Occurrence Details

Occurrence Number: 106C 129
Occurrence Name: Sunrise
Occurrence Type: Hard-rock
Status: Deposit
Date printed: 8/5/2025 6:03:35 PM

General Information

Secondary Commodities: gold
Aliases: Osiris Cluster, Nadaleen Trend
Deposit Type(s): Carbonate-Hosted Disseminated Au-Ag (Carlin-type)
Location(s): 64°6'37.36" N - -132°20'25.04" W
NTS Mapsheet(s): 106C01
Location Comments: Coordinates supplied by ATAC 2019
Hand Samples Available: No
Last Reviewed:

Capsule

Work History

The Sunrise occurrence was first discovered during road building in 2012. Prior to uncovering the occurrence, soil rock and silt had been preformed nearby with modest results. Soil sampling was completed in 2013 along with prospecting and 12 diamond drill holes.

In 2017 and 2018, diamond drilling was completed on the occurrence area.

Geology

The occurrence area is located in east-central Yukon within an area geologists have referred to as the Rackla belt. The Rackla belt straddles the northern edge of the Selwyn basin, where Neoproterozoic to Paleozoic rocks of the basin are juxtaposed against Paleozoic and older slope and basin rocks of the Ogilvie platform along the Dawson thrust zone. Selwyn basin rocks in the occurrence area are dominated by slope and facies carbonate, clastic rocks and siltstone with significant deep water black shale and chert, whereas the Ogilvie platform is dominated by shallow water platformal carbonate. The occurrence area is bound structurally to the south by the Dawson thrust and to the north by the Kathleen Lake fault. The Dawson thrust is believed to be a reactivated Neoproterozoic normal fault that lies at the northernmost boundary of the Selwyn basin and is generally marked by an abrupt facies change to the Ogilvie platform.

The Nadaleen trend consists of a southward-younging sequence of sedimentary rocks that is in fault contact with a large mudstone package north of the Nadaleen fault. The thick mudstone package is an argillaceous mudstone to siltstone with isolated debris flow lenses which Colpron assigns to the Upper Nadaleen assemblage (unit PNu). Sedimentary rock lying south of the Nadaleen fault host the Osiris zone/occurrence (106C 045) and the neighboring Conrad occurrence. The Osiris occurrence (106C 045) is hosted within Tuckers informal Osiris strata which overlie the neighboring Conrad strata. The Osiris Stratum consists of Osiris maroon siltstone (unit PNu – Upper Nadaleen Assemblage, Colpron) which is overlaid by Osiris limestone, dolostone and debris flow (unit PSc – Lower Stenbraten Assemblage -Colpron). Osiris gritty limestone and siltstone (unit PSs - Upper Stenbraten Assemblage, Colpron) tops the sequence. Small, east-west trending, steeply dipping gabbro dykes have been found in the area. The dykes which are mainly found in drill core intersections trend sub-parallel to the Nadaleen fault and range in thickness from 25 cm to 25 m.

Carlin-type deposits are characterized as sediment-hosted micron-scale gold hosted within disseminated arsenian pyrite (Arehart, 1996). The deposits are typically found as replacement bodies in silty-carbonates within slope and basinal facies and have both structural and stratigraphic controls with a strong relationship to deep seated crustal-scale structures (Cline et al., 2005; Muntean et al., 2011). Carlin-type mineralizing fluids are typically weakly acidic, resulting in the dissolution of carbonate which is followed in the mineralization process by precipitation of quartz and gold-bearing arsenian pyrite and trace metal enrichments of As-Sb-Hg-Tl (Muntean et al., 2011). Permeability is the key factor controlling the distribution of alteration and mineralization and features that control it include primary fluid conduits, such as fault and shear zones, as well as stylolites, veinlets and fold hinges (Tucker et. al., 2013).

Mineralization at the Sunrise zone is confirmed to be Carlin-type and occurs as two apparently sub-parallel tabular bodies that dip steeply to the south. Gold mineralization at the top of discovery hole (OS-12-173) intersected intensely decalcified limestone adjacent to a steeply dipping fault that separate the Osiris carbonate sequence from overlying shale. The hole was collared directly within mineralization and returned 14.86 m of 10.54 g/t gold.

Work History

Date	Work Type	Comment
12/13/2018	Drilling	
12/13/2017	Drilling	6 Drill holes (1886.40 m)
12/13/2013	Geochemistry	
12/13/2013	Drilling	12 holes
12/13/2013	Geochemistry	
12/13/2012	Drilling	2 holes
12/13/2012	Geochemistry	
12/13/2009	Geochemistry	
12/13/2009	Geochemistry	

12/13/2009	Geochemistry	

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
096810	2014	Assessment Report Describing Geochemical Sampling, Excavator Trenching, Geological Mapping, Auger and Diamond Drilling Along the Nadaleen Trend of the Rackla Gold Property	Auger - Drilling, Diamond - Drilling, Rock - Geochemistry, Backhoe - Trenching	59	4733
096607	2012	Assessment Report Describing Metallurgical Testing, Wildlife Monitoring, Heritage Evaluation, and Water Quality and Climate Monitoring Surveys	Water - Geochemistry, Metallurgical Tests - Lab Work/Physical Studies, Environmental Assessment/Impact - Studies, Heritage/Archeological - Studies		
096597	2012	Assessment Report Describing Geochemical Sampling, Auger Sampling, Geological Mapping, Diamond Drilling, and Geophysical Surveys	Air Strip - Development, Surface, Auger - Drilling, Diamond - Drilling, Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, EM - Ground Geophysics, Gravity Survey - Ground Geophysics, Magnetics - Ground Geophysics, Prospecting - Other, Hand - Trenching	172	37340.37
095938	2011	Assessment Report Describing Geochemical Sampling, Geological Mapping and Remote Sensing Surveys at the Rackla Gold Property	Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, LIDAR - Remote Sensing, Heritage/Archeological - Studies		
095902	2011	Assessment Report Describing Geological Mapping, Diamond Drilling and Geophysical Surveys at the Nadaleen Trend Project Rackla Gold Property	Gamma-Ray Spectrometry - Airborne Geophysics, Magnetic - Airborne Geophysics, Diamond - Drilling, Detailed Bedrock Mapping - Geology	89	26675.84
095712	2010	Assessment Report Describing Geochemical Sampling, Geological Mapping, Diamond Drilling and Geophysical Surveys at the Nadaleen Trend Property	ZTEM - Airborne Geophysics, Diamond - Drilling, Drill Core - Geochemistry, Rock - Geochemistry, Soil - Geochemistry, Detailed Bedrock Mapping - Geology, Regional Bedrock Mapping - Geology, Prospecting - Other	9	1898.28
095680	2009	Assessment Report Describing Geochemical Sampling	Soil - Geochemistry, Prospecting - Other		