Occurrence Details

Occurrence Number: 105O 032
Occurrence Name: Oro Main
Occurrence Type: Hard-rock
Status: Prospect
Date printed: 8/6/2025 2:17:32 AM

General Information

Secondary Commodities: antimony, arsenic, gold, silver, thallium, zinc
Aliases: Brick, Neve, Canol, Saddle, Jo
Deposit Type(s): Carbonate-Hosted Disseminated Au-Ag (Carlin-type), Vein Au-Quartz
Location(s): 63°17'43.11" N - -130°57'49.76" W
NTS Mapsheet(s): 105O07
Location Comments: Location marks mid-point between Saddle and JO zones. Canol zone at 401060 W, 7019790N.
Hand Samples Available: Yes
Last Reviewed: Feb 17, 2014

Capsule

Work History

In Sep/79 AGIP Canada Ltd staked Neve cl 1-16 (YA41352) 2.75 km to the east and carried out a 5 day limited geological mapping, stream sediment sampling and prospecting program in late June and early Jul/80. It appears the claims were allowed to lapse sometime the following year.

Staked as Brick cl 1-12 (YA62945) in Jul/81 by AGIP Canada Ltd which carried out prospecting, geological mapping, rock, silt sampling and grid soil sampling programs between July and Aug/81. In Nov/81 the company surrounded the original 16 Brick claims with Brick cl 13-40 (YA76421) and staked Neve cl 1-35 (YA76449) on the eastern boundary of the Brick claims.

In 1982 AGIP Canada carried out reconnaissance and grid based soil sampling, additional geological mapping and a ground magnetometer survey. Later in the year the company followed up the soil anomalies with a packsack overburden drilling program (117 holes). Ninety-three holes tested the newly defined Saddle zone and twenty-four holes tested the Canol zone. In addition a single trench was hand dug over the Saddle zone.

In 1983 AGIP Canada carried out a ground EM geophysical survey, further geological mapping and soil sampling and dug three hand trenches over the JO zone. The property was inactive in 1984.

In 1985 AGIP Canada prospected and continued geologically mapping the property. Later in the exploration season the company collared 9 diamond drill holes (1 257.3 m) on the newly merged JO - Saddle zone.

In Oct/87 AGIP Canada Ltd changed its name to AGIP Resources Ltd. In 1988 the company collared 4 diamond drill holes (447.5 m) on the Canol zone and 6 diamond drill holes (782.3 m) on the JO - Saddle zone.

In Oct/94 AGIP Resources transferred the Brick and Neve claims to Cameco Resources Ltd. In Jan/97 Cameco Resources changed its name to Cameco Corporation. The Brick and Neve claims lapsed in Jul/2000.

Restaked as Oro cl 1-48 (YD31351) in Oct 2010 by Cathro Resource Corporation. The Corporation added Oro cl 49-318 (YD104903) and cl 319-330 (YD105441) in Oct/2010.

Colorado Resources Ltd acquired a 100% option on the Oro claims in Nov/2010 and the adjoining Sol claims (Sol cl 1-206 – YD105453 - located on the southeast boundary of the Oro claims) in Jan/2011, from Cathro Resource Corporation in return for cash shares and certain work commitments.In Apr/2011 Colorado Resources staked OS cl 1-532 (YE42001) to the west and southwest, ON cl 1-400 (YE42601) and cl 401-407 (YE43261) to the north and east, SNG cl 1-5 (YE39295) to the southeast and HS cl 1-8 (YE43001), cl 11-24 (YE43011), cl 27-242 (YE43027), cl 243-250 (YE39287) and cl 251-256 (YE39281) to the west and northwest.

During the 2011 exploration season, Colorado Resources carried out a helicopter-borne magnetic and electromagnetic geophysical survey, a large regional silt and soil sampling survey, a detailed soil survey over previously discovered mineralization, prospecting and extensive rock sampling, regional and detailed geological mapping and mechanically dug 15 trenches (1 548 m) over mineralized structures located in and around the occurrence area. The company also signed a Traditional Knowledge Protocol with the Ross River Dena Council whose traditional territory encompasses the project area.

In 2012 Colorado Resources carried out geological mapping, additional rock sampling and infill soil sampling, prospecting and mechanically dug 4 trenches.

In May/2013 Colorado Resources optioned the Oro property to Gold Fields Selwyn Exploration Corporation a wholly owned subsidiary of Gold Fields Ltd. Under the agreement Gold Fields could acquire up to a 71% interest in the property subject to certain payments, work commitments and share issuances.

During the 2013 exploration program Gold Fields collared 13 diamond drill holes (1 614 m) and undertook a proprietary analysis of more than 20 000 soil and rock samples previously collected by Colorado Resources to identify areas to be highly prospective for "Carlin style mineralization".

In Nov/2013 Gold Fields terminated its option on the Oro claims

Capsule Geology

The occurrence area is located approximately 40 km west of the Macmillan Pass Airstrip near the central-east boundary of the Yukon. Access to the occurrence area is via helicopter from the airstrip or the camp/staging area located along the North Canol Highway approximately 10 km to the south of the airstrip.

The area was regionally mapped throughout the 1980's by G. Abbott who was employed by Exploration and Geological Services Division of the Department of Indian and Northern Affairs, Yukon. In April 2003 Abbott and the division was devolved to the Yukon Government and is now part of the Yukon Geological Survey. In 2013 Abbott released an updated version of the geology of the Macmillan Pass area based on his 30 year career in the Yukon. Beginning in 2011 Colorado Resources began remapping their ORO property in detail. In the first year the company mapped in detail the area surrounding the J.O. – Saddle – Canol zones where mineralization had been previously discovered by AGIP. In the second year the company expanded eastward and regionally mapped the central portion of their large property. Although Colorado Resources mapping differs somewhat from Abbott's in terms of the composition

of individual geological units and their stratigraphic location, Colorado's mapping generally mirrors Abbott's work.

The occurrence is located west of the Macmillan Pass area near the eastern margin of the Selwyn Basin, a Paleozoic continental margin basin. It is characterized by deposition of offshelf deep water shales in a basin bounded by platform carbonates to the east and north. The occurrence area is underlain by a homoclinal sequence of Paleozoic clastic sedimentary rocks with minor limestone and exhalative units ranging in age from Ordovician to Mississippian. This homoclinal sequence is north-facing, presented in the axis and overturned limb of a north-vergent syncline. The syncline is overthrust from the south by a panel containing Lower Paleozoic Road River Group and is open to the north to the limit of outcrop. Its axial plane dips moderately to the south and its axial plunge appears near-horizontal. Rocks exposed in the occurrence area compose a near-complete paraconformable sequence ranging in age from Ordovician to Mississippian.

The original Neve claims were staked to explore for SEDEX lead, zinc and silver mineralization similar to that discovered on Hudson Bay Exploration and Development Company Ltd.'s Tom property (Minfile Occurrence #105O 001) located approximately 40 km to the southeast. Silt sampling carried out in 1980 by AGIP Canada returned a few anomalous values of zinc and barium. AGIP returned in 1981 and located two small outcrops containing realgar-orpiment +/- stibnite veining associated with intrusive dykes cutting black shales on the adjoining Brick claims. Limited soil sampling outlined two anomalous areas of gold, silver, arsenic and antimony. Trenching conducted in 1982 uncovered elevated gold, silver, arsenic, antimony and mercury values in veins cutting highly altered quartz-feldspar porphyry dykes. This area was named the Saddle zone.

Further soil sampling, overburden drilling and trenching carried out in 1982 and 1983 uncovered the J.O. zone to the west and the Canol zone to the south. The J.O. zone is the western extension of the Saddle zone and the Canol is a separate zone underlain by silty limestone and shales.

According to AGIP Canada mineralization and alteration at the Saddle – J.O. zone appears to be related to faulting, fracturing and quartz-carbonate veinlets and stockworks temporally and spatially related to Cretaceous dyke and sills. Disseminated pyrite, realgar, orpiment, stibnite, arsenopyrite and proustite-pyrargyrite are found in narrow quartz veinlets hosted by altered quartz monzonite sills and dykes and adjacent to hornfelsed and bleached shales and argillites assigned to the Itsi and Portrait Lake formations of the Upper Devonian Earn Group. The zone is bounded and cut by faults which are anomalous in gold. In 1988, AGIP had identified a zone measuring approximately 850 m long by 300 - 450 m wide.

The 1985 diamond drill program tested the Saddle – J.O. zones and was plagued by core recovery problems. Three holes (5, 5A, 6 and 7) were abandoned. The best assay was 1.237 g/t gold and 6.13 g/t silver over 12.0 m in hole 85-4 which tested the main fault zone. Mineralization was described as trace to 10% quartz and calcite rimmed, fine to coarse grained pyrite cubes lying within black carbonaceous shales and siliceous graphitic-carbonaceous shales. Core recovery was improved in 1988 through the use of drilling mud and increased core dimensions. Notable assays include 1.108 g/t gold and 12.9 g/t silver over 1.20 m from a broken and faulted section of quartz monzonite dyke located between the Main and Western Extension faults (hole 88-9) and 0.574 g/t gold over 30.10 m from the junction of the Main and North South faults (hole 88-10). Bedrock was described as broken up and faulted, clay rich, grey to black carbonaceous shale.

AGIP Canada reported that the Canol zone (located approximately 450 m to the southwest of the Saddle – J.O zones) measures approximately 1 km long by 50 – 60 m wide and is underlain by silty limestone (Upper Silurian to Middle Devonian Sapper Formation?) and silty, bioturbated shales (Middle to Upper Silurian Steel Formation?). It was drill tested for the first time in 1988. Although no significant gold values were intersected in the silty limestone unit, anomalous gold values (up to 0.488 g/t over 2.70 m) were intersected in faulted and sheared shales.

Although AGIP Canada began suggesting "Carlin-Type" gold model of mineralization as early as 1985, later work by Colorado Resources suggests the mineralization discovered by AGIP Canada at the Saddle - J.O. zones represented mineralization contained within either black sulphidic shales or within extensional veins in elongated granitic dykes which track several of the second order structural zones. Any Carlin type mineralization would likely occur where these structural zones intersect Sapper Formation carbonaceous silty limestone. Subsequent geological mapping carried out by Colorado Resources in 2012 and 2013 indicates that the Sapper Formation may in fact intersect the structures at a relatively shallow depth crossing a broad overburden covered valley to the west.

In 2011, Colorado Resources carried out detailed geological mapping around the Saddle-JO-Canol zones which the company renamed the Oro Main zone. The program clarified the stratigraphic position and bedding orientations of the various geological units hosting the mineralization in the zone. The company spent considerable amount of time mapping the position of the Sapper Formation, a silty limestone unit considered favourable for hosting Carlin-type mineralization at depth. Although not seen at surface geological mapping infers its buried intersection with the Secondary fault, leakage from which may be responsible for the broad gold soil geochemical anomaly observed in the Main zone.

The 2011 soil sampling program covered the entire Oro property. Areas surrounding the Main zones and other areas where mineralization was previously found were sampled in detail and the remaining areas of the property regionally. The sampling over the Main zone returned elevated gold-arsenic, +/- thallium, +/- silver, +/- antimony values and extended the geochemical signature up to 4 000 m long by up to 800 m wide increasing the geochemical foot print of the zone by over 3 km in length from that previously identified by AGIP Canada. Trenching carried out over the Main zone identified "Carlin Type" lithologies containing occurrences of orpiment and realgar within broad zones of strongly anomalous gold mineralization measuring up to 36 m long and returning up to 0.446 g/t gold. Airborne geophysics identified a 4 km long structure that hosts the Main zone.

In 2012, Colorado Resources extended geological mapping east and westwards from the Main zone concentrating their efforts over a structural corridor outlined by airborne geophysics. Approximately 1 200 geological field stations representing 65 square kilometers were recorded and integrated into a regional geological map. Follow-up soil and silt sampling was carried out over anomalous areas detected in 2011.

Prior to the commencement of the 2013 diamond drill program Gold Fields Selwyn Exploration Corporation undertook a proprietary analysis of more than 20 000 soil and rock samples collected by Colorado Resources to identify areas of highly prospective for "Carlin Type" mineralization resulting in the identification of 17 areas over a 5 km by 24 km area. Gold Fields tested the Saddle-Jo-Canol zones with 7 diamond drill holes (length not reported). The remaining 6 drill holes tested Area 51, Golden Ridge-Golden Hinge zones and Limey Ridge (these three areas are covered by other Minfile Occurrences).

No actual assays have been publicly reported by either Colorado Resources or Gold Fields. A press release dated November 22, 2013 and released by Colorado Resources states, "Gold Fields noted that although high grade results were not recognized there were sufficient widespread anomalous gold areas to warrant further work. While the results of the 2013 program were promising, Gold Fields' current mandate is to focus more on near-term development opportunities; it has subsequently provided notice that it will not proceed under terms of its Option Agreement with the company".

Work History

Date	Work Type	Comment
12/31/1988	Drilling	Drilling carried out on Saddle-Jo zone = 6 holes (782.3 m) and Canol zone, 4 holes (447.5 m).
12/31/1985	Drilling	Drilling centred on Saddle - JO zone, 9 holes, 1,257 m.
12/31/1983	Geology	

12/31/1983	Geochemistry	
12/31/1983	Ground Geophysics	EM and Magnetometer surveys.
12/31/1983	Trenching	Dug over JO zone.
12/31/1982	Geology	Detailed around mineralized showings, reconnaissance over rest of property.
12/31/1982	Geochemistry	Reconnaissance and grid based.
12/31/1982	Geochemistry	
12/31/1982	Ground Geophysics	Magnetometer survey.
12/31/1981	Geochemistry	Grid based. Carried out on Brick claims.
12/31/1981	Geochemistry	Carried out on Brick claims.
12/31/1981	Geology	Carried out on Brick claims.
12/31/1981	Other	Carried out on Brick claims.
12/31/1980	Geochemistry	Limited 5 day program carried out on Neve claims.
12/31/1980	Geology	Limited 5 day program carried out on Neve claims.
12/31/1980	Other	Limited 5 day program carried out on Neve claims.
12/13/2013	Drilling	Thirteen holes (1,614 m) collared on 5 separate targets.
12/13/2013	Lab Work/Physical Studies	Gold Fields undertook a proprietary analysis of more than 20,000 soil and rock samples previously collected by Colorado Resources.
12/13/2012	Geology	Moved away from Main zone.
12/13/2012	Geochemistry	Infill sampling over anomalous areas, additional rock sampling.
12/13/2012	Trenching	Four trenches.
12/13/2011	Geochemistry	Property wide sampling.
12/13/2011	Geology	Detailed over Main zone, reconnaisaance scale over rest of property.
12/13/2011	Geochemistry	Property wide survey, detailed over mineralized areas, reconnaissance scale over rest of property.
12/13/2011	Geochemistry	Property wide.
12/13/2011	Trenching	dug over mineralized areas, 15 trenches, 1,548 m .
12/13/2011	Airborne Geophysics	Helicopter-borne magnetic and electromagnetic survey.
12/13/1985	Geology	Additional geological mapping carried out.
12/13/1982	Drilling	Packsack overburden drilling, 93 holes tested Saddle zone, 24 holes tested Canol zone. Holes averaged 1.5 m deep.

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
096656	2013	2013 Geological, Geochemical and Diamond Drilling Report on the Oro Property	Diamond - Drilling, Drill Core - Geochemistry, Rock - Geochemistry, Prospecting - Other	13	2614.36
096293	2012	2012 Geological, Geochemical and Trenching Report on the Oro Property	Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Prospecting - Other, Backhoe - Trenching		
095744	2011	Geological, Geochemical, Geophysical and Trenching Report on the Oro Property	Electromagnetic - Airborne Geophysics, Magnetic - Airborne Geophysics, Interpretation - Airphotography, Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Detailed Bedrock Mapping - Geology, Prospecting - Other, Backhoe - Trenching		
093827	1997	1997 Geological Assessment Report on Emerald Lake Claims	Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry		
092742	1988	Assessment Report on the 1988 Exploration Program on the Brick Property	Diamond - Drilling	10	1229.80
091770	1985	Assessment Report Brick 1-40/Neve 1-35 Claims	Diamond - Drilling, Drill Core - Geochemistry, Rock - Geochemistry, Soil - Geochemistry, Water - Geochemistry, Bedrock Mapping - Geology, Prospecting - Other	9	1257.30
091544	1983	Assessment Report Trenching Brick 4 and Brick 9 Claims	Handblast - Trenching		
091455	1983	Assessment Report Overburden Drilling Brick Claims Brick 2 and 4	Rotary - Drilling, Soil - Geochemistry		
091389	1982	Assessment Report Trenching Brick Claims Brick 4	Rock - Geochemistry, Hand - Trenching		
091056	1981	Assessment Report Geological Mapping and Geochemical Sampling Brick Claims	Rock - Geochemistry, Soil - Geochemistry, Detailed Bedrock Mapping - Geology		
019809	1968	Hess Area Project Proposed Property Follow-Up 1968 Field Season	Research/Summarize - Pre-existing Data		
019033	1968	Atlas Explorations Limited Project Report 1968 Hess River Area	Silt - Geochemistry, Soil - Geochemistry, Regional Bedrock Mapping - Geology		

018947	1967	Hess River Project Report	Rock - Geochemistry, Soil - Geochemistry, Detailed Bedrock Mapping - Geology		
019032	1967	Hess River Project Report	Data Compilation - Pre-existing Data		

Related References

Number	Title	Page(s)	Reference Type	Document Type
ARMC007358	Correspondence Re: Yukon Farmout properties		Property File Collection	Miscellaneous Company Documents
YEG1981	Yukon Exploration and Geology 1981	175.	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Annual Report
YEG1981-pg15	Mineral exploration in Yukon and western district of Mackenzie: Deposit discovery rate and exploration potential	15-21.	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Annual Report Paper
YEG1982	Yukon Exploration and Geology 1982	164.	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Annual Report
YEG1983	Yukon Exploration and Geology 1983	217-218.	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Annual Report
YEG1984	Yukon Exploration 1984	140-141.	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Annual Report
YEG1985_86	Yukon Exploration 1985-86	280.	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Annual Report
YEG1989	Yukon Exploration 1989	79.	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Annual Report
YEG2011_OV	Yukon Exploration and Geology Overview 2011	26-27, 66.	Yukon Geological Survey	Annual Report
YEG2012_OV	Yukon Exploration and Geology Overview 2012	36-37, 62.	Yukon Geological Survey	Annual Report
YEG2013_OV	Yukon Exploration and Geology Overview 2013	27-28, 43, 47.	Yukon Geological Survey	Annual Report
1983-1	Structure and Stratigraphy of the MacMillan Fold Belt: Evidence for Devonian Faulting		Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Open File (Geological - Bedrock)
GM2013-1	Bedrock geology of the Macmillan Pass area, Yukon and adjacent Northwest Territories		Yukon Geological Survey	Geoscience Map (Geological - Bedrock)
ARMC016467	Geology map - Hess project - Figure No. 21 - 105O/7		Property File Collection	Geoscience Map (Geological - Bedrock)
ARMC015547	Map sheet 105O/7 with geochemical locations and results noted		Property File Collection	Geochemical Map
ARMC015548	Map sheet 105O/7 with geochemical locations and results noted		Property File Collection	Geochemical Map
ARMC015545	Geochemical results and claim group map of sheet 105-O-7 with geological notations		Property File Collection	Geochemical Map
ARMC015546	Geochemical results and claim group map of sheet 105-O-7 with sample locations marked		Property File Collection	Geochemical Map
BROCK000083	Geochemical results and claim group map of sheet 105-O-7 - Fig. 12		Property File Collection	Geochemical Map
BROCK000092	Geochemical results and claim group map of sheet 105-O-7 - Fig. 21		Property File Collection	Geochemical Map