Occurrence Details

Occurrence Number: 115F 048
Occurrence Name: Arn
Occurrence Type: Hard-rock
Status: Prospect
Date printed: 4/28/2025 7:49:13 PM

General Information

Secondary Commodities: copper, gold
Aliases: Taylor
Deposit Type(s): Skarn Cu
Location(s): 61°57'43" N - -140°41'15" W
NTS Mapsheet(s): 115F15
Location Comments: .5 Kilometres
Hand Samples Available: Yes
Last Reviewed:

Capsule

Work History

Originally staked as Wee cl 1-12 (Y53472) in Jul/70 by a syndicate composed of Imperial Oil Ltd, Bow Valley Resources Ltd and Canadian Industrial Gas and Oil Ltd during a reconnaissance geochemical program.
Explored but not staked by the Nat Joint Venture (Chevron Canada Ltd and Armco Mineral Exploration Company) in 1980. The joint venture carried out prospecting in 1981 and 1982, no detailed exploration was undertaken and reports of the prospecting are not publically available.
Restaked as Arn cl 1-8 (YB06323) in Jul/87 by Kluane Joint Venture (All-North Resources Ltd and Chevron Minerals Ltd), which carried out geological mapping, geochemical sampling, VLF-EM and magnetometer surveying in 1988 and staked Arn cl 9-14 (YB27511) in May/90.
Acne Joint Venture bought out the All-North and Chevron interests in the property and subsequently optioned the claims to Mendocino Resources Ltd. In 1993, Mendocino carried out geological mapping, trenching, geochemical sampling, geophysical surveying and staked Arn cl 15-18 (YB38261) in Aug/93 before dropping the option.
Nordac Resources Ltd purchased a 100% interest in the property from Acne Joint Venture and carried out geochemical sampling and hand trenching in 1998. Nordac changed its name to Strategic Metals Ltd in Jun/2001 and optioned the property to Atac Resources Ltd in Feb/2002.
During 2002, Atac carried out geological mapping, prospecting, drilled 4 holes (182 m) and staked Arn cl 19-28 (YC19631) in Aug/2002. The company staked Arn cl 29-68 (YC25958) contiguously to the north and west of the existing claim block in Jun/2003 and immdediately carried out grid geochemical soil sampling and trenching on the previously existing claims and contour geochemical soil sampling, prospecting and geological mapping of the newly staked claims.
In Jul/2004 the Arn claims were optioned by Klondike Gold Corporation, which drilled 18 holes (900 m) on Zones A and B and carried out prospecting, geological mapping and hand trenching in the western part of the property. Klondike Gold subsequently terminated its option on the Arn claims and returned the property to Atac Resources in May/2005.
Atac Resources announced in Jun/2005 that it had optioned the right to earn a 50% interest in the Arn claims to Golden Reign Resources Ltd in return for cash payments and work expenditures.

Capsule Geology

The claimed area lies just southwest of the Shakwak-Denali Fault system and is underlain by Upper Jurrassic to Lower Cretaceous volcanic and sedimentary rocks of the Wrangellia Terrane that have been intruded by Late Early Cretaceous porphyritic to non-porphyritic andesite, diorite and latite dykes of the Kluane Ranges Suite. The `Arn fault¿, a composite structure composed of three or more narrow high angle faults separated by relatively competent wallrock trends west-northwesterly across the area. Copper and gold mineralization occurs in skarn zones and as structurally controlled vein or replacement mineralization related to the faults. Skarn zones range from less than a metre to a few tens of meters thick and are associated with all intruded rock types. Gold grades generally correlate directly with sulfide content regardless of host rock or alteration.
Soil sampling has identified a number of large gold-copper soil anomalies which strike northwesterly across the property, peak values of 8 370 ppb Au and 5 780 ppm Cu have been returned. Elevated copper and iron values weakly correlate with gold values, but atypically the usual pathfinders for gold are absent or are only sporadically anomalous.
Numerous zones of mineralization have been discovered and investigated to date on the claims. Most of the zones contain only skarn mineralization, a few consist of quartz-carbonate vein or replacement mineralization without accompanying skarns and some exhibit skarn and vein mineralization. The skarns show a wide variety of compositions and textures and are dominated by one of the following assemblages: 1) garnet-(magnetite); 2) epidote-calcite; 3) magnetite-amphibole; 4) pyrrhotite rich pods and lenses; and 5) pyrite. The skarn zones are complex, lensey to irregular in outline and when composed of one of the first three assemblages are generally resistant weathering, while the sulfide assemblages are usually oxidized near surface and weather recessively.
A total of seventeen zones of mineralization had been identified on the Arn claims by the completion of exploration in 2004. Zones A and B are the most advanced targets and the only ones that have been drilled. Zone A is located approximately 1.2 km north of the location marker for this occurrence, immediately east of Miles Creek and south of the Arn Fault. Gold-copper skarn mineralization in limestone and calcareous andesitic volcanics, intruded by narrow dykes, is exposed intermittently in outcrops and trenches along a 90 m east-southeasterly trend which is covered by overburden to the east and west. Zone B, 30 to 60 m south of Zone A, is hosted by basalt and consists of an easterly trending zone of sulphide rich skarn that is open to the west under overburden and apparently truncates against a fault to the east. Most of the other zones have not been mapped in detail nor systematically sampled.
Drilling of Zones A and B in 2002, intersected highgrade gold skarn mineralization within a steeply dipping structural zone. Hole Arn-04 intersected 12.67 m of sulfide rich skarn mineralization grading 11.92 g/t Au and 0.22% Cu, that included a 1.98 m section that returned 64.42 g/t Au and 1.16% Cu.
In 2004, 14 of 18 holes reached bedrock and nine of these contained atleast one significant mineralized interval. The companies reported a lower than anticipated proportion of skarn and a higher than expected density of dykes. The mineralized intervals are nearly all from skarn that is sulphide or magnetite rich and mostly occurs in three discontinuous bands that have been cut by post mineralizing dykes. Highlights of this drilling included 3.17 g/t Au and 2.5% Cu over 5.19 m (Hole Arn-05), 2.49 g/t Au and 3.18% Cu over 3.05 m (Hole Arn-10) and 8.6 g/t Au and 0.5% Cu over 6.39 m (Hole Arn-16).

References

ATAC RESOURCES LTD, Apr/2003. Assessment Report #094374 by W.D. Eaton.

ATAC RESOURCES LTD, Oct/2004. Assessment Report #094476 by W.D. Eaton.

ATAC RESOURCES LTD, News Release, 06 Jul/2004; 07 Sep/2004; 10 May/2005; 09 Jun/2005.

ATAC RESOURCES LTD, May/2005, Web Site: www.atacresources.com

GORDEY, S.P. and MAKEPEACE, A.J., 2003. Yukon Digital Geology, version 2.0, S.P Gordey and A.J. Makepeace (comp.); Geological Survey of Canada, Open File 1749 and Yukon Geological Survey, Open File 2003-9(D).

GREENE, A.R., SCOATES, J.S., WEIS, D. and ISRAEL, S., 2005. Flood basalts of the Wrangellia Terrane, southwest Yukon: Implications for the formation of oceanic plateaus, continental crust and Ni-Cu-PGE mineralization. In: Yukon Exploration and Geology 2004, D.S. Emond, L.L. Lewis and G.D. Bradshaw (eds.), Yukon Geological Survey, p. 109-120.

KLUANE JOINT VENTURE, Jun/89. Assessment Report #092734 by C.A. Main.

MENDOCINO RESOURCES LTD, Feb/94. Assessment Report #093156 by H. Copland, R.C. Carne and J. Payne.

NORDAC RESOURCES LTD, May/99. Assessment Report #094009 by R.C. Carne.

YUKON EXPLORATION 1988, p. 171; 1989, p. 106.

YUKON EXPLORATION AND GEOLOGY 1993, p. 7; 1998, p. 27; 2002, p. 12, 24, 26; 2004, p. 12.

Work History

Date	Work Type	Comment
12/31/2004	Drilling	Eighteen holes, 900 m.
12/31/2004	Geology	
12/31/2004	Trenching	
12/31/2004	Other	
12/31/2003	Geology	
12/31/2003	Geochemistry	
12/31/2003	Trenching	
12/31/2003	Other	
12/31/2002	Drilling	Four holes, 182 m.
12/31/2002	Geology	
12/31/2002	Other	
12/31/1998	Geochemistry	
12/31/1998	Trenching	
12/31/1993	Geology	
12/31/1993	Geochemistry	
12/31/1993	Ground Geophysics	Also VLF survey.
12/31/1993	Trenching	
12/31/1988	Geology	
12/31/1988	Geochemistry	
12/31/1988	Ground Geophysics	Also VLF and magnetic surveys.
12/31/1988	Other	
12/31/1982	Other	
12/31/1981	Other	
12/31/1970	Geochemistry	Reconnaissance program.

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
095079	2007	Assessement Report Describing Geophysical and Geochemical Surveys, Geological Mapping and Prospecting at the	Magnetic - Airborne Geophysics, VTEM - Airborne Geophysics, Soil - Geochemistry, Bedrock Mapping - Geology, Prospecting - Other		
093156	1993	Geological, Geochemical and Geophysical Report on the Arn Property	Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, EM - Ground Geophysics, Magnetics - Ground Geophysics, Hand - Trenching		
092054	1953	Report on the Geophysical Surveys in the Shakwak Valley Area, Yukon Territory for Canalask Nickel Mines Limited.	Magnetic - Airborne Geophysics		

Drill core at YGS core library

Number	Property	Year Drilled	Core Size	Photos	Data
ARN-10-01	Arn	2010	NTW-BTW	0	6
ARN-10-02	Arn	2010	NTW-BTW	0	5
ARN-10-03	Arn	2010	NTW-BTW	0	5
ARN-10-04	Arn	2010	NTW-BTW	0	5
ARN-04-02	Arn	2002	HQ	10	2