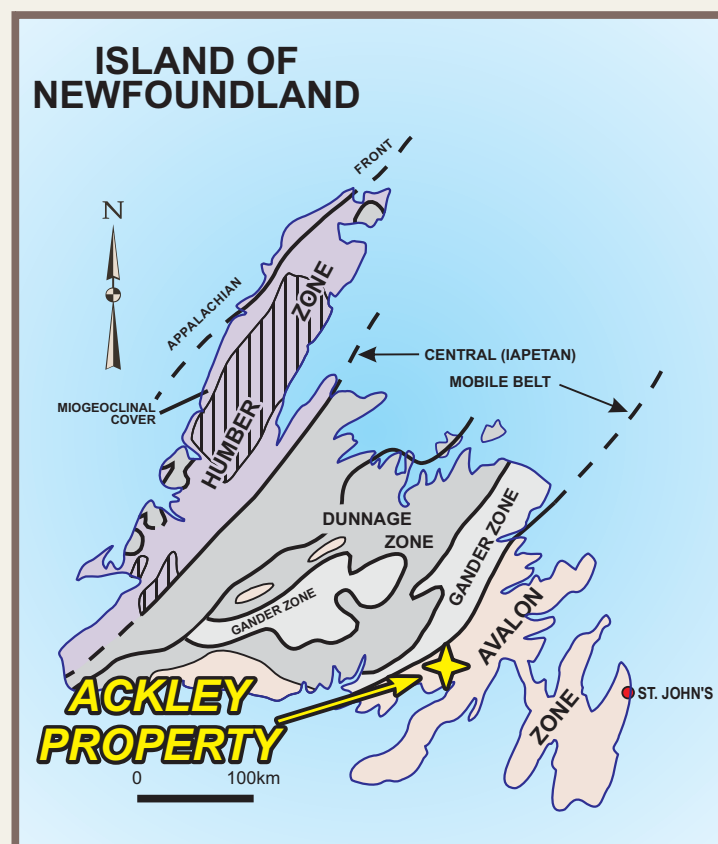


NEWFOUNDLAND & LABRADOR

Explore The Opportunities

Ackley Mo-Sn-F-W



Map 1. Property Location Map

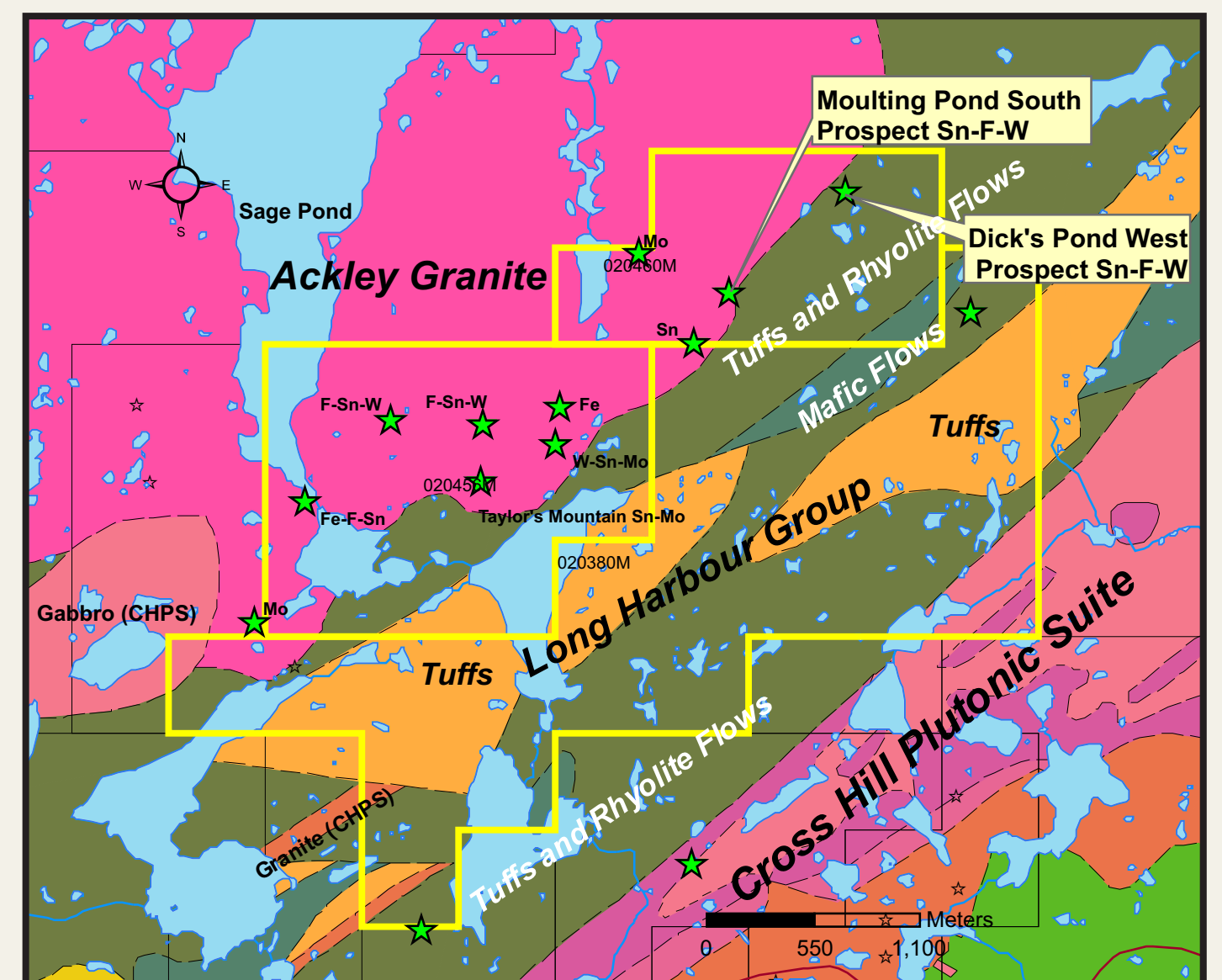
The **Ackley Property** consists of 41 claims located approximately 2 Km NW of the Burin Peninsula Highway (Route 211) (Map 1). The English Harbour East ATV trail gives access to the southern part of the property.

Regional Geology

The property is located in the west central Avalon Zone, eastern Newfoundland. The region is dominated geologically by Late Proterozoic rocks of the Long Harbour Group and the Devonian - Carboniferous Ackley Granite which cross cuts many of the Proterozoic structures and units in this area. This granite is a massive, non-foliated, coarse grained, porphyritic and equigranular, alaskitic biotite granite with associated medium-grained marginal phases & aplite dykes (Whelan, 1980).

Local Geology

The property is principally underlain by rocks of the Ackley Granite and in the southern portion by subaerial mafic to felsic volcanic to volcanoclastic rocks (Long Harbour Group) and in the east by the Late Cambrian Cross Hill Plutonic Suite (CHPS).



Map 2. Property Geology, Claims Map and Location of prospects.

Mineralization

There are 12 historic prospects, showings and indications of mineralization on the property (Map 2). These are associated with greisen development & alteration zones mainly at the margins of the Ackley granite and in the adjacent "country rocks". Topazite greisen veins contain tin and molybdenum mineralization. These veins are locally abundant, form prominent smooth, rounded edges up to 40 m in length and 10 m in width, and are aligned roughly parallel to the granite contact. These veins may extend up to 2 km into the granite from the contact (Dickson, 1983).

The topazite is saccharoidal, white-weathering, and pink to orange on fresh surfaces. Topaz may form up to 10 percent of the mode. Other accessories, present in highly variable proportions are fluorite, sericite, kaolinite, molybdenite, cassiterite, pyrite, hematite and sphene. There are also zones of disseminated pyrite in the Ackley Granite & adjacent Proterozoic volcanic rocks. Some of the more noteworthy prospects are described here.

Dicks Pond West Prospect: Pyrite, marcasite, hematite, quartz, fluorite, molybdenite, and minor cassiterite mineralization is found in quartzolite dykes and greisenous zones in the Moulting Pond area. The area contains **1-10% hematite, 0.5-5% molybdenite, 1 to 5% fluorite, and wolframite** may be observed in minor amounts (**2-3%**). At this occurrence, Esso Minerals Canada trenched two main areas and drilled five holes. The five holes were drilled on a zone of quartz topaz greisen to test, at depth, a zone which assayed **0.29% Sn over three metres in trenching**.

Trench area L: Six greisenous zones were sampled with **50-1830 g/t Sn and <30 - 193 g/t Mo over lengths of less than 0.5 m**. Trench area M: Six large greisenous zones generally less than 10 m long and 3 m wide were sampled over 1 m lengths. Trench assays found **3 - 6150 g/t Sn, and <30 - 420 g/t Mo, with an average grade of 970 g/t Sn and 130 g/t Mo** (O'Sullivan, 1983).

Drilling: Five holes were drilled on a zone of quartz topaz greisen to test a zone which assayed **0.29% Sn over three metres in trenching** (Trench M). Hole AG-1: The best assay was **0.17% tin over 1.0 m** in greisen. Hole AG-3: A greisen zone was cut from 3.2 to 13.5 m. A number of shorter sections of greisen occur within the granite, assaying **0.16% Sn from 5.5 to 6.0 m, 0.28% Sn from 9.8 to 10.0 m, and the best assay of 0.79% Sn from 41.1 to 41.6 m**. Hole AG-4: Greisen was cut from 1.2 m to 7.0 m but did not produce any assays greater than **825 g/t Sn**. A 0.5 m section of greisen at 17.6 m gave a **tin value of 0.48%**. A patch of euhedral cassiterite with 2 mm crystals was found in the drill core. Results of the drilling show that the greisen zones are quite variable in thickness and **tin content** up to **0.79% Sn** (O'Sullivan, 1983). However, given the potential strike length of 4 to 5 km, and the possibility of greisens at depth further from the contact, the potential for economic tin mineralization is good (O'Sullivan, 1983).

Moulting Pond South Prospect: Pyrite, marcasite, hematite, quartz, fluorite, molybdenite, and minor cassiterite mineralization is found in quartzolite dykes and greisens in the Moulting Pond area (O'Sullivan, 1983). Three main trenches were completed 3 to 6 m long, 1 to 1.5 m wide, and 1 metre in depth. Trench N covers an area of 105 m in length and up to 15 m wide. Ten samples were assayed over a length of 65 m, and were thought to be scree or possible bedrock. Grades from **30-2700 g/t Sn and <30-77 g/t Mo** were found. 20 m north of this trench a sample graded **2250 g/t Sn and <30 g/t Mo**. Trench O covers an area of 125 m in length and of varying widths of 5-20 m. Seven samples were assayed over a length of 85 m, and were thought to be greisen scree and possible bedrock. Grades from **5-495 g/t Sn and <30-84 g/t Mo** were found. Trench P covers an area of 90 m in length and varying widths of 10-25 m. Three bedrock samples graded **8-177 g/t Sn and <30-84 Mo over a 10 m by 2 m area**. Three scree samples graded **<3-330 g/t Sn and <30-2000 g/t Mo over 20 m**.

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Mineralization Model

Potential exists for both high grade vein and massive greisen mineralization and also for large tonnage, low grade stockwork deposits. These greisens probably represent the latest stage of fractionation of the granitic melt. A model for mineralization is envisaged whereby fluorite + tin-tungsten- rich magmatic fluids rise from a rapidly crystallizing marginal granite phase. These rose along easterly trending fracture system to collect in embayments at the granite margin and roof. Comparable models have been proposed for the origin of the molybdenite deposits in the Rencontre Lake area (Whalen, 1976, 1980, 1983; Dickson, 1983). Dickson (1983), has also suggested similarities of the various greisenized rocks in the Ackley Granite to that of Cornwall Sn deposits and the East Kemptville SN-

Source: Colman-Sadd, S. P., and Crisby-Whittle, L. V. J. (Compilers) 2005: Partial bedrock geology dataset for the Island of Newfoundland. Newfoundland Department of Natural Resources, Geological Survey, Open File NFLD/2616 version 6.0.
Mineral Occurrence Database - Geological Survey, Department of Natural Resources
Website: <http://www.gov.nl.ca/mines&en/geosurvey>

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Revised January, 2013