Occurrence Details

Occurrence Number: 106C 084
Occurrence Name: Goodfellow
Occurrence Type: Hard-rock
Status: Showing
Date printed: 4/29/2025 4:29:29 PM

General Information

Secondary Commodities: copper, lead, silver, zinc
Deposit Type(s): Vein Polymetallic Ag-Pb-Zn+/-Au
Location(s): 64°47'2" N - -133°55'31" W
NTS Mapsheet(s): 106C13
Location Comments: .5 Kilometres
Hand Samples Available: No
Last Reviewed:

Capsule

Work History

*Previous versions of Yukon Minfile reported the occurrence location 5 km to the southwest.

In the summer of 1978, W.D. Goodfellow of the Geological Survey of Canada carried out a detailed geochemical investigation of the area immediately east of Gillespie Lake to investigate intensive lead, zinc and silver Ag anomalies identified by a government regional geochemical survey. Goodfellow's work identified numerous mineralized showings hosted in a variety of stratigraphic units but no claims were staked.
In Jul/81 the Wernecke Joint Venture (Chevron Canada Ltd & Aquitaine Company of Canada Ltd) staked Jolly cl 1-10 (YA63101) to protect a series of pyrite, galena and sphalerite-bearing veins. The company explored with geological mapping and soil sampling in 1981 and 1982 and hand trenching in 1982.
Restaked as Jol cl (YB3252) in Sep/89 by NDU Resources Ltd, which did not record any work and allowed the claims to lapse in 1990.
Restaked as Joli cl 1-126 (YB22161) in Jun/93 by Archer, Cathro and Associates (1981) Ltd and Kennecott Canada Inc. The Joli claims cover this and the adjacent Kidney occurrence (Minfile Occurrence #106C 018). As property operator, Kennecott carried out geological mapping and geochemical sampling in the summer of 1993. In Dec/93 Kennecott withdrew from the partnership and in 1994 Archer Cathro sold the remaining claims to Nordac Resources Ltd. In 1995 Nordac hand trenched various mineralized sulphide showings.

Capsule Geology

The region is underlain by a metamorphosed and altered sequence of Early Proterozoic Wernecke Supergroup clastic and carbonate rocks (Fairchild Lake Group, Quartet Group and Gillespie Lake Group, from oldest to youngest) that are intruded by Early to Middle Proterozoic mafic sills and dykes, and cut by Middle Proterozoic Wernecke Breccia.
The occurrence is underlain by orange weathering dolomite, minor slate and limestone of the Gillespie Lake Group. Sphalerite, chalcopyrite and galena occur as stratabound disseminations and veins. The veins are 1-2 m wide and contain coarse-grained pyrite, galena and sphalerite in calcite, dolomite or quartz gangue. A series of northeasterly striking and steeply dipping shear zones host the mineralized veins.
The Goodfellow occurrence is correlative with the Cord occurrence (Minfile Occurrence #106D 074) located 8 km to the northwest. Lead isotopic ratios in galena from the Goodfellow and Cord occurrences are very similar to those from other Proterozoic occurrences, including the Hart River deposit (Minfile Occurrence #116A 009), and the Middle Proterozoic Sullivan mine, a large lead-zinc deposit in mid-Proterozoic sedimentary strata in southeastern British Columbia (Thorkelson, 2000) .
Goodfellow sampled various creeks and mineralized showings. The highest values obtained from 11 mineralized specimens collected by Goodfellow were 29% zinc, 2.6% copper, 1.9% lead and 34.3 g/t silver.
Exploration work completed by the Wernecke Joint Venture and others identified over 40 mineralized outcrops in three subparallel, linear recessive zones. The most significant of these is the D1 zone, a 1 km long recessive gossanous area which contains numerous scattered sulphide mineral-bearing outcrops. Galena, sphalerite and pyrite occur in veins, in stockworks of intersecting veins and veinlets and as matrix material in altered dolomite breccias. The mineralized structures strike northeast and dip steeply southeasterly. Average width of the area of potential mineralization has been estimated by Archer Cathro to exceed 75 m. Although mineralized specimens contain up to 30% lead-zinc, the overall grade of the veins is visually estimated at 1 to 2% lead-zinc.
Stream sediment samples collected around the occurrence were generally strongly anomalous for lead, zinc, silver and copper, while soil samples were generally anomalous in lead and zinc. In 1993 Derek Thorkelson, located a gossanous vein, west of the junction of Red Dog and Dry Creeks (approx. 2.5 km east of occurrence). A mineralized sample from the vein returned 357 ppm lead, 991 ppm zinc and 3.3 g/t silver.
As the property has yet to be drilled, the economic potential of the area is difficult to determine.

References

GEOLOGICAL SURVEY OF CANADA Paper 79-1A, p. 333-348.

KENNECOTT CANADA INC, Jun/94. Assessment Report #093193 by R. Hulstein.

NORDAC RESOURCES LTD, Jan/97. Assessment Report #093512 by R.C. Carne and T.C. Beker.

THORKELSON, D.J. AND WALLACE, C.A., 1994b. Geological Setting of mineral occurrences in Fairchild Lake map area, (106C/13), Wernecke Mountains, Yukon. In: Yukon Exploration and Geology, 1993, Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, p. 79-92.

THORKELSON, D.J., 2000. Geology of the Slats Creek, Fairchild Lake and Dorlores Creek map areas, Yukon (106D/16, 106C/13, 106C/14). Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Bulletin 10.

WERNECKE JOINT VENTURE, Jan/82. Assessment Report #090731 by W.D. Eaton.

WERNECKE JOINT VENTURE, Feb/82. Assessment Report #090966 by W.D. Eaton.

WERNECKE JOINT VENTURE, Mar/83. Assessment Report #091442 by W.D. Eaton.

YUKON EXPLORATION AND GEOLOGY 1981, p. 189; 1982, p. 176.

Work History

Date	Work Type	Comment
12/31/1995	Trenching	
12/31/1993	Geology	
12/31/1993	Other	
12/31/1989	Other	Property restaked but no work was filed and claims were allowed to lapse.
12/31/1982	Geology	
12/31/1982	Studies	Airphoto interpretation.
12/31/1982	Trenching	
12/31/1982	Other	
12/31/1981	Geochemistry	
12/31/1981	Geology	
12/31/1981	Geochemistry	
12/31/1981	Geochemistry	
12/31/1981	Other	
12/31/1978	Other	Carried out by Goodfellow of the Geological Survey of Canada.

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
095646	2007	2007 Geological, Geochemical and Geophysical Report on the Werneckes Project	Diamond - Drilling, Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Detailed Bedrock Mapping - Geology, Regional Bedrock Mapping - Geology, Magnetics - Ground Geophysics, Scintillometer - Ground Geophysics, Prospecting - Other, Backhoe - Trenching, Hand - Trenching, Handblast - Trenching	28	6537.96
094956	2006	2006 Geological, Geochemical and Geophysical Report on the Werneckes Project	Reverse Circulation - Airborne Geophysics, Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Scintillometer - Ground Geophysics, Prospecting - Other		
090966	1981	Geological and Geochemical Report, Jolly 1-10 Claims	Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Detailed Bedrock Mapping - Geology, Prospecting - Other		