

GEOLOGICAL & GEOCHEMICAL REPORT

- on the -

PATO 1 CLAIM

ATLIN MINING DIVISION

- for the -

GRANVILLE SQUARE JOINT VENTURE

Managed by: Union Oil Company of Canada Ltd.,
Box 999, Calgary, Alberta.

Work Completed: July 18, 1978.

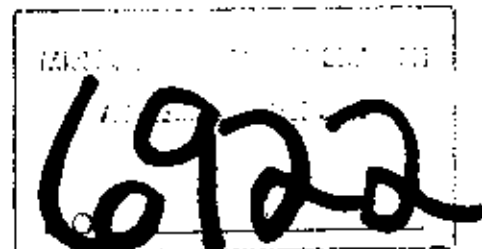
Location: NTS 104N/11W.
59°43'N; 133°18'W.
27 km. NE of Atlin, B. C.

Prepared By:

KERR, DAWSON & ASSOCIATES LTD.,

#1-219 Victoria Street,
Kamloops, B. C.

John R. Kerr, P. Eng.,
October, 1978.



INDEX

	<u>Page No.</u>
INTRODUCTION	1
General Statement	1
Location and Access	2
Topography and Vegetation	2
Property	3
History	3
FIELD PROGRAMME (1978)	4
GEOLOGY	6
GEOCHEMISTRY	9
CONCLUSIONS AND RECOMMENDATIONS	10
APPENDIX A - Statement of Costs	
APPENDIX B - Statement of Qualifications	
APPENDIX C - Geochemical Analysis	

LIST OF MAPS:

- Figure 175 - 1 - Location Map
- Figure 175C - 2 - Index Map
- Figure 175H - 3 - Geological Plan with
 Geochemical Data

INTRODUCTION

General Statement:

The Pato claims were staked in September, 1976, to cover a southeastern extension of the Purple Rose uranium occurrence and associated geochemical anomalies. The claims are located on the northwest contact of the Surprise Lake batholith. The potential of polymetallic deposits within the batholith or contact-type of deposits exist within the claim block. During 1977, the claims were prospected and a grid was established over the showing area for detailed geochemical sampling. Work was only recorded on the Pato #1 claim (9 units), which is the only claim currently in good standing. Results of the 1977 programme are compiled in a report by D. G. Leighton and Associates Ltd. (November, 1977).

The objective of the 1978 programme was to map geologically the showing area, and to evaluate the potential for both types of deposits by reconnaissance geochemistry. This report summarizes the results of this programme.

Location and Access:

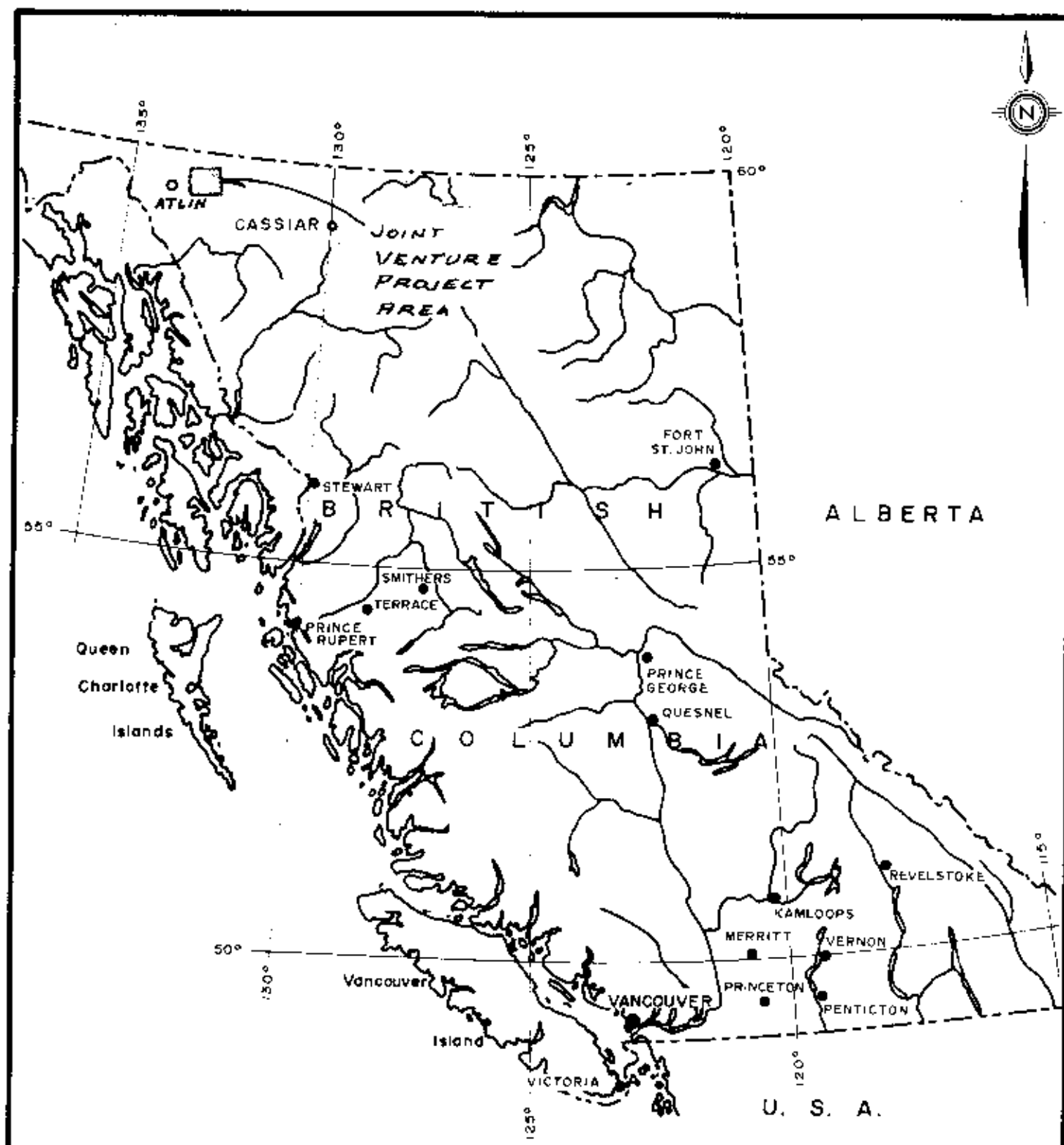
The Pato #1 claim is located at the head of Cracker Creek, 6 km. north of Surprise Lake, and 27 km. northeast of Atlin, B. C. The geographic coordinates of the property are $59^{\circ}43'N$ and $133^{\circ}18'W$. (NTS 104N/11W).

Road access is possible to within 500 meters of the eastern property boundary via the Cracker Creek road, a distance of 38 road kilometers from Atlin. The best access to the showings is by helicopter.

Topography and Vegetation:

The claim is located on an unnamed mountain between Cracker Creek and Ruby Creek. Relief is steep, with elevations ranging from 1,450 m (a.s.l.) to 1,830 m (a.s.l.). Steep cirque walls exist at the head of Cracker Creek.

Vegetation on the claim is dominantly alpine growth, with a few clumps of dwarf spruce in the Cracker Creek valley.



GRANVILLE SQUARE JOINT VENTURE

LOCATION MAP
 PROJECT AREA
 ATLIN DISTRICT
 LIARD MINING DIVISION -
 BRITISH COLUMBIA

DATE : 3rd. 1978	SCALE : 1CM = 87KM
TECH. WORK BY: Kerr - Dawson & Assoc.	DWG. No. 175-1

To Accompany A Report By J. R. Kerr, P. Eng.

Property:

The property consists of one claim staked under the Modified Grid System.

<u>Claim Name</u>	<u>No. Units</u>	<u>Record No.</u>	<u>Mining Division</u>	<u>Expiry Date</u>
Pato #1	9	131	Atlin	Sept. 17, 1979*

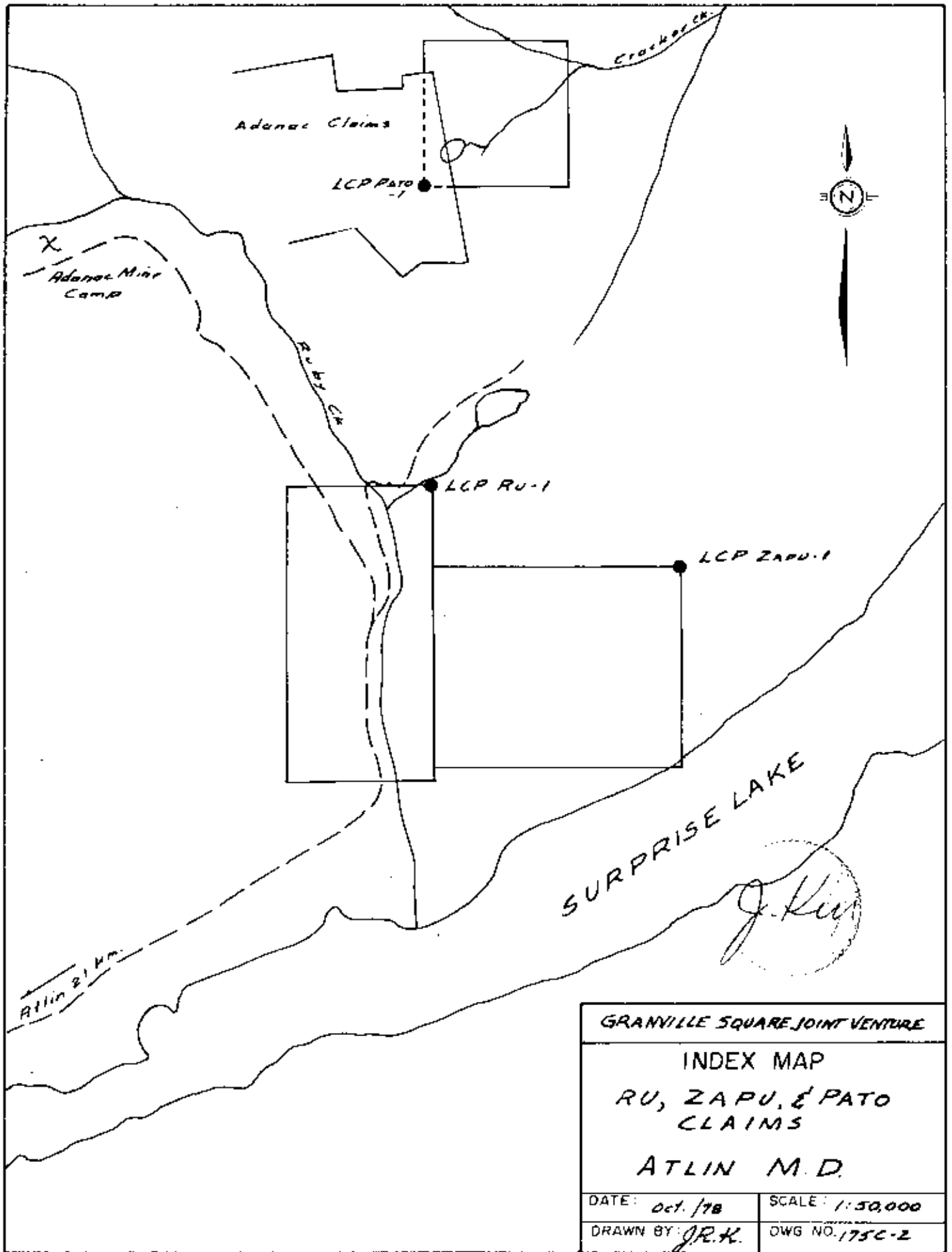
* On acceptance of this report.

The claim is recorded in the name of Union Oil Company of Canada Ltd., held in trust for the Granville Square Joint Venture.

History:

Gold has been intermittently mined from placer mining operations on Ruby Creek since the early nineteenth century. Prospecting at the head of Ruby Creek led to the discovery of the Purple Rose uranium occurrence in 1952.

During the discovery of the Adanac molybdenum deposit 4 km. to the west (1963-1971), the headwaters of Ruby Creek was extensively prospected and explored.



GRANVILLE SQUARE JOINT VENTURE	
INDEX MAP	
RU, ZAPU, & PATO CLAIMS	
ATLIN M.D.	
DATE: Oct. /78	SCALE: 1:50,000
DRAWN BY: J.R.K.	DWG NO. 175C-2

FIELD PROGRAMME (1978)

One crew spent July 18, 1978, completing reconnaissance sampling and geological mapping of the property. Traverses were completed by pace and compass methods from what is believed to be the Legal Corner Post of Pato #1, (the post was not identified as such).

All outcrop areas were tied into traversed lines, and the rock-types identified. Scintillometer readings were taken over outcrop areas, which assisted in prospecting for uranium mineralization.

Soil, rock, and water samples were collected at irregular intervals along the traversed lines. All samples were shipped to Min-En Laboratories in North Vancouver, B. C. for uranium determination. The rock samples were pulverized to -80 mesh, and the soil samples were dried and sieved. An aliquot of the -80 mesh fraction was digested in hot HNO_3 . The uranium content was determined by fusion-fluorometric methods, and the uranium content is expressed in parts per million.

In summary, the following number of samples were collected.

Soil and/or talus	- 16
Rock Chip	- 5
Water	- 2

The results of the mapping and geochemical data are compiled on the accompanying 1:5000 map (Figure 175H-3).

GEOLOGY

The geology of the Surprise Lake area is well documented in G. S. C. Memoir #307, Atlas Map Area (104N), by J. D. Aitken.

The claim covers a 1.5 km. length of the northwestern contact of the Surprise Lake batholith. The rocks of the batholith are best described as coarse-grained, porphyritic, biotite-rich quartz-monzonite.

The batholith is in contact with thermally altered argillite, quartzite and limestone of the Permian Cache Creek Group. Also intruding the Cache Creek sediments are small stocks and sills of partially serpentinized peridotite.

Both intrusive and sedimentary rocks along the contact zone were highly altered, fractured and sheared. Considerable rusting accompanies fracture and shear faces. Several mineral showings of note have been discovered along this contact zone.

- (1). The Purple Rose showing is smears of zeunerite and autonite on rusty fracture faces 200-300 meters west of the Pato #1 claim.
- (2). Coatings of zeunerite and autonite on rusty fracture faces in quartz-monzonite along the southern boundary of the claim. The showing covers an area of 10m x 20m.
- (3). A 1 meter wide magnetite/grossularite skarn containing azurite, malachite, and possibly scheelite in limestone along the southern property boundary.
- (4). Minor thread veins of chrysotile asbestos in serpentized fractures of peridotite.

None of the above-mentioned showings are considered economic; however, they do indicate intense alteration and presence of economic mineralization along the contact zone.

The scintillometer was a useful tool for determining the location of the intrusive contact in areas of overburden, and locating fractures containing autonite and zeunerite. Although readings were not regularly taken along traversed lines, all outcrops were scanned with the scintillometer to note radioactivity.

Radioactive fractures were located in the large outcrop just south of the tarn lake in the central portion of the claims. Readings of up to 12,000 cpm were obtained; however, radioactive minerals were not recognized.

GEOCHEMISTRY

Insufficient samples were collected to compile statistical data or geochemical anomaly interpretation.

Results of soil analysis in the Cache Creek sediments were low, and did not indicate the presence of contact type or uranium deposits.

Two soil samples collected immediately below the radioactive outcrop in the central portion of the claims indicated 100 and 190 ppm U. A rock sample from the same outcrop indicated 20.2 ppm U. Further detailed work is required to delineate the geochemical expression.

Water samples collected showed insignificant contents of uranium.


CONCLUSIONS AND RECOMMENDATIONS

The showings located to date are not considered economic; however, do indicate the presence of uranium mineralization within the contact zone of the Surprise Lake batholith. It is very unlikely that zeunerite/autonite smears on fracture faces are related to polymetallic vein deposits.

The large radioactive outcrop in the central portion of the claim, with associated anomalous soils, is definitely of interest. It is recommended that a grid be established over this area, with detailed soil sampling, radiometrics, and geological mapping. The rusty, altered, and highly fractured contact zone of the batholith has not been carefully prospected to date due to the precipitous nature of the cirque walls. Prospectors equipped with suitable climbing apparatus, should prospect and sample the remainder of this contact zone.

Respectfully Submitted By:

KERR, DAWSON & ASSOCIATES LTD.,


John R. Kerr
John R. Kerr, P. Eng.,
GEOLOGIST

APPENDIX A

STATEMENT OF COSTS

COST STATEMENT

Pato 1 Claim, Atlin Mining Division

Labour: July 18, 1978

W. Gruenwald, Geologist		
1 day @ \$125.00/day	\$125.00	
B. Cross, Assistant		
1 day @ \$ 95.00/day	<u>95.00</u>	\$220.00

Transportation:

Helicopter Charter Bell 47G-3B1		
1.3 hrs. @ 207/hr.	\$269.10	
Truck Rental - 1 day	<u>20.00</u>	289.10

Room and Board:

2 man days @ \$20.00/man/day		40.00
--	--	-------

Geochemical Analysis:

15 soil samples @ \$4.15/sample (U)	\$ 62.25	
5 rock samples @ \$5.25/sample (U)	26.25	
2 H ₂ O samples @ \$5.00/sample (U, Ph)	<u>10.00</u>	98.50

Prorated Cost - Mobilization and Field

Programme: (2.4% x 5470)		131.30
------------------------------------	--	--------

Supplies and Equipment Rental: 64.20

Report Preparation:

John R. Kerr, P. Eng.		
1 1/2 days @ \$175.00/day	\$262.50	
Drafting	50.00	
Photo copying and Reproduction	<u>40.00</u>	<u>352.50</u>

TOTAL \$1,195.60

Certified Correct
JOHN R. KERR
P. Eng.
John R. Kerr
John R. Kerr, P. Eng.

APPENDIX B

STATEMENT OF QUALIFICATIONS

JOHN R. KERR, P.ENG.
GEOLOGICAL ENGINEER

1 219 VICTORIA STREET
KAMLOOPS, B.C.

PHONE (604) 374-0544

CERTIFICATE

I, JOHN R. KERR, OF KAMLOOPS, B. C. DO HEREBY CERTIFY THAT:

- (1). I am a member of the Association of Professional Engineers of British Columbia and a Fellow of the Geological Association of Canada.
- (2). I am a geologist employed by Kerr, Dawson and Associates Ltd. of #1 - 219 Victoria Street, Kamloops, B. C.
- (3). I am a graduate of the University of British Columbia (1964), with a B. A. Sc. degree in Geological Engineering.
- (4). I have practised my profession continuously since graduation.
- (5). I supervised with the collection of data as compiled in this report. I am the author of this report which is based on the aforementioned data.



John R. Kerr, P. Eng.,

October, 1978,
KAMLOOPS, B. C.

APPENDIX C

GEOCHEMICAL RESULTS

COMP

Union Oil

GEOCHEMICAL ANALYSIS DATA SHEET

MIN-EN Laboratories Ltd

LAB. 8-297

DATE: Aug. 1,

1978.

PROJECT

ANALYST

J. Kerr

	Zn	Fe	Cu	U
	ppm	ppm	ppm	ppm
P 1				1.0
2				1.6
3				18.5
4				10.4
5				24.0
6				6.0
7				33.3
8				2.1
9				6.0
11				78.0
12				78.0
13				70.0
14				100.0
15				190.0
16				18.5

D.K.

Union Oil

SECURITY LOCAL 1111

8-297

Aug. 1,

1978.

J. Kerr

U
ppm
14.1
11.8
5.2
6.0
20.2

PR 4
7
9
10
15

Handwritten signature

August 1, 1978.

Union Oil Co.,
335-8th Ave. S.W.,
Calgary, Alta.
T2P 2K6.

File No: 8-297

WATER SAMPLES

<u>Sample Number</u>	U <u>ppb</u>	pH —
P 11A	0.2	6.9
F 17	0.9	6.5

Certified By

