Occurrence Details

Occurrence Number: 106C 090
Occurrence Name: Tow
Occurrence Type: Hard-rock
Status: Showing
Date printed: 12/16/2025 6:51:34 AM

General Information

Secondary Commodities: uranium
Deposit Type(s): Iron Oxide Breccias & Veins (Wernecke Breccias)
Location(s): 64°50'15" N - -133°47'55" W
NTS Mapsheet(s): 106C13
Location Comments: .5 Kilometres
Hand Samples Available: No
Last Reviewed:

Capsule

Work History

Staked as Tow cl 1-16 (YA30553) by Wernecke Joint Venture (Chevron Canada Ltd & Aquitaine Company of Canada) in Jun/78 and explored with an airborne radiometric survey under an option to Eldorado Nuclear Ltd. The joint venture performed radiometric and geochem surveys and rock sampling in 1981, when Aquitaine changed its name to Kidd Creek Mines Ltd. In 1982, Eldorado changed its name to Eldor Resources Ltd.
Restaked in September and October 1992 as MMM cl 1-12 (YB28964) and Olympic cl 1-86 cl (YB28634) by a joint venture consisting of Pamicon Developments Ltd, Equity Engineering Ltd and Westmin Resources Ltd, which performed geological, geochemical and geophysical surveys on the claims in Jun/93. The Olympic cl 99-150l (YB22868) were added in Oct/93. The joint venture partners transferred 100 % interest in both claim groups to Westmin Resources Ltd. in Jan/94.
Between June and Jul/94, Pamicon drilled 4 holes (785 m) on Olympic claims 42, 45 and 60 to test a geophysical anomaly, a soil geochemistry anomaly and the mineralization potential of a lense of Wernecke Breccia. The company assayed for Au, Cu, Co and Ag and measured for magnetic susceptibility and ionizing radiation (counts/sec using a scintillometer). None of the holes returned economic values.

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 hematitic 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 expanson 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. To the east, Wernecke Supergroup rocks are unconformably overlain by Middle Proterozoic Pinguicula Group rocks.
The Tow claims were staked over a breccia body cutting Gillespie Lake Group dolostone and Quartet Group argillite, which exhibit minor brannerite and pitchblende-bearing fractures. The best zones (A & B) are outlined by parallel radioactive float trains containing bleached and weakly brecciated argillite with minor pitchblende on hairline fractures.
Zone A is 30 by 130 m. Zone B is 5 by 100 m. Random chip samples across the two zones returned 12 and 161 ppm uranium oxide (U3O8), respectively. Representative specimens of radioactive float returned values up to 407 ppm uranium oxide (U3O8).
The MMM claims were staked to cover a vein system cutting argillite of the lower Fairchild Lake Group.

References

ELDORADO NUCLEAR LTD, Nov/79. Assessment Report #090517 by C.J. Riley.

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.

PAMICON DEVELOPMENTS LTD., Oct/94. Assessment Report #093222 by D. Caulfield.

THORKELSON, D.J. AND WALLACE, C.A., 1994. 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. AND WALLACE, C.A., 2000. Geology and mineral occurrences of the Slats 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, Jan/81. Assessment Report #090731 by W.D. Eaton and A.R. Archer.

WESTMIN RESOURCES LTD, Dec/92. Assessment Report #093117 by D.A. Caulfield.

WESTMIN RESOURCES LTD, Feb/94. Assessment Report #093172 by D.A. Caulfield and M.A. Stammers.

Work History

Date	Work Type	Comment
12/31/1994	Drilling	Four holes, 785 m.

12/31/1993	Geology	
12/31/1993	Geochemistry	
12/31/1993	Ground Geophysics	Also magnetic survey.
12/31/1981	Ground Geophysics	
12/31/1981	Geochemistry	
12/31/1981	Geochemistry	
12/31/1978	Airborne Geophysics	

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		
093116	1992	1992 Geochemical Report on the Olympic 1-92 Claims	Rock - Geochemistry, Bedrock Mapping - Geology, Prospecting - Other		
091442	1983	Geological and Geochemical Report Jolly 1-10 Claims	Interpretation - Airphotography, Bedrock Mapping - Geology, Hand - Trenching		
090731	1980	Geological and Geochemical Report, Tow 1-16 Claims	Rock - Geochemistry, Soil - Geochemistry, Detailed Bedrock Mapping - Geology, Scintillometer - Ground Geophysics, Prospecting - Other		
090517	1978	Report on Airborne Radiometric Survey and Prospecting Tow 1-6 Claims	Gamma-Ray Spectrometry - Airborne Geophysics		