

4614

GEOLOGICAL REPORT

- on the -

SLIDE CLAIMS
CAMP VIEW CIRQUE

- for -

CANADIAN JOHNS-MANVILLE CO. LTD.,

P. O. Box 1500,
ASBESTOS, P.Q.

COVERING: Slide 39 - 44 Mineral Claims

LOCATED: (1). $50^{\circ} 40' N$; $116^{\circ} 30' W$.
(2). N. T. S. 82K/10E.
(3). 20 miles west of Radium, B. C.

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 4614 MAP

Prepared by:

KERR, DAWSON & ASSOCIATES LTD.,

#9 - 219 Victoria Street,

KAMLOOPS, B. C.

John R. Kerr, P. Eng.,

September, 1973.

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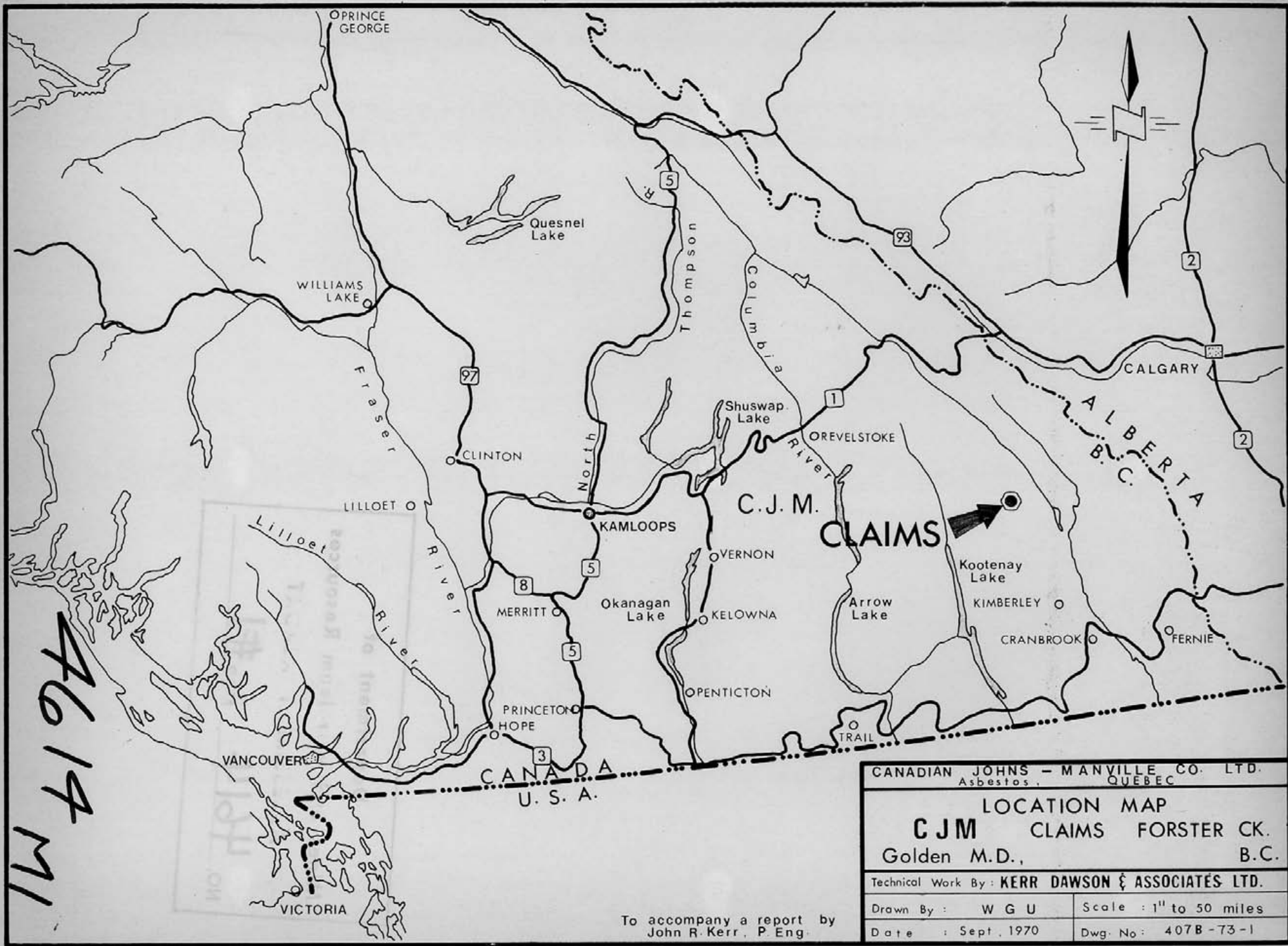
- #1 Figure 407D-73-1: Location Map 1": 50 mi.
- #2 Figure 407D-73-2: Geological Plan 1": 200 ft.

SUMMARY AND CONCLUSIONS

Following the initial discovery of radioactive and rare earth bearing boulders at Welsh Creek and Camp View Cirque, two northerly flowing tributaries of Forster Creek, in the fall of 1969, a crew spent two days mapping and prospecting the Camp View Cirque area, in an attempt to locate the bedrock source. A scintillometer was used as a tool to indicate radioactivity.

Two zones of radioactivity were discovered, each approximately 600 ft. wide. They are probably part of the same zone, separated by the glacial and talus filled valley floor. Conceivably the zone could have a strike length of 5,000 ft. A total of 9 hand selected vein material *samples* were collected and submitted for analysis. Three samples, taken from the radioactive zone indicated definite economic values of V, Ce, La, and Nb, and greater than background values of U, Th, Y, and Ta.

There was insufficient time during the 1973 field season to complete a detailed study of the zone; however, further work is certainly warranted. Surface exploration is rather limited due to the rather inaccessible nature of most of the outcrop area. Detailed mapping and sampling of accessible outcrop is recommended as an initial phase. If this programme is successful, diamond drilling and rock trenching would be warranted.



4614 MI

CANADIAN JOHNS - MANVILLE CO. LTD.
Asbestos, QUEBEC

LOCATION MAP
C J M CLAIMS FORSTER CK.
Golden M.D., B.C.

Technical Work By: **KERR DAWSON & ASSOCIATES LTD.**

Drawn By: W G U Scale: 1" to 50 miles

Date: Sept. 1970 Dwg. No: 407B-73-1

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

INTRODUCTION

In the fall of 1969, radioactive boulders were discovered on the southeast wall of Welsh Creek, and at the head of Camp View Cirque on the Slide Group of claims. Chemical analysis of samples indicated a high content of rare earths and uranium. During the 1973 field season, one crew spent two days mapping and prospecting these areas with the intent of tracing boulders to bedrock source, and delineating radioactive zones of interest. This report is a summary of the 1973 programme.

Normal introductory remarks regarding location, access, topography, etc. of this area are documented in earlier reports by Kerr (1970), and Conn and Lin (1971), and are summarized below. The existing Slide 39 - 44 claims cover the head of Camp View Cirque, with the location line along the creek flowing north into Forster Creek. The claims are located 20 miles due west of Radium, B. C. Access is possible along the Forster Creek logging road, and thence a $\frac{1}{2}$ - 1 mile hike up the Camp View Creek valley. The claims are at an elevation of 7,000 - 8,500 ft. a.s.l., and except for the valley floor are inaccessible to prospect on foot.

GEOLOGY

The general geology of the Horsethief Stock is documented in G. S. C. Memoir 369, Geology of the Lardeau Area, East half by J. E. Reesor, and in a private company report entitled Geology of the Horsethief Stock by K. Schrijver (1971). The geology of the Slide claims has been discussed in previous reports by Kerr (1970), and Conn and Lin (1971). In summary, the Slide 39 - 44 claims are underlain by the peripheral phase quartz - monzonite of the Horsethief Stock. K. Schrijver recognized the stock to be concentrically zoned, grading from a fine - medium - grained granodiorite, with occasional coarse orthoclase phenocrysts in the center, to a coarse - grained, purple and pink quartz monzonite along the periphery.

Radioactive placer deposits draining the Horsethief Stock, have been known of for many years on Forster Creek. Reesor recognized trace contents of radioactive minerals disseminated throughout the batholith; uraninite, pyrochlore-microlite, and euxenite-polycrase. During 1969 and 1970 crews of Canadian Johns-Manville Co. Ltd. attempted to locate bedrock concentrations of these minerals. Except for radioactive boulders, containing appreciable contents of uranium and rare earths, no bedrock source was discovered. Interest then became involved in the search of porphyry Mo deposits in other areas of the batholith.

In the field season of 1973, R. Willis and J. E. Binnie spent 1 days in the area of the radioactive boulders, geologically mapping and attempting to trace these boulders to bedrock source. A scintillometer was used as a tool

to locate radioactive boulders and bedrock. Samples of radioactive vein material was located both in boulders and in bedrock, samples were collected - CV #1 to #9, and were submitted to the Ottawa laboratories for geochemical analysis of U, Th, V, Y, Ce, La, Ta, and Nb. Rock samples were ground to -80 mesh fraction, and an aliquot of the -80 mesh fraction was digested in hot HNO_3 to extract the uranium, and in H_2SO_4 to leach out vanadium. The uranium content was determined by colorimetric methods; and vanadium content was determined by atomic absorption methods. The contents of Th, Y, Ce, La, Ta, and Nb were determined by X-ray fluorescent methods. Results of the analysis are shown in Appendix A.

R. Willis mapped the cirque area at the base of steep cliffs on a scale of 1":200 ft. In addition to mapping, the scintillometer was used as a guide for delineating zones of radioactivity. Although stations were not established, or individual readings taken, radioactive zones were noted, and plotted on the maps. Results of mapping, with rock sample locations and radioactive zones are shown on Figure 407D-73-2.

The claims are underlain by the coarse - grained, quartz-monzonite peripheral phase of the Horsethief Stock. Fracturing and joint systems have two dominant trends; N-S, dipping 80° vert W; and $N70^\circ$ W, dipping 50° S. Secondary quartz, pink K-feldspar and sericite are common along fractures. Quartz veins and aplite dikes are found along dominant fracture trends. Radioactivity is most intense along fractures with the following unique alteration.

Fractures are altered or even possibly vein filled with increasing content of secondary biotite towards fracture. Radioactive width may be 1 - 2 ft. No unusual radioactive minerals have been recognized in hand specimens. It is hand selected samples from these veins that were collected for analysis.

In addition to the radioactive veins, boulders were found containing spatterings and blebs of chalcopyrite, molybdenite, and malachite along fractures in the cirque valley floor. These were not traced to bedrock source.

DISCUSSION OF RESULTS

The results of the 1973 programme, indicate a bedrock source of radioactive veins with high content of rare earth elements. Although the samples have been hand selected from radioactive veins, no attempt has been made to map in detail all veins to better understand the economic potential of the area.

A reconnaissance radiometric survey has indicated a zone of high radioactivity over a width of 600 ft. along both valley walls of Camp View Cirque. If this zone is continuous into Welsh Creek, (where radioactive boulders were found), the zone could conceivably be 5,000 ft. long.

Three hand selected samples collected from the radioactive zone indicate the following values of interest:

CV - 5	U	- 0.022%
	Th	- 0.013%
	La	- 0.015%
	Nb	- 0.165%
CV - 6	Th	- 0.063%
	V	- 0.043%
	Ce	- 0.32 %
	La	- 0.25 %
	Nb	- 0.118%
CV - 9	Th	- 0.036%
	V	- 0.025%
	Ce	- 0.107%
	La	- 0.098%
	Nb	- 0.064%

All samples show economic values of Th, V, and the rare earths, with possible recoverable values of U, and Nb. The radioactive zone probably reflects a mass concentration of radioactive veins, rather than a disseminated source of radioactivity throughout the rock.

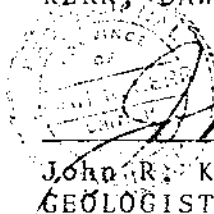
The zone is certainly of interest, and further exploration is certainly warranted. Surface work is limited due to the precipitous terrain along the cirque walls and deep talus and glacial debris in the valley floor. An initial surface programme is recommended as follows:

- (1). Detailed mapping of the zone where accessible, using a scintillometer to aid in delineating radioactive veins.
- (2). Sampling of the vein material, and chip sampling across the zone to ascertain possible values of radioactive and rare earth minerals.
- (3). Acquisition of at least 5 claims along strike of the zone to the north.

If the results of the above programme are favourable, surface rock trenching, bulk sampling, and diamond drilling would be warranted.

Respectfully Submitted by:

KERR, DAWSON AND ASSOCIATES LTD.,


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

September, 1973,
KAMLOOPS, B. C.

APPENDIX A

GEOCHEMICAL RESULTS

GEOCHEMICAL LAB REPORT

No. 23 - 496

Project: Not given

Extraction: V: H_2SO_4 Leach U: Hot HNO_3
 V: Atomic Absorption U: Colorimetric
 Method: Th, Y, Ta, Ce, La, Nb; X, R, F.

From Canadian Johns-Manville Co. Ltd.

Date September 17, 1973

Fraction Used -100 mesh

Analyst K. B.

SAMPLE NO.	U ppm	Th ppm	V ppm	Y ppm	Ta ppm	Ce ppm	La ppm	Nb ppm	REMARKS
CV - 1	1	19	5	28	L 3	65	81	146	
2	8	29	13	29	L 3	L10	28	147	
3	9	56	25	26	L 3	95	116	210	
4	40	63	25	27	L 3	90	100	427	
5	220	126	20	41	21	90	147	1650	
6	75	630	425	78	24	3200	2500	1180	
7	12	16	5	24	L 3	20	56	166	
8	10	32	18	24	L 3	35	81	160	
CV - 9	8	365	245	57	8	1070	980	636	
									cc Dr. D. S. Evans
									Mr. J. KERR
									L denotes 'less than'
									NOTE: Other rare-earth elements not offered on a routine basis. Contact us again in the winter.

APPENDIX B

COST STATEMENT

COST STATEMENT

(1). FIELD PERSONNEL - August 10th. and 11th., 1973.

J. Binnie - Sr. Assistant		
2 days at \$40.00 per day	\$	80.00
 R. Willis - Jr. Geologist		
2 days at \$35.00 per day	<u>70.00</u>	\$ 150.00

(2). ROOM AND BOARD

4 man days at \$14.00 per man/day		56.00
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(3). TRANSPORTATION

4 x 4 truck - 2 days at \$20.00 per day	40.00	
3B1 Helicopter - 0.6 hrs. at \$150/hr.	<u>90.00</u>	130.00

(4). ROCK GEOCHEMICAL ANALYSIS

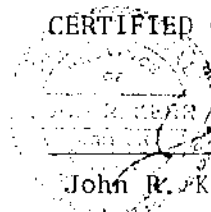
9 samples U at \$2.00 per sample	18.00	
9 samples Th at \$3.00 per sample	27.00	
9 samples V at \$2.00 per sample	18.00	
9 samples Y at \$3.00 per sample	27.00	
9 samples Ta at \$3.00 per sample	27.00	
9 samples Ce at \$3.00 per sample	27.00	
9 samples La at \$3.00 per sample	27.00	
9 samples Nb at \$2.50 per sample	22.50	
Preparation 9 samples at 0.85 each	<u>7.65</u>	
	201.15	
Less 20%	<u>40.23</u>	160.92

(5). INTERPRETATION AND REPORT PREPARATION

J. Kerr, P. Eng.	250.00	
Drafting	50.00	
Photocopying and Reproduction	12.00	
Secretarial	<u>10.00</u>	322.00

TOTAL COSTS HEREIN	\$	<u><u>818.92</u></u>
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CERTIFIED CORRECT:



John R. Kerr

 John R. Kerr, P. Eng.

APPENDIX C

WRITER'S CERTIFICATE

JOHN R. KERR, P.ENG.
GEOLOGICAL ENGINEER

9-219 VICTORIA STREET
KAMLOOPS, B.C.

PHONE (604) 374-6427

WRITER'S CERTIFICATE

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

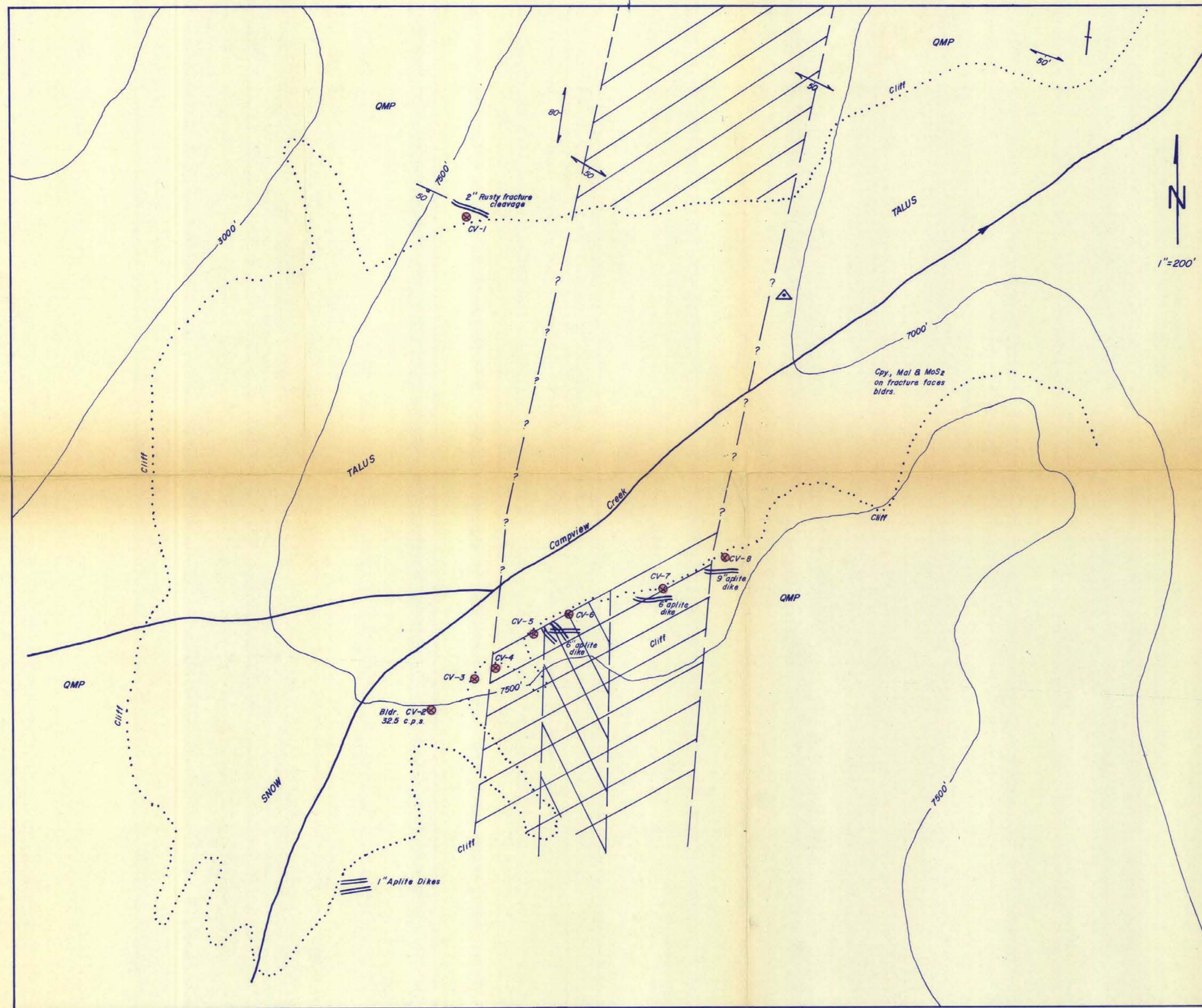
- (1). I am a member of the Association of Professional Engineers in the Province of British Columbia, and a Fellow of the Geological Association of Canada.
- (2). I am employed by Kerr, Dawson and Associates Ltd., with my office at #9 - 219 Victoria Street, Kamloops.
- (3). I have practiced as a geologist for 9½ years since graduation from the University of British Columbia in 1964 with a B. A. Sc. in Geological Engineering.
- (4). I have no direct interest or holdings of securities of Canadian Johns-Manville Co. Ltd., or in the Slide Claims described in this report.
- (5). The work described in this report was completed August 10th. and 11th., 1973, and was supervised directly by myself.
- (6). The costs, as shown in Appendix B of this report, are to the best of my knowledge correct.
- (7). This report is based on published and unpublished data, my own personal knowledge of the area, and the field data collected during the field programme.



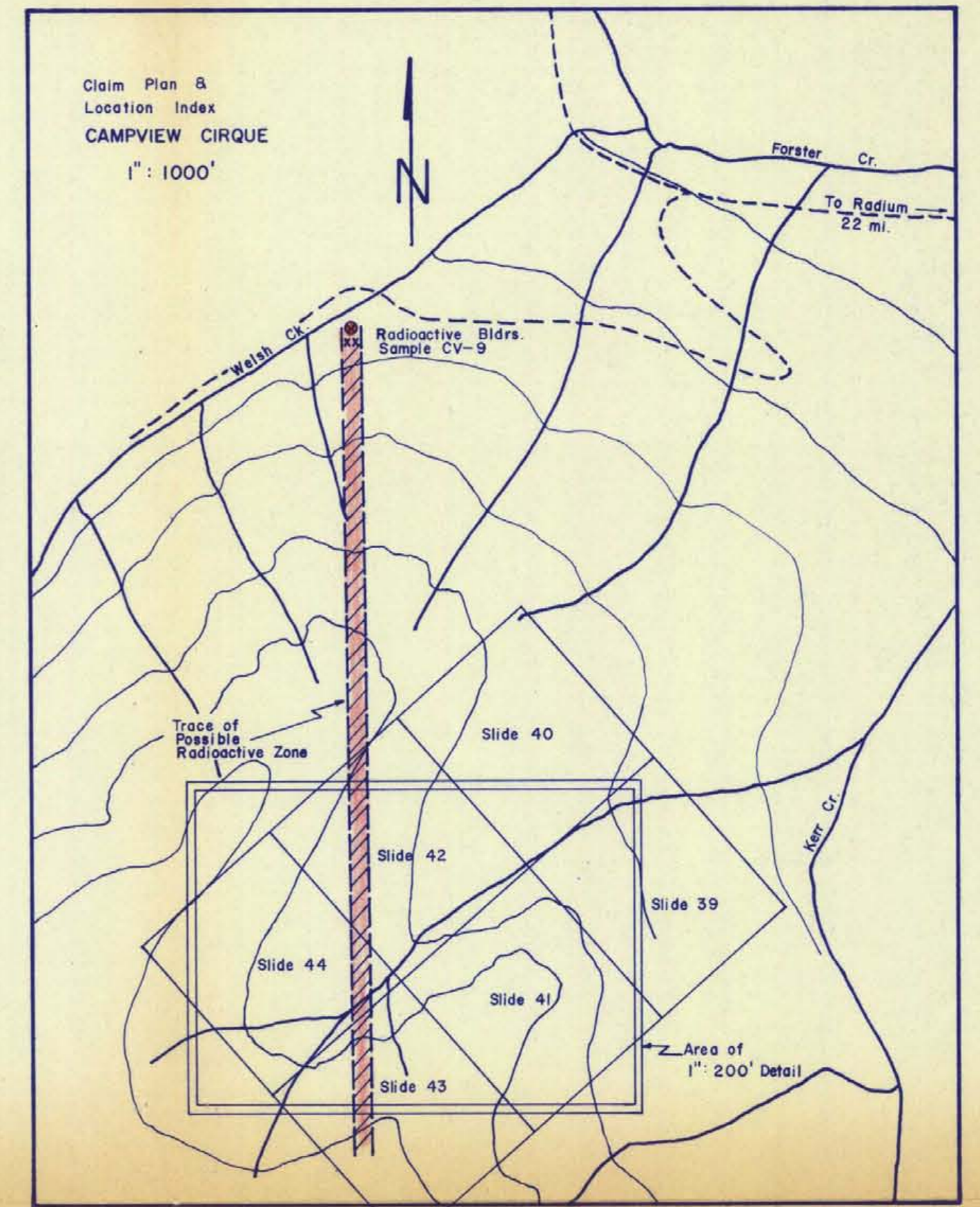
John R. Kerr

John R. Kerr, P. Eng.,
GEOLOGIST

September, 1973,
KAMLOOPS, B. C.



- LEGEND**
- - - - - Outcrop Limit
 - ⊗ CV-6 - Sample Station
 - - - - - Radioactive Zone
 - ▨ - 20-40 counts per second x 10
 - ▩ - 40-80 counts per second x 10
- NOTE: Background < 20 counts per second x 10
- - - - - fracture cleavage
 - - - - - veins
 - - - - - dikes
 - QMP - Quartz Monzonite
 - △ - Heliport



Geochemical Analysis Samples CV1-9
Samples hand selected from radioactive veins and fractures

Sample No	U	Th	V	Y	Ta	Ce	La	Nb
CV-1	1	19	5	28	L3	65	81	146
CV-2	8	29	13	29	L3	L10	28	147
CV-3	9	56	25	26	L3	96	116	210
CV-4	40	63	25	27	L3	90	100	427
CV-5	220	126	20	41	21	90	147	1650
CV-6	75	630	425	78	24	3200	2500	1180
CV-7	12	16	5	24	L3	20	56	166
CV-8	10	32	18	24	L3	35	81	160
CV-9	8	365	245	57	8	1070	980	636

L - Less than
 Samples ground to - 80 mesh
 Extraction U - Hot HNO₃
 V - H₂SO₄ (Leach)
 Method: U - Colorimetric
 V - Atomic Absorption
 Th, Ce } X.R.F.
 Y, La }
 Ta, Nb }

4614



Prepared For: CANADIAN JOHNS MANVILLE CO. LTD.

Department of Mines and Petroleum Resources
FORSTER CREEK PROJECT 407
GEOLOGICAL AND SAMPLE LOCATION PLAN
#2 CAMPVIEW CIRQUE

NO. 4614 MAP #2

Tech. Work by: C.J.M. Scale: As Indicated
 Drawn by: WESTERN MAPPING LTD. Date: September, 1973
 App'd by: J. Kerr Drawing No: 407 D-73-2

M2