Occurrence Details

Occurrence Number: 105B 027
Occurrence Name: Bar
Occurrence Type: Hard-rock
Status: Prospect
Date printed: 12/16/2025 2:50:06 AM

General Information

Secondary Commodities: copper, gold, lead, silver, zinc
Aliases: Dan, Window
Deposit Type(s): Skarn Pb-Zn
Location(s): 60°10'21" N - -131°7'52" W
NTS Mapsheet(s): 105B03
Location Comments: Location from satellite imagery
Hand Samples Available: Yes
Last Reviewed:

Capsule

Work History

Discovered in 1946 and staked within a large block of Bar claims (#1 = 63692) in Oct/52 by Hudson Bay Mining & Smelting, which carried out geological mapping, trenching and geophysical surveying in 1953 and drilled 3 holes (291.7 m) in 1954.
Restaked in Jul/66 as Dan claims (#1 = Y13401) by W. McKinnon, who optioned them to Boswell River Mines Ltd. The company carried out I.P., resistivity and EM geophysical surveys, soil and silt sampling and hand trenching between 1966 and early 1968, followed by extensive bulldozer trenching in 1968-69. In 1970 the company drilled 9 diamond drill holes (585.5 m) and carried out an aeromagnetic survey over the property.
Restaked as Ed cl (Y83097) in Jul/74 by B. Poulin; as Dave cl (Y93581) in Aug/75 by E. Pallard; as Com cl (YA44800) in Jul/79 by the Wolf Lake Project (Comaplex Resources International Ltd and Dayton Creek Silver Mines Ltd); as Sing cl 1-8 (YA55600) in Jul/80 by A. Mercier; and as Red cl 1-8 (YA68753) in Aug/82 by P. Wilman. Flame Petro-Minerals Corporation tied on Fall cl 1-39 & Park cl 1-32 (YA69156) to the southwest and southeast in Oct/82 and transferred them to W.E. England Drilling Company Ltd in 1983.
The showing was restaked as Best cl 1-8 (YA70336) in Aug/83 by H. Hibbing and as Park cl 1-64 (YB9516) in Nov/87 by First Yukon Silver Resources Inc, which carried out trenching in 1988. D. Schellenberg tied on Dan cl 1-122 (YB14428) to the south in Jul/88 and M cl 15-18 (YB15735) to the north in Jun/89, which were subsequently transferred to First Yukon Silver Resources. First Yukon Silver carried out extensive bulldozer and excavator trenching in 1989, 1990 and 1991. T. Liverton mapped the main showing area in detail in 1990. Cominco Ltd optioned the property and conducted a program of linecutting, trenching and drilled 8 diamond drill holes (1 581 m) on the Park and Key claims in Jul/93, before dropping the option in Dec/93.
In Apr/97, Birch Mountain Resources Ltd acquired an option to earn 100% interest in the property (this occurrence and Minfile Occurrence #105B 026) from First Yukon Silver Resources Inc. The company carried out geological mapping, excavator trenching, geochemical sampling, magnetic and EM geophysical surveying and drilled 6 diamond drill holes (683.15m) later that year. In Mar/99 the company dropped its option on the property and returned the claims to Yukon First Silver. In Aug/99 the main showing was mapped in detail. Detailed mapping continued in 2000.
First Yukon Silver Resources optioned the entire Swift River property in Nov/2004 to Expatriate Resources Ltd in return for Expatriate paying cash in lieu of assessment work and granting First Yukon Silver a 1% net smelter return. In Dec/2004 Expatriate shareholders approved a plan of arrangement whereby most of Expatriate Resources non-Finlayson Lake district exploration properties were transferred to a new company, Pacificia Resources Ltd. The Swift River Property remained with Expatriate Resources, which changed its name to Yukon Zinc Corporation.

Capsule Geology

The area is located 20 km north of the Yukon-British Columbia border, northeast of Swift River, Yukon and has been re-mapped by the Ancient Pacific Margin NATMAP Project (Roots et al., 2004).
The occurrence lies between the Cretaceous Seagull Batholith and less than 2 km southwest of the Cassiar Batholith, in rocks of the Ram Creek assemblage (mainly Mississippian age). Roots et al., (2000) have assigned the Ram Creek assemblage to the Yukon-Tanana terrane. The Ram Creek assemblage appears to be composed of structurally interleaved slices of siliciclastic and green metasedimentary layers, marble and calc-silicate rocks . All rocks have been deformed and metamorphosed to upper green schist facies during mid-Mississippian to Permian time. About 2 km south of the occurrence is a high ridge underlain by a steep-dipping diorite sill about 1 kilometre thick, and inferred to be of Jurassic age.
Irregular layers of black sphalerite and pyrrhotite occur with garnet-diopside skarn along the sheared contact between banded quartz-actinolite-chlorite meta-tuff and underlying marble. Stripping in the main showing area has exposed sulphide mineralization over a strike length of 315 m.
Up to 3 individual sulphide layers, each averaging about 1.5 m thick occur over a width of 50 m, and disseminated sulphides occur in calc-silicate rocks between the massive sulphide layers. Although the massive sulphide layers appear to be roughly concordant, detailed mapping by Liverton indicated that they follow a branching system of south-dipping reverse faults and minor cross faults.
Polished thin sections show that the sulphides were introduced along with actinolite and chlorite during retrograde alteration of the primary skarn minerals. Mineralization is layered, parallel to regional stratigraphy but locally cross-cuts minor folds. Bands of disseminated sphalerite in the lower marble layer assayed low grades of zinc over significant widths.
The original showing drilled by Hudson's Bay lies uphill, approximately 100 m south of the First Yukon Silver trenching. It consists of a 12 x 1.7 m exposure of massive pyrrhotite and sphalerite in actinolite-bearing meta-tuff which strikes northwest and dips about 70 southwest. This mineralization appears to correlate with the uppermost sulphide layer exposed in the First Yukon Silver excavation. Samples taken by P. Sevensma for Boswell River Mines in 1962 and 1966 averaged 8.0% Zn over 1.7 m.
Magnetic surveys carried out by Boswell River Mines indicate that the mineralization is traceable eastward beneath 1.5 to 15 m of glacial overburden which has masked soil geochemical response in the area. Sevensma reported massive pyrrhotite float 213 m east-southeast of the original showing which assayed 3.2% Zn, 0.25% Pb and 25.7g/t Ag. Along strike to the west, strong zinc soil anomalies extend westwards towards the Crescent Lake showings (Minfile Occurrences #105B 026A, B, and C).
A chip sample collected over the main showing by Noranda during a property visit in 1990 averaged 2.5% Zn over 6 m. A chip sample collected in 1990 by T. Bremner, a geologist employed by the Department of Indian and Northern Affairs, across the lowest of three massive sulphide layers averaged 5.6% Zn over 1.0 m. Specimens collected by Placer Dome during another property visit in the same year returned up to 39.35% Zn, with some samples containing anomalous levels of gold, antimony, silver, lead and copper. For example, a specimen of banded pyrite and sphalerite from the middle of the main trench contained 205 ppb Au, 83.0 g/t Ag, 1 050 ppm Pb and 8.74% Zn (Yukon Exploration 1990, p. 29).
Only 1 of Comincoćs drill holes tested the main showing. The remaining 7 holes tested showings located to the west on Minfile Occurrences #105B 026A, B, C). Cominco did not file assay results but the single hole appears to have intersected mostly calc-silicate skarn and biotite hornfels with occasional thin lenses of mudstone/siltstone and volcanic material.
Birch Mountain Resources resampled and remapped all of the known showings with the aim of identifying new areas of potential mineralization. The geophysics program was geared towards trying to locate and extend the strike of known mineralized horizons located across the width of the claim block. Six of the drill holes were collared on the Dan, and neighboring Lucy and Lost showings. Hole SR 97-06 collared on the Dan occurrence (this occurrence) returned 14.57% Zn over 1.2 m and 6.55% Zn over 1.88 m Birch Mountain reinterpreted the numerous showings as boudins of previously continuous strata-bound sulfide beds occurring at a number of stratigraphic horizons and suggested a syn-sedimentary exhalative origin for the mineralization.
Detailed mapping by de Silva et al., in 1999 and 2000 reinterpreted the finely-banded siliceous rock units at the occurrence as a rhyolite and the cherty layers as exhalites. This led to the theory that mineralization previously described as being skarn due to the pyroxene-amphibole-garnet silicate mineral assemblages were in fact stratabound massive sulphide type (VMS). This theory was expanded to explain mineralization at neighboring occurrences. First Yukon Silver believes that the greatest potential for additional mineralization lies to the south.
The origin of the mineralization was debated in the 1990s. The mineralogy is clearly skarn-type, and mineralization postdates metamorphic layering. It has been argued that the sulphides have been remobilized from a pre-existing syngenetic deposit. The stratabound nature of mineralization and presence of flow-banded siliceous rock interpreted as rhyolite suggest associated volcanism. Birch Mountain and First Yukon Silver pointed out the characteristics of a sedimentary (possibly volcanic) exhalative deposit that had been deformed and subsequently contact-metamorphosed by Jurassic and Cretaceous intrusions.
Four Pb isotope analyses of galena and pyrrhotite collected by Mortensen and Gabites (2002) formed a loose cluster of analyses conforming to a broadly mid-Triassic to mid-Jurassic age. They concluded that mineralization had a temporal and genetic association with Early Jurassic magmatism.

References

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BIRCH MOUNTAIN RESOURCES LTD, Jun/97. Assessment Report #093886 by A. Mann.

BIRCH MOUNTAIN RESOURCES LTD, Sep/98. Assessment Report #093904 by G. DePaoli.

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YUKON EXPLORATION AND GEOLOGY 1997, p. 20, 37-38; 1998, p. 20.

YUKON GEOLOGY AND EXPLORATION 1979-80, p. 144-145.

YUKON MINING AND EXPLORATION OVERVIEW 1989, p. 5,7.

Work History

Date	Work Type	Comment
12/31/2000	Geology	Further detailed mapping carried out on Dan prospect.
12/31/1999	Geology	The main showing (Window) was mapped in detail.
12/31/1997	Drilling	Nine holes, 900 m.
12/31/1997	Geology	
12/31/1997	Ground Geophysics	Also magnetic survey.
12/31/1997	Trenching	
12/31/1991	Geology	
12/31/1991	Trenching	
12/31/1990	Geology	
12/31/1990	Trenching	
12/31/1989	Trenching	

12/31/1988	Trenching	
12/31/1970	Drilling	Nine holes, 585.5 m
12/31/1970	Airborne Geophysics	
12/31/1968	Trenching	
12/31/1967	Ground Geophysics	Also resistivity and EM surveys.
12/31/1967	Trenching	
12/31/1954	Drilling	Three holes, 291.7 m.
12/31/1953	Geology	
12/31/1953	Ground Geophysics	Also magnetic survey.
12/31/1953	Trenching	

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
094828	2007	Assessment Report 2006 Describing Air-FTG Survey Geophysical Work on the Swift Project	Reverse Circulation - Airborne Geophysics		
094662	2006	Assessment Report Describing Prospecting on the: Swift River Property	Soil - Geochemistry, Line Cutting - Other		
094369	2002	Detailed Mapping and Re-Evaluation of the 'Knee' Zinc Mineralization Swift River, Yukon	Detailed Bedrock Mapping - Geology		
093886	1997	Assessment Report Work Completed April 30 1997 Swift River Exploration for Base Metals in Watson Lake Mining District, Southern Yukon Territory	EM - Ground Geophysics, Magnetics - Ground Geophysics, Line Cutting - Other		
093884	1997	Assessment Report on the Swift River Property, Yukon Territory	Diamond - Drilling, Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, EM - Ground Geophysics, Magnetics - Ground Geophysics, Line Cutting - Other, Backhoe - Trenching	9	956.10
093134	1993	1993 Assessment Report Swift River Property Line Cutting and Diamond Drilling	Diamond - Drilling, Line Cutting - Other	8	1581.40
092686	1988	Summary of 1988 Work Program Swift River Project	Soil - Geochemistry, Line Cutting - Other, Backhoe - Trenching		
060877	1971	Preliminary Report on the Swift River Property of Boswell River Mines Ltd.	Detailed Bedrock Mapping - Geology		
060878	1970	Report on Airborne Geophysical Surveys Swift River Property, Yukon Territory on Behalf of Boswell River Mines Ltd.	Electromagnetic - Airborne Geophysics, Magnetic - Airborne Geophysics		
060682	1967	Geophysical Report	EM - Ground Geophysics, Line Cutting - Other		

Related References

Number	Title	Page(s)	Reference Type	Document Type
ARMC007640	Claim map with 1993 grid and drill hole locations - Swift River option		Property File Collection	Geoscience Map (General)
ARMC013375	Magnetometer survey map - Dan No. 1-10 group - Boswell River Mines - Swift River, Y.T.		Property File Collection	Geophysical Map
ARMC013392	Work program map - Dan group - 105-B-3 - Aug 1968 to July 1969 - Fig. 2		Property File Collection	Geoscience Map (General)
ARMC013394	Plan map showing claim location - Dan No. 1 to 10 - Dangroup - Swift River area, Y.T.		Property File Collection	Geoscience Map (General)
ARMC013377	Plan map showing claim location Dan 1 to 10 - Dan group - Swift River area, Y.T.		Property File Collection	Geoscience Map (General)
ARMC013376	Plan map showing mineralized trend zones - Magnetometer survey - Dan 1-10 group		Property File Collection	Geophysical Map
ARMC013369	Plan showing claim location map Max 1 to 50, Sam 1 to 21 - Max & Sam groups - Boswell River Mines Ltd. - Swift River area, Y.T.		Property File Collection	Geoscience Map (General)
ARMC013368	Plan showing mineralized magnetic trend zones as indicated by magnetometer survey - Dan & Max claim group - Boswell River Mines Ltd. - Swift River area, Y.T.		Property File Collection	Geophysical Map
ARMC013388	Report on airborne geophysical survey - Dan group - Survey flown March 27, 1968		Property File Collection	Geophysical Map
ARMC013384	Preliminary report on the Swift River property of Boswell River Mines Ltd. in Yukon Territory		Property File Collection	Report
ARMC013395	Orientation map BD-GO 1-68 - Boswell River Mines		Property File Collection	Geoscience Map (General)
ARMC013	Table and sketch map showing drill hole locations - Section 200W - Dan group		Property File	Geoscience Map (General)

381	Table and sketch map showing drill hole locations - Section 200W - Dan group		Collection	Geoscience Map (General)
ARMC013383	Report on the exploration work in 1971 on the Swift River property of Boswell River Mines Ltd.		Property File Collection	Report
ARMC013396	Report to shareholders - Results of trenching Swift River area - Dan 1 - 10 Mineral Claims near mile 722 Alaska Highway		Property File Collection	Miscellaneous Company Documents
ARMC013363	Prospectus - Boswell River Mines Ltd. - August 1967		Property File Collection	Report
ARMC013360	Hand-drawn geochemical values map - Boswell Pine - Dan group		Property File Collection	Geochemical Map
ARMC013397	Notes on Bowell River Mines Ltd.		Property File Collection	Miscellaneous Company Documents
ARMC013382	Sketch map showing geology, structure, and drill holes		Property File Collection	Geoscience Map (Geological - Bedrock)
ARMC013372	Isomagnetic contours map - Burnt Hill area - Boswell River Mines Ltd. - Swift River area, Y.T.		Property File Collection	Geophysical Map
ARMC013374	Isomagnetic contours map - Dan 1-10 claim group - Boswell River Mines plan		Property File Collection	Geophysical Map
ARMC013391	Isomagnetic contours map - Dan 1-10 claim group - Expanded Boswell River Mines plan -		Property File Collection	Geophysical Map
ARMC013379	Map section - 1-80W - Tr No. 2 - Dan 6		Property File Collection	Geoscience Map (General)
ARMC013380	Magnetometer survey profiles - Dan claim group		Property File Collection	Geophysical Map
ARMC013385	Letters re: Property examination report of Dan group		Property File Collection	Miscellaneous Company Documents
ARMC013373	Location plan map - Burnt Hill area - Dan group - Boswell River Mines Ltd. - Swift River area, Y.T. - Fig. 4		Property File Collection	Geoscience Map (General)
ARMC013367	Location plan map - Central Valley - Dan group - Boswell River Mines Ltd. - Swift River area, Y.T. - Fig. 6		Property File Collection	Geoscience Map (General)
ARMC013371	Location plan map - Crescent Lake E 1/2 - Dan group - Boswell River Mines Ltd. - Swift River area, Y.T. - Fig. 2		Property File Collection	Geoscience Map (General)
ARMC013364	Location plan map - Dan 1 to 10 - Dan group - Boswell River Mines Ltd. - Swift River area, Y.T.		Property File Collection	Geoscience Map (General)
ARMC013365	Location plan map - Dan group - Boswell River Mines Ltd. - Swift River area, Y.T. - Crescent Lake W 1/2 - Fig. 3		Property File Collection	Geoscience Map (General)
ARMC013370	Location plan map - Drumlin Valley area - Dan group - Boswell River Mines Ltd. - Swift River area, Y.T.		Property File Collection	Geoscience Map (General)
ARMC013362	Correspondence and inspection report - Boswell River Mines' Swift River property		Property File Collection	Report
ARMC013378	Magnetic profile map - Crescent Lake area		Property File Collection	Geophysical Map
ARMC013366	Magnetic profiles map - Burnt Hill area - Boswell River Mines Ltd. - Swift River Area, Y.T.		Property File Collection	Geophysical Map
ARMC013356	Assay certificate and geochemical analytical work sheets - Dan group		Property File Collection	Miscellaneous Company Documents
ARMC013341	Correspondence re: Report on property examination - Dan group, Swift River, Yukon		Property File Collection	Miscellaneous Company Documents
ARMC013355	Correspondence, maps, assays, diamond drill logs - Boswell Pine project		Property File Collection	Miscellaneous Company Documents
ARMC013361	Dan group report - Watson Lake M.D., Y.T. - Boswell River Mines Ltd.		Property File Collection	Report
ARMC013398	DDH location map showing structure and geology - Dan group		Property File Collection	Geoscience Map (General)
ARMC013357	Field notes - Dan group 105-B-3		Property File Collection	Miscellaneous Company Documents
ARMC013358	Field sheet - Dan group		Property File Collection	Geoscience Map (Geological - Bedrock)
ARMC013359	Field sheet - Dan group		Property File Collection	Geoscience Map (Geological - Bedrock)