Occurrence Details

Occurrence Number: 115G 010
Occurrence Name: Duke
Occurrence Type: Hard-rock
Status: Showing
Date printed: 6/16/2025 1:20:01 AM

General Information

Secondary Commodities: asbestos, gold, silver
Deposit Type(s): Ultramafic-hosted asbestos
Location(s): 61°18'52" N - -139°11'39" W
NTS Mapsheet(s): 115G06
Location Comments: .5 Kilometres
Hand Samples Available: No
Last Reviewed:

Capsule

Work History

Staked as A, Anne and North Star cl (4480) in Jan-Sep/45 by W.C. Walsh and V. Wornonchuk. Restaked as Teck cl (68536) in Apr/54 by Teck ECL, which conducted mapping, trenching, mag and EM surveys later in the year. MacLeod-Cockshutt Gold ML tied on the adjoining Joan cl (71373) in Sep/55 but did no work.

Capsule Geology

The occurrence is located in Wrangellia, an accreted terrane extending 2340 km from Alaska to southern B.C.. In the area of the occurrence, Wrangellia is bounded to the northeast by the Denali Fault System and to the southwest by the Duke River Fault. The oldest Wrangellian rocks in the region are the Pennsylvanian to Permian Skolai Group, which consists of Station Creek Formation tuffs, pyritic black tuffs, mafic volcanics and argillite that are overlain by Hasen Creek Formation tuffs, mafic volcanics, argillite and limestone. The Skolai Group is stratigraphically overlain by Middle(?) Triassic phyllite, Upper Triassic Nikolai formation basalt and Upper Triassic McCarthy Formation Limestone and phyllite. Tertiary volcanic and sedimentary rocks unconformably overlie the sequence.
Two major suites of intrusive rocks are present in the belt. The oldest is Triassic and includes gabbro, peridotite, dunite and clinopyroxenite of the Kluane mafic-ultramafic complex and gabbro sills and dykes of the Maple Creek Gabbro. The sills are estimated to be up to 18 km long and 600 m thick. The Maple Creek gabbro is though to be coeval with the Kluane mafic-ultramafic complex and to have acted as a feeder to the Nikolai formation. The Cretaceous Kluane Ranges suite are dioritic to granodioritic in composition and occur throughout northern Wrangellia. Minor Tertiary sills, dykes and stocks of felsic to intermediate composition are also present.
The occurrence lies within ultramafic rocks of the Late Triassic Kluane mafic-ultramafic complex. Asbestos veinlets (6 mm wide) occur in a zone about 9 m wide within a peridotite body that outcrops in Ptarmigan (Windgap) Creek about 250 m upstream from Duke River. A pyritic carbonate vein zone containing low gold and silver values is exposed on Duke River about 550 m upstream from the mouth of Squirrel Creek.

References

DODDS, C.J., AND CAMPBELL, R.B., 1992. Overview, legend and mineral deposit tabulations for Geological Survey of Canada Open Files 2188, 2189, 2190 and 2191.

GORDEY, S.P. AND MAKEPEACE, A.J., 2003. Yukon Digital Geology, version 2.0, S.P. Gordey and A.J. Makepeace (comp); Geological Survey of Canada, Open File 1749 and Yukon Geological Survey, Open File 2003-9 (D).

ISRAEL, S. and VAN ZEYL, D., 2004. Preliminary bedrock geology of the Quill Creek area (parts of NTS 115G/5, 6, 12), southwest Yukon (1:50 000 scale). Yukon Geological Survey, Open File 2004-2.

ISRAEL, S., TIZZARD, A. and MAJOR, J., 2005. Geological map of the Duke River area (parts of NTS 115G/2, 3, 5, 6, 7), Yukon (1:50,000 scale). Yukon Geological Survey, Open File 2005-11.

READ, P.B. and MONGER, J.W.H., 1976. Pre-Cenozoic assemblages of the Kluane and Alsek Ranges, southwest Yukon Territory. Geological Survey of Canada, Open File 381, 96 p.

TECK EXPLORATION COMPANY LTD, 1954. Assessment Report *#017462 by A.J. Walker.

Work History

Date	Work Type	Comment
12/31/1954	Geology	
12/31/1954	Ground Geophysics	Also magnetic survey.
12/31/1954	Trenching	

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
091585	1984	1984 Exploration of the Bur Property, Yukon (Geological,	Reverse Circulation - Drilling, Soil - Geochemistry, Bedrock Mapping - Geology, Magnetics - Ground Geophysics, Heavy Mineral	136	

091505	1984	Geophysical, Geochemical, Overburden Drilling, Trenching)	Concentrate - Lab Work/Physical Studies, Line Cutting - Other, Stripping - Placer Processing, Mechanical - Trenching	130	
091495	1983	1983 Magnetometer Survey, Soil Sampling and Final Part of Heavy Mineral Sampling of the Bur Property, Yukon	Soil - Geochemistry, Magnetics - Ground Geophysics, Heavy Mineral Concentrate - Lab Work/Physical Studies		
060989	1970	Report on Niamodlaoc Mountain Coal Prospect, 1970 Field Season	Rock - Geochemistry		
017462	1954	Report of Work on Teck Claims, Duke River, Kluane Lake Area	Bedrock Mapping - Geology, EM - Ground Geophysics, Magnetics - Ground Geophysics		