



Occurrence Details

Occurrence Number: 105O 029
Occurrence Name: Gow
Occurrence Type: Hard-rock
Status: Showing
Date printed: 6/14/2025 5:04:55 PM

General Information

Secondary Commodities: barite, silver, thallium

Aliases: Thallium, Twin Zone

Deposit Type(s): Sediment hosted Sedimentary Exhalative Zn-Pb-Ag (Sedex)

Location(s): 63°18'2.342" N - -131°6'12.79" W

NTS Mapsheet(s): 105O06

Location Comments: Location verified by Colorado Resources Ltd during 2012 geological mapping program.

Hand Samples Available: No

Last Reviewed: Feb 24, 2014

Capsule

Work History

*In February 2014 the occurrence location was moved approximately 880 m northwest to a site verified by Colorado Resources Ltd.

Staked as TH cl 1-86 (YA38074) in Aug/78 by the Mackenzie Joint Venture (British Newfoundland Exploration Ltd, A.M. & S. Canada Minerals Ltd & C.L. Smith), which explored with mapping and geochemical sampling later in the year.

Restaked as Andy cl 1-32 (YA41392) in Nov/79 by Ventures West Minerals Ltd, which performed mapping and geochemical sampling in 1980.

Restaked within OS cl 1-532 (YE42001) in Apr/2011 by Colorado Resources Ltd. The claims were added to the larger Oro property located to the east. During the 2011 exploration season Colorado Resources flew a helicopter-borne magnetic and electromagnetic survey over the entire Oro property and carried out regional scale soil and silt sampling over the occurrence area.

In 2012 Colorado Resources carried out geological mapping and collected addition soil samples over the occurrence area.

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". None of the drill holes were collared on or in the vicinity of this occurrence.

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

Capsule Geology

The occurrence area is located approximately 45 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 areas located along the North Canol Highway located 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 (Minfile Occurrence 105O 032) located 5 km to the east, 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, including the area surrounding this occurrence. 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 TH claims were staked on an anomalous lead and zinc silt anomaly collected from a small creek (original occurrence location ~ 393791 W 7020398 N) draining the central portion of the claim block. The anomaly was likely originally discovered by Atlas Explorations Ltd during their Hess River Project, a large regional silt sampling program carried out in 1967-68. C.L. Smith, a principal participant in the Mackenzie Joint Venture was the chief geologist for Atlas Explorations' (see title page of Assessment Report # 018947). No records can be found regarding the results obtained by the joint venture group and it appears the TH claims were allowed to lapse the following year.

C.L. Smith restaked the anomaly within the Andy claims and immediately optioned the claims to Ventures West Minerals Ltd. Smith carried out 5 days of geological mapping in 1980 during which he discovered a barren barite bed, described as "several feet thick, massive to finely laminated and conformable with bedding". The barite bed is enclosed by a silvery weathering carbonaceous shale described by Smith as interbedded with black chert and minor barite. This description suggests the barite bed likely belongs to the Fuller Lake Member of the Upper Devonian Portrait Lake Formation, a silver grey bedded siliceous shale/argillite unit. This unit is known to host minor barite beds. The location of the bed was re-discovered and verified by Colorado Resources during their 2012 geological mapping program (new occurrence location).

Regional and follow-up soil sampling carried out in 2011 and 2012 by Colorado Resources outlined two sub-parallel thallium soil geochemical anomalies (called the Twin Zone) which trend to the west from the Oro Main zone (5 km to the east). Both anomalies contain core thallium values of over 15 ppm, a pathfinder element commonly associated with gold mineralization in the Carlin district in Nevada, USA. The northernmost anomaly (location ~7021090 N, 394560 W = ~ center point of anomaly) measures approximately 3 300 m long and 400 m wide. Geological mapping suggests that it is underlain by silver grey bedded siliceous shales-argillites assigned to the Fuller Pass Member of the Upper Devonian (?) Portrait Lake Formation and carbonaceous silty limestones of the mid Devonian Sapper Formation. The thallium likely originates from within the limestones.

The southernmost anomaly lies approximately 1.25 km to the south, (location ~7019485 N, 393880 W, = ~ center point of anomaly) and measures approximately 2 100 m long by 350 m wide. The anomaly appears to be underlain by buff weathering bioturbated cherty shales assigned to the upper Silurian (?) Steel Formation. This unit likely lies overtop carbonaceous silty limestones assigned to the mid Devonian Sapper Formation, the likely source of the thallium. A thrust fault separates the southern anomaly from the northern anomaly. The southern

anomaly also hosts a 1 000 m long by 250 m wide >95th percentile silver (>3.3 ppm to 20.1 ppm) anomaly.

Work History

Date	Work Type	Comment
12/31/1980	Geology	
12/31/1980	Other	
12/31/1978	Geology	
12/31/1978	Geochemistry	Regional program.
12/13/2012	Geochemistry	Infill sampling carried out refine size of anomaly.
12/13/2012	Geology	Carried out over anomaly.
12/13/2011	Geochemistry	Regional program, samples collected along claim lines.
12/13/2011	Geochemistry	Regional program.
12/13/2011	Airborne Geophysics	Also collected magnetics.

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		
090833	1980	Geological Report, Andy 1-32 Claims	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
ARMC008212	Detail map area - geochem values - Cu, Pb, Zn, Ba - MacMillan project - 105-O-6		Property File Collection	Geochemical Map
ARMC008213	Detail area map - MacMillan project - 105-O-6		Property File Collection	Geochemical Map
ARMC008033	Geochemical results and claim group map of sheet 105-O-7 - Ross River		Property File Collection	Geochemical Map
YEG1981	Yukon Exploration and Geology 1981	177.	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Annual Report
1983-1	Structure and Stratigraphy of the MacMillan Fold Belt: Evidence for Devonian Faulting	15-21.	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Open File (Geological - Bedrock)
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
GM2013-1	Bedrock geology of the Macmillan Pass area, Yukon and adjacent Northwest Territories		Yukon Geological Survey	Geoscience Map (Geological - Bedrock)
BROCK00090	Geology map - Geochemical results and claim group map of sheet 105-O-6 - Fig. 19		Property File Collection	Geoscience Map (Geological - Bedrock)