



Occurrence Details

Occurrence Number: 106D 076
Occurrence Name: Face
Occurrence Type: Hard-rock
Status: Showing
Date printed: 4/29/2025 4:43:13 PM

General Information

Secondary Commodities: copper, gold, silver, uranium
Deposit Type(s): Iron Oxide Breccias & Veins (Wernecke Breccias)
Location(s): 64°51'47" N - -134°19'26" W
NTS Mapsheet(s): 106D16
Location Comments: .5 Kilometres
Hand Samples Available: No
Last Reviewed:

Capsule

Work History

Staked as Face cl 1-8 (YA5723) in Jul/76 by a joint venture between Wernecke Joint Venture (Standard Oil of British Columbia, Aquitaine Company of Canada, Messrs. L & H Clay) and Eldorado Nuclear Ltd, which conducted soil sampling and radiometric surveys later in the year before Eldorado dropped its interest. Wernecke Joint Venture explored with an airborne radiometric survey and hand trenching in 1978 and further hand trenching in 1981. Aquitaine changed its name to Kidd Creek Mines Ltd in 1981. In 1982, Eldorado changed its name to Eldor Resources Ltd.

Restaked as Lex cl 1-8 (YB2035) in Sep/87 by 697895 Ontario Ltd which performed geological mapping in 1988.

Restaked as Face cl 1-20 (YC42453) in Nov/2005 by Fronteer Development Group Incorporated. In Jan/2006 Fronteer (80%) and Rimfire Minerals Corporation (20%) signed an agreement with Newmont Exploration Canada Ltd and NVI Mining Ltd (which bought Westmin's assets) to purchase all claims and exploration data relating to 700 mineral claims owned by the Fairchild Joint Venture in the Wernecke Mountains, Yukon. Fronteer Development was appointed operator of the project. In the summer of 2006 Fronteer Development carried out an airborne gravity survey over their entire claim holdings and carried out limited rock and soil sampling and geological mapping on the Face claims.

In Aug/2006 B. Gelber staked Off cl 1-18 (YC50618) on the western boundary of the Face claims. In Dec/2006 the claims were transferred to Archer, Cathro and Associates (1981) Ltd. Archer Cathro optioned a 50% interest in the claims to Cash Minerals Ltd in Apr/2007. In Jun/2008 Archer, Cathro's remaining 50% interest was transfer to Mega Uranium Ltd which had in Jan/2006 negotiated a 50-50 joint venture with Cash Minerals commonly referred to as the Yukon Uranium Project.

Capsule Geology

The occurrence located on the east side of the Bear River approximately 6 km northwest of the Bear River airstrip. The area located at the western margin of the Wernecke Supergroup inlier, a metamorphosed and altered sequence of Early Proterozoic 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. To the east, Wernecke Supergroup rocks are unconformably overlain by Middle Proterozoic Pinguicula Group rocks. According to Thorkelson (2000), Wernecke Breccia development is best modeled as a set of hydrothermal and/or phreatic breccias; brecciation being caused by explosive expansion of volatile-rich fluids. Hunt (2005) attributed Wernecke Breccia formation to periodic over-pressuring of dominantly basinal fluids, which lead to repeated brecciation of host strata and mineral precipitation.

The occurrence area is mainly underlain by Lower Proterozoic Quartet Group rocks. Towards the west, near the Bear River a wedge of younger Gillespie Lake Group rocks occur. The Quartet and Gillespie Lake group rocks are thrust west by a normal fault onto Cambrian to Devonian metasediments. The occurrence consists of brannerite, pitchblende and chalcopyrite mineralization in fractures within a siliceous border phase of a small Middle Proterozoic Wernecke breccia body that intrudes Lower Proterozoic Quartet Group argillite. No significant geochemical or radiometric anomalies were located. The breccia consists of metasomatized argillite clasts up to 15 m across in a matrix of fine to medium grained hematite, carbonate, chlorite, quartz and other minerals.

Prior to the 1981 field season the Wernecke Joint Venture group re-assayed all previously collected samples. A pitchblende and chalcopyrite-bearing float specimen which previously assayed 2.15% uranium oxide (U₃O₈) and 0.4% copper, was found to contain 6 400 ppb gold and 100 ppm silver. Follow-up trenching completed in 1981 uncovered additional minor chalcopyrite mineralization but the best follow-up gold value was 38 ppb.

Fronteer carried out a small sampling and geological mapping program in 2006. The company located two small mineralized showings previously identified by the Wernecke Joint Venture. Sampling by Fronteer confirmed historical values but the company determined the mineralization was too restricted to be of economic value.

References

ELDORADO NUCLEAR LTD, Nov/76. Assessment Report #061615 by C.J. Riley.

ELDORADO NUCLEAR LTD, 1976. Assessment Report #061619 by C.J. Riley. (duplicate of #061615).

FRONTIER DEVELOPMENT GROUP INCORPORATED AND RIMFIRE MINERALS CORPORATION, Apr/2007. Assessment Report #094956 by R.S. Hefferman, R. Black, H. Awmack and D. Baker.

FRONTIER DEVELOPMENT GROUP INC. News Releases, 19 May/2006, 10 Jul/2006.

FRONTIER DEVELOPMENT GROUP INC. March/2009. Web Site: www.frontiergroup.com. (contains 2007 Wernecke Exploration report).

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).

HUNT, J., 2005. The geology and genesis of iron oxide-copper-gold mineralisation associated with Wernecke Breccia, Yukon Canada, PhD thesis, James Cook University, Australia, 2 volumes, 120 p.

MINERAL INDUSTRY REPORT 1976, p. 126; 1978, p. 17.

697895 ONTARIO LTD, Sep/88. Assessment Report #092668 by D. Kretschmar.

THORKELSON, D.J., AND WALLACE, C.A., 1993a. Development of Wernecke Breccia in Slat Creek (106D/16) map area, Wernecke Mountains, Yukon. In: Yukon Exploration and Geology 1992, Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, p. 77-87.

THORKELSON, D.J. AND WALLACE, C.A., 1998. Geological Map of Slat Creek map area, Wernecke Mountains, Yukon (106D/16). Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada, Gesocience Map 1998-9, 1:50,000 scale.

THORKELSON, D.J. AND WALLACE, C.A., 2000. Geology and mineral occurrences of the Slat Creek, Fairchild Lake and "Dolores Creek" areas, Wernecke Mountains, Yukon (106D/16, 106C/13, 106C/14). Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada, Bulletin 10, 73 p.

YUKON EXPLORATION AND GEOLOGY 1981, p. 197-198; 2006, p. 34.

WERNECKE JOINT VENTURE, Jan/82. Assessment Report #090968 by W.D. Eaton.

Work History

Date	Work Type	Comment
12/31/2006	Geology	Limited program.
12/31/2006	Geochemistry	Also rock sampling. Limited program.
12/31/2006	Airborne Geophysics	Regional program.
12/31/1988	Geology	
12/31/1987	Geology	
12/31/1981	Geology	
12/31/1981	Geochemistry	Reconnaissance scale.
12/31/1981	Trenching	
12/31/1981	Other	
12/31/1978	Geochemistry	
12/31/1978	Airborne Geophysics	
12/31/1978	Trenching	
12/31/1976	Ground Geophysics	
12/31/1976	Geochemistry	
12/31/1976	Geochemistry	
12/31/1976	Other	

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		
092668	1988	Geological Report on the Lex 1-8 and Witz 1-40 Claims	Rock - Geochemistry, Prospecting - Other		
091456	1983	Exploration, 1982, Gold, Silver and Uranium Deposits, Glacier Lake Region	Rock - Geochemistry, Silt - Geochemistry, Detailed Bedrock Mapping - Geology, EM - Ground Geophysics, Scintillometer - Ground Geophysics, Petrographic - Lab Work/Physical Studies, Prospecting - Other, Hand - Trenching		
090968	1982	Wernecke Joint Venture, Hand Trenching Report, Face 1-8 Claims	Rock - Geochemistry, Soil - Geochemistry, Prospecting - Other, Hand - Trenching		
090868	1980	Exploration Report-Year 1980 on the Bear River Properties	Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Regional Bedrock Mapping - Geology, Gamma-ray Spectrometry - Ground Geophysics, Prospecting - Other, Hand - Trenching, Handblast - Trenching		
061615	1976	Report on Prospecting, Radiometric, and Geochemical Surveys Claims Face 1-8	Soil - Geochemistry, Gamma-ray Spectrometry - Ground Geophysics, Prospecting - Other		