



Occurrence Details

Occurrence Number: 115I 053

Occurrence Name: Margarete

Occurrence Type: Hard-rock

Status: Prospect

Date printed: 4/28/2025 11:07:26 AM

General Information

Primary Commodities: gold, silver

Aliases: Goldstar, Guder, Freegold

Deposit Type(s): Skarn Au

Location(s): 62°17'33" N - -137°8'42" W

NTS Mapsheet(s): 115I06

Location Comments: Coordinates provided by Triumph Gold in 2020.

Hand Samples Available: Yes

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, when Conwest, under option, drilled 5 holes (309 m) on the Main Vein and performed bulldozer trenching in 1964 on the Old cl (86068). Guder's claims (Gold Star group) were optioned in 1969 to Yukon Revenue Mines Ltd., which conducted bulldozer trenching and mapping, and in 1973 to Prism Resources Ltd., which did a magnetometer survey and staked an additional 100 claims - PFG, AG, etc (Y75468) in June-September.

Prism transferred the option early in 1974 to Dynasty Exploration Ltd., which explored by grid soil sampling, magnetic survey, bulldozing and 8 holes (653 m) later in the year. Guder's claims were optioned by Arctic Red Resources Corporation from 1980 to 1982, then transferred to Guder Mining Exploration Ltd., which performed trenching in 1982 and 1983. The south side was re-staked as Erick cl (YA82008) in June 1984 by D. Dodge and again as Rick cl (YA92748) in July 1985 by G. Harris. The Guder and Harris claims were optioned in 1986 by Chevron Minerals Ltd., which conducted a grid geochemical survey, and in 1987 by Big Creek Joint Venture (Big Creek Resources Ltd and Rexford Minerals Ltd), which explored with extensive bulldozer and excavator trenching, a VLF-EM and magnetometer survey and 17 holes (741 m) in 1987 and minor trenching in 1988. The claims were transferred back to Harris in September 1989.

Gagan Gold Corporation optioned the property and explored with trenching and six rotary holes (304.8 m) in 1991. G. Harris trenched on the property in January 1993, added several fractional claims in May and conducted a program of soil and rock sampling late in the year.

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.

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 Margarete occurrence. Limited trenching was performed at Margarete in 2008.

Triumph Gold acquired Northern Freegold Resources in 2015 and the property that includes the Margarete occurrence is now termed the Freegold Mountain Project. Triumph performed mechanical trenching and diamond drilling of four holes (1349 m) in 2018 and further trenching and diamond drilling (2 holes) in 2019.

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).

Gold bearing veins and skarn at Margarete occur in a roof pendant of Paleozoic metasedimentary rocks enclosed in Mesozoic syenite and granodiorite and intruded by Cretaceous porphyry dykes. The metamorphic rocks consist of quartz-feldspar-mica-chlorite gneiss and schist, and minor marble, amphibolite and quartzite (AR 093019).

Mineralization & Results

Mineralization in the Margarete zone is associated with quartz-carbonate stringers and veinlets in a 3.3 m wide zone of intense argillic alteration and brecciation and quartz-feldspar porphyry dykes. Sulphide minerals are pyrite and lesser arsenopyrite and chalcopyrite, which are commonly oxidized to depths of 20 m or more (AR 092127; AR 092699).

The Margarete vein system has been traced in drill holes and trenches for a total length of 350 m. The mineralized zone strikes west-northwest and dips steeply north. A specimen taken by the GSC from an old dump assayed 2,070 g/t Au (AR 093019). Historical, geological reserves (not NI 43-101 compliant) based on 1987 drilling at 50 m spacing are 123,800 tonnes grading 4.21 g/t Au and 47.2 g/t Ag to a depth of 60 m (AR 092699).

Right lateral faults probably offset the southeast extension of the Margarete zone through the Kirsteen and Augusta showings (MINFILE occurrences 115I 171 and 169) giving a possible total strike length of more than 1.5 km. A gold soil anomaly extends an additional 1 km to the northwest (AR 092699).

Diamond drilling in 1991 tested the Margarete vein at 50 m intervals along strike and intersected 0.049 oz/ton Au and 1.52 oz/ton Ag over 5 feet in hole 91-1 and 0.1635 oz/ton Au and 0.61 oz/ton Ag over 5 feet in 91-3 (AR 093019).

Triumph Gold performed diamond drilling in 2018 and 2019, which intersected significant copper and gold grades in supergene enriched sulphides (including 0.26 g/t Au, 3.3 g/t Ag and 0.17% Cu over

37.5 m in RV18-27) and porphyry style mineralization (including 0.26 g/t Au and 0.11% Cu over 26.38 m in RVD18-37) (MD&A, 23 Apr/2019).

Work History

Date	Work Type	Comment
8/1/2020	Drilling	2 holes, 186.37 m,
12/31/1993	Geochemistry	Work carried out on Goldstar property by Harris et al.
12/31/1993	Geochemistry	Work carried out on Goldstar property by Harris et al.
12/31/1993	Trenching	Work carried out on Goldstar property by Harris et al.
12/31/1991	Drilling	Four holes totaling 183 m.
12/31/1988	Trenching	
12/31/1987	Drilling	Seventeen holes, 741 m.
12/31/1987	Ground Geophysics	Also VLF-EM survey.
12/31/1987	Trenching	
12/31/1987	Trenching	
12/31/1986	Geochemistry	
12/31/1983	Trenching	
12/31/1982	Trenching	
12/31/1974	Drilling	Two holes, 219 m.
12/31/1974	Geochemistry	
12/31/1974	Ground Geophysics	
12/31/1974	Trenching	
12/31/1973	Ground Geophysics	
12/31/1969	Geology	
12/31/1969	Trenching	
12/31/1964	Trenching	
12/31/1959	Drilling	Five holes, 309 m.
12/31/1959	Trenching	
12/31/1958	Trenching	Work carried out between 1931 and 1958.
12/31/1930	Trenching	
12/13/2019	Geochemistry	
12/13/2019	Drilling	Two holes.
12/13/2019	Trenching	
12/13/2018	Drilling	Four holes totaling 1349 m.
12/13/2008	Trenching	
12/13/2006	Airborne Geophysics	Property wide survey.
12/13/2006	Airborne Geophysics	Property wide survey.
12/13/1988	Geochemistry	

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
094745	2006	2006 Geophysical Assessment Report on the Freegold Mountain Property	Electromagnetic - Airborne Geophysics, Magnetic - Airborne Geophysics		
094709	2004	2004 and 2005 Assessment Report on the Goldstar and Glen Property	Rock - Geochemistry, Bedrock Mapping - Geology, Prospecting - Other		
093019	1991	Rotary Percussion Drilling and Trenching Assessment Report on the Goldstar Property	All Weather Road - Development, Surface, Reverse Circulation - Drilling, Drill Cuttings - Geochemistry, Rock - Geochemistry, Mechanical - Trenching	6	304.80

092699	1989	Trenching Program on the Goldstar Property	Rock - Geochemistry, Mechanical - Trenching		
092127	1987	Trenching, Geophysical and Diamond Drilling Program on the Goldstar Property	All Weather Road - Development, Surface, Diamond - Drilling, Rock - Geochemistry, EM - Ground Geophysics, Magnetics - Ground Geophysics, Mechanical - Trenching	17	741.10
091896	1986	Report on Geological Mapping and Geochemical and Geophysical Surveys Done on the Goldstar Property	Soil - Geochemistry, Regional Bedrock Mapping - Geology, EM - Ground Geophysics, Prospecting - Other		
061154	1974	Application for Northern Mineral Assistance Grant Peg, Au, Ag, Add and Gold Star Claim Groups, Cat Trenching Report Gold Star Group	Mechanical - Trenching		
061093	1974	Geological and Geophysical Report Gold Star Group	Magnetics - Ground Geophysics, Hand - Trenching		
060200	1970	Report on the Geophysical and Geochemical Surveys Ram and Bow Claim Groups	Electromagnetic - Airborne Geophysics, Magnetic - Airborne Geophysics, Rock - Geochemistry, Soil - Geochemistry		

Related References

Number	Title	Page(s)	Reference Type	Document Type
ARMC007647	Correspondence Re: Freegold Mountain property, Carmacks area		Property File Collection	Miscellaneous Company Documents
ARMC007859	Preliminary reconnaissance-type mapping - Freegold Mtn. - Job No. 06065-3		Property File Collection	Geoscience Map (General)
ARMC007648	Correspondence Re: Prism Resources Limited, Gold Star property		Property File Collection	Miscellaneous Company Documents
ARMC007649	Report on the Gold Star group		Property File Collection	Report
ARMC007650	Isomagnetic plan map - Gammas - Freegold Mountain project - Fig. 4		Property File Collection	Geophysical Map
ARMC007651	Third annual report - Prism Resources		Property File Collection	Report
ARMC012160	Report on 1974 field work - Northern mineral assistance grant - Gold Star, PEG, ADD, AU and AG groups		Property File Collection	Report
ARMC012159	Report on the Gold Star group 115-I-6, Whitehorse Mining District, Yukon Territory		Property File Collection	Report
ARMC012166	Report on the Gold Star group 115-I-6, Whitehorse Mining District, Yukon Territory		Property File Collection	Report
ARMC012179	Progress reports: June 4, June 24, July, & August 1974 - Freegold Project		Property File Collection	Report
ARMC012170	Provisional geology map of Mt. Freegold		Property File Collection	Geoscience Map (Geological - Bedrock)
ARMC012941	Geology map with legend - Guder Best group - Dawson Range		Property File Collection	Geoscience Map (Geological - Bedrock)
ARMC012167	Geochemical map of Potassium 40 - Contour interval 5 cps - Big Creek area - Carmacks - Job No. 1150 - Fig. No. 5		Property File Collection	Geochemical Map
ARMC012184	Sketch maps - Trenches A - L & P-U - Freegold project		Property File Collection	Geoscience Map (General)
ARMC012177	Isomagnetic plan (gammas) - Freegold Mountain Project - Fig. 4		Property File Collection	Geophysical Map
ARMC012174	Map of total isomagnetic plan - Big Creek area - Carmacks - Job No. 1150 - Fig. No. 4		Property File Collection	Geophysical Map
ARMC016627	Land and disposition and mineral deposits chart - Freegold - Big Creek area		Property File Collection	Geoscience Map (General)
ARMC012175	Magnetometer values (gammas) - Freegold Mountain project - Fig. 3 with notes		Property File Collection	Geophysical Map
ARMC012176	Magnetometer values (gammas) - Freegold Mountain Project - Fig. 3 with notes		Property File Collection	Geophysical Map
ARMC012182	Provisional map 115-I/6 - Stoddart Creek with notes		Property File Collection	Geoscience Map (General)
ARMC012185	Provisional map 115-I/6 - Stoddart Creek with notes on Traverse M22-6		Property File Collection	Geoscience Map (General)
ARMC012161	Diamond drill record - Hole No. DDH-G-1 to DDH-G-8 with cross-section maps - Mt. Freegold		Property File Collection	Drill Logs
ARMC012183	Field sheets for 1974 - Freegold project		Property File Collection	Geoscience Map (General)
ARMC012173	Flight Line Layout - Big Creek Area - Carmacks - Job No. 1150, Fig. No. 3		Property File Collection	Geoscience Map (General)

ARMC01 2168	General geological report on "Freegold Mountain" property, Whitehorse M.D., Y.T.	Property File Collection	Report
ARMC01 2165	Geophysical note on the magnetometer survey of portions of Freegold Mountain, Carmacks, Y.T., on behalf of Prism Resources	Property File Collection	Report
ARMC01 2164	Analyses certificate and assay results - Mt. Freegold	Property File Collection	Assays
ARMC01 2163	Geology and Development - Area A - Freegold Project	Property File Collection	Geoscience Map (Geological - Bedrock)
ARMC01 6626	Geology and mineralization chart - Freegold - Big Creek area	Property File Collection	Geoscience Map (Geological - Bedrock)
ARMC01 2181	Magnetometer correction graphs & base station readings - May to June 1974 - Freegold project	Property File Collection	Geophysical Map
ARMC02 0318	Report on Braeburn coal area, Carmacks North coal area, Carmacks South coal area, Kotaneelee coal area, Lone Pine Mountain coal occurrence, Porter's coal, Guder's coal, Whitehorse coal area, and Bush Mountain coal area - File 164	Property File Collection	Report
ARMC01 2169	Correspondence Re: Internal report, maps on Mt. Freegold claim groups	Property File Collection	Miscellaneous Company Documents
ARMC01 2178	Correspondence with Prism Resources Re: Gold Star group near Carmacks	Property File Collection	Miscellaneous Company Documents
ARMC01 2180	Field notes - Magnetometer survey for May to June 1974 - Freegold project	Property File Collection	Miscellaneous Company Documents
ARMC01 2171	Cat trenching report - Margarete, Augusta, Liberty, Gold Star, Peerless, Protection, Shearzone 1-2, Vindicator 1-2, Excelsior 1-3, Progress 1-2, Greenstone 5, Greenstone 6 claims - Gold Star group	Property File Collection	Report
ARMC01 2172	Cat trenching report - Margarete, Augusta, Gold Star claims - Gold Star group	Property File Collection	Report
ARMC01 2162	Field sheets and claim maps - Margarete zone and MJK mineral claims - Mt. Freegold	Property File Collection	Geoscience Map (General)
BROCK0 00144	Northern mineral assistance grant report on 1974 field work (Gold Star, PEG, ADD, Au, and AG groups)	Property File Collection	Report
2018-2	Bedrock geological map of the Mount Freegold district, Dawson Range	Yukon Geological Survey	Open File (Geological - Bedrock)
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

Resource/Reserve

Year	Zone	Type	Commodity	Grade	Tonnage	Amount	Reported Amount	43-101 Compliant	Cut-off
1988	Margarete Vein (Open Pit)	Historical Estimate	gold	4.21 g/t	123,800	520800	No	No	Unknown
Archer & Cathro, 1989, by C.A. Main, Assessment Report# 092699. Calculation assumes an idealized 45 degree pit wall, with mining to a depth of 60 m.									
1988	Margarete Vein (Open Pit)	Historical Estimate	silver	47.16 g/t	123,800	5838000	Yes	No	Unknown
Archer & Cathro, 1989, by C.A. Main, Assessment Report #092699. Calculation assumes an idealized 45 degree pit wall, with mining to a depth of 60 m.									