



## Occurrence Details

**Occurrence Number:** 116B 147

**Occurrence Name:** Marn

**Occurrence Type:** Hard-rock

**Status:** Deposit

**Date printed:** 4/29/2025 1:01:30 AM

## General Information

**Primary Commodities:** copper, gold, silver, tungsten

**Deposit Type(s):** Skarn Au

**Location(s):** 64°29'37" N - -138°47'38" W

**NTS Mapsheet(s):** 116B07

**Location Comments:** .5 Kilometres

**Hand Samples Available:** Yes

**Last Reviewed:**

### Capsule

#### Work History

Historical correspondence indicates that F. McQuillan originally discovered this showing in 1914, but no supporting claim records have been located.

Staked as Marn cl 1-8 (YA31491) in Aug/78 by Mattagami Lake Exploration Ltd, which carried out prospecting that year. In 1979, Mattagami and Noranda Mines Ltd carried out geological mapping, prospecting, geochemical sampling and geophysical surveying and staked Marn cl 9-28 and 31-62 (YA47156) between the end of July and mid September that year. Mattagami staked Marn cl 29-30 and 63-108 (YA50039) in Jun/80 and carried out geological mapping, geophysical surveying and drilled 9 holes (1,003.7 m) later in the year; geological mapping, surveying and drilling of 17 holes (999.1 m) in 1981; geological mapping and prospecting in 1982; and drilled 13 holes (1,616.9 m) in 1983. In 1985, Noranda carried out CSAMT (Control Source Audio Magnetotellurics) surveying, detailed geological mapping and drilled 2 holes (867.8 m).

In Jan/96 Mar-West Resources Ltd staked Zulu cl 1-49 (YB67831) to surround the remaining Marn claims on three sides.

In Feb/95 the remaining Marn claims (1-8, YA31491) were transferred to Hemlo Gold Mines Inc. In Jun/96 Mountain View Ventures Inc acquired an option on the property and funded a exploration program to re-evaluate the property as a whole. The 1996 program was undertaken by Battle Mountain Canada Inc, a successor company to Hemlo Gold. The company carried out prospecting, geological mapping, geochemical sampling, geophysical surveying and trenching. It appears Mountain View Ventures dropped its option at the end of 1996 and the claims reverted to Battle Mountain Canada.

In Apr/2000, Canadian United Minerals Inc staked Prune cl 1-12 (YC19918) contiguously to the east and south of the Marn claims. The company carried out magnetometer surveying, geochemical sampling and prospecting in Aug/2000. Canadian United restaked Marn cl 1-4 (located on the northwest boundary of the Prune claims) as Jwhite cl 1-4 (YC21145) in Jan/2002 and carried out magnetometer surveying, geochemical soil sampling and prospecting in 2003.

The four surviving Marn claims (5 - 8) lapsed in Jan/2006. The Jwhite and surviving Prune claims were transferred to J.R. White in Aug/2008.

#### Capsule Geology

A gold-bearing massive sulphide zone occurs in a 30 m thick band of pyroxene skarn containing minor garnet and scheelite. The skarn is hosted by Permian Takhandit Formation limestone, which is underlain by Jurassic aged clastic sediments and cut by a 600 to 800 m wide lobe on the west side of the mid-Cretaceous Mount Brenner Stock of the Tombstone Intrusive suite. Most of the skarn lies beneath slightly discordant marginal sills off the monzonite lobe.

The main stage of sulphide enrichment consisted of the replacement of skarn minerals by an assemblage that averages 70% pyrrhotite and 20% chalcopyrite and also contains minor sphalerite, arsenopyrite, pyrite and trace cubanite and pentlandite. The final stage of mineralization consisted of veinlets of electrum, native bismuth, bismuthinite, bismuth telluride (possibly hedleyite) and silver minerals, which cut the earlier sulphides and silicates.

Two zones are present, one on either side of the monzonite lobe. The Mini Grid zone, (occurrence A) on the north side, is estimated to contain 226,796 to 272,155 tonnes averaging 8.56 g/t gold, 1% copper, 0.1% tungsten and 17.12 g/t silver (Assessment Report 091814). Gold grades up to 360 g/t gold have been obtained and the highest copper values (up to 1.5%) correlate with high gold grades. Tungsten, which grades up to 5.3% tungsten oxide (WO<sub>3</sub>) across short intervals, is only present in the Mini Grid zone.

The other zone, called Mineral Gully (occurrence B), is located on the south facing slope to the north of Scoville Lake. Dark green pyroxene skarn is exposed over 200 m in the upper part where the gully dissects the hillside close to the southwest boundary of the monzonite sill. Mineralization rarely exceeds 0.5 g/t gold, 1.3 g/t silver and 0.01% copper.

The majority of drill holes tested the Mini Grid zone. The two 1985 drill holes tested geophysical anomalies in the Mount Brenner valley located approximately 3 km south of the Mineral Gully zone but did not intersect any skarn or significant mineralization.

The purpose of the 1996 exploration program was to systematically assess the area between the Mini-Grid zone and the Mineral Gully area. Steep topography limited the program to approximately 50% of the available area. Geological mapping and prospecting indicates much of the area between the Mini-Grid and Mineral Gully areas is underlain by monzonite containing small xenoliths or rafts of sediments. Rock sampling returned < 1 g/t gold. A 1.5 m chip sample from the Mineral Gully area returned 5.2 g/t gold. Soil sampling returned anomalous results in areas of known mineralization but did not identify any new anomalous areas.

The 1996 HLEM geophysical survey detected an anomaly west of Mineral Gully. Battle Mountain hand trenched the anomaly but bedrock was not reached and grab and float samples only returned background gold levels. Overall the 1996 program did not reveal any new targets worthy of follow-up drilling. However the company did note that due to the rugged terrain and very limited exposure a large portion of the bottom contact of the main monzonite sill remained unexplored.

Canadian United's 2002 magnetometer survey tested a grided area measuring 200 by 300 m (centered around a small lake on Prune cl 10) located approximately 600 m east of the Mini Grid zone. The survey revealed three small magnetic anomalies that were approximately 250 gammas above the local background. Three soil samples collected over the strongest of the anomalies returned weakly anomalous values for bismuth, copper, molybdenum, zinc and gold. A sample of rusty weathering schist collected from outcrop in this area returned 15 ppb gold, 330 ppm arsenic and 6 ppm molybdenum.

The 2003 magnetics survey covered the area located northeast of the Mini Grid zone. It outlined the Mini Grid zone and four additional magnetic conductors which were theorized to represent satellite deposits of the mineralized skarn observed at the Mini Grid zone. Soil and rock samples were collected over two of the conductors and returned elevated levels for copper, gold, arsenic and zinc but the small sample size (39 soil and 6 roc samples) precluded meaningful statistical analysis.

### Work History

Date	Work Type	Comment

12/31/2003	Geochemistry	
12/31/2003	Ground Geophysics	
12/31/2003	Other	
12/31/2000	Geochemistry	
12/31/2000	Ground Geophysics	
12/31/2000	Other	
12/31/1996	Geology	
12/31/1996	Geochemistry	
12/31/1996	Ground Geophysics	(Max-min) and magnetic surveys.
12/31/1996	Trenching	
12/31/1996	Other	
12/31/1985	Drilling	Two holes, 867.9 m. Assessment Report 091814.
12/31/1985	Geology	
12/31/1985	Ground Geophysics	CSAMT (Control Source Audio Magnetotellurics) survey.
12/31/1983	Drilling	Thirteen holes, 1,616.9 m. Assessment Report 091517.
12/31/1982	Other	
12/31/1981	Drilling	Seventeen holes, 999.1 m. Assessment Report 090981.
12/31/1980	Drilling	Nine holes, 1,003.7 m.
12/31/1980	Other	
12/31/1979	Geology	
12/31/1979	Geochemistry	
12/31/1979	Geochemistry	
12/31/1979	Other	
12/13/1982	Geology	
12/13/1980	Ground Geophysics	Also magnetometer survey.

### Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
<a href="#">094459</a>	2003	Geophysical and Geochemistry Report PRUNE 1-12 and JWhite 1-4 Claims	Soil - Geochemistry, Magnetics - Ground Geophysics, Line Cutting - Other, Prospecting - Other		
<a href="#">094280</a>	2000	Geophysical and Geochemical Report on the PRUNE 1-12 Claims	Rock - Geochemistry, Soil - Geochemistry, Line Cutting - Other, Prospecting - Other		
<a href="#">093561</a>	1996	Marn Property 1996 Exploration Program	Rock - Geochemistry, Bedrock Mapping - Geology, EM - Ground Geophysics, Magnetics - Ground Geophysics, Line Cutting - Other, Prospecting - Other, Data Compilation - Pre-existing Data		
<a href="#">091517</a>	1983	1983 Report on the Marn Claims	Diamond - Drilling, Drill Core - Geochemistry, Surveying - Other	13	1616.87
<a href="#">091432</a>	1982	1982 Geology Report on the Marn 1-180 Claims	Bedrock Mapping - Geology, Prospecting - Other		
<a href="#">090981</a>	1981	Geology and Drilling 1981 on the Marn 1-180 Claims	Diamond - Drilling, Drill Core - Geochemistry, Rock - Geochemistry, Bedrock Mapping - Geology, Line Cutting - Other, Surveying - Other, Handblast - Trenching	17	999.10
<a href="#">090847</a>	1980	Geology, Geophysics, Drilling Report on the Marn 1-180 Claims	Diamond - Drilling, Drill Core - Geochemistry, Bedrock Mapping - Geology, EM - Ground Geophysics, IP - Ground Geophysics, Magnetics - Ground Geophysics, Line Cutting - Other	9	1003
<a href="#">090638</a>	1979	1979 Exploration on the Marn 1-62 Claims	Soil - Geochemistry, Bedrock Mapping - Geology, EM - Ground Geophysics, Magnetics - Ground Geophysics, Line Cutting - Other, Prospecting - Other		
<a href="#">090522</a>	1978	Preliminary Exploration Report on the Marn 1-8 Claims	Silt - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Prospecting - Other		
<a href="#">090183</a>	1977	Geochemistry, Geology, and Radiometric Survey on the TING, NOTING, and PROSPECTING Claims	Gamma-Ray Spectrometry - Airborne Geophysics, Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Water - Geochemistry, Bedrock Mapping - Geology, Gamma-ray Spectrometry - Ground Geophysics, Petrographic - Lab Work/Physical Studies, Prospecting - Other		
<a href="#">090184</a>	1976	Report on Geochemistry, Geology and Radiometric Survey on the NEBULOUS 1-33 Claims	Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Water - Geochemistry, Gamma-ray Spectrometry - Ground Geophysics, Petrographic - Lab Work/Physical Studies		

Related References				
Number	Title	Page(s)	Reference Type	Document Type
<a href="#">2003-9(D)</a>	Yukon Digital Geology (version 2)		Yukon Geological Survey	Open File (Geological - Bedrock)
<a href="#">1994-2(T)</a>	Proposed Tombstone Area Park: A Preliminary Review of Mineral Potential (116B)		Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Open File (Geological - Bedrock)

Resource/Reserve									
Year	Zone	Type	Commodity	Grade	Tonnage	Amount	Reported Amount	43-101 Compliant	Cut-off
1986	MARN - MINI GRID (OPEN PIT)	Historical Estimate	copper	1 %	226,796		No	No	Unknown
Report indicates reserves of 226 796 to 272 155 tonnes of material. Lower end of range is used for these purposes;; From Assessment Report #091814 by S.J. Kackey. Calculation appears to have been made by J.L Biczok in 1983 in a private report for Noranda. Historical calculation not NI 43-101 compliant.									
1986	MARN - MINI GRID (OPEN PIT)	Historical Estimate	gold	8.56 g/t	226,796		No	No	Unknown
Report indicates reserves of 226 796 to 272 155 tonnes of material. Lower end of range is used for these purposes;; From Assessment Report #091814 by S.J. Kackey. Calculation appears to have been made by J.L Biczok in 1983 in a private report for Noranda. Historical calculation not NI 43-101 compliant.									
1986	MARN - MINI GRID (OPEN PIT)	Historical Estimate	silver	17.12 g/t	226,796		No	No	Unknown
Report indicates reserves of 226 796 to 272 155 tonnes of material. Lower end of range is used for these purposes;; From Assessment Report #091814 by S.J. Kackey. Calculation appears to have been made by J.L Biczok in 1983 in a private report for Noranda. Historical calculation not NI 43-101 compliant.									
1986	MARN - MINI GRID (OPEN PIT)	Historical Estimate	tungsten	.1 %	226,796		No	No	Unknown
Report indicates reserves of 226 796 to 272 155 tonnes of material. Lower end of range is used for these purposes;; From Assessment Report #091814 by S.J. Kackey. Calculation appears to have been made by J.L Biczok in 1983 in a private report for Noranda. Historical calculation not NI 43-101 compliant.									

Drill core at YGS core library					
Number	Property	Year Drilled	Core Size	Photos	Data
<a href="#">M-85-1</a>	Marn	1985	NQ-BQ	6	2
<a href="#">M-85-2</a>	Marn	1985	NQ-BQ	6	2
<a href="#">M-83-25</a>	Marn	1983	BQ	0	2
<a href="#">M-83-31</a>	Marn	1983	BQ	0	2
<a href="#">M-83-35</a>	Marn	1983	BQ	0	2