



Occurrence Details

Occurrence Number: 105O 005
Occurrence Name: Niddery
Occurrence Type: Hard-rock
Status: Prospect
Date printed: 8/6/2025 8:02:47 AM

General Information

Secondary Commodities: barite, cadmium, copper, gold, nickel, silver
Deposit Type(s): Plutonic Related Au
Location(s): 63°10'44" N - -131°15'52" W
NTS Mapsheet(s): 105O03
Location Comments: 1 Kilometres
Hand Samples Available: No
Last Reviewed:

Capsule

Work History

Staked as Tom cl 1-8 (Y14164) and Tom cl 9-14 (Y14208) in Oct/67 by the Hess Project (Atlas Explorations Ltd, Quebec Cartier Mining Company and Phillips Brothers (Canada) Ltd), which carried out geological mapping and prospecting in 1968. Agip Canada Ltd staked Dall cl 1-112 (YA77035) 1.6 km northwest in Sep/82 and carried out geological mapping, prospecting and geochemical sampling later in 1983.

Restaked as Jet cl 1-86 (YB03442) in Apr/90 by NDU Resources Ltd which carried out prospecting and geochemical sampling later that year. Falconbridge Ltd optioned the claims in Jun/91 and immediately staked Jet cl 87-104 (YB18309) to the east. The 1991 program which consisted of geochemical sampling and geological mapping was carried out by NDU and funded by Falconbridge under the terms of the option agreement. In 1992, Falconbridge carried out geological mapping, geochemical and lithogeochemical sampling before dropping the option and returning the property to NDU in Feb/93.

In the spring of 1998 NDU merged with United Keno Hill Mines Ltd. Expatriate Resources Ltd carried out hand trenching, geological mapping and geochemical sampling of the Jet claims later that year under a option agreement with NDU which transferred to United Keno Hill. In Oct/98, Expatriate purchased a 100% interest in the claims from United Keno Hill.

In Aug/98 Viceroy Exploration (Canada) Inc staked Pink cl 1-10 (YC01344) and Floyd cl 1-12 (YC01332) 6.5 km and 8 km respectively, to the southwest. Both claim group were sold in May/99 to Nova Gold Resources Inc, which carried out a reconnaissance scale geological mapping and sampling program over the Pink claims later in the year. Both claim groups were later allowed to lapse.

Capsule Geology

The occurrence area is located within the Selwyn Basin. The Selwyn Basin consists of a broad package of Paleozoic age, shallow shelf to off-shelf marine clastic and chemical sediments, as well as basinal clastic sediments derived from the Ancient North American Platform. Age of deposition ranges from Late Precambrian to Permian. Rocks within the basin have been intruded by mid-Cretaceous Selwyn Suite intrusives which are believed to control much of the economic gold mineralization within the Basin.

The occurrence is underlain by Devonian to Mississippian Earn Assemblage black shale, siliceous argillite, chert, limestone and debris-flow conglomerate, which have been intruded by Cretaceous aged biotite-hornblende granite and quartz monzonite stocks.

The Tom group was staked to cover gossan zones that returned anomalous copper-zinc silt response. The gossans occur in a hornfels zone developed in conglomerate and limestone at the margin of a small intrusive stock. The geochemical response was found to be caused by high background levels in the weakly pyritic hornfels zone. Prospecting located a quartz vein with tetrahedrite, a specimen of which assayed 2 297 g/t Ag.

The Dall group covered the contact between lower Earn Assemblage clastic rocks and a small quartz monzonite intrusion. Minor quartz-arsenopyrite veins and a 30 cm wide sphalerite-rich skarn zone were found near the contact. Assays up to 815 ppb Au and 20 ppm Ag were obtained from the veins and skarn. Two baritic lenses up to 30 m thick and 100 m long also occur in Earn Assemblage carbonaceous shale. Assays of barite returned only traces of lead, zinc and precious metals.

NDU followed up a linear multielement geochemical anomaly (major Ni, V and Cu, minor Mo, P, Cu), and found a metalliferous horizon directly overlying a distinctive limestone unit. The limestone is pyritic, vuggy and contains shallow marine fossils of Lower Devonian age and disseminated bitumen. Occasional lenses of grey pyritic chert are stratigraphically equivalent to the limestone. Soil samples taken from the recessive metalliferous horizon returned values up to 3 160 ppm Ni, 1% zinc, and elevated levels of Cu, Cd, Ag, As and Mo. Polymetallic sedex mineralization found on the Nick property in central Yukon (Minfile Occurrence #106D 092) exhibits a similar geochemical response.

The 1992 soil sampling returned values of up to 1 593 ppm for Ni and 10 367 ppm Zn. Metal-rich fault gouge contained up to 3 000 ppm Ni and 10 252 ppm Zn.

Detailed mapping by Expatriate in 1998 indicates that Ordovician to Lower Devonian Road River Assemblage shales, argillites and chert underlie the Earn Assemblage rocks and that the contact between the two groups roughly parallels the northern boundary of the claim group. They suggest that this relatively recessive stratigraphic interval reflects the source horizon for the anomalous Zn, Ni, Cu, Cd and Ag geochemical values in the area. Although no fresh sulfide mineralization was seen in any of the trenches, analysis of chip samples from the trenches returned peak values of 1.29% Zn, 428 ppm Ni, 326 ppm Cu, 205 ppm Cd and 4.6 ppm Ag.

Nova Gold reported that the Pink claims were mainly underlain by Earn Assemblage chert pebble conglomerate and a minor occurrence of shale. Silt sampling returned gold values to 60 ppb gold while grab samples returned weakly anomalous values to 30 ppb gold, with elevated mercury, arsenic and antimony values. Evaluation of pathfinder elements suggests the presence of multiple mineralogical assemblages.

References

AGIP CANADA LTD, Jun/84. Assessment Report #091541 by R. Robertson.

ATLAS EXPLORATIONS LTD, Oct/68. Assessment Report #019040 by T.J. Adamson.

ATLAS EXPLORATIONS LTD, Dec/67. Assessment Report #018947 by C.L. Smith.

ATLAS EXPLORATIONS LTD, Dec/67. Assessment Report #019032 by C.L. Smith.

CECILE, M.P. and ABBOTT, J.G., 1989. Geology of the Niddery Lake Map Area (NTS 105 O), Geological Survey of Canada, Open File 2076.

EXPATRIATE RESOURCES LTD, May/99. Assessment Report #094012 by R.F. Gish.

FALCONBRIDGE LTD AND NDU RESOURCES LTD, Dec/91. Assessment Report #093003 by R.C. Carne.

FALCONBRIDGE LTD, Feb/93. Assessment Report #093095 by M.D. Edwards.

GEOLOGICAL SURVEY OF CANADA, Paper 69-55, p. 18.

GORDEY, S.P., AND MAKEPEACE, A.J., 1999. Yukon digital geology, S.P. Gordey and A.J. Makepeace (comp.); Geological Survey of Canada, Open File D3826, and Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Open File 1999-1 (D)

NDU RESOURCES LTD, Apr/91. Assessment Report #092940 by D. Parry and R.C. Carne.

NOVA GOLD RESOURCES INC, Feb/2000. Assessment Report #094088 by G. Johnson and C. Schulze.

YUKON EXPLORATION AND GEOLOGY 1983, p. 219; 1984, p. 136-138.

Work History

Date	Work Type	Comment
12/31/1999	Geochemistry	
12/31/1999	Geology	
12/31/1999	Geochemistry	
12/31/1998	Geology	
12/31/1998	Trenching	
12/31/1998	Other	
12/31/1990	Geology	
12/31/1990	Geochemistry	
12/31/1990	Other	
12/31/1990	Other	
12/31/1983	Geology	
12/31/1983	Other	
12/31/1968	Other	Carried out on Tom claims.

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
093827	1997	1997 Geological Assessment Report on Emerald Lake Claims	Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry		
093003	1991	Report on Geological Mapping and Geochemical Sampling on the Jet Property, Yukon Territory	Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Detailed Bedrock Mapping - Geology		
019040	1968	Report on Geological Work Done During the 1968 Field Season	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
ARMC008210	Map showing geochemical sample values - MacMillan project		Property File Collection	Geochemical Map
ARMC008845	Claim summaries - Dall		Property File Collection	Report
ARMC007358	Correspondence Re: Yukon Farmout properties		Property File Collection	Miscellaneous Company Documents
ARMC015532	Geology map - Tom group - Mt. Pratico area map		Property File Collection	Geoscience Map (Geological - Bedrock)
ARMC015526	Structural and geological sketch map of Mt. Pratico area - 1050/03		Property File Collection	Geoscience Map (Geological - Bedrock)
ARMC015527	Structural and geological sketch map of Mt. Pratico area - 1050/03		Property File Collection	Geoscience Map (Geological - Bedrock)
ARMC015525	Structural, geological and claim map of Hess River area		Property File Collection	Geoscience Map (Geological - Bedrock)
ARMC011941	Geochemical map - NTS 105-O-3 - Area A - MacMillan project		Property File Collection	Geochemical Map
ARMC016460	Geology map overlay - Hess project		Property File Collection	Geoscience Map (Geological - Bedrock)
ARMC016461	Geology map overlay - Hess project - Figure No.9		Property File Collection	Geoscience Map (Geological - Bedrock)

ARMC015530	Sheet 105O/3 map with geochemical notations and overlay - Tom group	Property File Collection	Geochemical Map
ARMC015523	Geochemical results and claim group map of sheet 105-O-3	Property File Collection	Geochemical Map
ARMC015524	Geochemical results and claim group map of sheet 105-O-3	Property File Collection	Geochemical Map
ARMC015531	Geochemical results and claim group map of sheet 105-O-3	Property File Collection	Geochemical Map
ARMC011929	Geochemical results and claim group map of sheet 105-O-3 - Ross River	Property File Collection	Geochemical Map
ARMC016462	Geochemical samples map overlay of 105O/3	Property File Collection	Geochemical Map
ARMC011940	Geochemical zinc contour - nts 105O-3 - MacMillan project	Property File Collection	Geochemical Map
ARMC018177	Field map of 105O/3 with geological notations	Property File Collection	Geoscience Map (Geological - Bedrock)
ARMC018192	Field sheet of 105O with notations	Property File Collection	Geoscience Map (General)
ARMC018193	Field sheet of 105O Niddery Lake with geology notations	Property File Collection	Geoscience Map (General)
ARMC011938	Geochemical copper contour - nts 105O-3 - MacMillan project	Property File Collection	Geochemical Map
ARMC015528	Geochemical lab report, notes and sketch map 105O/3- OEX examination - South of Niddery Lake	Property File Collection	Assays
ARMC011939	Geochemical lead contour - nts 105O-3 - MacMillan project	Property File Collection	Geochemical Map
BROCK000087	Geochemical results and claim group map of sheet 105-O-3 - Fig. 10	Property File Collection	Geochemical Map
BROCK000091	Geochemical results and claim group map of sheet 105-O-3	Property File Collection	Geochemical Map