



Occurrence Details

Occurrence Number: 105M 029
Occurrence Name: Mcquesten
Occurrence Type: Hard-rock
Status: Deposit
Date printed: 4/29/2025 2:11:01 AM

General Information

Primary Commodities: gold, lead, silver, zinc
Secondary Commodities: bismuth
Aliases: Wayne
Deposit Type(s): Plutonic Related Au
Location(s): 63°53'0" N - -135°40'44" W
NTS Mapsheet(s): 105M13
Location Comments: .5 Kilometres
Hand Samples Available: Yes
Last Reviewed:

Capsule

Work History

Available records indicate that the occurrence was originally staked as the Wayne cl 2-6 and Don cl 2-8 (62880) in Sep/55 by G. Rich. J. Strebchuk staked Alberta cl (62998) and Yukon cl (80078) contiguously to the west in July and Sep/56, respectively. The Alberta group was optioned by Rio Plata Silver Mines Ltd in 1962, which carried out bulldozer trenching and 76.2 m of rotary drilling. In Jul/64, L.T. Chisholm purchased a 50% interest in the Wayne claims. The Alberta and Yukon claim groups were subsequently optioned from Sep/67 to Jul/70 by Fort George Mining and Exploration Ltd, which added Joe cl (Y6927) in Nov/67 and carried out bulldozer trenching in 1968, shipped 5.88 tonnes of ore to the Trail Smelter and drilled 61 m. Adjoining claims, which have been explored by minor hand and bulldozer trenching in a few cases, include Don cl (62884) in Aug/55 by J. Boyle; Mary E cl 1-2 (80531) in Aug/60 by G. Rich; Rusty cl (Y14803) in May/68, MLS cl (Y26975) in Sep/68 and Duke cl (Y68498) in Aug/72 by W.T. Synott.

Prior to Sep/69, Silver Spring Mines Ltd optioned the Alberta claims and carried out diamond drilling (no record) and underground development consisting of 134.1 m of drifting and 54.9 m of raising which was completed by Dec/69. Subsequently Silver Spring apparently formed a joint venture with Canadian Reserve Oil and Gas Ltd which carried out VLF-EM geophysical surveying in 1971-1972 and bulldozer trenching and drilled three holes (reportedly 137 m) in 1972. Silver Spring staked additional Alberta cl (Y56184) in Sep/71 and Evelyn cl (Y68340) in Jun/72. During this period, in Dec/71, United Keno Hill Mines Ltd staked Buconjo cl 17-24 (Y56474) 2 km to the east and in 1972 the company drilled 10 holes (513.6 m) on Buconjo cl 22. The Alberta and Yukon claims were restaked as Snowdrift cl 1-11 (Y87462) in Mar/74 and Snowdrift cl 12-16 (Y97219) in Dec/74 by United Keno Hill Mines Ltd, which carried out geological mapping, prospecting and geochemical sampling in May/74; drilled 80 percussion holes (3 195.8 m) in 1976; 46 percussion holes (1 606.3 m) in 1982 and an additional 3 658 m of percussion drilling and 4 diamond drillholes (610 m) in 1984.

More than 600 Zap cl (YA38362) were staked to the northeast in Mar/79 by Canada Tungsten Mining Corporation Ltd which carried out geochemical and geophysical surveying in 1979-80. The Wayne group was optioned to Island Mining and Exploration Company Ltd in Feb/80, which drilled 14 holes (1 212 m) in 1981 and 7 holes (795 m) in 1983.

Between September and Dec/92, B. Kreft restaked the occurrence and surrounding area as Doug cl 1-9 (YB29472), Mary cl 1-6 (YB29002) and Jarret cl 1 (YB29440) including various fractions. Placer Dome Inc staked Doug cl 5-178 (YB29472) to the north in Jan/93. Kreft carried out trenching and mined approximately 15.4 tonnes of material in the fall of 1994 and in Mar/95 Kreft optioned the claims to Hemlo Gold Mines Inc. Hemlo cut a grid on the property and staked the Solstace cl 1-5 (YB64175) 1 km to the north and the Lakehead cl 1-13 (YB64188) 1 km to the southwest in Jun/95. In Oct/95 Hemlo carried out magnetic, VLF-EM and HLEM geophysical surveying on the property before dropping the option in 1996.

In 1997 the claims were optioned to Eagle Plains Resources Ltd and Miner River Resources Ltd, which carried out reverse circulation drilling of 6 holes (500 m) later that year. Viceroy Resources Corporation optioned a 70% interest in the claims in Oct/97 and immediately carried out excavator trenching and chip sampling. In 1998, Viceroy carried out further excavator trenching, magnetometer and IP surveying.

In mid 1999 Viceroy sold its interest in the property to NovaGold Resources Inc, which assumed all option agreement obligations associated with the claims. Later in the year NovaGold carried out a limited geochemical sampling and geological mapping program to assist in data interpretation of previous sampling completed east of the main trench area. NovaGold staked Hoito cl 1-8 and Twins cl 1-7 (YC02323) in Dec/99 as five separate but not contiguous claim holdings within 3 km of the property.

In Apr/2000 Newmont Exploration of Canada Ltd (a wholly owned subsidiary of Newmont Mining Corporation) entered an agreement with NovaGold to explore the claims and carried out regional airborne surveying, auger drilling, geological mapping and prospecting of this and several other newly acquired and contiguous properties (Minfile Occurrences #105M 027 and #105M 060) and drilled 5 holes (883 m) on this occurrence.

In 2003 the NovaGold option was acquired by SpectrumGold Inc (a 56% owned subsidiary of NovaGold) who took over as operator of the McQuesten project and carried out drilling of 17 holes (3 073 m) during Aug/2003. With the completion of this drill program, which fulfilled the option terms for earn in, a 70:30 joint venture between SpectrumGold and Eagle Plains was initiated.

In Mar/2004 NovaGold Resources Inc announced a plan of arrangement with SpectrumGold to acquire all of that companies publically held common shares.

Capsule Geology

Moderately to highly strained rocks exhibiting well developed foliation are exposed in two overlapping thrust sheets in the McQuesten-Mayo-Keno area. The more southerly RST sheet contains Late Proterozoic Yusezyu Formation of the Hyland Group consisting of turbiditic quartz sandstone and grit with rare limestone and minor maroon argillite, while the TT sheet to the north is comprised of clastic Earn Group rocks consisting of massive chert-pebble conglomerate, black chert and carbonaceous phyllite and felsic meta-tuff, which is overlain by Carboniferous Keno Hill quartzite consisting of sandstone with carbonaceous interbeds and minor limestone. with has been structurally thickened by recumbent folding or thrusts. (contemporaneous meta-tuff containing a VMS deposit occurs immediately northeast of the map area.

During the Middle Jurassic to Early Cretaceous regional deformation of the area occurred. The RST underwent at least 150 km of northerly displacement placing Hyland Group rocks in their present position (Roots, 1997). Subsequent thrusting of the Tombstone sheet marked by shearing and northwest transport imparted pervasive foliation high into the hanging wall of this thrust sheet and into the lower part of the overlying RST sheet. A third phase of deformation is evidenced by tight to isoclinal and recumbent folds and northeast displacement together with the formation of abundant shear planes offsetting regional foliation. Two late, regional antiformal structures, trending west-southwest and southeast, broadly deform the RST sheet.

Undeformed granitic and granodioritic intrusions of the 91-94 Ma Tombstone Plutonic Suite crosscut regional structure and were the probable heat source for epi- and meso-thermal veins of the historic Elsa-Keno Hill silver camp and currently are the focus of exploration for IRGS mineralization in this and neighbouring regions.

The occurrence consists of a branching, north-striking vein which cuts Carboniferous Keno Hill Quartzite near its contact with schist of the Late Proterozoic Hyland Group. The vein has been traced for 121.9 m by bulldozing and up to 61 m below surface by drilling. Mineralization consists of galena, sphalerite and tetrahedrite in a carbonate gangue. The 1968 shipment assayed 4 580.4 g/t Ag, 56.0% Pb, 4.4% Zn and 2.02 g/t Au.

The 1981 drill program, carried out at the western end of the mineralized trend (West zone), returned low silver values with only a 1:1 silver to lead ratio and showed that the vein dips west rather than east. This suggests that the vein is not of the favourable transverse-type which produces ore shoots in this district. The 1981 drilling unexpectedly intersected two stratiform gold-tungsten-bearing horizons, one on either side of the quartzite-schist contact. The schist-hosted horizon is a weakly foliated, pyrrhotite-chalcopyrite-pyrite-quartz-calcite-

diopside skarn with coarse scheelite, while the second horizon is a brecciated and graphitic section within the quartzite that is cemented with pyrite and scheelite. Core assays returned up to 33.3 g/t Au and 2.07% W03 over widths ranging from 46 cm to 3.17 m. In addition, four holes cut pyritic zones in rhyolite dykes and/or sills which returned assays up to 5.0 g/tAu over a core length of 3.5 m. The 1983 drilling was directed toward the skarns and focused on the eastern end of the mineralized trend (East zone). D. Emond (1992) obtained bismuth values up to 450 ppm from the skarn and demonstrated that there is a strong positive correlation between bismuth and gold.

Hemlo Gold's geophysical survey outlined several conductors on the property, but none over known zone of mineralization. Hemlo recommended field checks of all conductors to ensure that they do not have a cultural origin e.g. power lines, buried wire. Upon confirmation of the anomalies possessing a bedrock source the company recommended detailed prospecting and trenching in areas of shallow cover followed by drilling.

Drilling and trenching in 1997 and 1998 along the mineralized trend returned significant values from a major quartz monzonite dyke and the adjacent skarn which it has intruded in the West zone. Hole 97-2 (collared in dyke material) returned 1.77 g/t Au over 35.3 m, including 1.36 g/t Au over 15.2m from the dyke. Drilling in the area bulk sampled by Kreft, about 40 m north of the dyke, returned 3.23 g/t Au over 21.3 m. Trench sampling of the East zone yielded lower values than those returned from the West zone with a best interval of 1.45 g/t Au over 10 m from Trench 97-6, while the best drill intersection was 0.92 g/t Au over 45.7 m including 1.51 g/t Au over 18.3 m.

Two other occurrences, one south of the trend of the East and West zones and the other 2.4 km east of the West zone, returned values of 2.5 g/t Au and 1.03 g/t Au respectively from similarly altered and mineralized host rock. Viceroy concluded that the East zone is likely an extension of the West zone, that the other two occurrences indicate a lateral extent of the mineralization of at least 2.4 km and that the mineralization occurs in separate, parallel reactive members that overlie the West and East zones.

Newmont's drilling tested a 1.2 km section of the same trend that hosts the East and West zones and intersected significant mineralization in all five holes with grades and widths consistent with earlier drilling. Magnetic data shows elevated response across the northern part of the Doug claims for which a deep-seated, perhaps intrusive source is suggested. The source of strong negative responses along the southern boundary of the claim group have been interpreted as reversely magnetized pyrrhotite. A number of strong EM conductors traverse the southern part of the claim block from east to west and likely represent graphitic horizons with the Keno Hill quartzite. Further to the north, EM response is muted, likely due to increasing depth of overburden in the McQuesten River valley.

Drilling in 2003 encountered wide intervals of anomalous gold mineralization in all holes which included significant zones grading greater than 1 g/t Au. Gold grades appear related to both skarn development and the proximity of a series of high angle structural zones and thin felsic dykes encountered in the drilling. Mineralization remains open down dip and along strike.

References

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VICEROY RESOURCE CORPORATION, Feb/99. Assessment Report #093985 by C. Schulze.

WHITEHORSE STAR, 27 Sep/71, 17 May/72

YUKON EXPLORATION AND GEOLOGY 1981, p. 167; 1983, p. 206; 1997, p. 28-29, 38; 1998, p. 11-12; 2000, p. 18; 2003, p.10.

Work History		
Date	Work Type	Comment
12/31/2003	Drilling	Seventeen holes, 3.073 m.
12/31/2000	Drilling	Five holes, 833 m.
12/31/2000	Geology	
12/31/2000	Airborne Geophysics	Also EM survey .
12/31/2000	Other	
12/31/1999	Geochemistry	
12/31/1998	Ground Geophysics	Also IP survey .
12/31/1998	Trenching	
12/31/1997	Geochemistry	
12/31/1997	Drilling	Six holes, 500 m.
12/31/1997	Trenching	
12/31/1995	Ground Geophysics	Also VLF-EM and HLEM surveys. Carried out by Hemlo Gold.
12/31/1994	Geochemistry	Carried out by Kreft.
12/31/1994	Trenching	Carried out by Kreft.
12/31/1983	Drilling	Seven holes, 795 m.
12/31/1981	Drilling	Fourteen holes, 1,212 m.
12/31/1972	Drilling	Three holes, 137.2 m.
12/31/1972	Trenching	
12/31/1971	Ground Geophysics	Also VLF survey .
12/31/1969	Development, Underground	Conducted 134.1 m of drifting, 54.9 m of raising.
12/31/1968	Development, Surface	High-graded 5.88 t of ore.
12/31/1962	Trenching	
12/13/1999	Geology	
12/13/1968	Trenching	
12/13/1962	Drilling	Unknown number of holes, 76.2 m.

Assessment Reports that overlap occurrence					
Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
095713	2010	2010 Reverse Circulation Drilling Assessment Report	Reverse Circulation - Drilling, Drill Cuttings - Geochemistry	34	1186.89
094943	2006	2006 Geological, Aerial Photography and Orthophoto Assessment Report on the Keno Hill Property	Electromagnetic - Airborne Geophysics, Magnetic - Airborne Geophysics, Interpretation - Airphotography, Orthophoto - Airphotography, Digitizing Data - Pre-existing Data, Photogrammetry - Remote Sensing		
094787	2003	2003 Aurex Project Assessment Report	Diamond - Drilling, Drill Core - Geochemistry, Soil - Geochemistry, IP - Ground Geophysics, Magnetics - Ground Geophysics, Resistivity - Ground Geophysics, Line Cutting - Other	25	3811.81
095825	2003	2003 Diamond Drilling Assessment Report on the McQuesten Property	Diamond - Drilling, Drill Core - Geochemistry	18	3073
094222	2000	2000 Geological, Geochemical, Geophysical and Trenching Assessment on the Aurex Project	Electromagnetic - Airborne Geophysics, Magnetic - Airborne Geophysics, Reclamation - Development, Surface, Auger - Drilling, Drill Cuttings - Geochemistry, Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Detailed Bedrock Mapping - Geology, Line Cutting - Other, Research/Summarize - Pre-existing Data, Backhoe - Trenching	100	160
094277	2000	2000 Geophysical Assessment Report on the McQuesten Property	Electromagnetic - Airborne Geophysics, Magnetic - Airborne Geophysics		
094162	1999	1999 Exploration Progress Report-McQuesten Project	Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology		
093985	1998	1998 Geological and Geochemical Assessment Report on the McQuesten Project	Historical Drill Core - Geochemistry, Rock - Geochemistry, Detailed Bedrock Mapping - Geology, IP - Ground Geophysics, Magnetics - Ground Geophysics, Petrographic - Lab Work/Physical Studies, Line Cutting - Other, Data Compilation - Pre-existing Data, Process/Interpret - Pre-existing Data, Mechanical - Trenching		

093408	1995	Geological Surveys (Magnetic, HLEM and VLF-EM)-Wayne Option	EM - Ground Geophysics, Magnetics - Ground Geophysics, Line Cutting - Other		
093051	1992	The Geology, Geochemistry and Geophysics of the Aurex 1-36 and 51-86 Quartz Claims	Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Prospecting - Other		
062145	1981	1981 Exploration Program on the Wayne 2-6, Don 2-8, and Mary E 1F-2F Claims	Rock - Geochemistry		
090933	1981	[1981 Diamond Drilling on the Wayne 5 Mineral Claim]	Diamond - Drilling, Drill Core - Geochemistry	14	1211.58
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		
060942	1970	Report on Aeromagnetic Survey-Keno Area, Yukon Territory	Magnetic - Airborne Geophysics		

Related References

Number	Title	Page(s)	Reference Type	Document Type
ARMC014874	Shareholder report - Rio Plata Silver Mines Ltd. (N.P.L.)		Property File Collection	Report

Drill core at YGS core library

Number	Property	Year Drilled	Core Size	Photos	Data
W81-1	Wayne	1981	NQ	6	1
W81-10	Wayne	1981	NQ	14	2
W81-11	Wayne	1981	NQ	6	1
W81-12	Wayne	1981	NQ	10	1
W81-13	Wayne	1981	NQ	8	1
W81-14	Wayne	1981	NQ	10	2
W81-2	Wayne	1981	NQ	12	1
W81-3	Wayne	1981	NQ	10	1
W81-4	Wayne	1981	NQ	8	1
W81-5	Wayne	1981	NQ	10	2
W81-6	Wayne	1981	NQ	10	2
W81-7	Wayne	1981	NQ	16	2
W81-8	Wayne	1981	NQ	10	1
W81-9	Wayne	1981	NQ	8	2