Occurrence Details

Occurrence Number: 105L 062
Occurrence Name: Government
Occurrence Type: Hard-rock
Status: Showing
Date printed: 5/31/2025 3:00:06 AM

General Information

Secondary Commodities: copper, lead, silver, zinc
Deposit Type(s): Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn
Location(s): 62°11'32" N - -134°36'44" W
NTS Mapsheet(s): 105L02
Location Comments: .5 Kilometres
Hand Samples Available: No
Last Reviewed:

Capsule

Work History

The occurrence was discovered in 1998 by Don Murphy of the Yukon Geology Program. In Nov/98 P. Andrietz staked VMS cl 1-4 (YC09162) 750 m to the west.
Staked as Nina cl 1-8 (YC09182) in Dec/98 by Copper Ridge Exploration Inc. The company staked Nina cl 9-18 (YC14619) in May/99 and carried out a reconnaisance scale rock, soil and silt sampling program later in the summer.

Capsule Geology

The occurrence lies within the Little Salmon Range located southwest of the Tintina Fault, in the main body of the Yukon-Tanana Terrane. Detailed mapping in the Little Salmon Range completed in 1999 by Colpron of the Yukon Geology Program, shows that the Yukon-Tanana Terrane consists of coherent stratigraphic units that can be followed for tens of kilometres and that primary textures are commonly well preserved.
In the Little Salmon Lake area, geological mapping by Colpron shows that mid-Mississippian to early Pennsylvanian volcanic rocks of the Little Salmon succession (Colpron¿s unit 3, in earlier maps), unconformably overlie two distinct map units. To the east, the Little Salmon succession rests above the Drury assemblage (unit 1 in earlier maps), an arkosic grit and quartzite unit, which is intruded by an early Mississippian granodiorite. To the west, the volcanic rocks overlie a mixture of meta-sedimentary and meta-igneous rocks, the Snowcap assemblage (unit 2 in earlier maps), which record a poly-metamorphic history. These rocks are intruded by diorite plutons of the Tatmain/Little Salmon suite (ca. 340 Ma), which are likely subvolcanic to the Little Salmon succession. Accordingly, the Snowcap assemblage forms the basement onto which volcanic rocks of the Little Salmon succession were erupted.
The Little Salmon succession is dominated by volcaniclastic rocks (both epiclastic and tuffaceous). A prominent marble unit of Late Mississippian ¿ early Pennsylvanian age occurs in the lower part of the Little Salmon succession. Dacite and quartz-feldspar porphyry, dated at ca. 340 Ma, mark the base of the sequence near Little Salmon Lake. The felsic volcanic unit hosts a small sulphide occurrence (this occurrence). Near Little Samon Lake, volcanic rocks of the Little Salmon succession are typically of cal-alkiline composition; they record a second cycle of continental arc magmatism in the area. These rocks pass along strike to the northwest into a sequence of alkali basalt, which contains manganiferous exhalative rocks.
The occurrence occurs in a roadcut located on the north side of the Robert Campbell Highway, about 12 km west of Drury Creek. It consists of a sulphide zone which occurs at the contact between Snowcap assemblage quartzite, unit PSq and an overlying rhyolite, unit MMLSp, which marks the base of the Little Salmon volcanic assemblage. The sulphide zone itself is approximately 3 m wide and consists of semi-massive pyrite-magnetite-chalcopyrite horizons in a chlorite + quartz matrix. The overlying meta-rhyolite is altered to chlorite + epidote and locally contains magnetite veins. A second zone of non-magnetic massive sulphides, less than 1 m wide, occurs in a small isolated outcrop, located approximately 30 m to the west. Mapping indicates that the rhyolite unit thins to the northwest, whereas the quartzite gets thicker. No other sulphide occurrences were observed along the contact to the northwest, much of which is covered by overburden. Selected assay results from the sulphide bearing horizons returned > 600 ppm Cu and background values for other metals. The extensive chloritic alteration and anomalous Cu concentrations of the mineralized zone suggest that it may have formed in a sub-seafloor hydrothermal system.
Copper Ridge personnel prospected and sampled the meta-rhyolite horizon until it thined out to the northwest. The best rock sample returned 17.7 ppm Ag, 412 ppm Cu, 321 ppm Pb and 153 ppm Zn, from a site located 1 350 m northwest (on strike) from the occurrence. Silt and soil samples spiked in the area surrounding the occurrence but did not return anomalous values.

References

COLPRON, M., 1999a. A new mineral occurrence in Yukon-Tanana Terrane near Little Salmon Lake, central Yukon (NTS 105L/2). In Yukon Exploration and Geology 1998, C.F. Roots and D.S. Emond (eds.), Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, p. 255-258.

COLPRON, M., 1999b. Preliminary geological map of Little Salmon Range (parts of NTS 105L/1, 2 & 7), central Yukon. Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Open File 1999-2, 1:50 000 scale. (out of print).

COLPRON, M., 2000. Geological map of Little Salmon Lake (parts of NTS 105L/1, 2 & 7), central Yukon (1:50 000 scale). Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Open File 2000-10.

COLPRON, M., AND REINECKE, M., 2000. Glenlyon project: Coherent stratigraphic succession of Yukon-Tanana Terrane in the Little Salmon Range, and its potential for volcanic-hosted massive sulphide deposits, central Yukon. In: Yukon Exploration and Geology 1999, D.S. Emond and L.H. Weston (eds.), Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, p. 87-100.

COLPRON, M. AND YUKON-TANANA WORKING GROUP, 2001. Ancient Pacific Margin ¿ An update on stratigraphic comparison of potential volcanogenic massive sulphide-hosting successions of Yukon-Tanana Terrane, northern British Columbia and Yukon. In: Yukon Exploration and Geology 2000, D.S. Emond and L.H. Weston (eds.), Exploration and Geological Services Division, Yukon Indian and Northern Affairs Canada, p. 97-110

COLPRON, M., 2001. Geochemical characterization of Carboniferous volcanic successions from Yukon-Tanana Terrane, Glenlyon map area (105L), central Yukon. In: Yukon Exploration and Geology 2000, D.S. Emond and L.H. Weston (eds.), Exploration and Geological Services Division, Yukon Indian and Northern Affairs Canada, p. 111-136.

COPPER RIDGE EXPLORATIONS INC. Feb/2000. Assessment Report #094085 by B. Kreft.

Work History

Date	Work Type	Comment
12/31/1999	Geochemistry	
12/31/1999	Geology	
12/31/1999	Geochemistry	
12/31/1999	Geochemistry	
12/31/1998	Geology	

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
094085	1999	Assessment Report for the Nina 1-18 Quartz Claims Little Salmon Lake Area	Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Prospecting - Other		