



## Occurrence Details

**Occurrence Number:** 105N 040

**Occurrence Name:** Liam

**Occurrence Type:** Hard-rock

**Status:** Showing

**Date printed:** 4/29/2025 2:17:03 AM

## General Information

**Primary Commodities:** antimony, arsenic, gold, lead, silver, zinc

**Aliases:** Neeson

**Deposit Type(s):** Skarn, Vein Polymetallic Ag-Pb-Zn+/-Au

**Location(s):** N - W

**NTS Mapsheet(s):** 105N01

**Location Comments:** Location from sample GPS coordinates

**Hand Samples Available:** No

**Last Reviewed:**

### Capsule

The Liam property is located within northern Selwyn Basin, a predominantly off-shelf meta-sedimentary and meta-volcanic sequence that formed on the western margin of the North American craton from Upper Proterozoic to Lower Paleozoic times.

The regional geologic setting of the area has a basal sequence of Hyland Group rocks, Gull Lake Formation and Road River Group represents clastic fill and deep water chemical precipitate of Upper Proterozoic and Lower Paleozoic age. The Mid-Paleozoic Earn Group conformably and locally unconformably overlies the basal sequence and dominantly consists of black shale and marine conglomerate (Roots, 2003). The younger strata have more limited extent and comprise Mississippian to Triassic sedimentary successions. Numerous Mid-Cretaceous Selwyn Suite igneous bodies cut the sedimentary package throughout the region. A large area at the centre of the map sheet is covered by Quaternary unconsolidated glacial, glaciofluvial and glaciolacustrine deposits.

The Liam property lies between two large-scale northwest trending, high-angle faults, informally named the Lansing and Fairweather faults. The Lansing Fault is located 16 km northeast of the property, while the Fairweather Fault lies 11 km to the southwest. A southwest-dipping thrust fault is situated three kilometres northeast of the property, while a smaller-scale southwest-dipping thrust fault is mapped in the southwest part of the claim block. All of the major faults pre-date Mid-Cretaceous plutonism. Bedding is variable throughout the map sheet, but generally trends northwesterly, and dips moderately to the southwest.

Government mapping in the area illustrates that the western part of Liam property is dominantly underlain by a basement of undifferentiated Hyland Group, except for a sliver of a limey sedimentary rocks. Hyland Group is conformably overlain by Gull Lake Formation to the east, which pinches out to the north. These units are also juxtaposed against one another along a northwest-trending thrust fault that crosses the southern part of the property. Gull Lake Formation is unconformably overlain by undifferentiated Earn Group further to the east, while a relatively small area of Carboniferous to Permian Mount Christie Formation caps Earn Group near the eastern claim boundary. Hyland Group, Gull Lake Formation and Earn Group in the central and western parts of the property are cut by three small Selwyn Suite biotite quartz monzonite intrusive bodies. Selwyn Suite intrusions have little or no aeromagnetic expression due to their reduced nature, but they are often flanked by magnetic highs that mark hornfels zones in the surrounding sediments (Roots, 2003). A regional aeromagnetic map compiled by the YGS shows a strong, positive magnetic anomaly in the centre of the property (Yukon Geological Survey, 2011). This anomaly likely represents the hornfelsed country rocks that lie above and adjacent to the intrusions.

Detailed mapping in the southern part of the property identified four primary Earn Group lithologies – chert arenite, chert pebble conglomerate, slate and quartzite. Chert arenite is the most abundant and widespread of the four sub-units. It is dark grey to purple, fine to medium grained and dark grey to rusty weathering with minor local and sporadic thin calcarenite horizons. The chert arenite layers are commonly found interbedded with dark grey to rusty weathering slate and lesser chert pebble conglomerate. Slate layers are usually less than 10 cm thick. A light grey pyritiferous quartzite horizon (up to 180 m thick) is flanked to the north and south by two chert arenite horizons in the north-central part of the map area. A sliver of rusty to black weathering, thinly bedded and pyritiferous slate is sandwiched between the quartzite and southern chert arenite units within the west part of the map. Two patchy rusty weathering, light green skarn horizons up to 8 m thick are interbedded within the quartzite unit, but they could not be traced along strike due to vegetation cover.

Several diorite to granodiorite dykes cut sedimentary rocks. These dykes range from 10 to 60 m thick and have been traced up to 200 m along strike. They locally host fine grained disseminated pyrite and/or arsenopyrite.

The most southwesterly of the three intrusive plugs shown on government's regional map was located and its position confirmed (Figures 4 and 6). Outcrops on the ridge extending easterly-northeasterly away from the plug dominantly comprise slate with occasional interbeds of quartzite up to 50 m thick. Bedrock exposures southeast of that plug consist of mostly quartzite with some interbedded slate horizons up to 10 m thick.

The two plugs located near the centre of the property caused extensive hornfelsing of Earn Group, which is marked by rusty weathering related to weak pyritization of the metasedimentary rocks. Calc-silicate alteration is present within narrow bands of calcareous sediments adjacent to these plugs.

Sediment units in the area are moderately to strongly folded by regional-scale and parasitic structures. Orientations of bedding are variable, but typically strike southeasterly and dip moderately to the northeast or southwest. Fractures primarily strike northeasterly and dip steeply to the northwest or southeast.

Sampling by New Dimension Resources Ltd in 2012 returned a seven cm wide fragment of strongly scordite stained and arsenopyrite-rich quartz vein float was discovered 150 m east-northeast of the Liam (Neeson) Showing. It was found within talus that consists of light grey quartzite with about 1% quartz fragments. The specimen (1079677) returned 3.2 g/t gold, 30.2% arsenic, 37.6 ppm tin, 1270 ppm antimony, 63.1 ppm bismuth, 0.02% copper, 18.6 g/t silver, 0.18% lead, 0.29% zinc, 3.95 ppm tellurium and 2.66 ppm indium. The source of auriferous quartz vein float was not determined.

A rusty weathering quartz vein hosting weak to semi-massive arsenopyrite outcrops 270 m southeast of the showing yielded 2.13 g/t gold, 8.03% arsenic, 229 ppm tin, 10000 ppm antimony, 92.9 ppm bismuth, 0.02% copper, 29.6 g/t silver, 3.56% lead, 0.11% zinc and 5.48 ppm indium. The vein could not be traced due to thick vegetation cover.

### Work History

Date	Work Type	Comment
5/1/2012	Geochemistry	
5/1/2012	Geology	
5/1/2012	Geochemistry	
5/1/2012	Trenching	
5/1/2012	Other	
5/1/2011	Geochemistry	
5/1/2011	Geochemistry	
5/1/2011	Geochemistry	

5/1/1998	Geochemistry	
5/1/1998	Geochemistry	
5/1/1998	Geology	
5/1/1968	Geochemistry	
5/1/1968	Geochemistry	
5/1/1968	Pre-existing Data	
5/1/1968	Geology	
5/1/1967	Pre-existing Data	
5/1/1967	Geochemistry	
5/1/1967	Geology	
5/1/1967	Geochemistry	

**Related References**

Number	Title	Page(s)	Reference Type	Document Type
<a href="#">GM2003-1</a>	Bedrock geology of Lansing Range map area (NTS 105N), central Yukon		Yukon Geological Survey	Geoscience Map (Geological - Bedrock)