NEWFOUNDLAND & LABRADOR Explore The Opportunities

Krats - Copper-Nickel -Cobalt



<u>Map 1</u>. Property location map

The *Krats Property* consists of 161 claims located 80 km northeast of Labrador City, 5 km east of Sawbill Siding on the QNS&L Railroad. Access to the area can be by float plane to Evening Lake, just to the south of the property. Access is also possible by weekly train to Shefferville or by helicopter.

Regional Geology

The Mid Proterozoic 1.4 Ga Shabogamo Gabbro occurs in the Southeastern Churchill Province (SECP). The Grenville Province collided with the late Archean rocks of the Superior Province, the Lower Proterozoic Churchill (Rae) and Archean Nain Provinces along the Grenville Front (Wilton, 1995). The Grenville Front dominates the geology of the region. It is a probable crustal suture that forms part of the major Circum Superior terrane boundary.

Local Geology

The property is underlain predominantly by metamorphosed shale, siltstone and sandstone of the Knob Lake Group (ca. 1877 Ma) comprising reduced graphitic slate of the Menihek Formation,

Attikamagen Formation schists, Denault Formation marble and Sokoman cherty ironstone and quartzite.

These meta-siliciclastics are intruded by the Shabogamo Gabbro. The Shabogamo Gabbro sills, dikes, laccoliths and stocks (up to ~ 50 x 10 km) are believed to be part of a regional mafic magmatic event extending for ~ 500 km which includes the Michael Gabbro and possibly the Mealy Lake dikes (Gower et al, 1990). Intrusions consist of gabbros, olivine gabbros, lesser gabbronorite and rare occurrences of troctolite affected by amphibolite grade metamorphism. Cumulate layered rocks are common.

Mineralization

The principal mineralization on the Evening Lake Property is the Krats Showing discovered in 1998 by the late Karl Krats and his Ma



Map 2. Claims and geology map

prospecting colleagues, who were ground-checking anomalous Zn values in lake-sediment data (Kerr, 2007).



Figure 1

Mineralization consists of heavily disseminated magmatic sulfides with clusters of violarite replacing pentlandite in hydrothermally altered Shabogamo gabbro-dolerite mineralization exposed in a trench on the Krats property. Violarite with good octahedral pentlandite cleavage and expansion cracks occurs with chalcopyrite in pyrrhotite (Muntanion, 2002). Samples collected during initial prospecting contained up to 0.6% Cu and 0.6% Ni (Kerr, 2007). The property contains multi-element anomalies in both soil and bedrock. Blebby and disseminated sulphides occurring in gabbroic and sedimentary rocks returned values of 0.29% Ni, 0.32% Cu, 0.026% Co, 0.28% Zn, 0.12% Pb and 2.2 g/ton Ag. Limited assaying for PGE's have returned trace platinum and palladium. The Ni-Cu-Co bearing rocks occur in the footwall of an olivine gabbro sill, and are possibly part of a larger magmatic sulphide deposit. The Zn-Cu-Pb sulphides are present in black shale and slates near the gabbro contact, possibly indicating the presence of a Sedex deposit.

The Evening Lake area was one of several follow-up targets explained in detail by government geochemical surveys (see McConnell, 1984, NLDME Report 84-2). The survey returned substantial multi-element soil anomalies. Present work has determined a triangular-shaped anomaly for Zn, Pb, Cu, over 200 m wide narrowing over 1 km (Map 3). BHP-Billiton and Gallery Resources conducted extensive exploration in the area following their optioning of the Krats Showing in 2001. The exploration activity included airborne magnetic-EM surveys (Figure 1). Many of these anomalies have not been followed up. This area was selected because of the surface Ni-Cu mineralization in boulders and its proximity to sheet-like bodies of exposed Shabogamo Gabbro. EM-16 surveys produced strong anomalies in the area. There are several weaker anomalies over much of the property. A fan of



Map 3. Prospecting results (Krats, 2001)

		Property High	lights				
		Sample	Ni	Cu	Со	Zn	Pb
Actual Amounts (ppm) calculated at 100% sulphides (%)		0% '	ppm	ppm	ppm	ppm	ppm
sample Cu Ni Co	Cu Ni Co	PC2199 (rock)	2900	3235	261	63	9
PC9919 032 973 121 (bedrock)	1.42 1.00 0.20	PC2499 (float)	2400	2710	175	110	8
PC9920 662 802 103 (bedrock)	1.1 1.24 0.15	PC1899 (rock)	1039	880	131	60	4
PC9924 35/590*27 35/590*27 (boulder)	1.6 1.6 0.10	PC0399 (strear	n) 215	772	10	2800	77
PC9830 339 492 100 (bedrock)	1.15 1.67 0.10	Υ.	,				
		Many samples values; some c	have retui ontain trac	rned anoma ce PGE's	lous base i	metal and c	obalt

mineralized gabbro boulders were found in the area with a general NW to SE alignment, which agrees with the most recent glacial flow (Map 3) (Krats, 2001). The property has potential for significant magmatic sulphide deposits.

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EM-16 Line 4, from west to east Start-grid 19U 0681584---UTM-5942387

> Source: Mineral Occurrence Database - Geological Survey, Department of Natural Resources Website:http://www.gov.nl.ca/mines&en/geosurvey

> > P.H. Davenport, L.W. Nolan, R.W. Wardle, G.J. Stapleton, and G.J. Kilfoil, 1999 The Geoscience Atlas of Labrador. Newfoundland Department of Mines and Energy, Geological Survey, Open File NFLD/1305, Version 1.0