Occurrence Details

Occurrence Number: 115I 159
Occurrence Name: Willow Creek
Occurrence Type: Hard-rock
Status: Showing
Date printed: 12/16/2025 2:02:34 PM

General Information

Secondary Commodities: gold, lead, silver, zinc
Deposit Type(s): Epithermal Au-Ag: Low Sulphidation
Location(s): 62°4'40.53" N - -137°9'40.06" W
NTS Mapsheet(s): 115I03
Location Comments: Location provided by Rockhaven Resources 2019
Hand Samples Available: No
Last Reviewed:

Capsule

Work History

The claims surrounding the occurrence were re-staked by G. Dickson as Wedge cl 1-15 (YA82167), by M. Muursepp as Bull cl 1-8 (YA81420) and other miscellaneous claims, in 1984. Aurchem carried out trenching and soil geochemistry near Willow Creek in 1989 and further trenching in 1990.

Aurchem added JBF cl 1-7 ((fractional) YB362590) and Jon-Wedge cl 1-6 (YB35895) in August 1992 and explored with 3,384.8 m of reverse circulation drilling in 32 holes in July and August, 1992.

In early 1996, BYG obtained an option to purchase all of Aurchem's claims located in the Mt Nansen area. As part of this agreement BYG funded an extensive trenching and mapping program from August to October 96, on the Bull 2, JBF 1-f, Jon-Wedge 3 and LCGS 1 claims. BYG encountered financial difficulties at the end of 1996 and suspended most exploration activities. In February 1999, BYG announced plans to temporarily shut down the Mount Nansen Mine. In March 1999, BYG was placed in receivership and the Nansen mine became a Type II Minesite. The claim grouping, including the Wedge and JBF claims, reverted to Aurchem after the federal government took over maintenance of the adjoining Mount Nansen mine site in July 1999.

In 2009, 101073531 Saskatchewan Corp. flew a regional airborne and magnetic survey that included the Willow Creek occurrence. In 2011, Ansell Capital Corp optioned the claims, including the Willow Creek occurrence, from Aurchem Exploration. Ansell Capital carried out soil geochemistry in 2011.

Regional & Property Geology

The occurrence is located in the Dawson Range within Yukon-Tanana Terrane (YTT). The rocks of the YTT in this region consist of Early Mississipian metamorphic rocks separated into meta-sedimentary and meta-igneous suites (Stroshein, 1998). The meta-sedimentary suite consists of micaceous quartz-feldspar gneiss, schist and quartzite of the Nasina Assemblage. The meta-igneous package is comprised of biotite-hornblende feldspar gneiss and coarse-grained granodiorite orthogneiss with lesser amphibolite.

Four rock types dominate the geology surrounding the occurrence and are comprised of:
1. Paleozoic metamorphic Yukon-Tanana gneiss, quartzite, and amphibolite to the south;
2. Triassic to Jurassic metamorphosed alkali-feldspar-rich plutonic suites;
3. Mid-Cretaceous Mount Nansen Suite andesite, felsic lapilli tuffs, basaltic to latite volcanic rocks; and quartz feldspar porphyry, dacite, latite, and quartz monzonite porphyritic hypabyssal rocks; and
4. Mid-Cretaceous Whitehorse granodiorite.

A porphyry copper-molybdenum complex (MINFILE occurrence 115I 066) is found in the northeast section of the property, with argillic and propylitic alteration haloes covering the remainder. The porphyry complex occurs at the intersection between a major northwest structure and an east-west fault. Copper and molybdenum ± gold and silver occur in a porphyry stock and phyllic-altered granodiorite. Surface leaching and oxidation is variable, but can reach considerable depths. A steeply dipping, northwest-striking epithermal vein system which formed peripheral to the porphyry migrated inward during cooling and collapsed, creating a complex system of overlapping mineralization including: porphyry Cu-Mo-Au-Ag; northwest striking mesothermal quartz-pyrite-gold veins; and northwest striking epithermal quartz-Au-Ag-Pb-Zn-Cu veins.

Mineralization & Results

The Willow Creek occurrence consists of three Au-Ag-Pb-Zn veins along the edge of an extensively clay altered volcanic-granodiorite contact.

Trenching in 1989 returned 0.867 oz/ton Au, 16.8 oz/ton Ag, and 17.3% Pb over 1.5 feet. Grab samples returned up to 0.2 oz/ton Au, 90 oz/ton Ag, and 62% Pb.

Work History

Date	Work Type	Comment
12/13/2011	Geochemistry	
12/13/2009	Airborne Geophysics	And EM.
12/13/1992	Drilling	
12/13/1990	Trenching	
12/13/1989	Geochemistry	

12/13/1989	Trenching	

Related References

Number	Title	Page(s)	Reference Type	Document Type
YEG1998_20	A summary report on the geology of the Brown-McDade gold-silver deposit, Mount Nansen mine area, Yukon		Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Annual Report Paper
YEG1997_14	Geology and mineral deposits of the Mount Nansen camp, Yukon		Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Annual Report Paper