Occurrence Details

Occurrence Number: 105D 025
Occurrence Name: Goddell
Occurrence Type: Hard-rock
Status: Deposit
Date printed: 8/6/2025 1:46:17 AM

General Information

Primary Commodities: gold
Secondary Commodities: antimony, silver
Aliases: Goddell Gully
Deposit Type(s): Epithermal Au-Ag: Low Sulphidation, Orogenic Au
Location(s): 60°11'32" N - -135°16'55" W
NTS Mapsheet(s): 105D03
Location Comments: .5 Kilometres
Hand Samples Available: Yes
Last Reviewed:

Capsule

Work History

Quartz-stibnite veins were reportedly discovered in this area as early as 1893, although it was not until around 1906 that the occurrence was staked as Ora, Princess, Lone Star, etc cl by C. Goddell, who carried out trenching and drove a short adit.
Restaked as Grizzly cl 1-4, Dorothy cl 1-8 and Frankie cl 1-8 (73561) in Jun/58 by Prospectors Airways Company Ltd, which carried out minor exploration work.

Restaked as May cl 3-6 (92109) in May/65 by Yukon Antimony Corporation Ltd, which carried out trenching. National Lead Company Ltd held an option on the property between June and Sep/70. In Feb/71, Yukon Antimony was merged into International Mariner Resources Ltd.
Restaked as Carbon cl 1-4 (YA7918) in Aug/76 by Con-Am Resources Ltd, which carried out geological mapping and geochemical sampling in 1977.

In Mar/84 Berglynn Resources Ltd and Skukum Ventures Inc restaked the occurrence within a large block of Pop cl 15-104 (YA81468). The companies carried out grid soil sampling and staked Tech cl 22-40 (YA92145) 2 km contiguously to the northeast in Jun/85; staked MB cl 1-3 (YA94610) 1 km north in May/86; and carried out geophysical surveying (VLF-EM), drilled 11 holes (2,857.2 m) on the occurrence and carried out grid geochemical soil sampling and preliminary geological mapping and rock sampling of the Tech claims in 1987. Skukum Ventures was renamed Skukum Gold Inc in Mar/88. The companies then drilled 4 holes (1,976.3 m) in 1989 and an additional 7 holes (1,540 m) in 1990.

Berglynn changed its name to Arkona Resources Inc in Mar/92 and in 1994 Arkona formed a new joint venture with No. 276 Taurus Ventures Ltd, a private B.C. company, allowing it to increase its interest in the property and various contiguious claims.
Subsequently, in 1995, the property was optioned to Omni Resources Inc and that fall Omni drilled five holes (2,842 m). In 1996 a 630 m ramp was driven to facilitate underground drilling and between Oct/96 and Apr/97 twenty nine holes (6,946 m) were drilled, before the ramp was extended 180 m farther to the east and an additional eleven holes (2,268 m) were drilled in Jun/97. During this period BYG Natural Resources staked Mil cl 1-64 (YB67166) in Jun/96 to surround the exisiting claims to the north and northwest. These claims were later (Oct/2000) transferred to Omni Resources after a claim of lien was filed against BYG in Mar/99.

Omni and Arkona carried out detailed geological mapping, contour soil sampling and prospecting in 1998. By 1999 Omni had earned a 60% interest in the property and purchased Taurus Ventures 10% interest, subsequent to Arkona transferring 100% ownership of the property to Omni on July 23/99.

In Nov/2000 Omni amalgamated with Trumpeter Yukon Gold Inc to form Tagish Lake Gold Corp. Tagish Lake Gold carried out a detailed structural and alteration studies and commissioned a National Instrument 43-101 compliant resource estimate of the deposit in 2002 and completed data compilation and integration to digital format of historic data, relogging and sampling of historical drill core and surface drilling of three holes (974.8 m) at Goddell Gully in 2003.

In Jan/2005, Tagish Lake signed a letter of agreement to acquire Action Minerals Inc's (formerly Arkona) working funded interest (30%) in the claims covering the Goddel Gully deposit. Tagish Lake carried out large diamond drilling programs in 2005 and 2006 focused on bringing the Skukum Creek (Minfile Occurrence #105D 022) deposit into production. In Aug/2007 the company released an updated National Instrument 43-101 compliant resource estimate for the Goddell Gully deposit.

2007 to 2014 not fully summarized yet.

A Technical Report by R.G. Simpson and C.O. Nash stating a resource estimate was filed on September 14, 2012 with an effective date of July 16,2012 and was re-stated in a report by R.G Simpson with a revision date of July 31, 2013. The resource estimate was unchanged.

Capsule Geology

Gold and silver mineralization occurs at Goddell Gully within and to the south of the main strands of the Goddell fault and has been intersected in numerous drill holes and surface exposures over a strike length of at least 500 m. The fault zone, a 35 m wide east-trending zone of black augen cataclasite and brecciated quartz monzonite, forms a prominent gossanous lineament that has been traced for about 4.8 km on surface and cuts an equigranular hornblende-biotite quartz monzonite that has been correlated with the mid-Cretaceous aged Carbon Hill plug of the Mt. McIntyre Plutonic Suite.

Mineralized zones are crudely tabular, moderate to steeply north dipping and possibly westerly plunging and may in part be localized along minor north dipping splays off the main Goddell fault. Stibnite is commonly the main sulphide phase and is typically accompanied by minor amounts of pyrite, sphalerite and traces of galena.

Hart (1992) described four types of mineralization in the area; quartz-stibnite veins, disseminated gold-pyrite-arsenopyrite, disseminated copper, and quartz-hematite-galena veins.

(1) Quartz-stibnite veins. These are exposed on the west slope of Carbon Hill. They are 0.2 to 1.8 m wide, banded, and commonly contain pyrite and sphalerite. Stibnite-rich quartz-sulphide veins contain up to 13.7 g/t Au and 132 g/t Ag, and up to 5,000 ppb Hg. Massive stibnite samples contain up to 40% Sb, with several percent zinc and 10-100 g/t Ag.

(2) Disseminated copper. Porphyry copper-style mineralization was found at three separate locations near Goddell Gully.

Chalcopyrite and chalcocite occur in thin quartz-pyrite stringers cutting phyllic-altered, malachite and azurite-stained granite.

(3) Quartz-hematite-galena veins. Erratic high gold values from 10 to 17 g/t are reported from thin, anastomosing quartz veins containing specular hematite and minor galena. These veins cut the Carbon Hill granite and are generally adjacent to andesite dykes.

(4) Gold-pyrite-arsenopyrite veins.

The Goddell Shear Zone (formerly called Golden Tusk or PD zone) consist of gold- bearing pyrite and arsenopyrite intersected at depth in two 1988 drillholes. The gold values came from 2 zones. The upper mineralized zone is a black breccia formed from quartz monzonite, rhyolite, andesite and quartz fragments in a fine grained sulphide matrix. Gold in the lower mineralized zone is associated with acicular arsenopyrite crystals in a swarm of altered andesite and porphyritic rhyolite dykes. Hole 88-2 returned 4.1 g/t Au over 7.0 m from the upper zone and 13.4 g/t Au over 6.4 m from the lower zone, while Hole 88-3 produced 20.9 g/t Au over 11.3 m from the lower zone only, including 43.9 g/t Au over 4.3 m. The gold-bearing zones contain 1-12% As, 0.1-2% Sb and return anomalous Hg values. Drilling in 1990 tested the strike extension of the Goddell Shear Zone where it forms a massive alteration zone at surface, 152 m west of the 1988 drillholes. Hole 90-GT-2 intersected 18.3 m grading 5.2 g/t Au and 90-GT-7 intersected 1.5 m grading 461.4 g/t Au.

The 1995 drilling program was designed to test the western extension of the zones discovered in 1988 and to further explore the lower zone at depth. Three drill holes intersected the lower mineralized zone and effectively doubled its strike length. Hole 95-23 returned 15.8 g/t Au over 2.8 m; hole 95-24 returned 13.7 g/t over 6.92 m and hole 95-27 returned 5.6 g/t over 7.4 m. The lower mineralized zone is open at depth and to both the east and west. Geochemical statistics carried out on all drill core samples found that there is a strong positive correlation between Au-As; Ag-Pb-Zn-Cd; and between Mo-W.

Alteration within the main zone of shearing at Goddell is an intense quartz-sericite-carbonate alteration that is visually distinguished by it prominent apple-green coloration. This is surrounded by an envelope of sericitic alteration that extends a few tens of meters beyond and commonly weathers to a distinct brownish cast in affected drill core.

In Sep/2002, Tagish Lake Gold, employing a 5 g/t Au cut-off, estimated that the Goddell deposit hosted an Indicated Mineral Resources of 320,000 tonnes grading 11.02 g/t Au and Inferred Mineral Resources of 280,000 tonnes grading 9.21 g/t Au.

Relogging and infill sampling of historical diamond drill core from the Goddell Gully deposit was undertaken in 2003 after sampling of previously unsampled core from drillhole 97-56 yielded more significant mineralization, 8.49 g/t Au over 2.91 m, located within a larger lower grade zone that emcompassed the historical intersection which had returned 3.57 g/t Au over 0.66 m from a single sample. While the results of sampling of previously unsampled material ultimately indicated that historical sampling had accounted for most of the significant mineralization in the Goddell deposit drill core, it opened the up-dip potential within the Goddell Shear Zone and together with the current drilling suggests that the limits of the deposit are not yet defined.

In Aug/2007 Tagish Lake Gold, emplying a 4 g/t gold cut-off, estimated that the Godell Gully deposit hosted an Indicated Resource of 360,000 tonnes grading 10.3 g/t gold and a Inferred Resource of 310,000 tonnes grading 8.8 g/t gold.

2007 to 2014 not fully summarized yet.

A Technical Report by R.G. Simpson and C.O. Nash stating a resource estimate was filed on September 14, 2012 with an effective date of July 16,2012. A revised document of that report was released with a revision date of July 31, 2013. The revision was made to address comments by the British Columbia Securities Commission, include change in authorship but no material change and the resource estimate was unchanged. The current resource estimate for the Goddell deposit, using a 3 g/t Au cut-off is listed at 329,700 tonnes of INDICATED material grading 8.13g/t Au for a total of 86,210 oz Au (2.68M g Au) and 483,900 tonnes of INFERRED material grading 7.13g/t Au for a total of 110,687 oz Au (3.44M g Au).

Work History

Date	Work Type	Comment
8/27/2007	Studies	MineTech, 2007.
7/31/2013	Studies	Simpson, July 31 2013, revised and restated version of 2012 report (Simpson and Nash), no material change.
7/16/2012	Studies	Naas C. and Simpson R.G.,July 2012.
6/2/2003	Studies	MineTech, 2003.
12/31/2003	Drilling	Three holes, 9,74.8 m. Also re-logged historical core.
12/31/2003	Studies	Data compilation and integration to digital format.
12/31/2002	Studies	Structural and alreration studies and resource estimate.
12/31/1998	Geology	
12/31/1998	Geochemistry	Contour sampling.
12/31/1997	Drilling	Eleven holes, 2,268 m
12/31/1996	Drilling	Twenty nine holes, 6,946 m collared from underground.
12/31/1996	Development, Underground	630 m ramp driven to facilitate underground drilling.
12/31/1995	Drilling	Five holes, 2,842 m centered on the Goddell shear zone.
12/31/1990	Drilling	Seven holes, 1,540 m
12/31/1989	Drilling	Fourteen holes, 2,396 m
12/31/1988	Drilling	Four holes, 1,976 m
12/31/1987	Drilling	Eleven holes, 2,857.2 m
12/31/1987	Geochemistry	
12/31/1987	Ground Geophysics	Also VLF survey.
12/31/1985	Geochemistry	

12/31/1977	Geology	
12/31/1977	Geochemistry	
12/31/1965	Trenching	
12/31/1906	Development, Underground	Drove a short adit.
12/31/1906	Trenching	
12/13/2011	Studies	Part of Technical report by O'Connor, Sept 2011, AMEC Mining Consultants.
12/13/1985	Ground Geophysics	Also VLF survey.

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
095827	2011	Tagish Lake Gold Property, Exploration Report for 2011, Geological, Geochemical, Diamond Drilling and Data Compilation Work	Rehabilitation - Development, Underground, Diamond - Drilling, Drill Core - Geochemistry, Historical Drill Core - Geochemistry, Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Surveying - Other, Data Compilation - Pre-existing Data, Digitizing Data - Pre-existing Data	51	12487.77
095183	2009	Skukum Project Exploration Report for 2009 Geochemical and Geophysical Work Done on the Following Mineral Claims Char,Chief,Cl,Glee,Kuku,Lb,Mil,Mom,Omni,Pop,Raca,Sten	Rock - Geochemistry, IP - Ground Geophysics, Resistivity - Ground Geophysics		
094337	2002	Geological Structure and Alteration Study of the Pop,Mom,Chief,Glee,Tech,Berg,Sten,Mil Claims	Detailed Bedrock Mapping - Geology, Petrographic - Lab Work/Physical Studies, Process/Interpret - Pre-existing Data		
093685	1997	October 1996-April 1997 Underground Diamond Drilling Project, Diamond Drill Holes G96-28 to G97-56	Diamond - Drilling, Drill Core - Geochemistry	29	6946
093470	1995	Assessment Report on the 1995 Diamond Drill Program, Goddell Gold Project	Diamond - Drilling, Drill Core - Geochemistry	5	2842
092481	1988	Report on the Geology, Geophysics, Trenching and Diamond Drilling of the Pop Claims	Diamond - Drilling, Drill Core - Geochemistry, Rock - Geochemistry, Detailed Bedrock Mapping - Geology, EM - Ground Geophysics, Mechanical - Trenching	16	4159
092702	1988	Assessment Report on the Geology and Diamond Drilling of the Pop, Mom, Berg, Sten and MB Claims	Diamond - Drilling, Drill Core - Geochemistry, Historical Drill Core - Geochemistry, Petrographic - Lab Work/Physical Studies, Prospecting - Other	4	1976
062286	1987	Summary Report on the Wheaton Gold Property	Research/Summarize - Pre-existing Data		
091931	1986	Geology and Geochemistry Adit Rehabilitation and Sampling, Backhoe Trenching and Sampling	Rehabilitation - Development, Underground, Rock - Geochemistry, Soil - Geochemistry, Detailed Bedrock Mapping - Geology, Backhoe - Trenching		
091809	1985	Geological, Geochemical and Airphoto Interpretation Report	Interpretation - Airphotography, Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Line Cutting - Other, Prospecting - Other		
092071	1964	Carbon Hill Antimony Deposits,Wheaton District of Yukon Antimony Corporation Ltd (N.P.L)	Property Evaluation - Other		
092050	1940	[Preliminary Account of the Present-Work of the Wheaton River Antimony Deposits]	Tunnelling - Development, Underground, Hand - Trenching		

Related References

Number	Title	Page(s)	Reference Type	Document Type
ARMC005293	Map - P.A. Cox's antimony		Property File Collection	Geoscience Map (General)
ARMC005295	Mylar map overlay - Showing Mom, Tech and Pop claims		Property File Collection	Geoscience Map (General)
ARMC005296	Notes Re: P.A. Cox's antimony		Property File Collection	Miscellaneous Company Documents
ARMC005297	Notes Re: Becker Cochrane - Pop mineral claims		Property File Collection	Miscellaneous Company Documents
ARMC005298	Correspondence Re: Grizzly-Dorothy-Frankie Mcs - Old Becker/Cochrane stibnite property		Property File Collection	Miscellaneous Company Documents
ARMC005299	Property Information Form - Covering the location of Becker Cochrane-Porter claim groups		Property File Collection	News Release
ARMC005300	Memorandum Re: Cox Antimony prospect - Becker Creek		Property File Collection	Miscellaneous Company Documents
ARMC005301	Claim map showing Becker Creek, Antimony Creek, and Carbon Hill		Property File Collection	Geoscience Map (General)
ARMC005302	Plan map No. 2 - Cox Sb Property - Old Becker-Cochrane Group		Property File Collection	Geoscience Map (General)

ARMC005303	Correspondence Re: Antimony showing in the Wheaton district		Property File Collection	Miscellaneous Company Documents
ARMC005304	Preliminary report on the Cox antimony property, Becker Creek		Property File Collection	Report
ARMC005306	Plan map No. 3 - Theoretical cross-section and plan showing Cow claim group		Property File Collection	Geoscience Map (General)
ARMC005307	Petrology and mineralogy report of the Yukon Sb, stibnite deposit		Property File Collection	Report
1990-4(G)	Geology of Whitehorse, Alligator Lake, Fenwick Creek Carcross and Part of Robinson Map Areas (105D/11, 6, 3, 2 & 7)		Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Open File (Geological - Bedrock)
2003-9(D)	Yukon Digital Geology (version 2)		Yukon Geological Survey	Open File (Geological - Bedrock)
YEG1991-pg35	Chieftain Hill property (Morning, Evening, Ocean), south Yukon		Indian & Northern Affairs Canada/Department of Indian & Northern Development: Exploration & Geological Services Division	Annual Report Paper

Resource/Reserve

Year	Zone	Type	Commodity	Grade	Tonnage	Amount	Reported Amount	43-101 Compliant	Cut-off
2012	Goddell Gully (Underground)	Indicated	gold	8.13 g/t	329,700	2681430	Yes	Yes	3.0g/t Au
Naas and Simpson, 2012, restated in Simpson, 2013.									
2012	Goddell Gully (Underground)	Inferred	gold	7.13 g/t	483,900	3448349	Yes	Yes	3.0g/t Au
Naas and Simpson, 2012, restated in Simpson, 2013.									
2007	GODDELL - TOTAL RESERVES (UNDERGROUND)	Inferred	gold	8.8 g/t	310,000		No	Yes	Unknown
Resource was recalculated using 4 g/t gold cut-off. Change in cut-off grade increased resources from 2003 figure.; NI 43-101 compliant report prepared by MineTech International for Tagish Lake Gold Corp using a 4 g/t gold cut-off. Available from Sedar - August 27, 2007.									
2007	GODDELL - TOTAL RESERVES (UNDERGROUND)	Indicated	gold	10.3 g/t	36,000		No	Yes	Unknown
Resource was recalculated using 4 g/t gold cut-off. Change in cut-off grade increased resources from 2003 figure.; NI 43-101 compliant report prepared by MineTech International for Tagish Lake Gold Corp using a 4 g/t gold cut-off. Available from Sedar - August 27, 2007.									
2003	GODDELL - TOTAL RESERVES (UNDERGROUND)	Indicated	gold	11.02 g/t	320,000		No	Unknown	Unknown
Using a cut-off grade of 5 g/t equivalent gold.; News release Sept 23, 2003. These are updated reserve figures released by company. Original figures came from report by MineTech International Ltd.									
2003	GODDELL - TOTAL RESERVES (UNDERGROUND)	Inferred	gold	9.21 g/t	280,000		No	Unknown	Unknown
Using a cut-off grade of 5 g/t equivalent gold.; News release Sept 23, 2003. These are updated reserve figures released by company. Original figures came from report by MineTech International Ltd.									
1999	GODDELL - TOTAL RESERVES (UNDERGROUND)	Historical Estimate	gold	10.2 g/t	145,000		No	No	Unknown
Figures are Not Fully National Instrument 43-101 Compliant. Completed before regulations came into effect. Using a cut-off grade of 5 g/t equivalent gold.; Resource estimate calculated by D. O'Keefe for Omni Gold. Published on Tagish Lake Gold Corp's Web Site, June 2003.									
1999	GODDELL - TOTAL RESERVES (UNDERGROUND)	Historical Estimate	gold	16.41 g/t	92,000		No	No	Unknown
Figures are Not Fully National Instrument 43-101 Compliant. Completed before regulations came into effect. Using a cut-off grade of 5 g/t equivalent gold.; Resource estimate calculated by D. O'Keefe for Omni Gold. Published on Tagish Lake Gold Corp's Web Site, June 2003.									
1997	GODDELL - TOTAL RESERVES (UNDERGROUND)	Historical Estimate	gold	7.2 g/t	900,000		No	No	Unknown
Various figures reported for time period. This estimate appears to be updated from Mann's 1997 resource estimate based on block model. It is assumed that figure does not meet National Instrument 43-101 standards.; George Cross News letter No. 231, 2 Dec/97, p. 2. Also Canadian Mines Handbook 1999-2000.									