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**TOFINO NICKEL (DEER BAY) PROPERTY SUMMARY**

**INTRODUCTION**

The Tofino Nickel (Deer Bay) Property is comprised of 6 continuous mineral claims totalling 40 units owned jointly by Peter Buckland of Boat Basin and Arne Birkeland of North Vancouver. The property is located 25 km northeast of Tofino on the central west coast of Vancouver Island, B.C. (Alberni Mining Division, NTS 92F/4E). Access is via well maintained all weather logging roads or by boat from Tofino. With the exception of a Scenic Corridor along the foreshore of Tofino Inlet, the property is classified as General Use and is outside protected areas selected by the Clayoquot Land Use decision.

**PROPERTY HISTORY**

Exploration activity on the Deer Bay property dates back to the late 1890's when hand cobbled ore was produced from shafts and adits dug on small quartz veins along Tofino Creek. Between 1953 and 1984 the property was explored for its skarn and porphyry Cu-Mo potential associated with an Island Intrusive Stock at the head of Tofino Bay.

In 1984, Cominco examined the Cu-Ni-PGE Main Showing and optioned the property in 1985. Detailed geologic mapping, soil sampling, limited geophysics and trenching was carried out. Cominco concluded that PGE bearing Cu-Ni mineralization may have been emplaced as an immiscible liquid at the same time of injection of the ultrabasic host, demonstrating a potential for size and continuity of mineralization. A report by Mason, July 1986 states: *"While the isolated outcrop (Main Showing) is only 30 m by 10 m the associated rock types (altered ultramafics and anorthosite) and the Cu-Ni sulfide bands suggest that it is part of a much larger body... the property has both demonstrated grades and potential for significant tonnage."* Additional work was recommended but was not carried out by Cominco.

Reconnaissance geological mapping and geochemical surveys were conducted by Stag Explorations during 1988. Soil geochemistry was somewhat effective in delineating anomalous zones around the Main Showing. In 1992, reconnaissance soil and moss mat stream sediment sampling along new road-cuts above the Main Showing detected anomalous Cu, Ni, Co, Au and PGM extending the prospective mineralized strike length beyond the areas previously explored.

## **GEOLOGICAL SETTING**

The claims are underlain rocks belonging to the Paleozoic Sicker group and the West Coast Crystalline Complex (WC3). An Island Intrusion stock is present at the head of Deer Bay and a Tertiary Catface Intrusion flanks the property to the southwest.

The Main Showing is strataform to foliation and is hosted in amphibolites and gneiss in a broad northwest trending high-grade metamorphic zone in the WC3. A high level sub-volcanic (differentiated) gabbro sill anomalous in Cu, Ni, Co and PGM is strataform to the west of the Main Showing.

## **MINERALIZATION - MAIN SHOWING**

Massive sulphide mineralization over approximately a 1.5 m width is exposed in trenching in outcrop over a strike length of 22 m. The massive sulphide consists of bands of fine to coarse grained pyrrhotite, chalcopyrite, violarite, millerite and pyrite. Accessory minerals include minor magnetite, sphalerite and galena. The mineralization is concordant with the strongly developed foliation and is hosted in, and is intimately associated with a black, coarse grained, euhedral, hypidomorphic granular, biotite hornblend amphibolite. Dessiminated sulphides are also broadly distributed in the border phases of the massive sulphides.

Values of up to 10.1% Ni, 0.24% Cu, 0.17 o/T Pt and 0.76 o/T Pd were obtained from representative grab sampling of loose high-grade talus at the Main Showing. The best rock chip channel sampling of the zone returned 2.06% Ni, 1.97% Cu, 0.051 o/T Pt and 0.171 o/T Pd over a 2.2 m width and 1.58% Ni, 1.9% Cu, 0.024 o/T Pt and 0.166 o/T Pd over 1.3 m. This confirmed Cominco results (1985) where *chip sampling over 11.1 m gave values up to 1.5% Ni, 4.2% Cu, 1.4 ppm Pt and 4 ppm Pd. Selected character samples gave considerably higher values.*

## **DEPOSIT CLASSIFICATION**

Of importance was grab sampling of unmineralized amphibolite host at the Main Showing and from the gabbro (amphibolite) sill on the western portion of the property. Anomalous Ni values of 103 ppm and 147 ppm respectively indicate a genetic link between the amphibolite hosted mineralization and the gabbro body. Ni-Cu occurrences associated with WC3 amphibolite are also known to exist to the northwest on Vancouver Island, indicating that a Ni-Cu-PGE Belt may be present and that the Deer Bay showing is not an isolated occurrence.

The Deer Bay property is classified as a gabbroid Ni-Cu-PGE deposit type. Mineralization is hosted in an ultramafic/mafic intrusive associated with a differentiated high level upper Triassic gabbroic sill complex. Similar deposit types are present at a number of occurrences in southeastern Alaska.

## CONCLUSIONS

An excellent Cu-Ni-PGE massive sulphide showing occurs in outcrop. Although additional work has been recommended by Cominco geologists and others, **the showing has never been tested by diamond drilling.** Preliminary soil sampling indicates a possible considerable extent to the zone. A genetic link to a gabbroic sill identifies this prospect as belonging to the economically important gabbroic Cu-Ni-Co-PGE class, similar to the Voise Bay type but with with the addition of PGE credits. Additional exploration work is warranted.



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