Occurrence Details

Occurrence Number: 105O 058
Occurrence Name: Lm
Occurrence Type: Hard-rock
Status: Prospect
Date printed: 8/6/2025 8:02:50 AM

General Information

Secondary Commodities: copper, gold, silver
Deposit Type(s): Plutonic Related Au
Location(s): 63°37'21" N - -131°8'33" W
NTS Mapsheet(s): 105O11
Location Comments: .5 Kilometres
Hand Samples Available: No
Last Reviewed:

Capsule

Work History

Atlas Explorations Company Ltd and AGIP Canada Ltd conducted regional exploration programs in the area between 1982 and 1986 but did not stake any claims. A 1991 government regional silt sampling program identified minor precious metal anomalies from streams draining the various intrusive bodies located in the region.
In Apr/95 B. Lueck staked the occurrence as LM cl 1-6 (YB44111). Lueck staked Au cl 1-42 (YB44069) 4 km to the northeast at the same time. A short time later both claim groups were option to Yukon Gold Corp, which carried out a preliminary exploration program later in the summer. In May/96 Yukon Gold staked APC cl 1-24 (YB65367) around 3 sides of the LM claims. Later that same year, the company carried out a detailed mapping and prospecting program on the APC and LM claims. In Aug/96 the company drilled 3 diamond drill holes (1 252 m) on LM cl 3-6 (YB44113) and in Sep/96 the company staked LM cl 7-18 (YB65795).
In Jun/97 the LM, Au and APC claims were optioned to Cyprus Canada Inc which carried out a reconnaissance program on all 3 claim blocks later in the summer.

Capsule Geology

The regional geology of the area consists of a series of Upper Cretaceous granitic intrusions which intrude Upper Proterozoic to Devonian sedimentary, basic volcanic and volcanoclastic rocks of the Selwyn Basin. The Au claims are centred over a small Upper Cretaceous stock which intrudes Ordovician to Silurian argillites, cherts, shales and dolostones. A strong contact metamorphic aureole around the stock is marked by rusty weathering outcrops and talus. The sediments surrounding the intrusion have been metamorphosed to a dark fine-grained, magnetite bearing hornfels which produce a noticeable magnetic high. Numerous sulphide rich veinlets occur throughout the stock and surrounding hornfelsed sediments. Yukon Gold mapped and sampled the claim block but results were not reported. Cyprus collected 20 samples of hornfelsed sediments and quartz veins situated within the sedimentary package located in the southern portion of the claim block. Although the sulphide content of both samples types, was generally high (~5%) no significant gold values were found.
The LM claims are centred over a small granite to quartz monzonite stock which intrudes Silurian sedimentary rocks belonging to the Steel Formation. The Steel Formation consists of thinly, rusty to dark green to buff argillite which contains minor black shale and chert partings. A bright orange dolostone occurs as a single medium to thick layer near the base of the argillite. A large strong contact metamorphic aureole coincident with a magnetic high anomaly several kilometres wide surrounds the intrusion.
Mineralization on the claims is mainly hosted by sheeted quartz veins and stockwork within the intrusion, although several quartz-arsenopyrite veins occur within a fracture zone which continues through the sedimentary rocks directly north of the stock. Sulphides in the quartz veins include: arsenopyrite (up to 80%), pyrite (up to 80%), galena (up to 30%), sphalerite (up to 30%), chalcopyrite (up to 3%, usually mixed with arsenopyrite) and bismuthinite (up to 20%). The mineralized quartz veins are often banded, with more sulphides towards the vein margins. At least three crosscutting phases of open and filling have been observed, all along the same cleavage plain. Minor amounts of calcite occur as open space fillings within the vuggy centres of mineralized quartz veins. Mineralization appears to be most concentrated along the north face of the mountain and the western flank, east of the glacier.
Geochemistry indicates that gold mineralization is closely related with pyrite, arsenopyrite and bismuthinite. The veins with massive pyrite (generally occurring as pods up to 80 cm) and arsenopyrite +/- bismuthinite are thought to be different phases of veins, although both are associated with high gold values. It appears that quartz veins at higher elevations are mineralized with more galena and sphalerite (and arsenopyrite) as opposed to veins with more bismuthinite (and arsenopyrite) at lower elevations. Oxidation minerals include: limonite, arsenic oxide and minor malachite-azurite. Pods up to 1 metre, of massive, coarse crystalline pyrite have been located in areas of strong cleavage.
Zones of sericite-argillic alteration occur in prominent lineaments (fracture zones or faults) near the southern and western parts of the stock. These zones are poorly exposed and usually include fragments of mineralized (arsenopyrite-pyrite) quartz veins. Siliceous zones occur along the contacts of the stock, within the sedimentary rocks. Rocks in these zones are typically bleached, very hard siliceous, quartz veined with narrow stringers and occasionally vuggy. Other alteration is limited to oxidation zones outsides the contact areas, mostly within the sedimentary rocks. Oxide minerals include: limonite, pyrolusite and goethite.
The granitic intrusion on the LM claims forms a prominent peak in the centre of the claim block. Work carried out by Yukon Gold identified two main areas of mineralization on the claims; the north face of the peak and the west flank, east of the glacier. Initial rock sampling in 1995 returned values of between 1.6 g/t Au and14.64 g/t Au (locations not reported). Stockwork and sheeted veins of quartz-pyrite-arsenopyrite located on the west flank were chip sampled at 10 m intervals. Individual samples assayed up to 1.1 g/t Au and averaged 0.2 g/t Au over 150 m. Soil samples were collected at lower elevations within the pluton and returned values from 93 to 1 688 ppb Au, including an overall average of 536 ppb Au over a line distance of 800 m.
Yukon Gold concentrated their 1996 exploration efforts towards identifying potential diamond drill targets. The majority of the work was carried out on the west and north flanks of the intrusion. Chip samples yielded values ranging from 7 ppb Au (over 5m) to 5.14 g/t Au (over 0.4 m) while grab samples yielded values up to 18.85 g/t Au. Only 3 soil samples were collected. In Aug/96 the company commenced drilling 3 diamond drill holes (1 252.5 m). Hole AS-96-01 was collared on the west flank of the peak, east of the glacier while holes AS-96-02 and 03 were collared on the north flank.
Hole AS-96-01 intersected medium to fine-grained, gray, granite-granodiorite. Mineralization is hosted by sheeted quartz veins, 1 mm to 10 cm in width, (most > 1 cm) containing pyrite and arsenopyrite, with lesser chalcopyrite and bismuthinite. Anomalous but uneconomic gold mineralization was recorded throughout the hole and significant metal credits other than gold occur in this hole. Unlike surface sampling, where better gold grades were encountered in the hole, copper, silver and bismuth values were decreased. The hole returned 45.7 m grading 0.2 g/t Au, 5.1 g/t Ag and 0.2% Cu, including a 30.5 m intersection which returned 0.13 g/t Au, 7.0 g/t Ag and 0.3% Cu.
Hole AS-96-02 was drilled to intersect the sedimentary package from the intrusive side of the intrusive/sedimentary contact. The hole intersected a brown argillite at 309 m which hosted millimetre wide quartz veinlets and microfractures containing pyrite, arsenopyrite and pyrrhotite. No significant gold values were returned from the argillite. The intrusive, hosted quartz-stockwork veins and quartz veins with carbonate specks. The quartz veins are usually millimetres to centimetres wide, and contain pyrite, arsenopyrite and pyrrhotite with lesser chalcopyrite, bismuthinite and molybdenite. A 56.4 m intersection returned 0.18 g/t Au and 1.0 g/t Ag.
Hole AS-96-03 was collared 250 m northeast of hole AS-96-02 and was designed to intersect the same contact as the previous hole but from the sediments side. The sediments hosted quartz vein stockworks and quartz -stringers containing pyrrhotite, chalcopyrite and arsenopyrite but did not return any significant gold or other metal values. The intrusive was encountered at 68.3 m and consisted of a gray equigranular granite-granodiorite hosting quartz-stockwork veinlets millimetres wide and quartz-adularia veins 1-10 cm wide. The dominant minerals are pyrrhotite, chalcopyrite, arsenopyrite, pyrite and bismuthinite with lesser galena and sphalerite. Visible gold grains were observed in quartz-bismuthinite veins and two 1.5 m intersections assayed 76.90 g/t Au and 26.67 g/t Au. It is unknown whether these intersections represent discrete high grade lenses of vein fault or wether this is the result of ¿nugget effect¿ where coarse grains of gold occur in samples. The hole returned 274.3 m grading 0.81 g/t Au, 1.4 g/t Ag and 0.034 % Cu, including a 96 m intersection which assayed 2.09 g/t Au

, 1.78 g/t Ag and 0.016 % Cu.
In 1997 Cyprus Canada field checked the LM claims but did not collect any samples.

References

ALLIANCE PACIFIC GOLD CORPORATION, 6 Aug/97. News Release.

CECILE, M.P., 1998: Geology and structure cross-section, Arrowhead Lake, Yukon Territory; Geological Survey of Canada, Map 1943A, scale 1:50 000.

CYPRUS CANADA INC, Apr/98. Assessment Report #093827 by X. Jong and D. Broughton.

Friske, P.W.B., et. al., 1991. National Geochemical Reconnaissance Stream Sediment and Water Data, East Central Yukon, (NTS 105O; parts of 105P) Geological Survey of Canada Open File 2364.

GEORGE CROSS NEWSLETTER, 13 Nov/96, 7 Jan/97, 11 Aug/97.

YUKON EXPLORATION AND GEOLOGY 1995, p. 14, 16; 1996 p. 25, 30.

YUKON GOLD LTD, Jun/96. Assessment Report #093498 by B. Lueck.

YUKON GOLD LTD, Apr/97. Assessment Report #093695 by B. Lueck.

Work History

Date	Work Type	Comment
12/31/1997	Other	
12/31/1996	Drilling	Number of holes drilled: 3 Amount of work done: 1252 METRES Drilling carried out on LM claims.
12/31/1996	Geology	
12/31/1996	Other	
12/31/1995	Geology	
12/31/1995	Other	
12/31/1995	Other	
12/31/1991	Other	Geological Survey of Canada released regional geochemical survey results.
12/31/1986	Other	
12/31/1985	Other	
12/31/1984	Other	
12/31/1983	Other	
12/31/1982	Other	

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
096026	2011	Assessment Report, 2011 Surface Geochemical Exploration Program	Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry		
093827	1997	1997 Geological Assessment Report on Emerald Lake Claims	Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry		
093695	1996	Geological and Geochemical Assessment Report for the LM1-LM18 and APC1-APC24 Claims	Diamond - Drilling, Rock - Geochemistry, Soil - Geochemistry, Detailed Bedrock Mapping - Geology	3	1252
093498	1995	Geological and Geochemical Assessment Report for the Au 1-Au 42 and LM 1 -LM 6 Claims	Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology		
091076	1982	The Geology of the Old Cabin Claims	Detailed Bedrock Mapping - Geology, Process/Interpret - Pre-existing Data		
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
ARMC008209	Topographic map showing Cu, Pb, and Zn geochemical values - Arrowhead Pass area		Property File Collection	Geochemical Map

ARMC008013	Geochemical sample map - Old Cabin Creek area		Property File Collection	Geochemical Map
ARMC008023	Geology of claim map - Old Cabin Creek area		Property File Collection	Geoscience Map (Geological - Bedrock)
ARMC015553	Sheet map of 105O/11 with geochemical sample locations and results marked		Property File Collection	Geochemical Map