

BABINE LAKE NORTH AREA
PROPOSED EXPLORATION PROJECT

Introduction

Within the Smithers-Babine area are two producing mines, and at least three economically significant deposits in an advanced stage of exploration. The producing mines and two of the economically significant deposits occur within a belt of Mesozoic volcanic and sedimentary rocks that have been intruded by small Tertiary bi-feldspar and hb-bi-feldspar porphyry sills, dykes and small stocks.

Many of the sills and dykes have a north-northeasterly to northeasterly strike; however, the trend in the distribution of these intrusions is north to north-northwesterly. This northwesterly trend is the direction of major faulting in the Babine area. The dykes and sills were likely implaced along tension fractures developed from stresses along the main NW fault system. Exploration should therefore be directed along the northerly to northwesterly belt of Mesozoic rocks within the porphyry intrusive belt.

Location

The project proposed here is within the above belt. It lies along the northeast side of Babine River and Nilkitkwa Lakes extending from Haul and Tahlo Lakes northwesterly to Mount Horetzky. The area is centred on Lat. $55^{\circ} 30'$, Long. $126^{\circ} 40'$.

Access

The proposed area lies about 45 miles northeast of Hazelton and 55 miles north-northeast of Smithers. Nearest railroad point is at Hazelton. Highland Helicopters maintains a base at Hazelton, Okanagan Helicopters at Smithers. Pacific Western Airlines have a daily flight between Vancouver and Smithers.

Nature of the Area

The selected area lies between the Bait Mountain Range to the east and the Babine River on the west, encompassing a topographic low. Most of the area is drift-covered with relatively flat terrain and numerous swamps and lakes, hence outcrop occurrences can be expected to be less than 10%. Glacial movement was southeast.

Size of Proposed Area

An area 24 miles by 10 miles elongate in a northwesterly direction has been outlined. It extends from Haul Lake on the southeast to Horetzky Mountain on the northwest.

Project

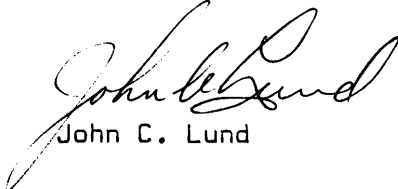
Briefly, the geology consists of a north-western belt of Mesozoic sedimentary and volcanic rocks, which form part of the Hazelton group. These have been intruded by hb-feldspar and porphyry, hb-bi-feldspar-porphyry intrusions. Associated with the porphyries are the deposits of Mt. Horetzky at the northwest end of the project area and Newman, Granisle and Morrison deposits on the southeast end of the area. Nick Carter, of the B. C. Department of Mines, classifies the Horetzky deposit with the latter three. It is conceivable, therefore, that similar deposits may exist in the area between Mt. Horetzky and Morrison Lake.

Work would be centred on a northwesterly trending magnetic "ridge". The ridge is likely a reflection of a volcanic unit interbedded with magnetically featureless sedimentary rocks. The known deposits are in or near volcanic rocks, hence the work should be concentrated along this magnetic ridge.

Methods

The lack of outcrop, possibly thick sections of overburden, and abundance of swampy ground make exploration difficult. The problem could be attacked in two ways: (a) Regional soils only taken at 1,000 ft. intervals on lines spaced at 1/2 mile, and (b) Combined regional soils and a low altitude, high sensitivity airborne magnetometer survey. Purpose of the air-

This proposal is submitted as a possible exploration project for this season starting on or before June 1, 1972. Wilf Christian could be put on this work either together with a helper of his choice or a student familiar with soil collecting techniques.


John C. Lund

March 22, 1972.

JCL/eh



Proposed Expl. Area = 24mi. x 10mi (240sqmi)

Start = S.E. End and work N.

Method = Regional soils. — 1/2 mile spaced lines soils @ 1000ft.

Time required: ~ 3mo. with 2 men.

Babine North Area

X Lakes capable of landing a power line

1" = 4 mi