GEOCHEMICAL REPORT ON THE VICARS PROPERTY, SCUITTO CR., B.C. KAMLOOPS MINING DIVISION

N.T.S. Map-Sheet 92I/9E
Lat. 50° 35' N; Long. 120° 10' W

for

British Newfoundland Exploration Ltd.

by

R.R. Culbert, PhD, P.Eng.

D.G. Leighton & Associates Ltd.
Vancouver, B.C.

15 December, 1977

CONTENTS

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GEOCHEMICAL REPORT ON THE VICARS PROPERTY, SCUITTO CR., B.C. KAMLOOPS MINING DIVISION

INTRODUCTION

This report describes the results of exploration work completed to date on the VICARS property located near Kamloops, B.C. This group was staked in 1976 to cover an area anomalous in uranium which resulted from a geochemical reconnaissance survey. Follow-up work has continued to produce encouraging results.

Field work has been done at intervals since the original reconnaissance surveys.

The conclusions set forth in this report are based on prospecting and geochemical work done on the property. The prospecting included ground based radiometric measurements.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

1. The VICARS 1 - 4 mineral claims held by British Newfoundland Exploration Ltd. are situated approximately 15 km. southeast of Kamloops, B.C.

2. Granitic rocks of the Wildhorse Mountain batholith underlie the claims, although the main phase present is unusually acidic and may in fact represent a separate intrusion.

3. Work carried out to date has consisted mainly of geochemical sampling and prospecting with hand-held scintillometers.

4. Geochemical results indicate highly anomalous uranium values associated with lake waters.

5. Potential exists for fracture controlled primary uranium mineralization.

6. Recommended work in the next stage includes: hand augering, EM and radon gas surveys plus further geochemical studies.

Respectfully submitted,

R.R. Culbert, PhD. P. Eng.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R. CULBERT

15 December, 1977

GENERAL DESCRIPTIONS

Location and Access

The VICARS property is located in the south-central portion of British Columbia 15 kilometers southeast of Kamloops. The claims are situated between Campbell Creek and Scuitto Lake at an average elevation of 3000 feet. Geodetic coordinates are 50° 35' north; 120° 10' west (see index map following this page).

Exploration History

Staking of this property followed discovery of a group of lakes here with up to 7700 ppb uranium in their waters, in 1976. Following two reconnaissance geochemistry visits to define the area and staking of the claims, a winter trip was made to examine the ponds when ice allowed access for augering.

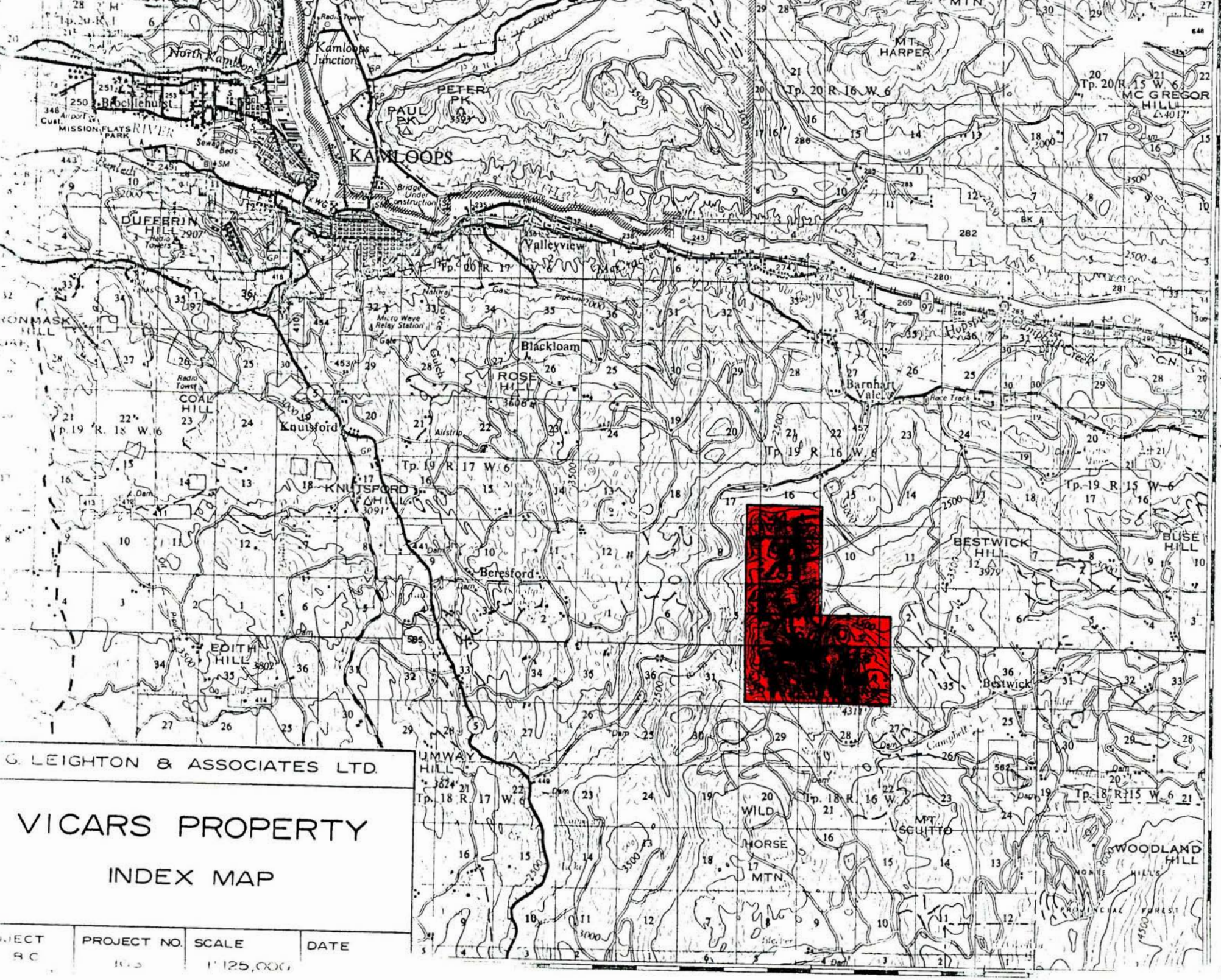
In the spring of 1977 a program of soil sampling along lineaments was carried out in search of signs marking uranium sources. Prospecting and geology were also employed during this time, searching both for favourable rock alterations and for radioactivity, using hand-held scintillometers.

The rock proved to be a monotonous quartz monzonite, with no outcrop in most areas. Lineaments were poorly defined and the rock of uniform low radioactivity, with the exception of some weakly radioactive pegmatite stringers. Neither the scintillometers nor the prospecting picked up anything of interest.

Claims

The VICARS property consists of four unsurveyed mining claims held in the name of British Newfoundland Exploration Ltd. These include:

Property	Claims	Units	Rec. No.	Rec. Date
VICARS	VICARS-1	20	644	26 November, 1976
	VICARS-2	20	645	26 November, 1976
	VICARS-3	20	646	26 November, 1976
	VICARS-4	10	699	24 February, 1977



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VICARS PROPERTY

INDEX MAP

JECT	PROJECT NO.	SCALE	DATE
RC		1" 125,000	

GEOLOGY

The VICARS property is underlain by granitic rocks of the Wildhorse Mountain batholith. These are typically coarse grained granodiorites and quartz diorites. In the upper Scuitto Creek area, however, the granite is orthoclase and quartz rich, and may consist of a separate intrusion. The ferromagnesium mineral is biotite, and according to Cockfield * the rock shows a preponderance of micropegmatite and microperthite.

GEOCHEMICAL SURVEY

General

Ground control for work in the Vicars Mountain area has been mainly air-photographs. Results were plotted on overlays to 36 x 36 inch blow-ups of standard 9 x 9 inch photos. This information has been transferred to a map for presentation here showing sample sites in relation to lakes and roads in the general area (see pocket). The approximate location of claim boundaries is also shown on this map. The primary photos used in this compilation are BC 7640-241 and BC 7641-30.

All samples were shipped to Min-En Laboratories Ltd. in North Vancouver, where they were tested using procedures outlined in Appendix A.

Results and Interpretation

This is an area of carbonate alkaline lakes and ground waters. The lakes tend to contain 60 - 80 mg/liter bicarbonate (actually bicarbonate and carbonate combined), which is extremely high. This in itself explains the water anomalies, given the levels of uranium in the lake sediments. These muds have between 10 and 60 ppm uranium, which is clearly anomalous for lake sediments in general but not particularly unusual for carbonate lakes in the southern B.C. Interior.

Auger samples taken in winter through lake ice coverings showed that uranium content decreases downward in the top few feet of sediments. The central question now is whether or not the moderate lake sediment anomalies are explained simply by carbonate ground waters leaching uranium from the surrounding granite and concentrating it in the uppermost slimes of the trapped sediments. The leaching power of such waters is known to be considerable with respect to uranium, which is amply demonstrated by the levels of uranium dissolved in the lakes.

The competing theory for explanation of the uranium sediment anomalies is that there are uranium mineral occurrences here; likely hydrothermal or vein style mineralization associated with fractures in the quartz monzonite.

* Cockfield, W.E. Geology & Mineral Deposits of the Nicola Map-Area, British Columbia; G.S.C. Mem. 249, p.17

To test this, lineaments and gullies draining into or near these lakes were tested by soil sampling at roughly 50 meter intervals. These samples were taken with mattocks at a depth of roughly two feet. In most places the soil proved to be of the brown forest class, often of a bleached appearance. It has a tendency to be calcareous and leached, especially in gullies. Because of the importance of organic material where water-transported uranium is concerned, the specific gravity (wt. of ½ tsp. soil) was recorded for samples. This measure is an approximate indication of organic content. Acid extractable calcium analyses were also run on samples with over 10 ppm uranium.

Anomalies, even results above the 10 ppm mark, proved to be rare in this area. Those which occurred east of the main lake chain were entirely from ponds or from areas where surfacing waters inter-acted with organic sediments. To the west of these lakes there were three anomalies of in-obvious origin, but these are scattered, of weak or moderate strength, and generally unconvincing.

Clearly, one of the problems has been that in the deep soils of these poorly defined lineaments, the sampled materials have probably never been affected by ground waters travelling in those lineaments. Deeper hand-augering might overcome this problem, and the question is whether this or methods such as soil radon sampling are justified.

Recommendations

The alkali lakes and flats associated with anomalous uranium in waters should be power-augered in winter to obtain samples of their sediments at depth. These samples may be used in part to search for buried uraniferous layers, but also to examine the degree of upward concentration of uranium in the sediments and perhaps obtain some limitations on the dates of deposition from gamma ray spectrometry. From this it should be possible to judge the rate at which uranium has accumulated in these ponds and whether this transfer seems feasible simply from the uranium contents of carbonate ground waters associated with granitic terrains - that is, without requiring uranium mineralization in the watershed.

Any further work in this area searching for primary mineralization should attempt to overcome the problem of deep (but dry) overburden by the following techniques:-

1. VLF EM surveys combined with analysis on airphotos better to locate the fracture zones in areas of broad, ill-defined lineaments.

2. Radon gas measurements above lineaments late in the season when soil is driest. As radium is not transported by alkaline waters, this will not respond to the water-deposited soil uranium concentrations.

3. Hand augering below the zone of leaching in areas selected by the preceding work. Uranium and radium analyses should be done here as radium/uranium ratios may be expected to increase as bedrock sources

are approached. Organic content must also be monitored in these interpretations.

SUMMARY OF COSTS
(for assessment purposes)

Wages and salaries	$1,450.00	
Benefits	364.00	$1,814.00
Analytical costs		1,300.00
Mobilization - truck rental		450.00
Miscellaneous, including report preparation		500.00
		$4,064.00

CERTIFICATION

I, R.R. Culbert, do hereby certify that:

1. I am a practicing Professional Geological Engineer with offices at 3152 West 10th Ave., Vancouver, B.C.

2. I am a graduate of the University of British Columbia, BA Sc. (1964), PhD. (1971).

3. I have practiced mining exploration for fifteen years, most of which were based in British Columbia.

4. I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia.

5. I have personally visited the VICARS property and supervised exploration work carried out there.

Respectfully submitted,

R.R. Culbert, P.Eng., PhD.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R.R. CULBERT

15 December, 1977

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APPENDIX "A"

MIN-EN Laboratories Ltd.
Specialists in Mineral Environments
Corner 15th Street and Bewicke
705 WEST 15th STREET
NORTH VANCOUVER, B.C.
CANADA

ANALYTICAL PROCEDURE REPORTS FOR ASSESSMENT WORK

Procedure for Uranium Analysis:

Rock, soil and silt samples are dried at 110°C and then rocks are crushed and pulverized to -80 mesh.

Soils and silts are sieved and the minus 80 mesh fraction is retained for analysis.

1.000 g. sub-sample is weighed and digested for eight hours with HNO_3 and $HClO_4$.

Then the uranium is separated chemically from other possible interfering ions as Mn, Fe, etc.

After preparation a suitable aliquote is taken and fluxed to form a 1.5 inch diameter discs in platinum dishes.

These salt discs then are compared and measured along with suitable standard with a Jarrell Ash Fluorometer.

The results are calculated accordingly to the sample aliquotes used from standard graphs.

VICARS - 4

VICARS - 3

VICARS - 1 VICARS - 2

N

LEGEND

- WATER SAMPLE - VALUE INDICATES URANIUM ppb { PO_4 - ppb; SO_4 - mg/l; HCO_3 - mg/l; F - ppb; Ph }
- SOIL SAMPLE - VALUES INDICATES URANIUM SPECIFIC GRAVITY EXCHANGABLE CALCIUM
- LEGAL CORNER CLAIM POST
- AIR PHOTO LINEAMENTS
- MAIN ACCESS ROAD

MINERAL RESOURCES DIVISION
Assessment Report
NO. 6574

PROFESSIONAL ENGINEER
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R. R. CULBERT

MAP TRACED FROM AIR PHOTOS
B.C. 7641-30 and 7640-241

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VICARS PROPERTY

GEOCHEMICAL SURVEY RESULTS

METRES 100 50 0 100 200 300 METRES

PROJECT	PROJECT No.	DATE	DRAWN
S. B.C. URANIUM	103	DEC. 1977	Altair