

GEOLOGICAL, GEOCHEMICAL & GEOPHYSICAL REPORT

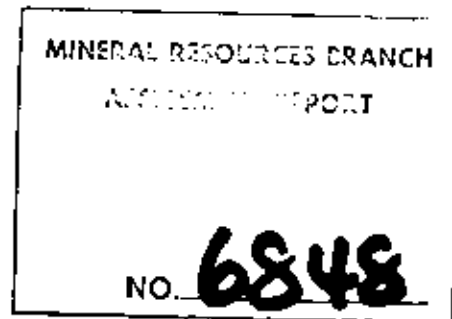
- on the -

MONT 2 & 4 CLAIMS

Atlin Mining Division

British Columbia

- for -



UNION OIL COMPANY OF CANADA LTD.,

Box 999, Calgary, Alberta.

WORK COMPLETED: July 10 and 11, 1978.

LOCATION: NTS 104N/11E.
59°36'N; 133°12'W.
30 Km. due east of Atlin

Prepared by:

Kerr, Dawson and Associates Ltd.,

41-219 Victoria Street,

Kamloops, B. C.

John R. Kerr,

September, 1978.

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SUMMARY

The Mont 2 and 4 claims cover an autonite/zeunerite showing in fractured quartz monzonite, and a 4 km. length of the Surprise Lake Batholith - Cache Creek sediment contact zone. The showing is considered to be too low grade and too small to be of economic significance.

The 1978 field programme consisted of reconnaissance geochemistry, radiometrics and geological mapping within the Thermally altered aureole of the Surprise Lake Batholith. One coincidental geochemical and radiometric anomaly has been interpreted at the eastern end of the Mont 2 claim. The anomaly is confused by a boulder talus of quartz-monzonite overlying the thermally altered sediments. The source of uranium in soil and the high radioactive readings may have derived from the quartz-monzonite.

Detailed sampling and radiometrics is recommended for this area. The grid should be extended an additional 600 meters to the east.



GRANVILLE SAGARE JOINT VENTURE

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

DATE: 5 Oct. 1978

SCALE: 1 CM = 87 KM

TECH. WORK BY:
Kerr - Dawson & Assoc.

DWG. No. 175-1

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

INTRODUCTION

General Statement:

The Mont 2 claim was staked in September, 1976 to cover radioactive fractures containing coatings of autonite and zeunerite within the Surprise Lake Batholith. Further prospecting to the north led to discovery of radioactive boulders, and subsequent location of the Mont 4 claim in July, 1977. Detailed geochemistry and radiometrics over the showing area completed during the 1977 field season has indicated the showing area to be limited, and the potential content of uranium to be low, therefore the showing is considered of no economic significance. The results of this work are filed in a report by D. G. Leighton and Associates Ltd. (November, 1977).

The Mont 2 claim (8 x 2) is elongated along the contact of the Surprise Lake Batholith and Cache Creek Group of sediments. The potential of a contact type of uranium deposit (Midnite Mine model) exists

within the thermal alteration aureole along this contact. The objective of the 1978 field programme was to detail the entire contact zone by geochemistry, geological mapping and radiometrics. This report summarizes the results of this programme.

Location and Access:

The Mont Claims are located 9 km. south of Surprise Lake, and 30 km. due east of Atlin, B. C. Geographic coordinates of the property are $59^{\circ}36'N$ and $133^{\circ}12'W$.

Direct access to the property is only possible by helicopter. The nearest roads are on Spruce Creek and Otter Creek, which provide vehicle access to within 12 km. of the property. During the winter months, a snowmobile trail would provide direct access to the claims.

Topography and Vegetation:

The claims are located within partially glaciated, alpine terrain. The local relief is

moderate to steep, elevations ranging from 1,400-1,850 meters (a.s.l.). Steep-walled cirques, with tarn lakes, are common on north-facing mountain slopes. Flat, felsenmeer strewn, mountain tops and ridges are evidence of non-glaciated areas.

Vegetation is limited to alpine growth. Trees do not exist on the property.

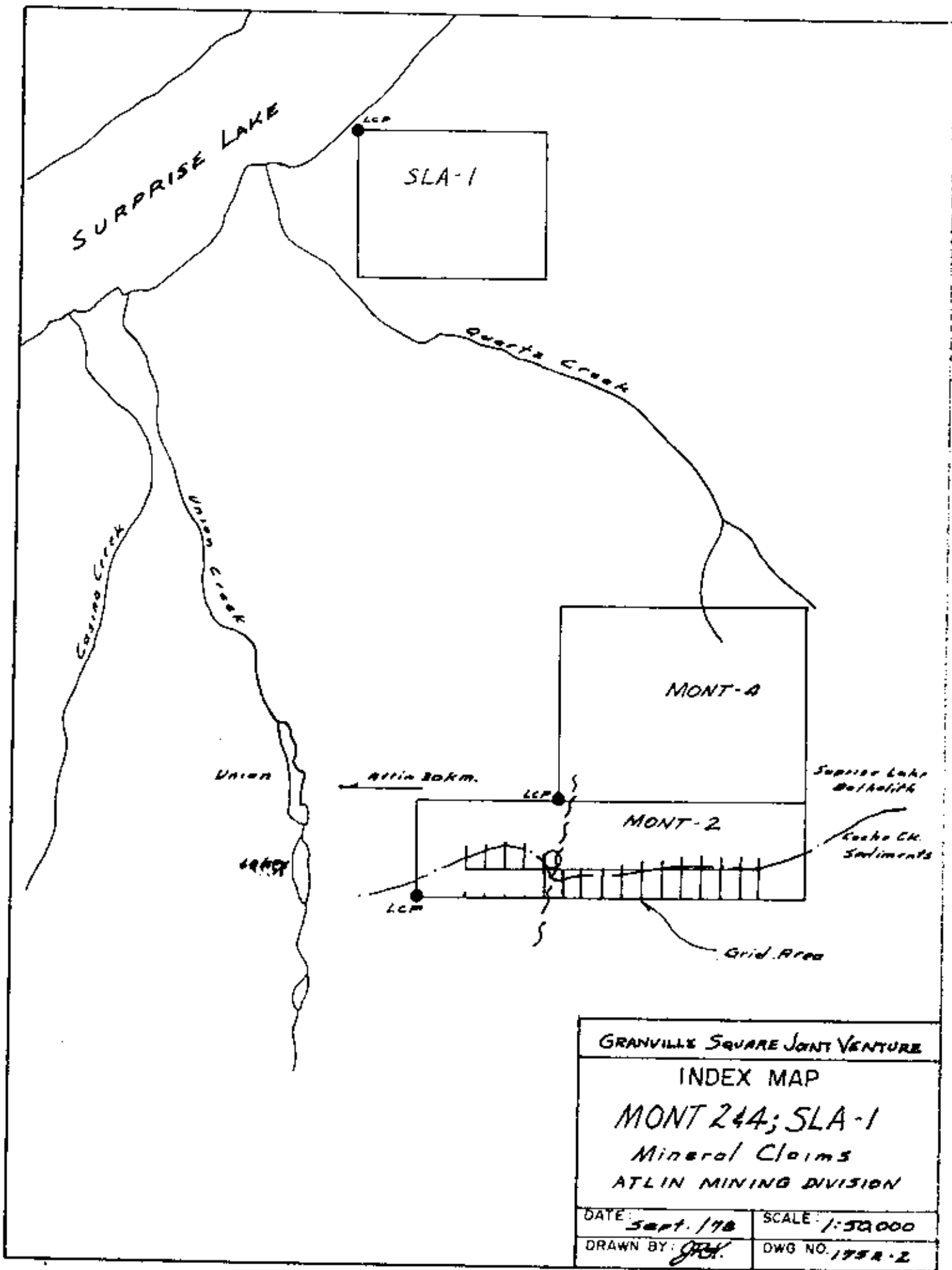
Claims:

The property consists of two contiguous claims staked under the Modified Grid System.

<u>Claim Name</u>	<u>No. Units</u>	<u>Record No.</u>	<u>Expiry Date*</u>
Mont 2	16	134	Sept. 17, 1979
Mont 4	20	237	July 26, 1979

* On acceptance of this report.

Both claims are in the Atlin Mining Division, and are recorded in the name of Union Oil Company of Canada Ltd.



History of Work:

Canadian Johns-Manville Co. Ltd. previously had portions of the Mont claims staked in the early nineteen seventies. There is no evidence of previous detailed ground surveys being completed on the property.

Mining activity in the Surprise Lake area has been limited to the placer gold operations on Pine, Spruce, Otter, Boulder, and Ruby Creeks.

FIELD PROGRAMME (1978)

Two crews spent July 10 and 11, 1978, completing reconnaissance geochemistry, radiometrics and geological mapping over 3 km. of the contact zone. Grid lines were established from an E-W baseline, and were extended 300-400 meters into the Cache Creek sediments. Lines were established by chain and compass methods at 200 meter intervals.

Soil samples were collected at 50 meter intervals along all lines. It was difficult to find a consistent soil type over the grid area. Soil horizons are very poorly developed. Samples consisted mainly of talus fines, and a wet sandy residual soil immediately underlying the Alpine vegetation layer. Talus samples were collected from 0 - 10 cm. deep and soils were collected from 5 - 20 cm. deep. In addition, 4 rock samples and three water samples were collected from various areas within the grid.

The samples were placed in brown Kraft envelopes, and shipped to Min-En Laboratories Ltd. in North Vancouver, B. C. The samples were dried and

sieved, and -80 mesh fraction being digested in hot HNO_3 . The uranium content was determined by fusion-fluorometric methods, and is expressed in parts per million (ppm) uranium. Detection limits are 0.3 ppmU.

Concurrently with soil sampling, scintillometer readings were recorded at each sample station. Readings were taken with a Exploranium GRS-1 total count scintillometer, and a McPhar TV-1 discriminating scintillometer. The two units were previously calibrated so that the readings from the GRS-1 (cps) could be related to the readings of the TV-1 (cpm). T_1 (total count), T_2 (Th+U), and T_3 (Th) readings were taken with the TV-1 unit; however T_2 and T_3 values are so insignificant, the values are not shown on the accompanying map sheet.

Outcrop areas, talus, felsenmeer, topographic features, and claim posts were tied into grid lines. General geological features, soil and talus geochemical values, and scintillometer readings are shown on the accompanying 1:5,000 scale map sheet (Figure 175 E-3).

GEOLOGY

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

The claims cover a 4 km. length of the southern contact of the Surprise Lake batholith. The batholith has been described by Aitken as a fine-coarse grained, occasionally porphyritic alaskite. Within the claim block, the intrusive rocks are best described as medium - coarse grained, biotite-rich quartz monzonite. Occasional boulders of mafic-free, light coloured alaskite were observed.

The batholith is in contact with thermally altered argillite, chert, and limestone of the Permian Cache Creek Group. Hornfels textures were observed in the argillaceous rocks (staurolite and/or andalusite crystals), and the limestone has been recrystallized, in part to marble. It is within this contact aureole of the Surprise Lake batholith that detailed exploration was completed in search of possible contact-type of uranium deposits.

One major N-S trending fault has been interpreted on the claim block. This fault has provided an apparent 200-250 meter lateral displacement of the quartz-monzonite contact. It is within a fracture zone related to this fault that autonite and zeunerite of the Dixie showing are observed.

GEOCHEMISTRY

The following table summarizes the statistical analysis of soil sample results:

No. of samples (n)	- 128
Mean (x)	- 4.03 ppm U.
Poss. Anomalous ($> x$)	- 4.0 ppm U.
Standard Deviation (s)	- 4.29 ppm U.
Def. Anomalous ($> x + 2s$)	- 12.6 ppm U.

It is interesting to note that the threshold contour (4.0 ppm) approximates the contact of the Surprise Lake Batholith. Therefore anomalies within the batholith are of lower order, as the soil background is obviously much higher than the background over the Cache Creek sediments. Anomalies are therefore only interpreted for soils within the Cache Creek sediments.

Three anomalies have been interpreted within the grid area. The two in the central portion of the grid are very weak and probably insignificant. The one located on L 14+00E and 16 + 00E is in a class of

definitely anomalous, with two soils > 20 ppm U. These two soils were collected near the creek, and may reflect an organic accumulation of uranium in the creek valley. The broad possible anomaly to the north of this zone probably reflects the extensive quartz-monzonite talus and boulders in this area.

RADIOMETRICS

As with geochemistry, the scintillometer values are very useful in interpreting the contact of the Surprise Lake Batholith. Values $> 3,500$ cpm reflect rocks of the batholith. The only interesting anomalous values ($> 2,500$ cpm) within the Cache Creek sediments are located on L 14 + 00E and L 16 + 00E in the area of the strong geochemical anomalies. These readings possibly reflect the large boulder talus of quartz-monzonite in this area.

CONCLUSIONS AND RECOMMENDATIONS

Evidence of uranium mineralization or real anomalies indicating possible uranium deposits in the contact aureole of the Surprise Lake Batholith were not discovered. The coincidence of geochemical and radioactive anomalies at the east end of the grid area cannot be disregarded, although it is probable that the anomalies are due to abundance of quartz-monzonite talus, and possibly due to a concentration of uranium in soils in the creek valley.

Extensions of the grid to the east and south, with lines at 50 meter intervals, and samples collected at 25 meter stations is recommended in this area. Effort should be made to avoid collecting samples from areas contaminated from abundant quartz-monzonite boulders, and from creek valleys or boggy areas which may accumulate uranium.

The only real evidence of uranium mineralization on the Mont claims are the fracture coatings of zeunerite and autonite associated with the main N-S

trending fault. Previous mapping and sampling indicate that the potential size of the showing is small, and the content of uranium is low. The showing is considered of no economic significance.

Respectfully Submitted By:

KERR, DAWSON AND ASSOCIATES LTD.,



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

September, 1978,

KAMLOOPS, B. C.

APPENDIX A

COST STATEMENT

APPENDIX B

CERTIFICATE OF QUALIFICATIONS

JOHN R. KERR, P.ENG.

GEOLOGICAL ENGINEER

219 VICTORIA STREET

KAMLOOPS, B.C.

PHONE (604) 374-6344

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 and assisted in 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.

September, 1978,

KAMLOOPS, B. C.

APPENDIX C

GEOCHEMICAL RESULTS

GEOCHEMICAL ANALYSIS DATA SHEET

PROJECT No. _____

MIN-EN Laboratories Ltd.

DATE: July 20

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
PHONE (604) 980-5814

ATTENTION: J. Kerr

1978

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb	U ppm			
81	86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
D00+50E													4.0			
1+00E													6.2			
1+50E													7.8			
2+00E													6.2			
3+00E													8.3			
D06+00E													4.5			
00+00													3.4			
0+50S													0.8			
1+00S													0.8			
1+50S													0.8			
2+00S													1.8			
2+50S													1.8			
3+00S													1.8			
3+50S													2.3			
D0+00													3.4			
0+50W													2.8			
1+00W													2.8			
1+50W													2.8			
2+50W													4.5			
3+00W													4.0			
D0+002W													2.8			
D1+50S													2.3			
0+50W													2.3			
1+00W													1.8			
1+50W													2.8			
2+00W													4.5			
2+50W													2.8			
3+00W													3.4			
D2+00E													1.8			
0+50S													1.8			
1+00S													1.8			
1+50S													5.0			
2+00S													1.8			

11/2/78

COM: Union Oil

GEOCHEMICAL ANALYSIS DATA SHEET

No. 8-257

PROJECT No.:

MIN - EN Laboratories Ltd.

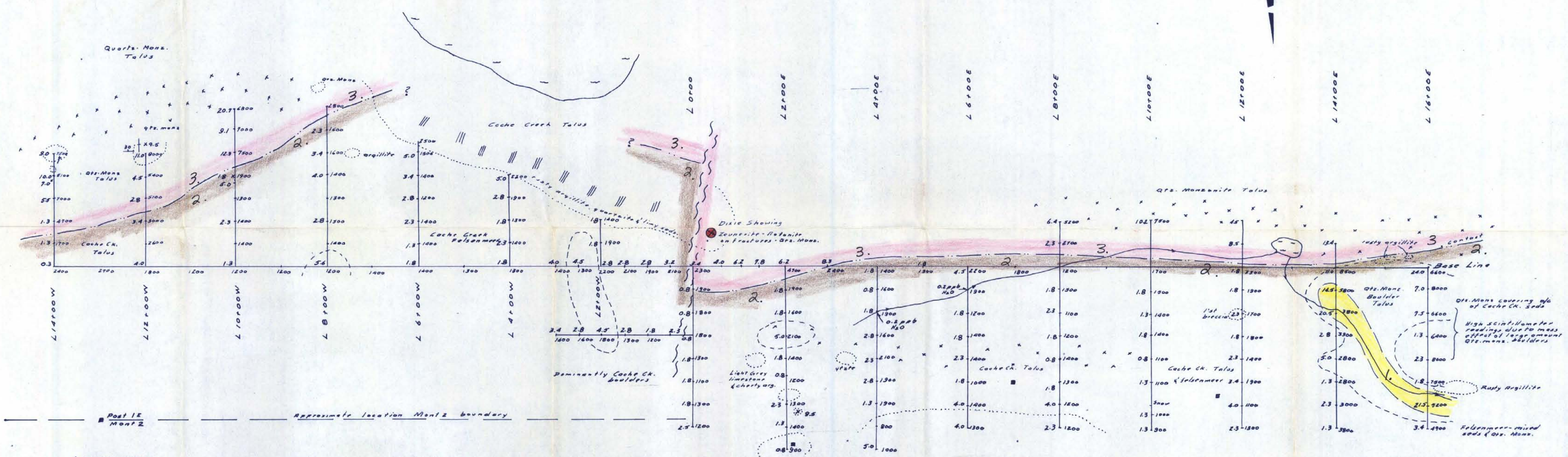
DATE: July 20

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2
PHONE (604) 930 5814

ATTENTION: J. Kerr

1978.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb	U ppm		
81	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
D14+00W													0.3		
0+50N													1.3		
1+00N													1.3		
1+50N													5.5		
2+00N													7.0		
2+50N													9.0		
D14+00S													11.0		
0+50S													19.5		
1+00S													20.5		
1+50S													2.8		
2+00S													5.0		
2+50S													1.8		
3+00S													2.3		
3+50S													1.3		
D14+00E													24.0		
0+50S													7.0		
1+00S													7.5		
1+50S													1.3		
2+00S													2.3		
2+50S													1.8		
3+00S													21.5		
3+50S													3.4		



- Outcrop Area
- Geological Contact
- Sample Station { ppm U
cpm. (cont. rdg.)
- Post. Anomalous
Geochem. Anomaly } > 40 ppm U
- Def. Anomalous
Geochem. Anomaly } > 125 ppm U
- Lake

ROCK CLASSIFICATION

- SURPRISE LAKE BATHOLITH**
Dominantly biot. rich, med.-course
grained Quartz. Monzonite
- CACHE CREEK GROUP**
Dominantly, anomalously altered,
rusty argillite. Some limestone,
chert & quartzite.

6848

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
6848
NO. 2001



To accompany a report by J.R. Kerr, P.Eng.

GRANVILLE SQUARE JOINT VENTURE

MONT CLAIMS
Geological, Geochemical
& Radiometric Survey

Tech Work: KDA	Scale: 1:5,000
Drawn by: J.R.K.	Date: Sept. 1978
App'd by: J.R.K.	Draw. No: 175 E-3