



Occurrence Details

Occurrence Number: 116C 020
Occurrence Name: Alaska
Occurrence Type: Hard-rock
Status: Anomaly
Date printed: 4/29/2025 7:19:17 AM

General Information

Secondary Commodities: arsenic, gold, silver
Deposit Type(s): Plutonic Related Au
Location(s): 64°3'4" N - 140°59'45" W
NTS Mapsheet(s): 116C02
Location Comments: .5 Kilometres
Hand Samples Available: No
Last Reviewed:

Capsule

Work History

Investigated in May/70 by the Dawson Range Joint Venture (Straus Explorations Inc, Martin Marietta Corporation, Molybdenum Corporation of America, Trojan Consolidated Mines and Great Plains Development Corporation of Canada Ltd) following the release of stream sediment geochemical results from samples collected the previous year in Alaska.

* The exact location of the anomaly appears unknown.

R. Beckett staked Pk cl 1-4 (YB54253) in the general area in Sept/95. J.P. Ross surrounded the PK claims on three sides with Uni cl 1-13 (YB67499) in Oct/95. In 1996 Ross optioned the Uni claims and the neighboring Cici claims (Minfile Occurrence 116C 146) to Madrona Mining Ltd. Madrona carried out airborne electromagnetic, magnetic and radiometric surveying over the claim blocks in Jul/96 and staked Uni cl 14-17 (YB88049) in Jun/96 and Uni cl 18-40 (YB88681) in Aug/96 forming a contiguous claim block joining the two occurrences.

In Sep/97 Madrona carried out an extensive soil sampling program over the combined claim block and staked Uni cl 41 (YC04559) to cover ground that had been staked in Jun/96 by S. Moldum as Claim cl 1 (YB88048). In Jun/98 the company staked Cici cl 35-47 (YC07248) to the east, Creek cl 31-38 (YC07263) to the southeast and Uni cl 42-53 (YC07371) to the north covering geochemical anomalies located the previous year which were on open ground.

Following a property visit in Jul/98 Kennecott Canada Exploration Inc optioned the property from Madrona and carried out prospecting, geological mapping, geochemical sampling and gravity surveying that year. Kennecott staked Sixty cl 1-143 (YC12289) to the south in Aug/98. In 1999 after optioning Bud and Mac claims located to the east (Minfile Occurrence 116C 166) and other claims to the southeast (Minfile Occurrences 116C 019 and 082), from their respective owners, Kennecott carried out prospecting, geochemical sampling and airborne geophysical surveying over their combined claim holding. The following year Kennecott dropped all of its options in the area.

In August and Sep/2002 J.P. Ross prospected, soil sampled and rock sampled two areas southeast of the Porker Creek anomaly. In 2006 Ross rock and soil sampled the area north of the Porker Creek anomaly. In Jul/2006 Ross staked Uni cl 54-59 (YC44635) on the north side of the anomaly.

Capsule Geology

The occurrence is located within the Yukon-Tanana Terrane west of Dawson City, Yukon. The region escaped glaciation and thus there is very little exposed outcrop in the area.

Preliminary mapping by Madrona Mining Ltd indicates that the occurrence is underlain by Late Devonian(?) to mid-Mississippian Nasina assemblage rocks consisting of quartz carbonaceous and quartz muscovite schist (quartzite). A large unit of Nasina assemblage metavolcanics, exposed in a thrust panel, cuts diagonally northeast-southwest across the neighboring Cici and Creek claim blocks. A Late Cretaceous aged unit of volcanic rock consisting of massive andesitic flows and breccias, that correlates with Carmacks Group volcanics, unconformably overlies the other units in the northeast corner of the Cici claim block.

A stream sediment sampling program by the Alaska Department of Natural Resources returned anomalous copper (50-180 ppm) and zinc (450-550 ppm) values from streams originating on the Yukon side of the border. No mineralization was found.

The airborne geophysical survey identified 15 anomalies of which 6 are conductive signatures having possible potential for reflecting sulphide mineralization. The interpretation and mineral potential of the anomalies was hampered by the lack of geological mapping and other field observations. Follow-up field investigations were recommended to accurately define the source of the anomalies.

Madrona's soil survey utilized four grids located around the headwaters of Glacier Creek and identified 12 geochemical anomalies of which 5 were base metal anomalies consisting of zinc, ± copper and ± lead. The remaining 7 anomalies consisted of arsenic ± zinc, copper and lead and locally tungsten. The company did not report threshold values but the deep overburden overlying the area masked the response of the survey with the highest zinc result returning 304 ppm. The association of arsenic and locally tungsten with many of the anomalies is thought to reflect the possible presence of intrusive-related gold mineralization, although none of the gold results were above the 1 ppm detection limit of the analytical technique used in the testing.

Kennecott's sampling was regional in nature and was completed at a reconnaissance scale across a much larger area encompassing most of their accumulated holdings. The company's program which targeted the gold potential of the area successfully identified five mineralized anomalies, one of which is related to this occurrence.

The Porker Creek anomaly which is located 2.2 km east-northeast of this occurrence location, covers the Porker Creek drainage basin and includes a 500 by 1000 m gold in soil anomaly.

Kennecott identified three different types of mineralization in the area:

- 1) Vein type mineralization in the northeast part of the basin, coincident with the soil anomaly, which is composed of numerous, predominately east trending, steeply south dipping quartz veinlets containing traces of fine grained disseminated pyrite in locally silicified and/or graphitic, rusty weathering Nasina assemblage quartzites which returned 105 ppb gold from grab samples;
- 2) A second type of vein mineralization, collected as float in the northwestern part of the drainage basin, consisting of quartz vein breccia in silicified quartzite with trace disseminated pyrite and kaolinite clay alteration, samples of which returned up to 270 ppb gold and 203 ppm arsenic;
- 3) Intense bleaching and quartz-pyrite-sericite alteration (metasomatism) of muscovite quartzite in a 5 by 5 m outcrop near the eastern fork of Poker Creek, described by Kennecott as possible VMS style alteration/mineralization, a grab sample of which returned 80 ppb gold and 1.54 ppm silver.

Ross undertook the 2002 sampling program to test an area lying between the Porker Creek anomaly and a soil anomaly found previously by Madrona Mining called the Madrona anomaly.

On the west grid gold values in soils were anomalous but erratic while on the east grid, gold in soil values were low. The 2006 program tested an area immediately north of the Porker Creek anomaly. The rocks in the area contain considerable graphite and were assayed using 30 element Inductively Couple Plasma - Mass Spectroscopy (ICP-MS) instead of traditional fire assay. It appears the graphite content of the soils and rocks affected the solubility of any contain gold resulting in lower than expected results. Ross also sampled at the Ferkel and Walker Folk anomalies which are related to Minfile Occurrence 116C 146.

Work History

Date	Work Type	Comment
12/31/2006	Geochemistry	
12/31/2006	Geochemistry	
12/31/2002	Geochemistry	
12/31/2002	Geochemistry	
12/31/1998	Geochemistry	
12/31/1998	Airborne Geophysics	Also radiometric survey.
12/31/1998	Other	
12/31/1997	Geochemistry	
12/31/1996	Airborne Geophysics	Also magnetic and radiometric surveys
12/13/1998	Ground Geophysics	

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
096208	2010	SIXTY MILE Property-2010 Geological, Geochemical, Geophysical and Auger, RAB and Diamond Drilling	Gamma-Ray Spectrometry - Airborne Geophysics, Magnetic - Airborne Geophysics, Auger - Drilling, Diamond - Drilling, Rotary - Drilling, Drill Core - Geochemistry, Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Mechanical - Trenching	443	7289.37
094055	1999	Report on the 1999 Geological, Geochemical and Geophysical Work on the SIXTY MILE Property	Gamma-Ray Spectrometry - Airborne Geophysics, Magnetic - Airborne Geophysics, Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Detailed Bedrock Mapping - Geology, Gravity Survey - Ground Geophysics, Petrographic - Lab Work/Physical Studies, Prospecting - Other, Mechanical - Trenching		
093559	1996	Report on a Combined Helicopter-Borne Electromagnetic, Magnetic and Radiometric Survey, Poker Creek Prospect Uni and Cici Claim Groups, Little Gold Area, Central West Yukon	Electromagnetic - Airborne Geophysics, Gamma-Ray Spectrometry - Airborne Geophysics, Magnetic - Airborne Geophysics		

Related References

Number	Title	Page(s)	Reference Type	Document Type
1996-1(G)	Geological Compilation Maps of the Northern Stewart River Area, Klondike and Sixty mile Districts (115N/15, 16, 115O/13, 14 and Parts of 115O/15, 16)		Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Open File (Geological - Bedrock)