## Occurrence Details

**Occurrence Number:** 116I 070
**Occurrence Name:** Nimo Sun
**Occurrence Type:** Hard-rock
**Status:** Prospect
**Date printed:** 8/6/2025 1:46:24 AM

## General Information

**Secondary Commodities:** molybdenum, nickel, palladium, platinum, vanadium, zinc
**Aliases:** Cronin
**Deposit Type(s):** Sediment hosted Shale-Hosted Ni-Zn-Mo-PGE (Nick)
**Location(s):** 66°50'52.69" N - -136°20'5.928" W
**NTS Mapsheet(s):** 116I16
**Location Comments:** Location marks surface trace of mineralization intersected in drill hole SN07-03.
**Hand Samples Available:** No
**Last Reviewed:** Jun 24, 2013

### Capsule

**Work History**

The Geological Survey of Canada (1981) noted the presence of barite veins 2.0 km to the southwest but the area was never staked.

S. Ryan collected three lines of reconnaissance soil samples across the property in 2005 but did not stake any mineral claims.

Staked within Sun cl 1-40 (YC61044) in Jun/2007 by S. Ryan, who immediately optioned the claims to Southampton Ventures Inc. The company incorporated the claims into their NiMo project which was comprised of seven other properties optioned in Apr/2007 from Strategic Metals Inc.

Southampton collected silt and grid based soil samples across the claim block in Jun/2007 and drilled 3 holes (295.66 m) in August and Sep/2007.

In Apr/2009 Southampton Ventures changed their name to Quetzal Energy Inc. The claims lapsed in Feb/2012.

**Geology**

The claims are located approximately 60 km north of Eagle Plains Lodge and lie approximately 180 m east of the Dempster Highway in Northern Yukon. The area is located on the west side of the Richardson Trough a north to northwest-trending intracratonic depression formed during Early to Middle Paleozoic time. Deep water shale and argillaceous limestone of the Ordovician to Silurian Road River group are deposited within the trough atop Cambrian and Proterozoic age strata. Younger Paleozoic sediments unconformably cap the Road River Group within the trough and elsewhere in the surrounding broader basin. The entire stratigraphic section is folded by a large-scale anticline that plunges to the north. This anticline is called the Richardson Anticlinorium and its axis approximately coincides with the centre of the trough. To the east, the Richardson Trough is bound by the Trevor fault and to the West the Deception fault.

The occurrence is underlain by shallow west-southwest dipping shales assigned to the Middle to Upper Devonian Earn Group and Ordovician to Silurian Road River Group. The Earn Group is comprised of sandy shale belonging to the Imperial Formation which outcrops west of the claim block and conformably overlies siliceous shale of the Canol Formation which forms a narrow north-south band across the claim block. The Earn group sits unconformably above calcareous shale belonging to the Road River Group, which is exposed to the east.

On other properties belonging to the NiMo Project, the contact between the Earn Group and Road River Group is often marked by a unique lithological sequence consisting of a phosphatic chert member, sulphide horizon (containing nickel-molybdenum mineralization commonly known as the NiMo horizon), nodular shale and limestone member. Due to limited outcrop exposure on the claim block these units were not observed at surface but most were observed in drill core.

A similar massive sulphide horizon is reported at the same stratigraphic location at the Nick occurrence (Minfile Occurrence 106D 092) located 122 km to the southwest. The Nick massive sulphide horizon covers an area greater than 80 square kilometres and comprises pyrite, vaesite, melnikovite-type pyrite, sphalerite and wurtzite hosted in a gangue of phosphatic-carbonaceous chert, silica and bitumen. Rock assays from the Nick horizon typically average 3% nickel, 0.20% molybdenum, 0.82% zinc, 0.82% vanadium, 310 ppm platinum and 150 ppb palladium over narrow widths (i.e. < 10 cm). S. Ryan staked the Sun claims to explore for this type of mineralization.

Ryan's 2005 reconnaissance soil sampling program consisted of three soil lines which covered the northern, central and southern sections of the claim block. The strongest results came from the northern line which paralleled a creek which flowed along the presumed contact between the Canol and Road River Formations. Assays returned results up to 590 ppm nickel, 620 ppm molybdenum and 6831 ppm zinc.

The 2007 detailed soil sampling program filled in the gaps between the 2005 soil lines. The best results were returned from samples collected on or near the presumed trace of the nickel/molybdenum horizon. The highest assay values recorded were 1190 ppm nickel, 253 ppm molybdenum and 8 060 ppm zinc.

Two of the three drill holes intersected the nickel/molybdenum horizon. The third hole SN07-01 only intersected Road River Group strata thus placing it too deep to intersect the targeted horizon. Hole SN07-02 intersected a heavily weathered portion of the horizon which did not return any anomalous results. Hole SN07-03 intersected visible nickel/molybdenum mineralization measuring less than 1 cm in thickness. The mineralization was described as pinched in places. The best intersection returned 3.01% nickel, 1 220 ppm molybdenum and 6 300 ppm zinc over 1 cm. The intersection also returned anomalous values for gold, platinum, palladium and rhenium.

### Work History

| Date | Work Type | Comment |
|---|---|---|

| | | |
|---|---|---|
| 12/13/2007 | Drilling | 3 holes, 295.66 m |
| 12/13/2007 | Geochemistry | Grid soil sampling carried out over entire claim block. |
| 12/13/2007 | Geochemistry | All streams silt sampled. |
| 12/13/2005 | Geochemistry | 3 lines of reconnaissance soil samples |
| 12/13/1982 | Geology | GSC noted the presence of barite veins 2.3 km to the southwest |

## Assessment Reports that overlap occurrence

| Report Number | Year | Title | Worktypes | Holes Drilled | Meters Drilled |
|---|---|---|---|---|---|
| 094871 | 2007 | Assessment Report Describing Prospecting, Mapping, Geochemical Sampling and Diamond Drilling at the Sun Property | Diamond - Drilling, Soil - Geochemistry, Detailed Bedrock Mapping - Geology, Prospecting - Other | 3 | 295.66 |

## Related References

| Number | Title | Page(s) | Reference Type | Document Type |
|---|---|---|---|---|
| YEG2007_OV | Yukon Exploration and Geology Overview 2007 | 30, 39, 42. | Yukon Geological Survey | Annual Report |
| 2003-9(D) | Yukon Digital Geology (version 2) | | Yukon Geological Survey | Open File (Geological - Bedrock) |
| 2006-3 | Mineral Assessment of the Eagle Plain Study Area, Yukon. | | Yukon Geological Survey | Open File (Geological - Bedrock) |

## Drill core at YGS core library

| Number | Property | Year Drilled | Core Size | Photos | Data |
|---|---|---|---|---|---|
| SN07-01 | Sun | 2007 | BTW | 2 | 2 |
| SN07-02 | Sun | 2007 | BTW | 2 | 2 |
| SN07-03 | Sun | 2007 | BTW | 4 | 2 |