



Occurrence Details

Occurrence Number: 105F 073

Occurrence Name: Bnob

Occurrence Type: Hard-rock

Status: Prospect

Date printed: 12/16/2025 7:37:21 AM

General Information

Secondary Commodities: barite, copper, lead, silver, zinc

Aliases: Ice

Deposit Type(s): Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn

Location(s): 61°34'27" N - -132°32'8" W

NTS Mapsheet(s): 105F10

Location Comments: .5 Kilometres

Hand Samples Available: No

Last Reviewed:

Capsule

Work History

Staked as Bnob cl 1-16 (YA258) in Jul/76 by a joint venture between Cyprus Anvil Mining Corporation and Hudson's Bay Oil & Gas Ltd, which carried out grid soil sampling and prospecting in 1976. The partners added Bnob 17-24 (YA11088) in Sep/76 and carried out geological mapping, magnetic and EM surveying in 1977 and drilled one hole (258.5 m) in 1980. Restaked within Ram cl 1-730 (YA71576) in Sep/84 by Regional Resources Ltd, which carried out an extensive program of mapping, geochemical and geophysical surveys in 1985 and transferred its interests to Fairfield Minerals Ltd in 1986. Fairfield added RAM cl 759-796 (YA01904) in Sep/87 and explored them with grid soil sampling in 1988. Pacific Comox Resources Ltd acquired a 100% working interest in the Ram claims in Jan/93.

Restaked as Ice cl 1-6 (YB74423) by Eagle Plains Resources Ltd in Feb/96 which carried out geological mapping, hand trenching and sampling in 1996 and 97. The company added Ice cl 7-8 (YB84555) in Jun/96, cl 9-10 (YB87288) in Aug/96 and Ice cl 11-18 (YB89927) in Sep/97.

Atna Resources Ltd optioned the property in Oct/97 and carried out geological mapping, grid soil sampling and EM surveying in 1998, before dropping the option.

Eagle Plains carried out prospecting, mapping and geochemistry in 1999 and drilled a single hole (107 m) in 2000. In Sep/2000 the company covered the open ground located between this occurrence and Minfile Occurrence #105F 071 (located 7.5 km to the northeast), with Ice cl 19-104 (YB92850), Ash cl 1-20 (YB92830), Eva cl 1-28 (YB93567) and Cole cl 1-30 (YB93030).

In 2001 the company carried out extensive geological mapping, silt and soil sampling programs over the enlarged claim block. The company continued their exploration work in 2002 and collected In Sep/2000 the company covered the open ground located between this occurrence and Minfile Occurrence #105F 071 (located 7.5 km to the northeast), with Ice cl 19-104 (YB92850), Ash cl 1-20 (YB92830), Eva cl 1-28 (YB93567) and Cole cl 1-30 (YB93030).

In 2001 the company carried out extensive geological mapping, silt and soil sampling programs over the enlarged claim block. The company continued their exploration work in 2002 and began archiving all previously collected data using a Geographic Information System.

Capsule Geology

The area is located southwest of the Tintina Fault on the Cassiar Platform. The Cassiar Platform is a curvilinear shelf that formed, between mid-Cambrian and Silurian time, roughly parallel to the western margin of the North American craton but separated from it by the Selwyn Basin. Shallow water deposition on the Cassiar Platform continued until Late Devonian time. Block faulting and local uplift during Late Devonian and Mississippian resulted in deposition of carbonaceous shale and chert pebble conglomerate in the Selwyn Basin and across the platform. Local explosive volcanism produced thick tuff and flows whose extremities intertongue with surrounding black shale. Some of these centres contain base metal mineralization. Calcareous argillite of Upper Paleozoic to Triassic age was deposited above the shale and volcanic sequence (Hunt, 1999).

The occurrence is located at the northwest end of the Pelly Mountains volcanic belt, an arcuate belt approximately 80 km long and up to 25 km wide that forms part of the Cassiar Platform. The belt is comprised of localized volcanic centers separated by basins in-filled with sediments and volcanoclastic rocks. The present deformed thickness of the volcanic section is highly variable, ranging from less than 100 m to as much as 1 700 m. Associated with these volcanic rocks are at least two volcanogenic massive sulphide (VMS) deposits, the Wolf (Minfile Occurrence #105G 008) and MM (Minfile Occurrence #105F 012) and numerous other historical showings including Chzernpough (Minfile Occurrence #105F 071) and the Bnob, this occurrence.

The volcanic rocks are predominantly felsic but in some areas significant accumulations of andesite to basalt occur. The most common feature of the belt are flows, epi-zonal sills, and small plugs of trachyte. The trachyte flows and/or sills are laterally very extensive, probably due to low magmatic viscosity caused in part by high alkali element content. Typically the trachyte contains significant amounts of pyrite which gives rise to extensive gossans. The trachytes are commonly cream colored, with fine to medium grained phenocrysts of feldspar and rare quartz and locally massive, amygdaloidal or brecciated. Syenite intrusions have been noted at a number of locations within the Pelly Mountains volcanic belt and are thought to represent volcanic feeders. Although these intrusions were originally thought to represent plugs recent diamond drilling suggests that they are really sills.

Exploration work carried out by Cyprus Anvil led to the discovery of the original Bnob occurrence. Cyprus described the occurrence as consisting of thin layers of pyrite and sparsely disseminated galena in a 9 m thick band of sugary white barite that outcrops over a length of 45 m and is traceable in talus for an additional 300 m. The barite layer forms part of a sequence of alkaline to peralkaline volcanic rocks of Mississippian age. The volcanic sequence is underlain by siliceous grey phyllite, and includes pyritic felsic tuff and lapilli tuff, and is overlain by a blocky felsic flow. The 1980 drill hole failed to intersect barite or volcanogenic massive sulphide mineralization and interpretation by later operators suggests the hole was collared stratigraphically below the mineralized barite horizon.

Regional Resources and Fairfield Minerals explored the occurrence in conjunction with a larger regional program, which examined all of the significant silver-gold-lead-zinc vein and replacement showing/deposits located in the region. A decline in metal prices in the late eighties curtailed exploration activities in the area.

Eagle Plains staked the occurrence for its VMS potential. The company sampled the existing occurrence and uncovered a second showing, (the Ice 1 zone) 1 km to the northeast. This zone consists of a 10 m stratigraphic thickness of massive, bedded barite containing large disseminations, blebs and stratiform bands of galena, with disseminated fine- to coarse-grained pyrite and disseminated sphalerite intergrown (?) with galena. Grab samples from both showings returned up to 55.6 g/t silver, 1.060 % copper, 9.53 % lead and 4.74% zinc.

Atna Resources carried out a detailed exploration program over the property. Grid and contour soil sampling outlined anomalous lead and zinc values near the Bnob and Ice 1 showings and a third area labeled the Gully zone. The source of the anomalous values from the Gully zone could not be determined due to limited outcrop exposure. A Max-Min HLEM geophysical survey outlined 4 bedrock conductors, 2 of which were considered to be significant. Atna felt the potential of the Bnob occurrence could be tested with a single drill hole but the company ultimately dropped its option and returned the property to Eagle Plains.

In 2000 following detailed geological mapping, Eagle Plains collared a single drill hole (107 m) on the Bnob occurrence. The hole intersected a thick exhalite bedded barite horizon, containing numerous sulphide horizons over an approximate true thickness of 48.4 m from a depth of 30.2 m to 78.6 m. The best mineralized interval within the barite was found from 56.7 m to 58.0 m which returned 5.64% zinc, 0.17% lead and 12.3 g/t silver. Overall, the entire barite interval averaged 8.9 g/t silver, 5 019 ppm zinc and 1 659 ppm lead over its 48.4 m thickness.

The 2001 exploration program was the first of a two year program geared towards geochemically sampling newly staked areas, much of which had never been sampled by Eagle Plains. The 2002 program followed up on areas of interest identified the previous year. The final results identified 4 principal areas of interest, of which one area, the McConnell River area, is located south of this occurrence. Three soil sample lines outlined anomalous lead and zinc values over a large area, including line FL7 which returned 883.5 ppm lead and 3 795 ppm zinc

over 175 m with associated anomalous silver, gold, antimony and cadmium values and line F8 which returned 249 ppm lead and 1 733 ppm zinc over 100 m with associated anomalous cadmium and silver values. In addition the archiving of all geochemical results into a Geographic Information System, enabled the company to improve their understanding of the various stratigraphic relationships present on the property.

References

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CYPRUS ANVIL MINING CORPORATION, Aug/77. Assessment Report #090193 by P. Dean.

ECONOMIC GEOLOGY, Aug/82. p. 1225-1230.

EAGLE PLAINS RESOURCES LTD, Mar/97. Assessment Report #093608 by J.R. Dickie.

EAGLE PLAINS RESOURCES LTD, Sep/97. Assessment Report #093793 by B. Kreft

EAGLE PLAINS RESOURCES LTD, Feb/2001. Assessment Report #094200 by C.C. Downie.

EAGLE PLAINS RESOURCES LTD, Dec/2001. Assessment Report #094267 by C.C. Downie.

EAGLE PLAINS RESOURCES LTD, Nov/2002. Assessment Report #094392 by C.C. Downie and C. Gallagher.

EAGLE PLAINS RESOURCES LTD, News Release, 14 Jun/2001, 30 Aug/2000, 11 Sep/2000.

EAGLE PLAINS RESOURCES LTD, Aug/2004. Web Site: www.eagleplains.ca

FAIRFIELD MINERALS LTD, Sep/87. Assessment Report #092096 by J.J. Hylands.

FAIRFIELD MINERALS LTD, Nov/88. Assessment Report *#092604 by J.J. Hylands.

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HUNT, J.A., 1999. Preliminary stratigraphy and distribution of Devonian-Mississippian massive sulphide-bearing volcanic rocks in the Mount Vermillion area, Pelly Mountains (105G/5 and G/6), southeast Yukon. In: Yukon Exploration and Geology 1998, C.F. Roots and D.S. Emond (eds.), Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, p. 73-89.

HUNT, J.A., 2002. Volcanic-associated massive sulphide (VMS) mineralization in the Yukon-Tanana Terrane and coeval strata of the North American miogeoclinal belt, in the Yukon and adjacent areas. Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada, Bulletin 12, 107 p.

MINERAL INDUSTRY REPORT 1976, p. 194-195; 1977, p. 83.

NORTHERN MINER, 218 Sep/95; 4 Jun/96; 30 Oct/2000.

REGIONAL RESOURCES LTD, Jan/86. Assessment Report #091768 by M.A. Stammers.

YUKON EXPLORATION 1985-86, p. 219-221.

YUKON EXPLORATION AND GEOLOGY 1996, p. 20, 30; 1997, p. 18-19, 35; 1998, p. 1999, p. 22; 2000, p. 9-11, 25, 27; 2001, p. 10-11, 24.

Work History

Date	Work Type	Comment
12/31/2002	Pre-existing Data	Began archiving results in GIS system.
12/31/2001	Geology	Work mainly carried out on newly staked areas.
12/31/2001	Geochemistry	Also silt sampling. Work mainly carried out on newly staked areas.
12/31/2000	Drilling	One hole, 107 m. Eagle Plains drilled single hole to test mineralized horizon.
12/31/1999	Geology	
12/31/1999	Other	
12/31/1998	Geology	
12/31/1998	Geochemistry	
12/31/1998	Ground Geophysics	HLEM survey.
12/31/1997	Geochemistry	
12/31/1997	Geology	
12/31/1997	Geochemistry	
12/31/1997	Trenching	
12/31/1996	Geochemistry	

12/31/1996	Geology	
12/31/1996	Geochemistry	
12/31/1996	Trenching	
12/31/1987	Geology	
12/31/1987	Ground Geophysics	Also VLF-EM and magnetometer surveys.
12/31/1985	Geology	
12/31/1985	Geochemistry	Also rock sampling.
12/31/1980	Drilling	One hole, 258.47 m. Hole appears to have been drilled below mineralized horizon.
12/31/1977	Geology	
12/31/1977	Ground Geophysics	Also magnetometer survey.
12/31/1976	Geology	
12/31/1976	Geochemistry	
12/31/1976	Other	
12/13/2002	Geology	

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
096497	2013	Data Compilation and Geochemical Assessment Report for the Fire (Chzerpnough) and Ice (BNOB) Properties	Data Compilation - Pre-existing Data, Digitizing Data - Pre-existing Data		
094905	2007	2007 Geological and Geochemical Assessment Report for the Fire (Chzerpnough), Ice (BNOB) and Melt Properties	Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology		
094779	2006	2006 Report for the Fire (Chzerpnough), Ice (BNOB) and Melt Properties	Electromagnetic - Airborne Geophysics, Magnetic - Airborne Geophysics		
094392	2002	Geological Report for the Fire (Chzerpnough), Ice (BNOB) and Melt Properties	Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology		
094267	2001	Geological Report for the Fire(Chzerpnough), Ice(Bnob) and Melt Properties Pelly Mountain Project	Soil - Geochemistry, Prospecting - Other		
094200	2000	Diamond Drilling Geological Report for the FIRE(Chzerpnough) and ICE(BNOB) Properties	Diamond - Drilling, Soil - Geochemistry, Detailed Bedrock Mapping - Geology	7	616
093958	1998	1998 Project Report on the Ice Property	Soil - Geochemistry, Bedrock Mapping - Geology, EM - Ground Geophysics		
093793	1997	Geological Assessment Report for the Bnob Mineral Property	Rock - Geochemistry, Backhoe - Trenching		
093608	1996	Geological Assessment Report for the Ice 1-6 Mineral Claims	Rock - Geochemistry, Bedrock Mapping - Geology, Backhoe - Trenching		
092980	1991	Dighem Magnetics/VLF Survey for Pacific Comox Resources Ltd.	Electromagnetic - Airborne Geophysics		
092096	1987	Geological, Geochemical & Geophysical Report on the Ram 1-178 & Mat 1-12 Mineral Claims	Soil - Geochemistry, Bedrock Mapping - Geology, EM - Ground Geophysics, IP - Ground Geophysics, Magnetics - Ground Geophysics		
091768	1985	Geological and Geochemical Report on the Ram 1-758 Mineral Claims	Soil - Geochemistry, Bedrock Mapping - Geology		
090193	1977	Geological and Geophysical Report, BNOB Claim Group	Bedrock Mapping - Geology, EM - Ground Geophysics, Magnetics - Ground Geophysics		
090174	1977	Geochemical Report, BNOB Claim Group	Soil - Geochemistry		

Related References

Number	Title	Page(s)	Reference Type	Document Type
ARMC002967	Grid map - Pelmac project - Bnob claims		Property File Collection	Geoscience Map (General)
ARMC002969	Claim map and proposed DDH site - Pelmac project - Bnob claims		Property File Collection	Geoscience Map (General)
ARMC009281	Geochemical coverage map - Bnob claims		Property File Collection	Geochemical Map
ARMC009282	Radem VLF E.M. profiles - Bnob claims - Figure 6b		Property File Collection	Geophysical Map
ARMC009283	Geology map - Bnob claims		Property File Collection	Geoscience Map (Geological - Bedrock)
ARMC008738	Certificate of Analysis - iPL 96F0523 - Fire and Ice claims		Property File Collection	Assays

ARMC008739	Correspondence Re: Eagle Plains Resources Fire and Ice claims	Property File Collection	Miscellaneous Company Documents
ARMC008740	News releases - Fire and Ice claims	Property File Collection	News Release
ARMC014318	Regional geology - Pelly Mountains - Pelmac project - Field work completed from July - September 1980	Property File Collection	Report
ARMC014316	NTS sheet 105F - Quiet Lake with field notations	Property File Collection	Geoscience Map (General)
ARMC014427	1978 geological report on the Bnob claims - Field work done during the period July 31 to Aug 4, 1978	Property File Collection	Report
ARMC014428	1980 drilling report - Bnob claim group - Field work completed from August 15 to 24, 1980	Property File Collection	Report
ARMC014313	Pelly project summary report: 1978 - Watson Lake mining district, Yukon Territory - Field work done during the period: June 12 - August 30, 1978	Property File Collection	Report
ARMC014233	Claims map drawn on NTS sheet 105F - Quiet Lake	Property File Collection	Geoscience Map (General)
ARMC014434	Drill core log and diamond drill record - Pelmac - Bnob claims - 80-B-01	Property File Collection	Drill Logs

Drill core at YGS core library

Number	Property	Year Drilled	Core Size	Photos	Data
I00-01	Ice	2000	BTW	36	2
80-B-01	BNOB	1980	BQ	22	2