



Occurrence Details

Occurrence Number: 106D 070

Occurrence Name: Slab

Occurrence Type: Hard-rock

Status: Prospect

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General Information

Secondary Commodities: barite, cobalt, copper, molybdenum, uranium

Deposit Type(s): Iron Oxide Breccias & Veins (Wernecke Breccias)

Location(s): 64°59'43" N - -134°1'46" W

NTS Mapsheet(s): 106D16

Location Comments: .5 Kilometres

Hand Samples Available: Yes

Last Reviewed:

Capsule

Work History

Staked as Sheep cl 1-4 (84350) in Mar/65 by J.B. O'Neill and restaked as Slab cl 1-28 (Y4630) in May/68 by Cyprus Exploration corporation Ltd, which carried out prospecting and mapping later that summer. This is probably the same locality which was staked in Oct/10 as Slab, etc. cl (12044) by D.W. Ballantine and Associates.

Restaked as D.I.T. cl 1-16 (Y69089), in Apr/73 by D.Tully who optioned the claims to New Minex Resources Ltd. The company explored with geological mapping and sampling until the end of 1976 when it dropped the option.

Restaked within a block of 161 Eagle claims (#1=YA41720) in Jun/80 by Pan Ocean Oil Ltda which drilled 1 diamond drill hole (152 m) later in the year.

Restaked between Jul and Oct/92 by Pamicon Developments Ltd as part of a group of 208 Slab cl (#1=YB28600). Pamicon formed a joint venture with Equity Engineering Ltd and Westmin Resources Ltd, and carried out a geochemical survey on the Slab claims in June, 1993. Ten additional Slab claims (YB22493) were added in Aug/93. The joint venture partners flew an airborne geophysical survey, collecting magnetic and radiometric data, in Sept/93. The following month, Pamicon staked 24 Arch cl (YB22998) to the south. In Jan/94 the joint venture partners transferred 100 % interest in the Slab and Arch claim groups to Westmin Resources Ltd.

In the spring of 1994 Pamicon Developments Ltd and Equity Engineering Ltd on behalf of Westmin Resources constructed a 895 by 30 m long airstrip on the Slab cl 153, 155, 156, 158 (YB29974 etc.). Pamicon drilled 1 hole (SB94-3 - 294 m) on Slab cl 5 (YB28604) in Jul/94 and conducted visual and thin section analysis of the core and mineralization.

In June and Jul/94 Pamicon carried out 6 person days of work on the Arch cl 1-24 (YB22998). The work consisted of geological mapping and the collection of stream silt, rock and soil samples. From May to Jul/95 Westmin added Arch cl 25-96 (YB44695) to the north and east sides of the claim block. In Aug/95 Westmin drilled 3 diamond drill holes on the Arch claim block and 4 holes on the Slab claim block.

Westmin Resources was purchased by Boliden Ltd in Mar/98 and changed its name to Boliden Westmin Ltd. The Arch claims lapsed at the end of 2000. In Jul/2004 Breakwater Resources Ltd purchased all outstanding shares of Boliden Westmin (Canada) Ltd from parent company Boliden Ltd. Breakwater transferred control of all surviving claims located in the Wernecke Mountains, Yukon (including the surviving Slab claims) to its wholly owned subsidiary NVI Mining Ltd.

In Jan/2006 Fronteer Development Group (80%) and Rimfire Minerals Corporation (20%) signed an agreement with Newmont Exploration Canada and NVI Mining Ltd 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 flew a airborne gravity survey and carried out an extensive geological, geochemical and prospecting program over their entire claim holdings. On the Slab claims the company carried out a single reconnaissance traverse and collected a one rock sample.

Capsule Geology

The region is underlain by a metamorphosed and altered sequence of Lower 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. 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.

Most exploration has been focused on conspicuous malachite-stained Middle Proterozoic Wernecke Breccia exposed on Slab Mountain in a cliff face about 1.6 km long and 366 m high. The breccia consists of unaltered to weakly altered clasts of grey phyllite and metasilstone up to 15 m across in a matrix of granule- to silt-sized grains of quartz, microcline, biotite and other minerals and fragments of metamorphic rocks. The breccia occurs at the faulted contact between subaerial flows of the Lower Proterozoic Slab volcanics and metasomatized limy argillite of the Fairchild Lake Group. Hydrothermal alteration is much weaker than in other Wernecke Breccia.

The best mineralization occurs in weak fractures developed along the contact and consists of chalcopyrite, pyrite, barite, cobaltite, brannerite and traces of molybdenite. Brannerite is also weakly disseminated throughout the breccia. The 1980 work was mainly directed toward cobalt potential.

The original joint venture released very little information. Exploration carried out in 1994 on the Arch claims outlined a magnetic high in the north-central part of the claim block and a wide zone of albitic breccia greater than 3 kilometers long across its length. Prospecting failed to discover any evidence of mineralization in the breccia zone, however a narrow fault near a breccia zone contained chalcopyrite with anomalous gold values. Both the Arch and Slab claim blocks were drilled in 1995 but the joint venture only filed assessment work on those holes which returned minor or no mineralization. Limited publicly released information suggests both claim blocks hold high potential to host copper, molybdenum, gold and uranium mineralization.

Fronteer only spent a minor amount of time exploring the Slab claims because their exploration program was focused on identifying uranium targets and mineralization identified to date on the Slab claims appears to be iron-oxide copper-gold or IOCG based.

References

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YUKON EXPLORATION & GEOLOGY 1995, p. 12, 16; 2006, p. 34 and 45.

Work History

Date	Work Type	Comment
12/31/2006	Geochemistry	Also soil and silt sampling. Reconnaissance in scale.
12/31/2006	Geology	Reconnaissance in scale.
12/31/2006	Airborne Geophysics	
12/31/1995	Drilling	Four holes. Data not released to public.
12/31/1994	Development, Surface	
12/31/1994	Geochemistry	
12/31/1994	Drilling	One hole, 294 m. Drill hole located on Slab claim # 5
12/31/1994	Geology	
12/31/1994	Lab Work/Physical Studies	Prepared thin sections from rock samples.
12/31/1993	Geochemistry	
12/31/1993	Airborne Geophysics	Also radiometric survey.
12/31/1980	Drilling	One hole, 152 m.
12/31/1976	Geology	
12/31/1976	Geochemistry	
12/31/1968	Geology	
12/31/1968	Other	
12/13/2006	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 Wernekes 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 Wernekes Project	Reverse Circulation - Airborne Geophysics, Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Scintillometer - Ground Geophysics, Prospecting - Other		
093181	1993	1993 Summary Report on the Slab 1-208 Claims	Orthophoto - Airphotography, Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, IP - Ground Geophysics, Magnetics - Ground Geophysics		
093119	1992	1992 Geochemical Report on the Slab 1-84 Mineral Claims	Rock - Geochemistry, Soil - Geochemistry, Detailed Bedrock Mapping - Geology, Prospecting - Other		
090817	1981	Assessment Report on the Eagle, Otter, and Vole Claims	Diamond - Drilling, Rock - Geochemistry, Silt - Geochemistry, Bedrock Mapping - Geology, Magnetics - Ground Geophysics, Scintillometer - Ground Geophysics, Prospecting - Other, Backhoe - Trenching, Handblast - Trenching	14	1590.16
060926	1973	Report on the D.I.T. Group of Mineral Claims, Fairchild Lake Area	Rock - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Prospecting - Other		
019407	1968	Geological Report on Slab Mountain, Fairchild Lake Area	Detailed Bedrock Mapping - Geology		

Related References

Number	Title	Page(s)	Reference Type	Document Type
ARMC004979	Correspondence Re: MINEX Development Ltd. - D.I.T. claim group		Property File Collection	Miscellaneous Company Documents