Occurrence Details

Occurrence Number: 105O 017
Occurrence Name: Mars
Occurrence Type: Hard-rock
Status: Prospect
Date printed: 8/5/2025 8:28:15 AM

General Information

Secondary Commodities: antimony, arsenic, gold
Aliases: Einarson
Deposit Type(s): Carbonate-Hosted Disseminated Au-Ag (Carlin-type)
Location(s): 63°49'4.217" N - -131°28'14.27" W
NTS Mapsheet(s): 105O14
Location Comments: Location marks collar of drill hole A-12-01 which returned best results of 2 drill programs.
Hand Samples Available: No
Last Reviewed:

Capsule

WORK HISTORY

Staked within PI cl 1-16 (YD32884) in Sept/2010 by 18526 Yukon Inc (R. Berdahl) which added PI cl 17 - 38 (YD05101) in Jan/2011. In Mar/2011 the Berdahl added PA cl 1-12 (YD04673) to the southwest and PA cl 13 – 32 (YD04685) to the northeast side of the claim block.

In Mar/2011 18526 Yukon staked Q cl 1 - 524 (YD152744) to the east and in Apr/2011 Berdahl staked IO cl 1-206 (YD82301) to the northwest. Subsequently to the start of field work Anthill Resources Ltd optioned the all of the claims from 18526 Yukon/Berdahl and carried out reconnaissance stream sediment and moss mat sampling program over the claims. The program was part of a larger exploration program carried out over the company's entire Einarson Project.

In Jan/2012 18526 Yukon Inc/ R. Berdahl staked Huo cl 1 - 560 (YF37501) to the west on adjoining topographic map sheet 105O 13. In Mar 2012 18526 Yukon/Berdahl transferred a 30 % interest to Anthill Resources. The company subsequently transferred a 1 % interest in some of the claims to separate company insiders.

In 2012 as part of a follow-up exploration program, Anthill Resources cut a soil grid (A1) over the occurrence area and prospected, geologically mapped and silt sampled streams draining the occurrence area. Later in the season Anthill Resources collared 4 diamond drill holes (696 m) on the newly named Mars zone (Occurrence Location).

In 2013 Anthill Resources extended grid based soil sampling approximately 10 km to the north and northeast to cover gold soil anomalies identified in previous sampling programs. The company also carried out detailed geological mapping and rock sampling and dug 4 trenches over the Mars structural zone. Three diamond drill holes (670.38 m) were collared to test the strike extension of mineralization discovered during the 2012 drill program.

In 2015 Anthill Resources concentrated their exploration efforts on the Mars North and Northeast targets. The company carried out ground magnetic, VLF and Induced Polarization (IP) geophysical surveys followed by follow-up grid soil sampling, rock sampling and geological mapping.

GEOLOGY

The occurrence area lies approximately 200 km east of Mayo in east central Yukon. Access to the area is usually by float plane to Anthill Lake (local name) and then helicopter to the various showings. The Einarson Project comprises more than 11,000 quartz mineral claims that cover parts of 8, 1:50 000 topographic map sheets. A seasonal base camp was established at Anthill Lake which is located at approximately 15 km to the southeast (UTM 363635 E, 7087805 N) on adjoining topographic map sheet 105O 13.

The Einarson Project is located on the northeastern margin of the Selwyn basin and is mainly underlain by Ediacaran to Lower Cambrian Hyland Group rocks. The discovery of gold in 2008 on ATAC Resources Rackla Gold Project located to the north, led the Yukon Geological Survey to initiate a regional scale mapping program on topographic map sheets (106C 1-4). In 2013 M. Colpron and others released a geological compilation for topographic map sheets (106C1 – 4, and 106D1). In 2014 D. Moynihan of the survey released a 1:50,000 scale geology map for topographic map sheet 106B4 and in 2016 Moynihan released a geological compilation for topographic map sheets 105N15, 105N16, 105O13, 106B4 and 106C1 & 2. The survey also released an updated Yukon wide geological compilation in 2016.

Anthill Resources labeled this part of the Einarson Project the Mars trend. The trend comprises approximately 1,387 quartz mineral claims divided to two groups. 1) 3055 claim group (PA, PI, IO, Q and N claims) and 2) Huo claim group. The Mars Trend straddles the boundary between topographic map sheets 105O 13 and 14. Exploration work was originally centered on the Mars Main occurrence and then extended northwards as sampling identified the Mars North and Mars Northeast targets.

Approximately half of the Mars trend lies east of Moynihan's 2016 geological compilation. Anthill Resources geologists extrapolated Moynihan's mapping eastwards onto their project area. The Mars Trend in underlain by a thick sequence of Hyland Group rocks which are subdivided into three main formations, which from oldest to youngest include the Yusezyu, Algae and Narchilla Formations.

In 2011 Anthill Resources collected 794 silt samples across their property. At approximately half of the collection sites (365) the company also collected moss mat samples. Limited rock sampling and reconnaissance scale geological mapping was also carried out. Sample results outlined 19 areas (A - S) containing two or more anomalous silt or rock samples. The Mars Trend covered areas A, S, and G. Area A, located the farthest south was explored first and areas S and G were covered by later exploration. Area A returned the highest gold-in-silt result, "200 ppb gold" of the entire 2011 silt sampling program. The result was obtained near the headwaters of a stream and values decreased downstream over the next eight samples (ranging from 94 ppb to 8 ppb gold). The stream also returned one of the highest arsenic values (477 ppm) of the program.

In 2012 Anthill Resources selected 7 areas for follow-up silt, grid soil sampling and detailed geological mapping and rock sampling. Area A was one of the areas chosen. The company covered Area A with soil grid A, which extended along the anomalous length of the stream and to the northwest. The soil survey returned weakly elevated gold-in-soil values at the southwest end of the grid. Thick overburden and wide sample spacing appear to have masked the results.

Prospecting identified gold mineralization at the Mars Main zone. The Mars Main zone (occurrence location) is located along the steep limb of a north-northwest trending anticline. The fold limb is cut by a north-northwest trending, moderately east dipping normal fault and numerous sub-parallel splays and bedding parallel the thrust faults. Surface exposures of gold mineralized faults are developed in interbedded sandstone/siltstone of the Narchilla Formation and minor base metal mineralization is also present in adjacent carbonate lithologies of the Algae Formation. Gold mineralization is associated with quartz-carbonate-pyrite-arsenopyrite veins developed in both high-angle and low-angle fault/shear zones and as replacement style mineralization peripheral to the structural zones. A parallel trend of base metal +/- silver mineralization occurs about 800 m west of the gold bearing Mars trend, where coarse clastics of the Yusezyu Formation are silicified and clay altered. Several occurrences of galena and sphalerite mineralization occur within the zone.

Rock sampling conducted in 2012 across the Mars Main zone returned consistently high gold values, including 6.89 g/t gold over 3.0 m, 7.45 g/t gold across 1 m and up to 9.47 g/t gold from composite grab sampling. High gold values have a strong correlation with high arsenic values. The four diamond drill holes collared in 2012 were drilled from two collar locations: one set (holes A-12-01 and 02)

targeted the projected intersection of the main north-northwest mineralized trend and associated faults and splays. The second set (holes A-12-03 and 04) tested the northern extension of the north-northwest mineralized trend. The best gold grades were returned from hole A-12-01, which returned a 21.16 m intercept from 81.0 to 102.16 m grading 0.571 g/t gold. This mineralized intersection occurs at the projected intersection of several shear zones. A second fault gouge zone was intersected from 151.71 to 177.65 m (25.94 m) which assayed 0.318 g/t gold including a sub-interval from 176.0 to 177.65 m that returned 1.65 g/t gold. The second intersection is thought to represent a separate mineralized zone.

Hole A-12-02 appears to have intersected the upper mineralized zone encountered in hole A-12-01. A 0.6 m wide shear zone intersected from 102.5 m to 103.1 m returned an assay of 0.350 g/t gold. The hole was terminated at 129 m thus did not intersect the lower mineralized zone. Hole A-12-03 appears to have intersected the upper mineralized with a 9.34 m intersection from 106.85 m to 116.19 m grading 0.677 g/t ton gold. Hole A-12-04 appears to have intersected the lower mineralized zone with a 4.65 m intersection from 158.3 to 162.95 m grading 0.452 g/t gold. The elevated gold values were associated with arsenic enrichment in the form of arsenopyrite but no other pathfinder enrichments.

In 2013 Anthill Resources collected approximately 4 384 soil samples across a soil grid that covered the entire length of the Mars Trend. The survey defined three areas of anomalous gold- in-soil results: Mars Main, Mars North and Mars Northeast. Arsenic and antimony values correlate well with all three gold-in-soil anomalies found along the Mars Trend. The Mars Main anomaly measures approximately 4.5 km in length by 2.3 km wide and covers the north-south trending Mars Fault zone (previously called the 340 zone). The survey returned 24 samples with gold values greater than 100 ppb gold including 6 samples which returned values greater than 1 000 ppb gold. The best sample returned 8 970 ppb gold (8.97 g/t). The anomaly includes the Mars Main zone in the southeast corner of the anomaly.

The Mars North Anomaly is defined by 8 soil samples with values greater than 50 ppb gold. The location of this anomaly is confusing. Various maps contained in the 2013 assessment report (#096657) show the anomaly located at the north end of the Mars Main soil anomaly. The 2015 assessment report (#096929) also shows the anomaly located at the northeast end of the Mars Main anomaly and is the location of the 2015 geophysical program. However the May 14, 2015 Press Release released by Anthill Resources places the anomaly approximately 5 km northeast (UTM 376605 E, 7086425 N) of the Mars Main zone. This location is correct for the 8 soil samples collected by Anthill Resources but the 2015 exploration and geophysical surveys were conducted at the northeast end of the Mars Main soil anomaly. The Mar North anomaly is also called the Mars Northwest anomaly in some sections of Anthill Resources assessment reports.

The Mars North area (northeast end of Mars Main grid) hosts a gold in soil anomaly measuring approximately 1.1 km long that returned values up to 9 110 ppb gold (9.11 g/t) gold. It appears the anomaly was absorbed into the Mars Main anomaly as the anomaly grew by approximately 1 km between the 2013 and 2015 exploration programs. Initial geological mapping suggests the gold mineralization is hosted in east dipping, low-angle fault/fracture zones in siliciclastic lithologies of the Narchilla Formation that are cut by north and northwest trending normal faults. The northwest trending normal faults are interpreted to be post mineral while the north trending normal faults are locally associated with gold mineralization.

The Mars Northeast gold-in-soil anomaly (UTM 381515 E, 7089755 N) is defined by 3 samples returning values above 100 ppb gold and eight samples containing more than 50 ppb gold with a maximum value of 1 129 ppb gold. The anomaly is northerly trending with a strike length of 900 m and remains open to the north and covers most of target G identified in the 2011 silt sampling program. Initial prospecting identified fine-grained, chalcedonic quartz vein (?) float containing up to 25.2 g gold mineralization which initially appears different from quartz vein mineralization at the Mars Main zone and could represent epithermal quartz veining. Geological mapping carried out in 2015 indicates the area is underlain by Hyland Group, Narchilla Formation fine clastic sediments including maroon shales in eastern areas and siltstone to mudstone in northern areas. Additional soil samples collected in 2015 suggest the presence of five distinct mineralized areas.

In 2013 Anthill Resources dug 4 trenches (45 m) in areas of steep topographic relief and thin soil coverage in the Mars Main zone. A 33.5 m section of trenching returned 1.65 g/t gold with a high values of 9.25 g/t gold across 2 m. Threes drill holes (670.38 m) were collared on the Mars Main zone. One hole each tested for gold mineralization 50 and 100 m north of the 2012 drilling and one hole tested 40 m south. All of the holes intersected interbedded siltstone and sandstone lithologies and minor shale cut by both high and low-angle shear/fracture zones containing localized vein and replacement silica alteration containing arsenopyrite and pyrite mineralization. Hole A-13-05 intersected 0.18 g/t gold over 8.41 m starting at 73.15 m and 0.693 g/t gold over 5.55 m starting at 86.13 m. Hole A-13-07 which targeted the trenching area returned 6 gold mineralized intercepts ranging in thickness from 1.25 to 10.69 m with grades ranging from 1.280 to 0.67 g/t gold. While the 2012 and 13 drilling programs intersected gold mineralization, neither program returned consistent economic mineralization.

In 2015 Anthill Resources carried out ground resistivity/induced polarization (res-IP), ground total magnetic field/very low frequency electromagnetic (mag-VLF) surveys on the Northeast zone and the northern portion of the Mars Main grid (zone). The total magnetic field data was not useful for either area. VLF, IP chargeability and resistivity data collected on the Mars Main grid identified a nearly 8 km long structure corridor where coincident gold-in-soil anomalies indicate a potential mineralization target 100 m beneath an Algae Formation carbonate antiformal structure. At the Mars NE zone IP chargeability and resistivity surveys outlined 5 strong anomalies coincident with gold-in-soil anomalies which the company believed warrant further geological mapping, rock sampling and grid soil sampling.

Work History

Date	Work Type	Comment
12/13/2015	Geochemistry	Sampled newly discovered mineralization.
12/13/2015	Geochemistry	Sampled Mars North and Northeast zones.
12/13/2015	Ground Geophysics	Also VLF, and IP surveys on Mars North and Northeast zones.
12/13/2015	Geology	Mapped newly discovered mineralization.
12/13/2013	Geochemistry	Detailed sampling.
12/13/2013	Drilling	Three holes (670.38 m) to test strike extension.
12/13/2013	Geochemistry	Tighten up sampling.
12/13/2013	Trenching	Dug 4 trenches on Mars structural zone.
12/13/2013	Geology	Over mineralized areas.
12/13/2012	Drilling	Four holes (696 m) collared on Main zone.
12/13/2012	Geochemistry	Grid based soil sampling.
12/13/2012	Geochemistry	Additional sampling.
12/13/2012	Geology	Mapped over mineralized areas.
12/13/2012	Other	Prospected soil anomalies.
12/13/2011	Geochemistry	Property wide. Some sites also moss mat sampled.

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled

096657	2013	Assessment Report for the 2013 Exploration Program of Silt, Soil and Rock Chip Geochemical Surveys, Geological Mapping and Diamond Drilling	Diamond - Drilling, Drill Core - Geochemistry, Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology	21	4803
096584	2012	Assessment Report on 2012 Program of Geological Mapping, Soil and Silt Geochemical Surveys and Diamond Drilling on the Einarson Project, Anthill Resources Yukon Ltd.	Diamond - Drilling, Silt - Geochemistry, Soil - Geochemistry, Regional Bedrock Mapping - Geology	10	1875
095778	2011	Stream Sediment and Moss Mat Geochemical Survey on the Einarson Property	Plant - Geochemistry, Silt - Geochemistry		
093827	1997	1997 Geological Assessment Report on Emerald Lake Claims	Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry		

Related References

Number	Title	Page(s)	Reference Type	Document Type
YEG2011_OV	Yukon Exploration and Geology Overview 2011	p. 63.	Yukon Geological Survey	Annual Report
YEG2011_03	Preliminary observations on the geology of the Rackla belt, Mount Ferrell map area (NTS 106C/3), central Yukon	p. 27-43.	Yukon Geological Survey	Annual Report Paper
YEG2013_OV	Yukon Exploration and Geology Overview 2013	p. 27, 47.	Yukon Geological Survey	Annual Report
YEG2013_11	Bedrock Geology of NTS 106B/04, Eastern Rackla Belt	p. 147-167.	Yukon Geological Survey	Annual Report Paper
YEG2012_OV	Yukon Exploration and Geology Overview 2012	p. 34-35, 61, 65.	Yukon Geological Survey	Annual Report
2016-2	Bedrock geology compilation of the eastern Rackla belt, NTS 105N/15, 105N/16, 105O/13, 106B/4, 106C/1, 106C/2, east-central Yukon		Yukon Geological Survey	Open File (Geological - Bedrock)
YEG2015_OV2	Yukon Hard Rock Mining, Development and Exploration Overview 2015	p. 29, 43.	Yukon Geological Survey	Annual Report Paper