Occurrence Details

Occurrence Number: 115I 171
Occurrence Name: Kirsteen
Occurrence Type: Hard-rock
Status: Prospect
Date printed: 8/3/2025 10:05:02 AM

General Information

Secondary Commodities: gold, silver
Aliases: Freegold
Deposit Type(s): Epithermal Au-Ag: Low Sulphidation
Location(s): N - W
NTS Mapsheet(s): 115I06
Location Comments: Coordinates provided by Triumph Gold in 2020.
Hand Samples Available: No
Last Reviewed:

Capsule

Work History

The original discovery in the Mt. Freegold area was made by P.F. Guder in 1930 on the Augusta cl (15494), followed by discoveries on the adjoining Peerless, Gold Star and Margarete claims. Guder explored by hand pits and shallow shafts until 1959. Guder's claims (Gold Star group) were optioned in 1969 to Yukon Revenue Mines Ltd and in 1973 to Prism Resources Ltd.

Prism transferred the option early in 1974 to Dynasty Exploration Ltd. Guder's claims were optioned by Arctic Red Resources Corporation from 1980 to 1982, then transferred to Guder Mining Exploration Ltd. The Guder and Harris claims were optioned in 1986 by Chevron Minerals Ltd., which conducted a grid geochemical survey and bedrock mapping, and in 1987 by Big Creek Joint Venture (Big Creek Resources Ltd and Rexford Minerals Ltd), which explored with extensive bulldozer and excavator trenching, diamond drilling (2 holes) and geochemistry. The claims were transferred back to Harris in September 1989.

Gagan Gold Corporation optioned the property and explored with trenching and geochemistry in 1991. Redell Mining Corporation optioned the Goldstar property from Harris and Associates in August 1994. In September 1995, Pauline cl (YB37987) and Goldstar cl 1-3 (YB37988) were transferred to B. Harris. Redell Mining changed its name to FM Resources Corp. and explored the Kirsteen occurrence with mechanical trenching and rock geochemistry in 1999.

In 2004, Midnight Mines Ltd. carried out prospecting, rock geochemistry of grab samples and bedrock mapping at Kirsteen.

Northern Freegold Resources consolidated the claims in 2006 as part of their Golden Revenue property and performed a property wide VTEM and magnetic airborne survey, including the Kirsteen occurrence. In 2013, trenching and rock geochemistry was carried out at Kirsteen.

Triumph Gold acquired Northern Freegold Resources in 2015 and the property that includes the Kirsteen occurrence is now termed the Freegold Mountain Project.

Regional & Property Geology

The occurrence is partly underlain by Yukon-Tanana Terrane (YTT). The rocks of the YTT in this region consist of Early Mississippian metamorphic rocks separated into meta-sedimentary and meta-igneous suites. The meta-sedimentary suite consists of micaceous quartz-feldspar gneiss, schist and quartzite. The meta-igneous package is comprised of biotite-hornblende feldspar gneiss and coarse-grained granodiorite orthogneiss with lesser amphibolite.

The YTT basement rocks are cut by numerous plutonic and volcanic events from the Mesozoic (Murray & Friend, 2018), including:
1. Early Jurassic Long Lake monzonite to syenite plutonic suites;
2. Mid-Cretaceous Mount Nansen Suite andesite to diorite;
3. Mid-Cretaceous Whitehorse granodiorite, quartz monzonite and granite;
4. Late Cretaceous Casino quartz monzonite;
5. Late Cretaceous Prospector Mountain syenite; and,
6. Quartz feldspar and feldspar hornblende porphyry dykes and plugs.

The major structural feature in the area is the Big Creek Fault with steeply-dipping, northwest-trending dextral faults parallel to the more regional Tintina and Denali faults (AR 097175).

Mineralization at Kirsteen cuts the metamorphic basement rocks and the mid Cretaceous Casino granodiorite and appears to be intimately associated with probable late Cretaceous quartz feldspar porphyry dykes (AR 092699).

Mineralization & Results

The Kirsteen zone lies between the Margarete and Augusta showings (MINFILE occurrences 115I 053 and 169), and is possibly a faulted offset of the Margarete vein. The zone at Kirsteen trends west-northwest and dips steeply to the northeast (AR 093019).

Gold mineralization occurs in silicified, intensely argillic-altered and brecciated quartz-feldspar porphyry. The vein system consists of quartz- carbonate stringers and veinlets, with minor sulphides, hosted by a 3.3 m wide zone of intense argillic alteration. The sulphides consist of pyrite with lesser arsenopyrite and chalcopyrite (AR 092127; AR 092699).

The best surface sample from trench G-5 in the Kirsteen zone graded 1.92 g/t Au and 30.0 g/t Ag over 5 m. Drill hole 87-17 intersected 4.33 g/t Au and 2.43 g/t Ag over a true width of about 4 m (AR 092127).

Work History

Date	Work Type	Comment
12/13/2013	Geochemistry	Grab and chip sampling.

12/13/2013	Trenching	
12/13/2006	Airborne Geophysics	Property wide survey.
12/13/2006	Airborne Geophysics	Property wide survey.
12/13/2004	Geology	
12/13/2004	Other	And geochemistry of grab samples.
12/13/1999	Geochemistry	Chip sampling of trenches.
12/13/1999	Trenching	
12/13/1991	Geochemistry	Chip sampling of trenches.
12/13/1991	Trenching	
12/13/1987	Drilling	2 holes.
12/13/1986	Geology	
12/13/1986	Geochemistry	

Related References

Number	Title	Page(s)	Reference Type	Document Type
YEG2017_4	New contributions to the bedrock geology of the Mount Freegold district, Dawson Range, Yukon (NTS 115I/2, 6 and 7)		Yukon Geological Survey	Annual Report Paper
2018-2	Bedrock geological map of the Mount Freegold district, Dawson Range		Yukon Geological Survey	Open File (Geological - Bedrock)