Occurrence Details

Occurrence Number: 105N 031
Occurrence Name: Thunderhead
Occurrence Type: Hard-rock
Status: Anomaly
Date printed: 12/16/2025 5:06:16 PM

General Information

Secondary Commodities: copper, gold, silver
Deposit Type(s): Vein Cu+/-Ag Quartz
Location(s): 63°18'47" N - -132°19'19" W
NTS Mapsheet(s): 105N08
Location Comments: 1 Kilometres
Hand Samples Available: No
Last Reviewed:

Capsule

Work History

Discovered during reconnaissance traversing and geochemical sampling in Jun/97 and staked as Thunderhead cl 1-12 (YB80957) by Viceroy Exploration (Canada) Inc in Jul/97. Viceroy carried out geological mapping and rock sampling later that year and staked Thunderhead cl 13-24 (YB81375) in Sep/97. In Oct/97, Viceroy staked Bach cl 1-60 (YB99785) 9 km to the northwest. Viceroy carried out geological mapping and geochemical sampling of both claim blocks in 1998.
In Mar/99, NovaGold Resources Inc acquired 100% of Viceroy's interest in these and 20 other grassroots properties in the Yukon in exchange for 3.4 million common shares. Later in 1999, NovaGold carried out a limited program of geological mapping and geochemical (silt and soil) sampling of the Bach claims.

Capsule Geology

The area is located north of Fairweather Lake and is underlain by a succession of Selwyn Basin shallow marine shelf to off shelf sediments ranging in age from Late Proterozoic to mid-Paleozoic. The area is underlain by Late Proterozoic to Middle Cambrian Hyland Group rocks which are disconformably overlaid by Upper Cambrian to Silurian Road River Group rocks. The Road River Group rocks are in turn, disconformably overlaid by Devonian to Lower Carboniferous Earn Assemblage rocks. The sediments generally dip south and southwest. Southern dipping thrust faults and numerous open folds have created a series of imbricated rock slices, whereby older sedimentary rocks lie on top of younger units. Quartz monzonitic to monzonitic intrusions and numerous small dykes belonging to the Mid-Cretaceous Tombstone Plutonic Suite intrude the various sediment sequences.
The occurrence area is underlain by a major regional south dipping thrust fault that separates Road River shale and siltstone to the north, from Hyland Group calcareous siltstone and minor limestone to the south. A sub-unit of Road River Group argillites occurs to the south. To the east, Road River Group sediments lie in contact with Earn Group rocks. A small, quartz monzonite pluton of the Tombstone Suite is emplaced within Hyland Group limestone and calcareous sediments.
Copper enriched skarn mineralization has formed along the margins of the stock and copper enriched quartz-arsenopyrite veining with minor base metal enrichment occurs peripheral to the stock. Mineralized occurrences, are abundant and occur primarily within the Hyland Group sediments, but are of limited extent. Composite grab sample of pyrrhotite-chalcopyrite with minor bornite skarn mineralization from the eastern margins of the intrusive stock returned up to 0.52% Cu. Vein mineralization (occurrence location) which is most abundant along the northwest margin of the stock, returned moderate copper, silver and gold enrichment, with grab samples returning peak values of 1.23 % Cu, 54.2 g/t Ag and 1.3 g/t Au.
The Bach claims (located 9km to the northwest) are underlain by an east-southeast trending package of Road River Group shales and chert, with Devonian aged Earn Group chert pebble conglomerate underlying the extreme southern areas of the claims. A number of coincident gold in soil and silt anomalies were returned from sampling in 1998 and 1999. The anomalies which cover roughly 3 square kilometers are centred over the east-southeast trending shale-chert contact and returned Au in soils up to 120 ppb, with anomalous Ag (to 4.4 ppm) and Sb (to 12 ppm).

References

NOVAGOLD RESOURCES INC, Mar/2000. Assessment Report #094098 by C.M. Schulze.

NOVAGOLD RESOURCES INC, May/2002. Web site: www.novagold.net.

ROOTS, C.F. AND BRENT, D., 1994. Geology of West Lake Map Area (105 N/9), Hess Mountain, East-Central Yukon. Indian and Northern Affairs Canada, Exploration and Geological Services Division, Yukon Region. Open File 1994-5 (G).

ROOTS, C.F, ET AL., 1995. Bedrock Geology of Lasing Range Map Area (105N), East Half, Hess Mountains, Yukon. Indian and Northern Affairs Canada, Exploration and Geological Services Division, Yukon Region. Open File 1995-7 (G).

ROOTS, C.F. ET AL., 1995. New stratigraphy and structures in eastern Lansing map area, central Yukon territory; in Current Research 1995-A; Geological Survey of Canada, p. 141-147.

VICEROY EXPLORATION (CANADA) INC, May/98. Assessment Report #093828 by C.M. Schulze.

VICEROY EXPLORATION (CANADA) INC, Feb/99. Assessment Report #094015 by C.M. Schulze.

VICEROY EXPLORATION (CANADA) INC, Mar/99. Assessment Report #093970 by C.M. Schulze.

YUKON EXPLORATION AND GEOLOGY 1999, p. 11.

Work History

Date	Work Type	Comment
12/31/1999	Geology	

12/31/1999	Other	
12/31/1998	Geochemistry	
12/31/1998	Geology	
12/31/1998	Geochemistry	
12/31/1997	Geochemistry	
12/31/1997	Geology	

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
094015	1998	1998 Geological and Geochemical Assessment Report on the Thunderhead 1-24 Claims	Rock - Geochemistry, Silt - Geochemistry, Detailed Bedrock Mapping - Geology		
093828	1997	1997 Geological and Geochemical Assessment Report on the Thunderhead 1-12 Claims	Rock - 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
ARMC016485	Geological overlay map - 105N/8		Property File Collection	Geoscience Map (Geological - Bedrock)
ARMC018026	Geology map - Fairweather Lake area - 105N/1, 2, 7, 8		Property File Collection	Geoscience Map (Geological - Bedrock)