



Occurrence Details

Occurrence Number: 106D 027
Occurrence Name: Mar
Occurrence Type: Hard-rock
Status: Deposit
Date printed: 8/6/2025 8:02:24 AM

General Information

Primary Commodities: tungsten, tungsten trioxide
Secondary Commodities: gold
Aliases: Garnet, Garnet Skarn Zone, Mar-Tungsten, Ray Gulch
Deposit Type(s): Skarn W
Location(s): 64°1'40" N - -135°45'4" W
NTS Mapsheet(s): 106D04
Location Comments: .5 Kilometres
Hand Samples Available: Yes
Last Reviewed:

Capsule

Work History

Staked as Tip Top cl (55220) in Oct/42 by Harvey Ray, examined by Ventures Ltd in 1942, and investigated by the Geological Survey of Canada in 1942-44. Restaked in Aug/51 by R.A. Batty and E. Barker as Batty cl (61878), which were prospected and sampled in 1956 by Stride Exploration and Development Company Ltd. Mayo Silver Mines Ltd staked claims on the east side of the gulch about 1960 and bulldozer trenched in 1963 or 1964.

The first interest in the bulk tonnage tungsten potential commenced in Jun/68 when Pan cl 1-36 (Y27203) were staked by C. Provencher. The Pan claims covered this occurrence and the Potatoe Hills occurrence (Minfile Occurrence #106D 026) located approximately 1.5 km to the north. After 1968 both occurrences were explored simultaneously for tungsten mineralization, however the majority of exploration was directed towards this occurrence.

The property was optioned in 1968 by Great Plains Development Company of Canada Ltd, which conducted bulldozer trenching and added Pan cl 37-68 (Y31528) in Sep/68. Tam Mines Ltd added Arpa cl 29, 31, 39, 40 (Y31715) and Arpa cl 57-96 (Y31727) to the claim group in Feb/69 and bulldozer trenched later in the year. Connaught Mines Ltd optioned all of the claims from 1969 to 1971 but assigned their rights in 1970 and 1971 to Canex Aerial Exploration Ltd. The company carried out bulldozer trenching and an extensive soil geochemical survey on the west side of Ray Gulch in 1970, and in 1971 drilled three holes (457.2 m) across the quartz-scheelite vein system located within the stock. All of the claims reverted early in 1972 to Provencher, who transferred them to a private company, Scheelite Hills Minerals Ltd.

Restaked as Mar cl 1-24 (YA14897) in Mar/77 by Queenstake Resources Ltd, which carried out geological mapping and bulldozer trenching later in the year. In the spring of 1978, Canada Tungsten Mining Corporation Ltd optioned the Mar claims from Queenstake Resources. At approximately the same time Canada Tungsten purchased the adjoining (west) R & D claims (1-16, YA1393) from Dublin Gulch Mining Ltd, staked Dave cl 1-24 (YA17802) to the southwest in Apr/78 and either purchased or optioned a further 389 claims in the Dublin Gulch region. The company explored with extensive geochemical and geophysical surveys in 1978 and 1979 and between July and Sep/79 drilled 21 diamond drill holes (2 423 m) on the Garnet Skarn Zone. In Apr/80 Canada Tungsten released a preliminary resource figure of 4 861 593 tonnes of ore grading 0.48% tungsten oxide (WO₃) (Assessment Report #090614 - page 113). This preliminary reserve was listed under the "possible-probable category and is reported for historical purposes and is not compliant with National Instruments 43-101 standards.

Beginning in 1980 Bema Industries assumed project management. They drilled 64 diamond drill holes (11 278 m) in 1980, carried out additional trenching, geochemical and geophysical programs in 1981. In Nov/81 Bema published an updated reserve figure of 3 750 492 tonnes grading 0.555% tungsten oxide (WO₃) (Assessment Report #090915 - Table 1 located between pages 26 and 27). This reserve figure is not compliant with National Instruments 43-101 and can only be considered historical. Bema drilled 3 diamond drill holes (751 m) in 1982 after which no further work was carried out on this occurrence. Cantung dropped its option in 1986 and the claims reverted to Queenstake Resources. After 1982 very little work was carried out on this occurrence.

H-6000 Holdings optioned the entire Dublin Gulch property in 1991 and subsequently optioned it in Sep/91 to Amax Gold Inc, which explored with mapping, geochemistry, geophysics and 16 diamond drillholes totaling 2 500 m. Amax was interested in exploring the property's potential for an intrusive hosted, bulk mineable gold deposit similar to the Fort Knox deposit located near Fairbanks, Alaska.

In 1992, Amax performed 1 129.9 m of reverse circulation drilling on the R & D 2 and 16, Bob 1, Smoky 64, 65, 74 and 76 claims. In late 1992, the property was returned to Ivanhoe Goldfields Ltd (a successor company of H-6000 Holdings). In Sep/93, Ivanhoe drilled 10 reverse circulation drill holes totaling 2 079 m on the Smoky 3 and 4 claims and Smoky 96 fractional claim, and dug several test pits in decomposed bedrock on the R and D claims and the Olive crown grant in Sept/93. Samples were then screened, gravity concentrated and assayed. Ivanhoe also performed a soil survey on the West, Sec and DG claims in Sep/93. In Aug/94 First Dynasty Mines Ltd acquired Ivanhoe Goldfields Ltd and in Oct/94 Queenstake Resources Ltd transferred its interest in the Mar, R and D, DG, Jeff, Bob, and Smoky claims to First Dynasty.

In 1995, First Dynasty and in 1996 its wholly owned subsidiary, New Millennium Mining Ltd carried out a major drilling program to outline a core resource/reserve on the Eagle Zone (Minfile Occurrence #106D 025) located approximately 2.5 km to the west. The companies also carried out diamond drilling on Potato Hills (Minfile Occurrence #106D 026) located 1.5 km to the northeast to test for mineralization under the proposed heap leach pad area. During the 1990's only a minor amount of assessment work was carried out on the tungsten potential of this occurrence and the neighboring Potatoe Hills occurrence.

First Dynasty changed its name to Sterlite Gold Ltd in Jul/2002. In Oct/2004 StrataGold Corporation entered into an agreement to acquire all of Sterlite's interest in Dublin Gulch including this occurrence. In addition, StrataGold purchased Queenstake Resources surviving rights and interest in various claims. Queenstake retained a 1% royalty on ore processed from this occurrence and surrounding leases.

StrataGold renamed this occurrence the Mar-Tungsten Deposit and hired SRK Consulting (US) Inc to calculate a updated resource estimate for the deposit. In Jan/2008 StrataGold announced a National Instruments 43-101 resource estimate for the Mar-Tungsten Deposit of 5.31 million tonnes grading 0.39% tungsten oxide (WO₃) in the indicated category and 2.17 million tonnes grading 0.36 % tungsten oxide in the Inferred category. A cut-off grade of 0.10% tungsten oxide was used for the resource estimate (SRK Consulting, Feb 2008).

Stratagold released a positive NI 43-101 preliminary economic assessment on the Mar in a report dated December 01 2008. The report was prepared by SRK Consulting (US) Inc and included an updated resource estimate.

Capsule Geology

The area has not yet been remapped by the Yukon Geological Survey however C. Roots (1997) of the Geological Survey of Canada under contract with the Exploration and Geological Services Division (now part of the Yukon Geological Survey) remapped topographic map sheet 105M located directly to the south in the mid-1990's. In 2003 Gordey and Makepeace released a geological compilation of the Yukon which covered this area. In addition various company geologists have mapped the Dublin Gulch area in detail.

Geological work carried out by Roots, Gordey and Makepeace and various company geologists shows that the Dublin Gulch area is underlain by deformed Upper Proterozoic to Lower Cambrian clastic rocks of the Hyland Group that have been intruded by the Dublin Gulch Stock, a Late Cretaceous medium-grained granodiorite stock assigned to the Tombstone Suite. The stock is cut by minor late dykes. Rare narrow intrusive breccia dykes have also been reported. Alteration, gold and tungsten mineralization is directly associated with these intrusions.

Ray the original staker found large blocks of pale green, coarsely crystalline tremolite skarn float containing 2.7% to 3.3% scheelite. In 1943, the Geological Survey of Canada located an outcropping zone 25 m thick in Late Proterozoic Hyland Group quartz-biotite schist, from which grab samples assayed 0.27% to 0.5% tungsten oxide (WO₃).

In the occurrence area interbedded units of gritty quartzite, micaceous (muscovite) quartzite, massive white quartzite, limestone and phyllite locally referred to as the Grit unit are intruded by the Dublin Gulch stock. A hornfels thermal aureole measuring up to 2 km wide developed around the stock as it intruded the metasedimentary rocks and altered them to biotite-quartzite schists, marble, wollastonite-quartz skarn and pyroxene skarn as a result of contact metamorphism and metasomatism. The Ray Gulch tungsten skarn (Mar Tungsten) deposit formed within this hornfels aureole.

Four phases of granitic rocks have been identified in outcrop and drill core. They are, from youngest to oldest: leucocratic granite and aplite, quartz monzonite, quartz diorite and granodiorite. Intrusion of the granodiorite and leucocratic granitic phases were likely responsible for the metasomatic alteration and mineralization of the hornfelsed metasedimentary rocks. Two phases of metasomatism in the skarn and scheelite mineralization have been identified. The first phase formed a light green, fine-grained skarn within marble and biotite-quartzite schist units. No tungsten mineralization was associated with this phase. The second phase formed massive dark green scheelite bearing skarn within marble units and also within previously formed light green skarn. Sulphide mineralization in the tungsten bearing skarn is negligible.

The deposit is located within a roof pendant and the pendant has been sliced in several places by the injection of several sill-like sheets of granodiorite. There are two dominant sheets which are thicker and laterally more continuous than the rest and might have exerted some control on the tungsten mineralization in the pyroxene skarns. The upper sheet averages 10 m in thickness, plunges westerly and pinches out to the south. The lower sheet averages 40 m in thickness, dips southward and like the upper sheet pinches out at the southern extremity of the deposit. The two sheets are separated by six interbedded units of wollastonite-quartz skarn, pyroxene skarn, biotite-quartzite schist and marble. The two sheets connect with the main Dublin Gulch stock to the north, east and possibly the west but pinch out to the south.

Drill-indicated ore reserves and probable reserves are contained within the six skarn zones, all which possess a northerly strike and a westerly 25 degree dip. The number 1 zone is at the highest elevation and the number 6 zone is at the lowest elevation within the metasedimentary units. Zones 1 to 3 are located between the upper granodiorite sheet and the surface in the west central part of the deposit and have been nearly removed by erosion. The number 4 zone lies adjacent to and is cut by the upper granodiorite sheet. The number 5 zone lies between the upper and lower granodiorite sheets and is truncated to the west and south by the lower sheet as it rises to higher levels in these directions. The number 6 zone lies along and just above the lower granodiorite sheet and is also truncated to the west and south by this sheet.

Within the deposit each of the six skarn zones consists of several skarn beds that are in close proximity to each other. The lateral continuity of individual skarn units varies considerably because of different degrees of replacement by the mineralized pyroxene skarns. Tungsten concentration within individual unit are highly variable but because several skarn units form each zone concentration variations in each unit are smoothed. Thus these generalized zones of mineralization are therefore in most cases laterally continuous and consistent in grades.

Average tungsten grades increase with depth from the number 1 skarn zone nearest the surface of the deposit, to the lower level number 6 skarn zone located some 200 m below surface. Within each zone, grades in pyroxene skarns range from less than 0.10% tungsten oxide (WO₃) to greater than 2.0% tungsten oxide. There is no tungsten mineralization in the wollastonite-quartz skarn units within each zone. Massive pyroxene skarn units are more common than wollastonite-quartz skarn units in the number 5 and 6 skarn zones and there is a gradual increase in grade within the pyroxene skarn units themselves from the number 1 to number 6 skarn zones. However it is the greater abundance of the massive pyroxene skarn units in each successive zone that accounts for the higher tenor of these zones.

NI 43-101 compliant resource as reported by StrataGold Corporation on Jan 15 2008 were:

Indicated Resource = 5 310 000 tonnes grading 0.39% tungsten oxide (WO₃)

Inferred Resource = 2 100 000 tonnes grading 0.36% tungsten oxide (WO₃)

A cut-off grade of 0.10% tungsten oxide (WO₃) was used for the resource estimate. Estimate calculated by SRK Consulting (US) Inc and can be found on the SEDAR web site under the StrataGold Corporation company profile dated Feb 26, 2008.

In Oct, 2008, Stratagold released an updated resource for the Mar tungsten deposit: 7.819 mT at 0.381% WO₃ in the indicated category and 0.945 mT at 0.410% WO₃ in the inferred category.

A preliminary economic assessment report dated December 2008, by SRK, revised the estimate to an Indicated Mineral Resource of 12.7Mt of material with 0.31% WO₃ and an additional Inferred Mineral Resource of 1.3Mt of material with 0.30% WO₃ both using a 0.1% WO₃ cut-off.

References

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Work History		
Date	Work Type	Comment
2/2/2008	Studies	SRK Consulting, Feb 2008, effective date Dec 2007.
12/31/1996	Studies	All work undertaken to evaluate Dublin Gulch property.
12/31/1995	Studies	All work undertaken to evaluate Dublin Gulch property.
12/31/1993	Drilling	Ten holes, 2,079 m. Drilling was reverse circulation, completed on Smoky claims.
12/31/1993	Geochemistry	
12/31/1993	Trenching	
12/31/1992	Drilling	Nine holes, 1,129.9 m. Amax drilled a total of 5 639 m in the Dublin Gulch and Haggart Creek areas.
12/31/1991	Drilling	Six holes, 2,500 m.
12/31/1991	Geology	
12/31/1991	Geochemistry	Also rock sampling.
12/31/1982	Geochemistry	
12/31/1982	Drilling	Three holes, 738.2 m.
12/31/1982	Geology	
12/31/1982	Geochemistry	
12/31/1982	Ground Geophysics	Also VLF-EM and radiometric surveys.
12/31/1980	Drilling	Sixty-one holes, 11,315 m.
12/31/1980	Trenching	
12/31/1979	Geochemistry	

12/31/1979	Drilling	Twenty-one holes, 2,421.9 m.
12/31/1979	Geology	
12/31/1979	Geochemistry	
12/31/1979	Ground Geophysics	
12/31/1978	Geology	
12/31/1978	Geochemistry	
12/31/1978	Geochemistry	
12/31/1978	Other	
12/31/1977	Geology	
12/31/1977	Trenching	
12/31/1956	Geochemistry	
12/31/1956	Other	
12/13/1981	Geology	
12/13/1981	Geochemistry	Also rock sampling.
12/13/1981	Trenching	
12/13/1978	Ground Geophysics	
12/13/1971	Drilling	Three holes, 457.2 m.
12/13/1971	Geochemistry	
12/13/1971	Trenching	
12/13/1970	Geochemistry	
12/13/1970	Trenching	
12/13/1969	Trenching	
12/1/2008	Studies	SRK Consulting, December 1 2008. Includes revised resource estimate.

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
097130	2017	Assessment Report on the VBW Claims: Geological, Geochemical and Remote Sensing Exploration Program - 2017	Magnetic - Airborne Geophysics, Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, LIDAR - Remote Sensing		
096246	2012	2011 Dublin Gulch Exploration, Drilling, Regional Surface Sampling, Engineering and Environmental Programs	Diamond - Drilling, Diamond - Drilling, Reverse Circulation - Drilling, Reverse Circulation - Drilling, Drill Core - Geochemistry, Drill Core - Geochemistry, Drill Cuttings - Geochemistry, Drill Cuttings - Geochemistry, Rock - Geochemistry, Rock - Geochemistry, Regional Bedrock Mapping - Geology, Regional Bedrock Mapping - Geology, Bulk Sample - Lab Work/Physical Studies, Bulk Sample - Lab Work/Physical Studies, Environmental Assessment/Impact - Studies, Environmental Assessment/Impact - Studies, Geotechnical - Studies, Geotechnical - Studies, Backhoe - Trenching, Backhoe - Trenching	268	35882.36
095654	2008	Dublin Gulch, Assessment Report 2008	Diamond - Drilling, Drill Core - Geochemistry, Rock - Geochemistry, Soil - Geochemistry, Environmental Assessment/Impact - Studies, Backhoe - Trenching	48	8301.23
095592	2006	2006 Dublin Gulch Exploration Program	Diamond - Drilling, Drill Core - Geochemistry, Rock - Geochemistry, Soil - Geochemistry, Hand - Trenching	10	4281.51
094788	2004	2004 [Dublin Gulch] Geophysical Survey	Electromagnetic - Airborne Geophysics, Magnetic - Airborne Geophysics		
091387	1982	Dublin Gulch 1982 Assessment Drill Logs & Trench Geology	Diamond - Drilling, Drill Core - Geochemistry, Rock - Geochemistry, Mechanical - Trenching	3	738.24
090915	1981	1981 Exploration Program, Dublin Gulch	Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Prospecting - Other, Mechanical - Trenching		
090790	1980	1980 Assessment Report on the Dublin Gulch Property	Diamond - Drilling, Drill Core - Geochemistry, Rock - Geochemistry, Bedrock Mapping - Geology, Backhoe - Trenching, Mechanical - Trenching	65	11315.09
090564	1979	Geological, Geochemical, and Geophysical Report	Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, EM - Ground Geophysics, Seismic - Ground Geophysics, Research/Summarize - Pre-existing Data		
090614	1979	1979 - Project Report - Dublin Gulch Property Claim Groups A-L & Ungrouped Claims Geology, Geochemistry, Geophysics, Diamond Drilling	Diamond - Drilling, Drill Core - Geochemistry, Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Magnetism - Ground Geophysics, Prospecting - Other,	28	3114.20

