



Occurrence Details

Occurrence Number: 106D 065
Occurrence Name: Bond
Occurrence Type: Hard-rock
Status: Prospect
Date printed: 4/29/2025 7:22:16 AM

General Information

Secondary Commodities: barite, copper, iron, uranium
Deposit Type(s): Iron Oxide Breccias & Veins (Wernecke Breccias)
Location(s): 64°39'42" N - -134°55'38" W
NTS Mapsheet(s): 106D10
Location Comments: .5 Kilometres
Hand Samples Available: Yes
Last Reviewed:

Capsule

Work History

Iron and copper mineralization was noted in this vicinity by the Geological Survey of Canada about 1961. The uranium mineralization was discovered in Aug/74 by Wernecke Joint Venture (Standard Oil Company of British Columbia Ltd, Aquitaine Company of Canada Ltd and Messrs. L & H Clay), which staked the Bond cl 1-4 (Y97398) and cl 5-56 (Y97546) in Jun/75, and Bond cl 57-72 (YA1198) and cl 73-96 (YA1290) in Sep/75. The joint venture performed radiometric and geochemical surveys and geological mapping in 1975. Eldorado Nuclear Ltd optioned the property and drilled 3 Winkie drill holes (122.2 m) in 1976 and 8 Winkie drill holes (347.5 m) and a magnetic survey in 1977. After the Eldorado option expired in March, 1981, Wernecke Joint Venture performed mapping and magnetic, IP, radiometric and radon gas geophysical surveys later in the year. Aquitaine changed its name to Kidd Creek Mines Ltd in 1981. In 1982, Eldorado changed its name to Eldorado Resources Ltd. By the beginning of 1990 only Bond cl 1-4 (Y97398) and cl 5-8 (Y97546) remained in good standing. Archer, Cathro & Associates Ltd restaked Bond cl 1-44 (YB03550) in Jun/90 overtop expired claims. BHP Minerals Canada Ltd optioned the property from Archer, Cathro and performed a short geological and geochemical evaluation in 1992. The Bond claims were transferred from Archer, Cathro and Associates to Archer, Cathro and Associates (1981) Ltd, a separate company in Sept/94. In Oct/94 D & J Hajek staked the Buck cl 1-22 (YB43584) on the northern and eastern sides of the Bond claims. In 1995 Archer, Cathro sold the property to Nordac Resources Ltd. By Mar/2001 only Bond cl 5-8 (Y97546) remained in good standing. In Jun/2001 Nordac Resources changed its name to Strategic Metals Ltd. Strategic Metals staked Bond cl 1-4 (YC32465) and cl 9-22 (YC38937) around the four surviving Bond claims (Bond cl 5-8) in Oct/2004. In Dec 2004 Strategic Metals sold its interests in the Bond claims to Twenty-Seven Capital Corporation. In Feb/2005 Twenty-Seven Capital signed an agreement with Cash Minerals Ltd whereby Cash could acquire up to a 75% interest in a large number of claims (including the Bond claims) collectively known as the Yukon Uranium Project. In 2005 Cash Minerals carried out geological, geochemical and geophysical programs on the Bond claims followed by a 7 hole (735.46m) diamond drill program. The agreement between Cash Minerals and Twenty-Seven Capital was updated in March 2006. The partners added Bond cl 23-62 (YC42826) in Mar/2006 and Bond cl 63-80 (YC48074) in Jun/2006. In Oct/2006 Twenty-Seven Capital sold its interests in the Yukon Uranium Project to Mega Uranium Ltd.

Capsule Geology

The area lies 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. 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 occurrences are located near the centre of a 7 km long, up to 3 km erosional window of Proterozoic age rocks which is elongated along the crest of an open, east trending anticline that also affects overlying Paleozoic strata. The Wernecke Supergroup rocks are strongly deformed and are separated from surrounding relatively undeformed Ordovician-Silurian carbonates by an angular unconformity marked by a thin regolith and discontinuous basal conglomerate. The occurrence area is underlain by stratigraphic units belonging to the Fairchild Lake Group and the Quartet Group. Bedding consistently strikes easterly and is tightly folded. The oldest strata outcrops south of the property and there is a general younging toward the north.

Two separate uranium occurrences have been located in a window of Early Proterozoic Quartet Group argillite which is exposed beneath Paleozoic dolomite. Bond 1 is a siderite-quartz-barite vein with minor pyrite, chalcopyrite and pyrrhotite while Bond 2 consists of radioactive, iron- and manganese-stained lenses in a foliated breccia body. Soil sampling over the breccia returned an average of 263 ppm copper and 6 ppm molybdenum. Morin mentioned the presence of pitchblende along with the secondary uranium oxides torbernite, autunite, iriginite and vandendriesscheite. Radioactivity is also associated with the unconformity between the Early Proterozoic and Paleozoic rocks. Minor chalcopyrite is associated with hematite peripheral to the breccia bodies and a 3 to 9 m wide quartz vein, about 3.2 km to the west, is mineralized with pyrite and chalcopyrite for a length of about 300 m.

The 1976 drilling consisted of one hole on Bond 1, which gave negative results, and 2 holes which intersected uranium mineralization on Bond 2. The 1977 work, restricted to Bond 2, located magnetic anomalies over areas of breccia and confirmed that uranium mineralization is restricted to the breccia body.

The 2005 drilling program tested the Bond 1 and Bond 2 occurrences. Diamond drilling confirmed results obtained in the 1970's. The holes intersected weak uranium mineralization over narrow intervals in a shallowly north dipping zone.

References

ARCHER, A.R., AND SCHMIDT, U., Aug/78. Mineralized Breccias of Early Proterozoic Age, Bonnet Plume River District, Y.T. Canadian Institute of Mining and Metallurgy Bulletin, p. 53-58.

CASH MINERALS LTD AND TWENTY-SEVEN CAPITAL CORPORATION, Feb/2006. Assessment Report #094969 by M.R. Dumala.

CASH MINERALS LTD, News Release, 26 May/2005; 7 Sep/2005.

CASH MINERALS LTD, Mar/2005. Technical Report describing the Geology, Geochemistry, Geophysics and Diamond Drilling at the Bond, Igor, Steel and Prerdt Properties Mayo Mining District, Yukon Territory by W. D. Eaton and H.W. Wober (available on SEDAR, April 21/2005).

CASH MINERALS LTD, Dec/2005. Web Site: www.cashminerals.com

ELDORADO NUCLEAR LTD, 1976. Assessment Report #061622 by J. Griffin and C.J. Riley.

ELDORADO NUCLEAR LTD, 1977. Assessment Report #061706 by W.J. Olsson.

ELDORADO NUCLEAR LTD, Apr/78. Assessment Report #091308 by W.J. Olsson.

GEOLOGICAL SURVEY OF CANADA Memoir 364, p. 139.

GEOLOGICAL SURVEY OF CANADA Paper 77-1A, p. 33-37; Paper 78-1A, p. 320-322.

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 mineralization associated with Wernecke Breccia, Yukon Canada, PhD thesis, James Cook University, Australia, 2 volumes, 120 p.

KLEIN, C. AND BEUKES, N.J., 1993. Sedimentology and geochemistry of the glaciogenic late Proterozoic Rapitan Iron Formation in Canada, Economic Geology and the Bulletin of the Society of Economic Geologists, May 1993, Vol. 88, No. 3, p. 542-565.

MINERAL INDUSTRY REPORT 1975, p. 61-62; 1976, p. 124-125; 1977, p. 43-44.

MORIN, J.A., 7 Dec/76. Uranium-copper mineralization and associated breccia bodies in the Wind-Bonnet Plume River Area, Yukon. Paper presented at Whitehorse Geoscience Forum.

THORKELESON, 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.

WERNECKE JOINT VENTURE, 1975. Assessment Report #090101 by A.R. Archer.

YUKON EXPLORATION AND GEOLOGY 1992, p. 2, 3; 2005 p. 17, 38, 40.

Work History		
Date	Work Type	Comment
12/31/2005	Drilling	Seven holes, 736 m.
12/31/2005	Geology	
12/31/2005	Geochemistry	
12/31/2005	Pre-existing Data	Interpreted old geophysical data.
12/31/1992	Geochemistry	Also soil sampling.
12/31/1992	Geology	
12/31/1981	Geochemistry	
12/31/1981	Geology	
12/31/1981	Ground Geophysics	Also IP, radiometric and radon gas surveys.
12/31/1977	Drilling	Eight holes, 347.5 m.
12/31/1977	Ground Geophysics	
12/31/1976	Drilling	Three holes, 122.2 m.
12/31/1975	Geochemistry	
12/31/1975	Geology	
12/31/1975	Geochemistry	
12/13/1975	Ground Geophysics	

Assessment Reports that overlap occurrence					
Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
095597	2006	Assessment Report Describing Geophysical Surveys and Diamond Drilling at the Bond Property	Gamma-Ray Spectrometry - Airborne Geophysics, Magnetic - Airborne Geophysics, Diamond - Drilling, Drill Core - Geochemistry, Gravity Survey - Ground Geophysics	3	652.05
090101	1976	Report on Soil Geochemistry, Geology, and Radiometric Survey	Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Gamma-ray Spectrometry - Ground Geophysics, Hand - Trenching		

Related References				
Number	Title	Page(s)	Reference Type	Document Type
ARMC008073	Geochemical values map - Reef project - Castle Ridge detail area - Figure 9		Property File Collection	Geochemical Map

ARMC008074	Castle Ridge geochem map - Reef project - Figure 21		Property File Collection	Geochemical Map
ARMC008088	Castle Ridge detail area map - 1976		Property File Collection	Geoscience Map (General)
ARMC008089	Castle Ridge detail area map - 1974		Property File Collection	Geoscience Map (General)
ARMC011912	Geology compilation map - Castle Ridge detail area - Reef project - Figure 8		Property File Collection	Geoscience Map (Geological - Bedrock)

Drill core at YGS core library					
Number	Property	Year Drilled	Core Size	Photos	Data
DDH-B10	Bond	1977	IAX	0	1
DDH-B12	Bond	1977	IAX	0	3
DDH-B13	Bond	1977	IAX	18	3
DDH-B14	Bond	1977	IAX	0	1
DDH-B15	Bond	1977	IAX	0	1
DDH-B16	Bond	1977	IAX	0	1
DDH-B4	Bond	1977	IAX	0	1
DDH-B5	Bond	1977	IAX	0	3
DDH-B8	Bond	1977	IAX	0	1
DDH-B9	Bond	1977	IAX	0	1
B-1	Bond	1976	BQ	0	2
B-2	Bond	1976	BQ	0	3
B-3	Bond	1976	BQ	0	3