Assessment Report

on

Nokluit 1-8 Claims

Watson Lake Mining District

Claim Sheet 105F/8

Latitude 61°29'N, Longitude 132°11'W

December 23, 1977

Alan R. Archer, P. Eng. Consulting Engineer
This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work to the amount of

[$\text{Signature}]

[Geologist/Miner on Sheet]

Considered as representation work under Section 53 (4) of the Claim Mining Act.

S.R. BAXTER
Supervising Mining Recorder

[Signature]

Commissioner of Yukon Territory
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INTRODUCTION

The Nokluit property was staked in 1976 to cover an area of anomalous radioactivity located by total count airborne radiometric surveys. Preliminary sampling indicated that the radioactivity was caused by thorium rather than uranium mineralization.

The 1977 program consisted of exploring for uranium-rich zones by airborne radiometrics with a 4-channel spectrometer on July 29 followed by prospecting and reconnaissance geochemical sampling from August 5 to 8 by field men D. Eaton, R. Warner and J. Cockell. The program was managed by Archer, Cathro & Associates Ltd.

Geochemical analysis for uranium was done at Chemex Labs Ltd., North Vancouver, B.C. by hot acid extraction of a minus 80 mesh fraction followed by fusion in a sodium fluoride-based flux and examination with a G.K. Turner fluorometer.

PROPERTY, LOCATION AND ACCESS

The Nokluit property consists of eight contiguous mineral claims recorded at Watson Lake as follows:

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<td>Nokluit 1-8</td>
<td>YA 567 - YA 574</td>
<td>20 August, 1978</td>
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The claims are located at 61°29'N and 132°11'W, within NTS claim sheet 105F/6, 58 km (36 miles) south of Ross River. The nearest road point is the south end of an old mine access road along Ketza River, some 8 km (5 miles) to the north. Access in 1977 was by helicopter from another Archer, Cathro camp at the end of the Ketza Road.
1977 EXPLORATION PROGRAM

Geological Mapping

The claims lie well above timberline, straddling a northeast-trending ridge at the headwaters of the Ketza River. The ridge reaches an elevation of 2100 m above sea level and has a steep, almost inaccessible, north-facing slope. The 1977 mapping was concentrated on the accessible portions of this slope, where the stratigraphic succession consists of thin-bedded quartzites, tuffaceous chert and felsic submarine volcanic flows overlying dark phyllite and slate, all of Mississippian age (see Figure U-NK1 on the following page).

A syenite stock about 200 m across was located near the volcanic-slate contact just north of the centre of the claim block. This stock is probably related to syenite intrusions 13 km to the west that are thought to be coeval with the Mississippian flows and tuffs. It contains fine to coarse grained phases and varies from mafic deficient syenite through coarse hornblende syenite to hornblendite. The stock is surrounded by dykes of similar composition and by fine grained, grey-green dikes.

Airborne Radiometrics

A contour airborne radiometric survey was flown at 150 m (500 feet) elevation intervals over a 6 km by 7 km area more or less centred on the claims (see Figure U-NK2). The survey was flown at a height of 50 m above the ground charting total count, uranium and thorium signals from a Scintrex GAD-4 spectrometer connected to a Scintrex GSA-61 sensor (1853 cc crystal).

An anomalous response was obtained within and immediately peripheral to the claim block. Here, total count ranges up to 2300 counts per second (cps) over a background of 800 cps, thorium up to 80 cps over a background of 16 cps and...
uranium up to 30 cps over a background of 15 cps. This pattern suggests that the major part of the anomalous response is caused by thorium rather than uranium. No anomalies were detected elsewhere in the area surveyed.

**Mineralization**

Prospecting in 1976 located eight areas of anomalous radioactivity in discontinuous, linear, siliceous, sometimes gossanized zones up to 10 m wide within felsic volcanics on the southeast side of the claim block. Assays of the most radioactive specimens from each zone ranged from 200 to 3200 ppm Th and 0.5 to 74 ppm U. Limited assaying for rare earths and niobium returned values up to 2000 ppm Ce, 2000 ppm La, 2000 ppm Nd, 2000 ppm Y and 0.95% Cb₂O₅.

Prospecting in 1977 located similar radioactive float in volcanics on the north side of the claims as well as strongly radioactive float associated with breccia and narrow vein zones within and marginal to the syenite stock. Associated mineralization includes barite, siderite, calcite, quartz and minor purple fluorite and pyrite. Uranium assays of 12 radioactive specimens from the syenite ranged from 10 to 670 ppm U with most grading less than 70 ppm U. Specimens of radioactive float from five areas within the volcanics assayed between 10 ppm and 120 ppm U. No thorium, rare earth or niobium assays have been obtained from the 1977 samples.

Prospecting beyond the northern boundary of the claim block failed to locate any extension of the radioactive zone and reconnaissance soil sampling returned background uranium values. Three panning concentrates were obtained from creeks draining the syenite and all assayed 10 ppm U or less. The concentrates contained traces of scheelite and about 20% magnetite and zircon.
CONCLUSIONS AND RECOMMENDATIONS

Numerous strongly radioactive zones occur on the claims. However, airborne spectrometer surveys followed by rock and soil sampling indicate that the anomalous radioactivity is primarily caused by thorium rather than uranium mineralization.

Selected specimens from new zones located in 1977 should be assayed for niobium and rare earths because of the anomalous values obtained in 1976. If significantly richer zones are not found, no further work is recommended and the claims should be allowed to lapse on their normal expiry date.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES LTD.,

ARA: jm
