



Occurrence Details

Occurrence Number: 105B 126

Occurrence Name: Electricity

Occurrence Type: Hard-rock

Status: Showing

Date printed: 4/29/2025 2:32:48 AM

General Information

Secondary Commodities: lead, molybdenum, rare earths, tantalum, tungsten, uranium

Aliases: Elle

Deposit Type(s): Skarn W

Location(s): 60°37'22" N - -130°24'28" W

NTS Mapsheet(s): 105B09

Location Comments: 1 Kilometres

Hand Samples Available: No

Last Reviewed:

Capsule

Work History

Staked as Elle cl 1-139 (YA36153) in Apr-Aug/79 by Eldorado Nuclear Ltd on GSC geochemical results and an airborne radiometric anomaly obtained by Eldorado and Canadian Occidental Petroleum Ltd in 1977. Eldorado performed airborne and reconnaissance ground and limited grid radiometric surveys and hand pitting in 1979 and geochemical surveys in 1980. Restaked as Bozo cl 1-12 (YA73628) in Aug/85 by Central Electricity Generating Board Exploration (Canada) Ltd, which performed geological mapping, geochemical and radiometric geophysical surveys in 1985 and 1986. The company added Bozo cl 13-16 (YA91384) in Aug/86. Restaked as Alle cl 1-8 (YB93148) in Feb/2001 by Strategic Metals Ltd, which carried out a digital geological compilation of all previous exploration. The company added Alle cl 9-50 (YC25359) between October and Dec/2004.

Capsule Geology

The area lies about 10 km southwest of the Tintina Fault and is underlain by the Cabin Creek stock, a mid-Cretaceous zoned stock assigned to the Cassiar Suite. The stock measures approximately 15 km long by 8 km wide and intrudes Upper Proterozoic clastic metasedimentary rocks of the Cassiar Platform. Geological mapping indicates that the eastern side of the stock hosts a very coarse grained porphyritic biotite quartz monzonite which produces a pronounced horseshoe shaped magnetic expression on regional aeromagnetic maps. This unit contains numerous magnetic, biotite rich segregations that are commonly radioactive but possess low uranium to thorium radioactive ratios (< 3:1) possibly indicating the presence of uranophane associated with biotite. The central and western portions of the stock is underlain by equigranular, fine to medium grained, biotite quartz monzonite. Muscovite and radioactive alteration zones have only been observed within the central portion of the stock. Numerous pegmatite dykes occur within and peripheral to the stock. Aside from reconnaissance scale exploration which identified garnet-pyroxene skarns with associated molybdenite, galena and scheelite in calcareous quartz-feldspar-muscovite schist and marble at the margin of the stock, exploration in the area has focused almost exclusively on uranium. Eldorado Nuclear and Central Electricity Generating Board (CEGB) Exploration's work programs outlined four areas of anomalous uranium response within the stock where uranium mineralization is hosted by three compositional phases of the stock. The occurrence location underlies the area known as Zone 2. It is underlain by coarse grained, porphyritic biotite-quartz monzonite containing numerous biotite and magnetite rich lenses that are up to 1 m thick and can be traced for short distances along strike. A radiometric survey outlined a 400 by 100 m area that returned anomalous background readings of 500 counts per second (cps) and spot anomalies as high as 3 600 cps. Rock samples of biotite quartz monzonite returned up to 518 ppm U3O8 using the total extraction method and up to 47.2 ppm U3O8 using the partial extraction method. Both Eldorado Nuclear and CEGB considered the mineralization too localized to be of economic interest. Zone 1 located approximately 2 km northeast of the occurrence, was discovered by CEGB in 1985. It consists of a series of radioactive, northwest trending kaolinized linears developed in medium grained quartz monzonite. Petrographic and scanning electron microanalyzer (SEM) studies identified pitchblende, brannerite and uranium-rare earth elements. The most promising area is a 50 by 5 m area at the intersection of two linears where samples returned between 70.8 and 5 650 ppm U3O8 using partial extraction methods. Total extraction returned almost identical results. Petrographic and SEM analysis of rock samples collected from the clay altered zone show that besides uranium, the area is enriched in some of the rare earth elements. Zone 4 located approximately 500 m to the northeast hosts weakly radioactive, clay altered linears similar to those at Zone 1. Zone 3 located approximately 1 km southwest of the occurrence hosts an area underlain by both porphyritic and equigranular biotite-quartz monzonite. The highest radioactivity is associated with megacrystic pods up to 5 m in diameter, although scattered lenses of moderately radioactive biotite and magnetite rich material are also present. Two east-northeast trending bands of anomalous radioactivity were outlined over lengths of about 600m. Each band contains areas of high radioactivity and coincides approximately with areas of elevated magnetic susceptibility. Specimens collected from this zone returned up to 2.1 % U3O8 using total extraction methods. Partial extraction returned generally lower results. Petrographic studies identified the mineral kobeite in close association with biotite. Rare element analysis of samples collected from the largest megacrystic pod returned high concentrations of tantalum, niobium, thorium and a wide range of rare earth elements.

References

CENTRAL ELECTRICITY GENERATING BOARD EXPLORATION (CANADA) LTD, 1986. Assessment Report #091788 by A.T. Turner and S.E. Amukun.

CENTRAL ELECTRICITY GENERATING BOARD EXPLORATION (CANADA) LTD, 1987. Assessment Report #091736 by A.T. Turner.

ELDORADO NUCLEAR LTD, May/80. Assessment Report #090624 by D. Pare.

GEOLOGICAL SURVEY OF CANADA, 1978. Open File 563, Map 43-1978.

GEOLOGICAL SURVEY OF CANADA, 1996. Open File 3293. Regional Stream Sediment and Water Geochemical Data Southeastern Yukon (Parts of NTS 95D and 105A).

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).

STRATEGIC METALS LTD, Jun/02. Assessment Report #094310 by W.D. Eaton.

YUKON GEOLOGY AND EXPLORATION 1979-80, p. 158.

YUKON EXPLORATION 1985, p. 136; 1987, p. 82-83.

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Work History

Date	Work Type	Comment
12/31/2001	Pre-existing Data	Strategic Metals carried out digital geological compilation of all previous exploration work.
12/31/1986	Ground Geophysics	Also magnetic survey.
12/31/1986	Geology	
12/31/1986	Geochemistry	
12/31/1985	Ground Geophysics	Also magnetic survey.
12/31/1985	Geology	
12/31/1985	Geochemistry	Also silt sampling.
12/31/1980	Geochemistry	
12/31/1979	Airborne Geophysics	
12/31/1979	Trenching	
12/31/1977	Airborne Geophysics	
12/31/1977	Geochemistry	Geological Survey of Canada survey.
12/13/1979	Ground Geophysics	

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
095013	2008	Assessment Report Describing Geochemical Sampling, Geophysical Surveys, Hand Trenching and Diamond Drilling at the Alle Property	Magnetic - Airborne Geophysics, VTEM - Airborne Geophysics, Diamond - Drilling, Soil - Geochemistry, Gamma-ray Spectrometry - Ground Geophysics, Hand - Trenching	14	1933
094589	2006	Assessment Report Describing Geochemical Sampling and Radiometric Surveys on the Alle Property	Silt - Geochemistry, Soil - Geochemistry, Scintillometer - Ground Geophysics, Heavy Mineral Concentrate - Lab Work/Physical Studies, Hand - Trenching		
094310	2002	Assessment Report Describing Digital Geological and Geochemical Compilation for the Alle Property	Data Compilation - Pre-existing Data		
091736	1987	Geological and Geochemical Report on the Bozo 13-16 Mineral Claims, Cabin Creek Area, Yukon Territory	Rock - Geochemistry, Prospecting - Other		
091788	1986	Geological, Geochemical and Geophysical Report on the Bozo 1-12 Mineral Claims, Cabin Creek Area, Yukon Territory	Rock - Geochemistry, Soil - Geochemistry, Detailed Bedrock Mapping - Geology, Gamma-ray Spectrometry - Ground Geophysics, Magnetism - Ground Geophysics, Petrographic - Lab Work/Physical Studies		
090624	1979	Report on the 1979 Field Program Elle 1-139	Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Water - Geochemistry, Bedrock Mapping - Geology, Gamma-ray Spectrometry - Ground Geophysics, Hand - Trenching		
060884	1971	Preliminary Report on the Red Claim Group of Boswell River Mines Ltd. in Liard River Area, Yukon Territory	Process/Interpret - Pre-existing Data		