Occurrence Details

Occurrence Number: 115I 058
Occurrence Name: Tinta Hill
Occurrence Type: Hard-rock
Status: Deposit
Date printed: 8/5/2025 8:28:14 AM

General Information

Primary Commodities: copper, gold, lead, silver, zinc
Aliases: Freegold
Deposit Type(s): Vein Polymetallic Ag-Pb-Zn+/-Au
Location(s): 62°17'16.8" N - -136°59'49.2" W
NTS Mapsheet(s): 115I07
Location Comments: Coordinates provided by Triumph Gold Corp. in 2020.
Hand Samples Available: Yes
Last Reviewed:

Capsule

Work History

Originally discovered in 1930 and staked in 1931 by G. McDade, who explored with trenching and shallow shafts from 1931-1932. Re-staked by W. Teare as Tenderfoot cl (39142) in June 1937 and re-staked as Tenderfoot cl (4208) in November 1940. Teare explored with two shafts (15 m and 11 m deep) and a 16 m adit.

Re-staked as May cl 1-12 and June cl 1-4 (74197) in May 1959 by Conwest Exploration Company Ltd., which carried out trenching that year; staked May cl 13-14 (74218) in June 1959; and drilled 5 holes (410 m) in 1960. Canol Metal Mines Ltd tied on Sno cl 1-24 and North cl 1-16 (74721) in April 1960.

Re-staked as Tinta cl 1-4 (Y10054) in August 1966 by Canex Placer Ltd., which carried out grid soil geochemical sampling, EM geophysical surveying and staked Tinta cl 5-8 (Y20626) in November 1966. The property was optioned to Silgold Mines Ltd. in 1968, which resampled the existing trenches and staked Tinta cl 9-16 (Y24745), Tinta cl 17-18 (Y25329) and Tinta cl 19-26 (Y26024) in May, July and September 1968, respectively. This option was transferred to Coin Canyon Mines Ltd., which carried out geochemical soil sampling and bulldozer trenching from 1969 to 1972.

Optioned in September 1973 by Exeter Mines Ltd., which carried out grid geochemical sampling, EM geophysical surveying and drilled 4 holes (343.2 m) that year; drilled 21 holes (1,341.4 m) in July and August 1974; staked Tinta cl 9, 11-26 (Y76840) in August 1974; changed its name to Tinta Hill Mines Ltd in 1975; and drilled 3 holes (313.6 m) in 1976.

The claims then reverted to Placer Development Ltd. and were optioned in 1979 by a joint venture between Silver Tusk Mines Ltd. and Panther Mines Ltd., which completed 516 m of drifting and crosscutting in the No. 1 Adit in 1980 and 1981, and another 457 m in 1981 in the No. 2 Adit situated 366 m west and 45.7 m lower in elevation than No. 1. Additional trenching was carried out in 1986 by the joint venture and in 1987 by International Consolidated Platinum Ltd. under a separate joint venture agreement.

Mill City Gold Inc. optioned the property and carried out reconnaissance geochemical sampling and prospecting in November 1988 and drilled 8 holes (1,143.6 m) in December 1988. Silver Tusk carried out road work in 1989; trenched in 1991, 1992 and 1994; and staked Tinta cl 9-72 (YA48246) in October 1994.

In November 1998, Midnight Mines Ltd. (B. Harris) began re-staking lapsing sections of the property as various Tinta and Hill claims (YC09166). From 2000 to 2001, Midnight Mines carried out prospecting and geochemical sampling. The company's acquisition of the property was completed with the re-staking of the last of the original Tinta claims as Tinta cl 1-2 (YC19653) in August 2002 and Tinta cl 11-12 (YC19666) in September 2002. During this period, GPS surveying and mapping of the various roads, drill collars, trenches and underground working present on the property was undertaken and an existing baseline was partially reconstructed. In 2004, Midnight Mines performed rock geochemistry and prospecting.

In 2007, Northern Freegold drilled 12 holes for a total of 2200 m, which confirmed the extension of the vein system at depth and along strike. The company drilled 17 holes for a total of 3807 m in 2008.

A technical report by Fonseca and Giroux dated August 31, 2009 covers all of Northern Freegold's Freegold Mountain property and includes an inferred resource estimate for the Tinta Hill deposit.

Triumph Gold acquired Northern Freegold Resources in 2015 and the property that includes the Tinta Hill occurrence is now termed the Freegold Mountain Project. An updated inferred assessment resource was determined for Tinta Hill in 2015.

Triumph Gold performed magnetic and VLF-EM ground geophysics and soil sampling in 2016; soil sampling and mechanical trenching in 2017; and mechanical trenching in 2019.

Regional & Property Geology

The occurrence 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 in the area are cut by numerous plutonic and volcanic events from the Mesozoic (Murray & Friend, 2018), including:
1. Early Jurassic Long Lake monzonite and granodiorite plutonic suites;
2. Mid-Cretaceous Mount Nansen Suite andesite to diorite;
3. Mid-Cretaceous Whitehorse granodiorite, quartz monzonite and monzodiorite;
4. Late Cretaceous Casino quartz monzonite;
5. Late Cretaceous Prospector Mountain syenite;
6. Late Cretaceous Carmacks basalt and andesite; and,
7. 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 & Results

Mineralization consists of northwest-trending, sub-vertical quartz-carbonate veins containing galena and sphalerite with minor tetrahedrite and chalcopyrite. Th emain vein occurs in a vertical shear zone up to 30.5 m wide which cuts Early Jurassic granodiorite to quartz monzonite of the Aishihik/Long Lake Suite. The main vein zone has been characterized discontinuously over 3.5 km along strike with individual veins varying from 0.9 to 1.6 m. Alteration envelopes around veining consists of intense kaolinite extending a few metres and a broader muscovite and illite envelope locally surrounding mineralization (AR 097175).

The Conwest drilling, which explored the vein for a length of 366 m and a depth of 107 m, indicated fairly persistent mineralization over an average width of 1.7 m and as much as 3 m of disseminated pyrite and chalcopyrite in the walls.

The 1973-1974 drilling indicated an average grade of 185.1 g/t Ag, 2.74 g/t Au, 4.7% Pb, 6.0% Zn, 0.4% Cu and 0.05% Cd and showed that higher grade zones are erratically distributed

The No. 1 Adit intersected 94 m of vein grading 6.8 g/t Au, 164.6 g/t Ag, 1.0% Cu, 5.6% Pb and 13.2% Zn over an average width of 0.76 m. The No. 2 Adit intersected 31 m grading 7.54 g/t Au, 120 g/t Ag, 0.8% Cu, 1.3% Pb and 3.8% Zn over an average width of 0.6 m, plus 35.7 m grading 27.8 g/t Au, 696.0 g/t Ag, 3.6% Cu, 6.5% Pb and 2.8% Zn over an average width of 0.53 m.

In 1980, Silver Tusk Mines reported reserves of 764,757 tonnes grading 6% Zn, 4.71% Pb, 0.35% Cu, 2.57 g/t Au and 183.2 g/t Ag.

The 1988 drilling was completed over a 381 m distance along strike of the known mineralized vein structure. Mineralization was observed in all eight drill holes and the core was extensively sampled, but analytical results were never filed.

The GPS surveying and mapping carried out in 2002 served to accurately relocate existing infrastructure in the area and provided the basis for the preparation of a compilation basemap to be used during future exploration of the property.

Grab samples taken in 2004 from the adits returned up to 43.5 g/t Au, 2270 ppm Ag, 7.49% Cu, 8.86% Pb and 4.66% Zn.

Diamond drilling was carried out in 2007 and 2008 that intersected mineralization in holes: TH07-08, which returned 1.35 g/t Au, 29 g/t Ag, 0.12% Cu, 0.17% ppm Pb and 0.12% ppm Zn over 4 m; TH08-13, which returned 0.74 g.t Au, 124 g/t Ag, 0.41% Cu, 0.20% Pb and 0.45% Zn over 0.2 m; and TH08-14, which returned 0.42 g/t Au, 9.26 g/t Ag, 0.04% Cu, 0.38% Pb and 0.49% Zn.

Work History

Date	Work Type	Comment
9/4/2009	Studies	Fonseca and Giroux, 2009.
12/31/2008	Drilling	Seventeen holes totaling 3,807 m.
12/31/2007	Drilling	Twelve holes totaling 2,200 m.
12/31/2002	Other	GPS surveying and mapping of existing infrastructure was also carried out.
12/31/2001	Geochemistry	
12/31/2001	Other	
12/31/2000	Geochemistry	
12/31/2000	Other	
12/31/1994	Trenching	
12/31/1994	Development, Surface	
12/31/1992	Trenching	
12/31/1991	Trenching	
12/31/1989	Development, Surface	
12/31/1988	Drilling	Eight holes totaling 1,150 m.
12/31/1987	Trenching	
12/31/1986	Trenching	
12/31/1980	Development, Underground	Drifting of adits #1 and #2.
12/31/1974	Drilling	Twenty-one holes totaling 1,341.4 m.
12/31/1973	Drilling	Four holes totaling 343.2 m.
12/31/1973	Geochemistry	
12/31/1973	Ground Geophysics	
12/31/1973	Trenching	
12/31/1972	Geochemistry	
12/31/1972	Trenching	
12/31/1971	Geochemistry	
12/31/1971	Trenching	
12/31/1970	Geochemistry	
12/31/1970	Trenching	
12/31/1969	Geochemistry	
12/31/1969	Trenching	
12/31/1966	Geochemistry	
12/31/1966	Ground Geophysics	

12/31/1960	Drilling	Five holes totaling 409.96 m.
12/31/1959	Trenching	
12/31/1940	Development, Underground	Two shafts (50' and 35' deep) and a 52 ft adit.
12/31/1932	Trenching	
12/31/1931	Development, Underground	Small shafts dug.
12/31/1931	Trenching	
12/13/2020	Studies	Davis and Sim, 2020.
12/13/2019	Trenching	One trench totaling 88 m.
12/13/2017	Geochemistry	
12/13/2017	Trenching	Six trenches.
12/13/2016	Geochemistry	
12/13/2016	Ground Geophysics	And VLF-EM.
12/13/2015	Studies	Campbell et al., 2015.
12/13/2004	Geochemistry	Grab samples.
12/13/2004	Other	
12/13/2002	Geology	
12/13/1976	Drilling	Three holes totaling 313.64 m.

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
097175	2017	Drilling and Geochemical Report on the Freegold Mountain Project	Diamond - Drilling, Rock - Geochemistry, Soil - Geochemistry, Mechanical - Trenching	18	7615
095211	2008	2008 Drilling Assessment Report on the TINTA HILL Zone	Diamond - Drilling	3	655.34
094813	2007	2007 Drilling Assessment Report on the TINTA HILL Zone-FREEGOLD MOUNTAIN Project	All Weather Road - Development, Surface, Diamond - Drilling, Drill Core - Geochemistry	11	2203
094745	2006	2006 Geophysical Assessment Report on the Freegold Mountain Property	Electromagnetic - Airborne Geophysics, Magnetic - Airborne Geophysics		
094570	2004	Geological and Geochemical Assessment Report on the TINTA HILL Project	Rock - Geochemistry, Property Evaluation - Other, Prospecting - Other		
094406	2002	2002 Assessment Report on the TINTA HILL Property	Bedrock Mapping - Geology, Surveying - Other		
092750	1988	1988 Diamond Drilling Report on the TINTA HILL Property	Diamond - Drilling	8	1143.60

Related References

Number	Title	Page(s)	Reference Type	Document Type
ARMC020134	1981 progress report and mineral inventory for the Tinta Hill deposit, Y.T. optioned to Silver Tusk Mines Ltd. and Panther Mines Ltd.		Property File Collection	Report
ARMC020135	Geological report on the Tinta Hill property, Whitehorse Mining Division, Y.T. for Silver Tusk Mines Ltd. - Assays, drill logs, and drill hole section maps		Property File Collection	Report
ARMC020136	A valuation of the Tinta Hill deposit for International Platinum Ltd. - January 1988		Property File Collection	Report
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
1987-2(G)	Geology of Mt. Nansen (115I/3) and Stoddart Creek (115I/6), Dawson Range, Central Yukon		Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Open File (Geological - Bedrock)
2018-2	Bedrock geological map of the Mount Freegold district, Dawson Range		Yukon Geological Survey	Open File (Geological - Bedrock)

Resource/Reserve

Year	Zone	Type	Commodity	Grade	Tonnage	Amount	Reported Amount	43-101 Compliant	Cut-off
2009	TINTA HILL (UNDERGROUND)	Inferred	copper	.29 %	1,150,000	3356583	Yes	Yes	0.5g/t Au

Fonseca A. and Giroux G.H., 2009. Resource within vein boundaries: no dilution. Economic cut-off unknown.									
2009	TINTA HILL (UNDERGROUND)	Inferred	zinc	1.51 %	1,150,000	17372586	Yes	Yes	0.5g/t Au
Fonseca A. and Giroux G.H., 2009. Resource within vein boundaries: no dilution. Economic cut-off unknown.									
2009	TINTA HILL (UNDERGROUND)	Inferred	silver	49.34 g/t	1,150,000	56608000	Yes	Yes	0.5g/t Au
Fonseca A. and Giroux G.H., 2009. Resource within vein boundaries: no dilution. Economic cut-off unknown.									
2009	TINTA HILL (UNDERGROUND)	Inferred	gold	1.88 g/t	1,150,000	2177200	Yes	Yes	0.5g/t Au
Fonseca A. and Giroux G.H., 2009. Resource within vein boundaries: no dilution. Economic cut-off unknown.									
2009	TINTA HILL (UNDERGROUND)	Inferred	lead	.9 %	1,150,000	10341905	Yes	Yes	0.5g/t Au
Fonseca A. and Giroux G.H., 2009. Resource within vein boundaries: no dilution. Economic cut-off unknown.									
1980	TINTA HILL (UNDERGROUND)	Historical Estimate	copper	.35 %	843,000		No	No	Unknown
No details available on how calculation was determined. Not National Instrument 43-101 compliant. Reported for historical purposes only.; Northern Miner December 4, 1980 p. 5.									
1980	TINTA HILL (UNDERGROUND)	Historical Estimate	zinc	6 %	843,000		No	No	Unknown
No details available on how calculation was determined. Not National Instrument 43-101 compliant. Reported for historical purposes only.; Northern Miner December 4, 1980 p. 5.									
1980	TINTA HILL (UNDERGROUND)	Historical Estimate	silver	183.2 g/t	843,000		No	No	Unknown
No details available on how calculation was determined. Not National Instrument 43-101 compliant. Reported for historical purposes only.; Northern Miner December 4, 1980 p. 5.									
1980	TINTA HILL (UNDERGROUND)	Historical Estimate	gold	2.57 g/t	843,000		No	No	Unknown
No details available on how calculation was determined. Not National Instrument 43-101 compliant. Reported for historical purposes only.; Northern Miner December 4, 1980 p. 5.									
1980	TINTA HILL (UNDERGROUND)	Historical Estimate	lead	4.71 %	843,000		No	No	Unknown
No details available on how calculation was determined. Not National Instrument 43-101 compliant. Reported for historical purposes only.; Northern Miner December 4, 1980 p. 5.									

Drill core at YGS core library

Number	Property	Year Drilled	Core Size	Photos	Data
TH-88-01	Tinta Hill	1988	NQ	4	2
TH-88-02	Tinta Hill	1988	NQ	2	2
TH-88-02A	Tinta Hill	1988	NQ	6	2
TH-88-03	Tinta Hill	1988	NQ	4	2
TH-88-04	Tinta Hill	1988	NQ	4	2
TH-88-05	Tinta Hill	1988	NQ	2	2
TH-88-06	Tinta Hill	1988	NQ	8	2
TH-88-07	Tinta Hill	1988	NQ	10	2