Occurrence Details

Occurrence Number: 106C 045
Occurrence Name: Osiris
Occurrence Type: Hard-rock
Status: Prospect
Date printed: 8/5/2025 10:07:31 AM

General Information

Secondary Commodities: arsenic, gold
Aliases: Osiris Cluster
Deposit Type(s): Carbonate-Hosted Disseminated Au-Ag (Carlin-type)
Location(s): 64°6'50" N - -132°20'44.53" W
NTS Mapsheet(s): 106C01
Location Comments: Coordinates supplied by ATAC 2019
Hand Samples Available: No
Last Reviewed:

Capsule

WORK HISTORY

Staked as Sten 1-20 (YC99501) in Jul/2009, by ATAC Resources which carried out a short prospecting, silt and soil sampling program on the claims. Following receipt of preliminary results the company added Sten cl 21-38 (YC995232) in Sep/2009 and Sten cl 39-54 (YD08485), cl 55 -142 (YD10405) and Dale cl (1-12) YD0853) in Nov/2009.

During the 2010 exploration season The company carried out extensive contour, ridge and spur and detailed soil sampling programs, trenched and sampled numerous surface showings and collared 9 diamond drill hole (1 898.28 m) on various exploration targets. At the Osiris showing the company conducted prospecting and follow-up rock, soil and silt sampling and collared 6 diamond drill holes (1 351.47 m).

In 2011 ATAC Resources focused their exploration work on exploring the Nadaleen Trend portion of their Rackla Gold Belt. The company carried out remote sensing studies, extensive silt sampling, contour, ridge and spur and detailed soil sampling surveys and dug and sampled numerous trenches over previously detected geochemical anomalies. At the end of May, the company commenced a large diamond drillhole program (89 holes, 26 675.84 m) and shortly thereafter carried out detail geological mapping in the Osiris area of the property. Thirty-seven drillholes (9 011.28 m) targeted the Osiris zone.

During 2012 ATAC Resources focused on delineating the size and scope of the various mineralized zones identified in the 2011 exploration program. The company completed over 37 100 m of diamond drilling in 116 drill holes. Work at the Osiris zone consisted of 16 diamond drill holes (total footage not broken out). ATAC Resources continued geochemical testing and geological mapping areas located outward from the Conrad – Osiris areas.

Drilling was completed in 2017 and 2018 in the Osiris zone.

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 and the neighboring Conrad occurrence. The Osiris occurrence 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.

The Osiris zone/occurrence is one of 4 areas of Carlin-type mineralization discovered in 2010-2011 by ATAC Resources. Although gold mineralization was discovered during the 2010 drilling season the formal declaration of Carlin-type mineralization was not made until the spring of 2011 following extensive mineralogical work conducted over the winter of 2010-2011. Mineralization at the Osiris zone is hosted by carbonate rocks that are folded into a southerly plunging anticline and occurs in the form of narrow veins, veinlets, stockworks and disseminations of realgar and orpiment. (both are sulphide minerals) accompanied by calcite flooding. Mineralization is hosted by limestone debris flows and turbidite deposits characteristic of an offshore environment. Drilling has outlined stratabound gold mineralization over a 900 m strike length along the east and west limbs of the anticline and in the hinge of the anticline. Higher grade drill intersections are located in the hinge area where diamond drillhole OS-10-101 intersected 65.2 m grading 4.65 g/t gold.

Diamond drilling, combined with detailed geological mapping of trench and bedrock exposures has identified two distinct structural settings. The first is a strong north trending, steeply dipping structural zone which ATAC Resources referred to as the Osiris Shear. The Osiris Shear parallels near vertical bedding in the west limb of the Osiris anticline. Gold-bearing intersections within diamond drillholes OS-11-23, OS-11-031 and OS-10-001 (the 2010 discovery hole) occur where this shear system coincides with reactive limestone beds. The shear measures approximately 50 to 100 m wide and has been traced along strike for approximately 1 km horizontally and 500 m vertically. The shear is interpreted to lie near the contact between reactive silty limestone beds and an overlying dolostone unit.

The second structural setting is a series of vertical shears that crosscut and offset moderately south dipping beds in the east limb of the Osiris anticline. Gold mineralization here is described as near surface stratabound and is best developed where silty limestone and limestone debris flow units are partially replaced with silica sinter and realgar. Drilling has traced the surface mineralization over a 50 by 150 m area. The mineralized zone is open to expansion along strike to the east and down dip to the south. Diamond drillhole OS-11-071 intersected 22.5 m grading 2.35 g/t gold from surface in this zone.

Reconnaissance soil and silt sampling carried out in 2009 by ATAC Resources outlined a gold silt and soil anomaly centered over Clifton Creek, located approximately 300 m to the

northwest. The highest silt anomaly, collected near the headwaters of the peak returned 1 775 ppb gold and 3 850 ppm arsenic. A silt sample collected near the downstream mouth of the creek returned 155 000 ppm arsenic. Follow-up grid soil sampling carried out in 2010 outlined a 150 m wide by 500 soil anomaly that returned peak values of 175 000 ppb gold and 23 700 ppm arsenic. Rock samples collected along the length of the anomaly consisted of pale grey, vuggy, sintery quartz alunite with rare fragments of realgar +/- orpiment. One rock sample collected near the top of a ridge returned 39.2 g/t gold and 21 700 ppm arsenic. Additional soil sampling carried out later in the exploration season increased the size of the Osiris soil anomaly to 250 m wide by 1 km in length.

The 2010 diamond drill holes tested the core of the Osiris soil anomaly. Four of six broadly spaced holes drilled along a 300 m wide fence centered across the southern part of the soil anomaly yielded significant gold bearing intercepts. The best results were obtained in diamond drillhole OS-10-01 (the discovery hole) which intersected 9.26 g/t gold over 31.3 m within a larger interval that averaged 4.65 g/t gold over 65.2 m. Other notable intersections include 35.08 m grading 2.31 g/t gold including 12.5 m grading 5.29 g/t gold in diamond drillhole OS-10-02 and 22.30 m grading 2.21 g/t gold, including 10.26 m grading 4.14 g/t gold in diamond drillhole OS-1-03.

The 2011 and 2012 diamond drill programs conducted on the Osiris zone was focused on expanding gold mineralization in the zone. The first phase of drilling was undertaken with short step outs from 2010 intercepts to establish a better understanding of the structural and stratigraphic controls on gold mineralization. Later in the program, drilling concentrated on testing for gold mineralization in the Osiris Shear and near surface stratabound mineralization. Once the various controls on mineralization were confirmed ATAC Resources moved outwards from known areas of mineralization.

In the fall of 2012 ATAC Resources prospected a strong gold in soil anomaly detected during follow-up grid soil sampling conducted in 2010. The soil anomaly is located approximately 300 m east of the eastern limb of the Osiris anticline. Bulldozer trenching conducted up slope of the anomaly exposed a fault containing intensely decalcified limestone. Systematic channel sampling along the length of the trench, cut across the newly named Sunrise zone, returned a weighted average grade of 24.60 g/t gold over 10 m. The company tested the newly discovered zone with three diamond drill holes, two of which intersected mineralization.

Work History

Date	Work Type	Comment
12/13/2018	Studies	NI 43-101
12/13/2018	Drilling	3 holes
12/13/2017	Drilling	8 holes (2540.19 m)
12/13/2012	Drilling	Sixteen holes (footage not broken out) collared on Osiris zone
12/13/2012	Geochemistry	
12/13/2011	Drilling	Thirty-seven holes (9,011.28 m).
12/13/2011	Geology	In and around Osiris zone.
12/13/2011	Remote Sensing	Property wide.
12/13/2010	Airborne Geophysics	Flown over entire Nadaleen Trend.
12/13/2010	Geochemistry	Follow-up sampling.
12/13/2010	Drilling	Six holes (1,351.47 m) part of larger 9 hole (1,898.28 m) program.
12/13/2010	Geochemistry	Follow-up grid soil sampling.
12/13/2010	Geochemistry	Follow-up sampling.
12/13/2009	Geochemistry	Reconnaissance in nature, also include a couple of rock and silt samples.
12/13/2009	Other	Conducted while sampling area.

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		

Related References

Number	Title	Page(s)	Reference Type	Document Type
YEG2010_OV	Yukon Exploration and Geology Overview 2010	23-24, 60, 65.	Yukon Geological Survey	Annual Report
2013-13	Geological map of the Rackla belt, east-central Yukon (NTS 106C/1-4, 106D/1)		Yukon Geological Survey	Open File (Geological - Bedrock)
YEG2013_OV	Yukon Exploration and Geology Overview 2013	26-27, 42, 47.	Yukon Geological Survey	Annual Report
YEG2013_11	Bedrock Geology of NTS 106B/04, Eastern Rackla Belt	147-167.	Yukon Geological Survey	Annual Report Paper
YEG2014_OV	Yukon Exploration and Geology Overview 2014	23-24, 40, 42.	Yukon Geological Survey	Annual Report
YEG2012_11	Geology, alteration, and mineralization of the Carlin-type Conrad zone, Yukon	163-178.	Yukon Geological Survey	Annual Report Paper
YEG2012_OV	Yukon Exploration and Geology Overview 2012	33-34, 62, 65.	Yukon Geological Survey	Annual Report
YEG2011_OV	Yukon Exploration and Geology Overview 2011	24-25, 67, 73.	Yukon Geological Survey	Annual Report
2014-1	Geological map of NTS 106B/04, east-central Yukon		Yukon Geological Survey	Open File (Geological - Bedrock)

Drill core at YGS core library

Number	Property	Year Drilled	Core Size	Photos	Data
OS-11-88	Osiris	2011	HQ-NQ	20	8