

Canwell Cu-Ni-PGE Prospect

Avalon Development Corporation Summary Report May 2019

- Surface outcrops of the Canwell prospect returned up to 15% nickel, 4.5% copper, 17 gpt platinum, 15 gpt palladium, 4 gpt gold and 128 gpt Ag from layered mafic – ultramafic host rocks
- Large zone of disseminated sulfide mineralization over 170 meters drill thickness that has returned assays of 0.27% Ni and 0.02% Cu with elevated PGE, Au, and Ag values
- Known mineralization open to expansion and is road accessible on State of Alaska land open to mineral development

The Canwell Cu-Ni-PGE prospect is located 265 kilometers (165 miles) southeast of Fairbanks, on the north flank of the central Alaska Range. The project consists of 43 State of Alaska mining claims covering approximately 6,800 acres. The project is road accessible via the 4 mile-long Red Rock Canyon Road, an informal state gravel road that is connected to the Richardson Highway, a paved, all-season State of Alaska highway. The 48-inch diameter Trans Alaska petroleum pipeline parallels the Richardson Highway just west of the project and currently carries approximately 0.5 million barrels of crude oil per day to the deep water all-weather port at Valdez, approximately 200 miles south of the project.



Mineral exploration of the Canwell prospect area has occurred intermittently since the 1950s, however, little significant exploration was conducted on the Canwell prospect until the 1990's when INCO subsidiary American Copper and Nickel Company (ACNC) completed prospecting and airborne geophysics and then staked a large block of ground over the Fish Lake, Rainy and Canwell mafic-ultramafic complexes. ACNC and subsequent JV partner Fort Knox Gold Resource completed two drill holes at Canwell in 1997 and an additional 5 holes in 1998. Additional mapping, geochemical sampling, geophysical surveys and limited drilling were conducted on what became known as the MAN project. From 1998 through 2004, owner Nevada

Star Resources and JV partner Anglo American completed 6 RC holes (2,275ft) on the Canwell prospect. Nevada Star eventually was taken over by Pure Nickel Inc. who, partly in conjunction with partner ITOCHU Corporation, conducted significant exploration on the MAN project through 2013 but completed little additional work at the Canwell prospect through 2015 when Pure Nickel allowed the MAN project claims to lapse. Current owner Northridge Exploration acquired the project in 2017 and has completed additional prospecting and geochemical sampling since acquisition.

The Canwell prospect is hosted in the Canwell Complex, a northwest trending Triassic-age mafic-ultramafic complex that is part of the regionally extensive Wrangellia Terrane. Wrangellia is interpreted to be a late-Paleozoic island-arc assemblage which underwent rifting during the Triassic, forming an extensive overlying flood-basalt package (+4,500m) and related mafic to ultramafic intrusions. The intrusive component of this assemblage, locally known as the Nikolai Group, consists of cumulate-textured dunite, peridotite and clinopyroxenite layered intrusions with subordinate gabbro that are intruded into older sulfidic metasediments and metavolcanics and overlying cogenetic flood basalts.

Over 40 nickel-copper-PGE sulfide occurrences have been document in the area, ranging from disseminated through net textured to semi-massive and massive magmatic sulfides commonly near the base of zoned mafic-ultramafic intrusions. At the Canwell prospect, geologic mapping, geochemical sampling, backhoe trenching and limited drilling have defined two nickel-copper-PGE mineralized trends, the 1,000m long Canwell Ridge zone and the 1,500m long Northwest Canwell zone. Surface samples of massive to semi-massive sulfide mineralization found at or near the contact between a gabbro and dunite have returned values ranging between 0.4 to 15.4% Ni, 0.1 to 4.51% Cu, 0.69 to 17.6 gpt Pt, 0.69 to 15.6 gpt Pd, trace to 4.14 gpt Au, and trace to 128 gpt Ag. Additional showings at Canwell include a large zone of disseminated sulfide mineralization over a 170m drill thickness that returned 0.27% Ni and 0.02% Cu with anomalous PGE, Au, and Ag values.

The Canwell prospect is temporally and genetically similar to the Kluane mafic-ultramafic belt of the Yukon Territory where Ni-Cu-PGE sulfide mineralization is frequently found near the base of peridotite and marginal gabbro sills which are considered to be cogenetic and coeval with the overlying Triassic-age Nikolai Group basalt. Contamination of the magma, particularly with sulfur, by assimilation of the sedimentary country rocks, is considered to have been a key factor in the formation of Ni-Cu-PGE sulfide mineralization at Canwell and in the Kluane belt. Faults also appear to be important conduits for focusing mineralization at Canwell and Kluane.

Potential exists at the Canwell prospect for Cu-Ni-PGE mineralization similar to that at the past-producing Wellgreen deposit (669,150 tonnes averaging 2.23% Ni, 1.39% Cu, 0.073% Co and 2.15 ppm Pt + Pd) and the currently active Nickel Shaw prospect (Measured and Indicated resources of 323,400 tonnes grading 0.26% Ni, 0.16% Cu, 0.253 gpt Pt, 0.255 gpt Pd and 0.015% Co), both in the Kluane Belt, Yukon Territory. The owner of the Canwell prospect is seeking a financially and technically capable party to take over future exploration and development of the Canwell prospect.

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