



Occurrence Details

Occurrence Number: 105F 021

Occurrence Name: Box

Occurrence Type: Hard-rock

Status: Prospect

Date printed: 6/15/2025 11:49:49 AM

General Information

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

Aliases: Mat

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

Location(s): 61°31'56" N - -132°35'10" W

NTS Mapsheet(s): 105F10

Location Comments: .5 Kilometres

Hand Samples Available: Yes

Last Reviewed:

Capsule

Work History

Staked as Box cl (88443) in Sep/63 by O. Haug for Conwest, Exploration Company Ltd which explored with hand trenching in 1964. Restaked as MC cl 1-40 (Y2879) in Apr/66 by J.K. Campbell and optioned in 1966 to the Quiet Lake Syndicate (controlled by Silver Standard Mines Ltd, and consisting of Tay River Mines Ltd Copper Ridge Mines Ltd and Utica Mines Ltd), which trenched, sampled and mapped the showings in Aug/66. In 1968, the claims were optioned by Canol Mines Ltd but no further work was carried out. Restaked by Nitex Exploration & Development Ltd in Aug/74 as Mat cl 1-4 (Y83159 & occurrence A) & Gull cl 1-4 (Y83155 -occurrence B) which were explored with mapping and hand trenching in 1974. Thunderwood Exploration Ltd and Royal Agassiz Mines Ltd optioned the claims in 1975 and explored with geological mapping, hand trenching and 3 short drill holes. The group added Mat cl 5-24 (Y93734) and Gull cl 5-16 (Y93746) in Sep/75. In 1976, the Mat claims were optioned by Welcome North Mines Ltd, which carried out prospecting, rock sampling and soil sampling in the vicinity of occurrence A. Extensive fringe staking in Aug-Sep/76 included Gray cl 1-24 (YA00715) & Ling cl 1-16 (YA00739) to the south by Nitex Exploration which were later acquired by DuPont of Canada Exploration Ltd; FG cl 1-16 (YA11263) to the southeast by B. Morrison; Sea cl 1-3 (YA00971) and cl 9-22 (YA11034) to the southwest by Sovereign Metal Corporation Ltd & Nuspar Resources Ltd; and JD cl 1-12 (YA703) to the east by M. Sherman. In 1977 Welcome North Mines transferred the option to the Seagull Joint Venture (comprised of DuPont, Rosario Resources Ltd and Aquitaine Canada. The group explored with geochem and EM surveys, mapping and 3 holes (320.6 m) before dropping the option. United Keno Hill Mines Ltd briefly optioned the JD claim group in 1977 and performed mapping and geochem surveys later in the year. In the same year, DuPont performed geochem surveys, mapping and trenching on the Gray & Ling groups and geochem and geophysical surveys on the Sea group. Nitex Exploration Ltd performed more mapping and a radiometric survey on the Gray group in 1978 and bulldozer trenching on the Mat group in 1979. The entire property was optioned in 1979 by Northern Horizon Res Corp, which performed trenching and mapping in 1980 and more trenching in 1981. The north showing was restaked as Mat cl 1-12 (YA71135) in Jun/84 by M. Sherman and transferred to Fairfield Minerals Ltd in 1987. The southern occurrence (B) was restaked as Mat cl 31-44 (YB88921) by B. Hall in Mar/97. Hall restaked the northern occurrence (A) as Mat cl 1-30 (YB70114) in Oct/97 and subsequently optioned the claims to Oro Bravo Resources Ltd who added them to their Mamu-Bravo-Kulan claim block located to the southeast (Minfile Occurrence #105F 023). Atna Resources Ltd optioned the Mat claims and the Mamu-Bravo-Kulan claims from Oro Bravo in 1997. In 1998 the company carried out reconnaissance geological mapping, prospecting and soil sampling on the Mat claims as part of a larger exploration program on the Mamu-Bravo-Kulan claims. Atna dropped the option at the end of 1998. In Jan/2001 Oro Bravo changed its name to Bravo Resources Partners Inc.

Capsule Geology

The occurrence is located southwest of the Tintina Fault Zone within the Pelly Mountain volcanic belt, a arcuate shaped belt of volcanic rocks approximately 80 km long by up to 25 km wide that forms part of the Cassiar Terrane. The Cassiar Terrane is a curvilinear shelf which formed, between mid-Cambrian to Silurian time, roughly parallel to the western edge of the North American craton, but separated from it by the Selwyn Basin. Shallow water deposition on the platform continued until Late Devonian time. Block faulting and local uplift during the Late Devonian and Mississippian resulted in deposition of carbonaceous shale and chert pebble conglomerate in the Selwyn Basin and across the Cassiar Terrane. Local explosive volcanism produced thick tuffs and flows (Pelly Mountain volcanic belt) whose extremities intertongue with surrounding black shale. Some of these volcanic centres contain base metal mineralization. Calcareous argillite of Upper Paleozoic to Triassic age was deposited above the shale and volcanic sequence (Hunt, 1999). Although outcrop is scarce, both occurrences appear to be underlain by Mississippian aged felsic and mafic metavolcanic rocks which have been intruded by Mississippian age syenite. The discovery showing (the northernmost or occurrence A) consists of a lens of massive to semi-massive galena up to 1.5 m thick, hosted by graphitic slate and foliated tuff with quartz eyes. It is surrounded by a zone of disseminated and lenticular pyrite. Trenching in 1980 returned assays of 466.3 g/t Ag, 17.9% Pb, 0.4% Zn, 0.56% Cu and 0.3 g/t Au from a 6.1 m chip sample. About 110 m west of and parallel to the main showing, a gossan approximately 300 m long is caused by the oxidation of pyrite and pyrrhotite in felsic volcanic rocks. The 1977 drilling and mapping confirmed the presence of a weakly mineralized talcose rhyolite pipe surrounded by lapilli tuff, basalt and mudstone and cut by a syenite plug. Drill results were disappointing. The southernmost showing (occurrence B, originally staked as the Gull claims) is located about 2.4 km south and consists of galena and sphalerite veins and stringers in andesite surrounding a partly exposed rhyolite dome. A selected grab sample of the best looking material collected in 1975 returned 6.2 % Pb, 0.7% Zn and 61.7 g/t Ag. Check sampling in 1980 returned 6.15% Pb and 5.38% Zn. Several veinlets of galena-sphalerite which cut syenite and volcanic rocks on the JD claims gave specimen assays up to 28.5% Pb, 6.5% Zn, 260.6 g/t Ag and trace Au (Mineral Industry Report 1978, p. 82) The 1979 bulldozer work explored mineralization over a 9 by 18 m area from which specimens assayed 1 200.0 g/t Ag, 36% Pb and 1.4 g/t Au. Atna Resources optioned the property to search for massive sulphide mineralization similar to that discovered at the Wolf deposit (Minfile Occurrence #105G 008) located 55 km to the southeast at the southern end of the Pelly Mountain volcanic belt. Geological mapping confirmed the work of previous operators. Atna prospected and sampled the gossan located west of occurrence A. They described it as strongly oxidized with resultant supergene (clay) alteration occurring locally. Disseminated pyrite in concentrations ranging from trace to about 10% account for the large area of iron staining. Soil sampling over the gossan and occurrence A returned elevated but not anomalous values for Pb and Zn. Minor quartz veining containing trace amounts of galena were observed throughout the claims. The lack of barium float and barium enriched geochemical samples and the lack of volcanic units typically associated with massive sulphide mineralization in the region, amongst other factors, led Atna to drop the option.

References

ATNA RESOURCES LTD, Apr/99. Assessment Report #093978 by P. Holbek and R. Wilson.

DUPONT OF CANADA EXPLORATION LTD. Nov/77. Assessment Report #091145 by F.M. Smith.

HUNT, J.A., 1999. Preliminary stratigraphy and distribution of Devono-Mississippian massive sulphide-bearing volcanic rocks in the Mount Vermillion (Wolf) 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.

MINERAL INDUSTRY REPORT, 1976, p. 96, 193-4; 1977, p. 79-80; 82; 84;1978, p. 60.

NITHEX EXPLORATION & DEVELOPMENT LTD, Aug/75. Assessment Report #090007 by J.M. Dawson.

NITHEX EXPLORATION LTD, 1978. Assessment Report *#090378 by D.W. Tully.

NORTHERN HORIZON RESOURCE CORP., Aug/80. Assessment Report #090674 by L.D. Nicoll.

NORTHERN HORIZON RESOURCE CORP., Dec/80. Assessment Report #091148 by L.D. Nicoll.

NORTHERN HORIZON RESOURCE CORP., Jan/82. Assessment Report #092899 by S. Lightburn.

NUSPAR RESOURCES LIMITED, Sep/77. Assessment Reports #061636, 061637 and 061638 by T.L. Sadlier-Brown.

ORO BRAVO RESOURCES LTD. Dec/97. Assessment Report #093756 by R.A. Doherty.
SHERMAN, M., Sep/76. Assessment Report *#091741 by M. Sherman.

TAY RIVER MINES LTD, May/67. Assessment Report #017496 by J.H. Hachey.

UNITED KENO HILL MINES LTD, Oct/77. Assessment Report #090244 by J. McFaul and H.F. Keats.

WELCOME NORTH MINES LTD, Nov/76. Assessment Report #090150 by J.S. Brock.

YUKON EXPLORATION 1984, p. 90; 1987, p. 154.

YUKON GEOLOGY & EXPLORATION 1979-80, p. 173.

Work History

Date	Work Type	Comment
12/31/1998	Geology	Program was reconnaissance in nature.
12/31/1998	Geochemistry	
12/31/1998	Other	
12/31/1981	Trenching	
12/31/1980	Geology	
12/31/1980	Trenching	
12/31/1978	Geology	
12/31/1978	Geochemistry	
12/31/1978	Ground Geophysics	
12/31/1977	Drilling	Five holes, 457.2 m.
12/31/1977	Geology	
12/31/1977	Geochemistry	
12/31/1977	Ground Geophysics	
12/31/1977	Trenching	
12/31/1976	Geology	
12/31/1976	Geochemistry	
12/31/1975	Drilling	Three short holes, unknown footage.
12/31/1975	Geology	
12/31/1975	Trenching	
12/31/1974	Geology	
12/31/1974	Trenching	
12/31/1969	Geology	
12/31/1969	Trenching	
12/31/1966	Geochemistry	Sampling trenches.

12/31/1966	Geology	
12/31/1966	Trenching	
12/31/1964	Trenching	

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
095891	2011	2011 Geochemical Sampling Program, Grayling Property	Soil - Geochemistry		
095343	2010	Geological Report on the True Blue Project Describing the Geology, Geochemistry and REE Mineralization of the Shark Property	Gamma-Ray Spectrometry - Airborne Geophysics, Magnetic - Airborne Geophysics, Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Detailed Bedrock Mapping - Geology, Prospecting - Other		
093978	1998	1998 Assessment Report on the Mat Property	Soil - Geochemistry, Bedrock Mapping - Geology		
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		
090244	1977	1977 Geological and Geochemical Report on the JD 1 to 24 Mineral Claims	Silt - Geochemistry, Soil - Geochemistry		
091144	1977	[Drill Logs for Assessment Work on the Sun, DM, S and D Claims]	Diamond - Drilling	2	37.64
092044	1977	Seagull Joint Venture, Final Report; Geological, Geophysical, Geochemical Surveys and Diamond Drilling	Diamond - Drilling, Soil - Geochemistry, Bedrock Mapping - Geology, EM - Ground Geophysics, Backhoe - Trenching	5	444
091145	1977	[Drill Logs for Assessment Work on the Sun, DM, S and D Claims]	Diamond - Drilling	4	398.20
090150	1976	A Geological Geochemical Investigation Of the Mat Mineral Claims	Rock - Geochemistry, Soil - Geochemistry		
090007	1975	Report on the Mat and Gull Claims	Soil - Geochemistry, Bedrock Mapping - Geology		
017496	1966	Report on the MC Group	Rock - Geochemistry, Backhoe - Trenching		

Drill core at YGS core library

Number	Property	Year Drilled	Core Size	Photos	Data
M-77-1	Gull	1977	BQ	10	1
M-77-2	Gull	1977	BQ	4	1
M-77-3	Gull	1977	BQ	10	1
M-77-4	Gull	1977	BQ	6	1
M-77-5	Gull	1977	BQ	4	0