



Occurrence Details

Occurrence Number: 105J 009

Occurrence Name: Riddell

Occurrence Type: Hard-rock

Status: Prospect

Date printed: 10/3/2025 7:05:38 PM

General Information

Secondary Commodities: copper, gold, lead, silver, zinc

Aliases: Box, Wing

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

Location(s): 62°44'14.5" N - -131°52'30.91" W

NTS Mapsheet(s): 105J12

Location Comments: Occurrence location marks approximately location of Phelps Dodge drill program.

Hand Samples Available: No

Last Reviewed:

Capsule

Work History

*In Dec/2013 the occurrence was moved 2.5 km to the northwest to cover the assumed centre point of Phelps Dodge Corporations diamond drill program.

The area was first explored in 1968 by Atlas Explorations Ltd on behalf of the Hess Project, a joint venture between Atlas, Quebec Cartier Mining Company Ltd and Phillips Brothers Canada Ltd. The joint venture carried out a large regional exploration program in 1968 which identified numerous silt anomalies and mineralized showings which were followed up with prospecting, geological mapping, trenching and rock sampling.

In Jun/69 Atlas Explorations staked May cl 1-8 (Y35363) approximately 2.1 km to the southwest and Box cl 1-4 (Y35379) approximately 0.5 km to the south. The company trenched and rock sampled on the claims.

In Jul/70, prospector G. Wing restaked the May claims as Wing cl 1-6 (Y53496) and in Sep/70 the Box claims as Wing cl 7-8 (Y59201). Phelps Dodge Corporation of Canada optioned the Wing claims in Sep/70 and in Oct/70 restaked the claims within the PDR claims (cl 1-48, #1=Y59758). The company carried out mapping and grid geochemical sampling in 1971 added PDR cl 49-68 (Y62032) and cl 69-134 (Y62393) in Sep/71 and drilled 5 diamond drill holes (613.9 m) in 1971-72.

It appears the occurrence location was staked within TUT cl 1-16 (YA19702) in Aug/77 by R.G. Hilker. The claim block covered the former Box claims. Hilker hand trenched in 1978 and transferred the property to June Resources Inc which performed more trenching in 1979 and line cutting in 1980.

M. Barker staked Rid cl 1-4 (YC08105) 3 km to the south in Aug/97.

Restaked within Riddell cl 1-80 (YD153511) in Feb/20011 by Overland Resources Yukon Ltd which carried out detail geological mapping, grid soil sampling and reconnaissance rock chip sampling over the central portion of the property.

Capsule Geology

The area lies within the Selwyn basin of the Northern Cordillera; a continental margin rift-filled and cover sedimentary sequence deposited off the coast of ancestral North America. S. Gordey and S. Irwin of the Geological Survey of Canada initially mapped the area in the early to mid-1980's. A series of maps were released in 1987. In the mid-2000's Gordey revisited his maps with the aim of updating the earlier maps using present day knowledge resulting in the release of an updated set of maps in 2008 and a final version in 2013.

The area is located south of the MacMillan River, near Klingit Peak, approximately 30 km northwest of the North Canal Road in southwest Yukon. The area is underlain by Proterozoic Yusezyu Formation rocks of the Proterozoic Hyland Group which are unconformably overlain by Ordovician to Silurian rocks assigned to the Road River Group. Silvers of Lower Devonian to Upper Cambrian siliceous rocks assigned to the Portrait Lake Formation of the Devonian to Mississippian Earn Group are known to occur in the area. Numerous mid-Cretaceous granitic intrusions of various sizes and composition; assigned to the Selwyn Plutonic Suite, commonly intrude the local stratigraphy.

Geological mapping completed by Gordey and geologists employed by Overland Resources show that the Dragon Anticline roughly bisects the Riddell claim block from the northwest corner through to the southeast corner. Rocks on the northern side of the anticline are generally assigned to Hyland Group Yusezyu Formation while the southern side generally comprise Road River Group rocks. A steeply dipping fault, (downthrown side to the south and southwest) places Hyland Group rocks overtop Road River rocks. Overland Resources geologists mapped a small granitic intrusion east of Klingit Peak in the east-central portion of the claim block. The intrusion is likely associated with the mid-Cretaceous Riddell Stock located approximately 6 km to the southeast.

Very few assessment reports or work records exist for this occurrence. It appears much of the information regarding Atlas Exploration and Phelps Dodge Corp work programs was acquired by the Northern Cordillera Mineral Inventory system forerunner to Yukon Minfile. Atlas carried out a large regional silt and rock sampling program (Hess Project) in 1968). The program outlined numerous silt anomalies which Atlas Exploration followed up in 1969. Although Atlas followed up the majority of anomalies, the company appears to have focused their efforts on two anomalies; the May zone and the Box zone both of which were staked within small claim blocks of the same names.

The May zone is located approximately 2 km west of the new occurrence location. Details are sketchy however the zone is reportedly located within Ordovician to Silurian clastic rocks assigned to the Road River Group. The zone consists of banded, heavily disseminated galena, sphalerite, pyrite and pyrrhotite in a poorly exposed zone of silicification up to 5 m wide at the contact of a dacite dyke. Selected specimens assayed about 18 to 28% combined zinc-lead and 34.3 to 68.6 g/t silver.

The Box zone is located approximately 0.6 km south of the new occurrence location and is described as finely disseminated pyrite and chalcopyrite in thinly bedded black chert that measures approximately 30 m long and 3 m thick. Black chert suggests the zone is located within the Road River Group but Gordey maps the occurrence area as Hyland Group Yusezyu Formation. It is quite possible that there is intermixing of the two rock units and the zone is located within the Road River Group.

Phelps Dodge located a skarn zone at the contact of a small mid-Cretaceous stock (occurrence location). Mineralization is described as consisting of pyrrhotite and chalcopyrite occurring in

zones up to 60 m thick that has developed in limy quartzite and chert. Geologists employed by Overland Resources mapped the area as quartzite and sandstone thus the area is likely underlain by Hyland Group Yusezyu Formation. The best drill intersection was 0.32% copper across 17.7 m, unfortunately no records can be found to verify this result. The only proof that diamond drilling occurred is that a one of Phelps Dodge's geology maps identifies a drill camp west of the occurrence location and Overland Resources reported finding the remains of drill collars in the area. Neither company provide actual locations for the drill collars.

Overland Resources collected 7 lines of soil samples. The grid was orientated northeast to southwest and covered the central portion of their claim block. Areas to the east and west were not sampled due to swampy conditions. The company also collected rock samples from various outcrops located throughout the claim block. No significant results were reported.

Work History

Date	Work Type	Comment
12/31/1978	Trenching	
12/31/1971	Drilling	5 holes (613.9 m). Date of diamond drilling is uncertain (1971-72).
12/31/1971	Geology	
12/31/1971	Geochemistry	Grid based.
12/13/2011	Geochemistry	On Riddell claims.
12/13/2011	Geochemistry	Grid based on Riddell claims.
12/13/2011	Geology	On Riddell claims.
12/13/1979	Trenching	
12/13/1969	Geochemistry	On May and Box zones.
12/13/1969	Trenching	On May and Box zones.
12/13/1968	Geochemistry	Regional program, Hess project. also limited rock and soil sampling.

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
095895	2011	Geological and Geochemical Surveying on the Riddell Property	Soil - Geochemistry, Detailed Bedrock Mapping - Geology		
061271	1971	Project No. 196 - Casca	Rock - Geochemistry, Soil - Geochemistry, Detailed Bedrock Mapping - Geology, EM - Ground Geophysics, Magnetics - Ground Geophysics, Handblast - Trenching		
018941	1968	Hess Project Report 1968 Laforce Lake - Mount Selous Area	Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Regional Bedrock Mapping - Geology, Prospecting - Other		

Related References

Number	Title	Page(s)	Reference Type	Document Type
ARMC000356	Topography Map - Riddell		Property File Collection	Geoscience Map (General)
MIR1971_72	Mineral Industry Report 1971 - 72	105-106.	Indian & Northern Affairs Canada/Department of Indian & Northern Development: Geology	Annual Report
2003-9(D)	Yukon Digital Geology (version 2)		Yukon Geological Survey	Open File (Geological - Bedrock)
ARMC016323	Geochemical results and claim group map of sheet 105J/12 - Revised - Ross River		Property File Collection	Geochemical Map
ARMC016691	Geochemical results and claim group map of sheet 105J/12 0 Revised		Property File Collection	Geoscience Map (General)
ARMC016690	Geochem samples locations map - 105J/12 - With notes on Selwyn project		Property File Collection	Geochemical Map
ARMC016689	Geochem samples map - 105J/12 - With notes on Selwyn project		Property File Collection	Geochemical Map