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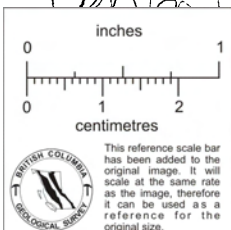
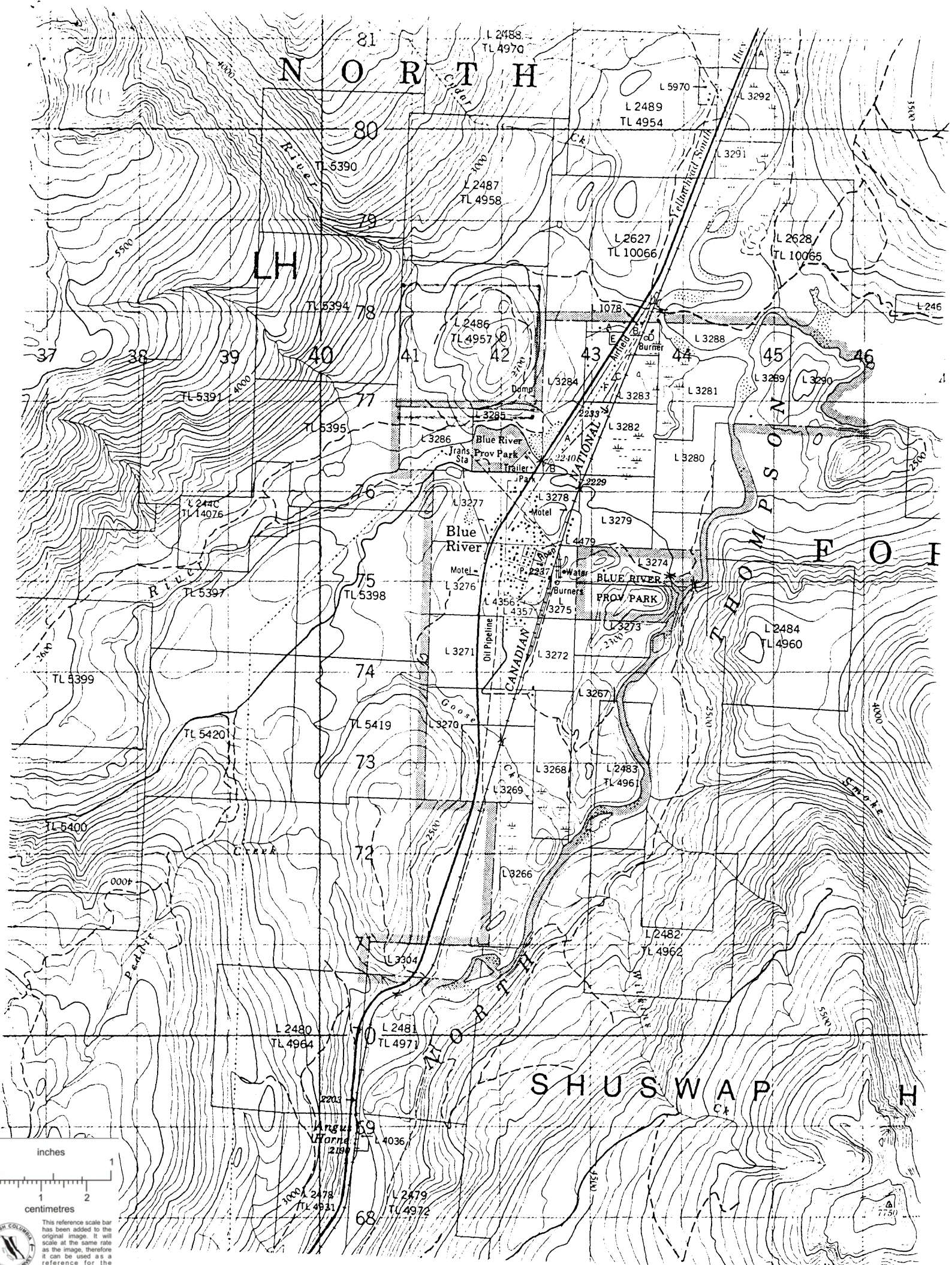
BLUE RIVER CALCITE

This is a new deposit of white marble not previously reported or explored. It occurs on the northern fringe of the town of Blue River, British Columbia, barely a mile west of the Yellowhead South Highway (Highway 5), the Canadian National Railway, and the Blue River airstrip. Blue River is approximately midway between Vancouver and Edmonton.

The deposit is secured by a claim group comprising 9 units covering an area of about 550 acres, nearly a square mile. There are three major outcrop areas of white marble, one of which was tested by diamond drilling and surface sampling. Several surface samples were also tested from a second area.

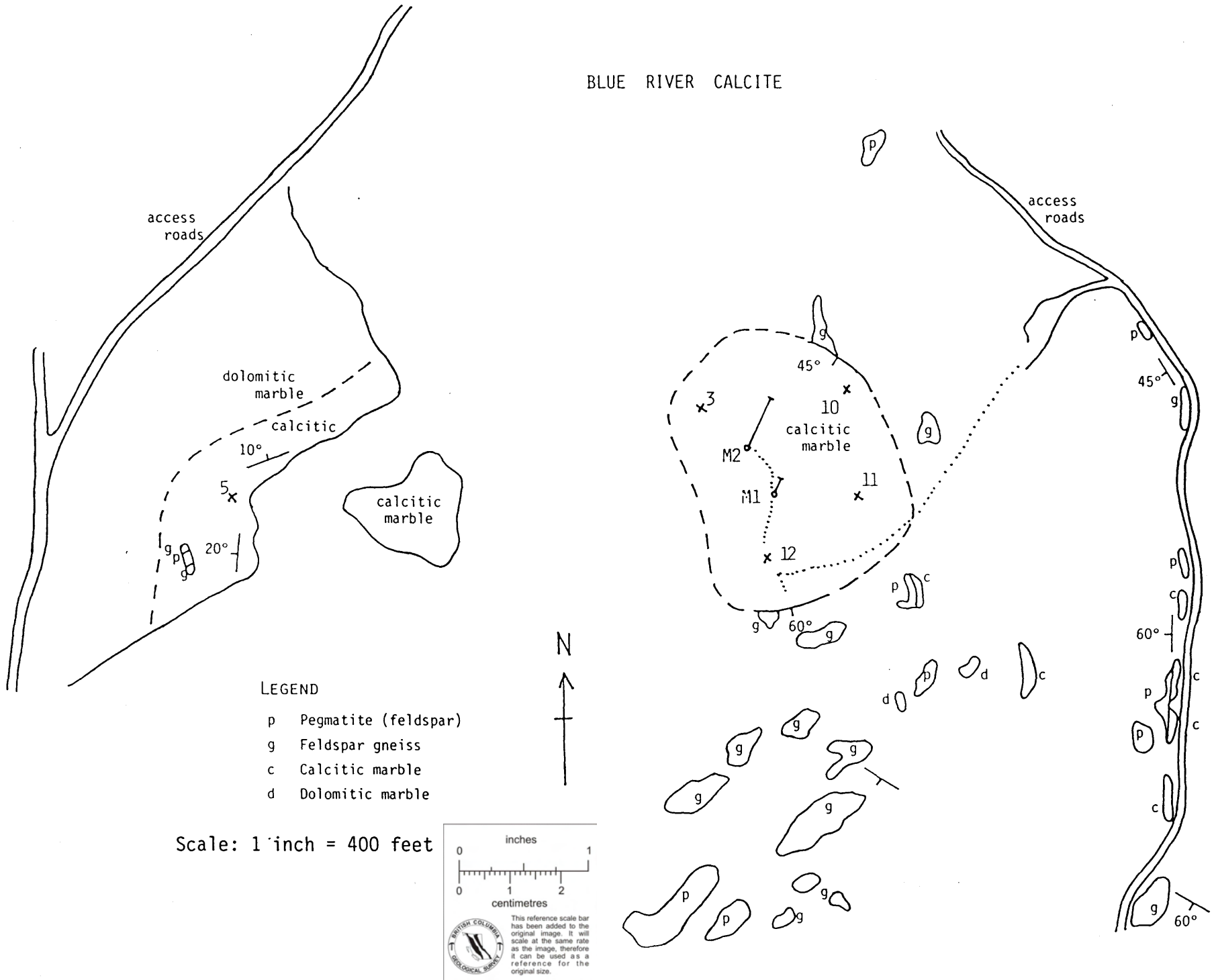
The drilled area forms the cap of a hill 750 feet above the North Thompson River valley in which the highway, railway and town of Blue River are located. Access is easy via timber roads, and portions of the deposits have been recently exposed by clear-cutting.

The drilled area has a minimum surface exposure of 700 feet by 400 feet. Drillhole M2 intersected more than 100 feet of high purity calcitic marble, indicating a reserve potential of at least 2 million tons.



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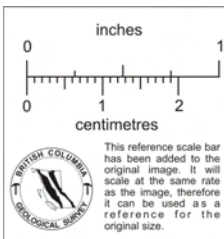
BLUE RIVER CALCITE



LEGEND

- p Pegmatite (feldspar)
- g Feldspar gneiss
- c Calcitic marble
- d Dolomitic marble

Scale: 1 inch = 400 feet



DIAMOND DRILLHOLE LOG

DIAMOND DRILLHOLE LOG			COMPANY Guillet-Kriens-Morton			PROPERTY NAME Blue River Calcite			HOLE NO. 84-M2	PAGE 1			
DRILLING COMPANY Phil's Diamond Drilling Ltd.			COLLAR ELEV.	BEARING OF HOLE 030°T	TOTAL DEPTH 162 feet	LOCATION OF HOLE 110' north of M1; West central part of deposit				PROJECT NO.			
DATE STARTED		DATE COMPLETED May 1984	DATE LOGGED June 18/84	DIP OF HOLE AT COLLAR 45° AT		LOGGED BY G.R. Guillet							
DEPTH From To		VISUAL QUALITY	DESCRIPTION	Sample Number	Sample Interval			Raw analyses					
feet	feet				From	To	Sample Length	colour	SiO ₂ %	MgO %	Al ₂ O ₃ %	Fe ₂ O ₃ %	
0.0	9.0		Gneiss: Mixed and broken medium grained biotite gneiss and white calcitic marble. Foliation 80° to core axis. Seven feet of lost core.										
9.0	14.0	Good	Marble: Uniform, white with patches of diffuse pale grey cloudiness, coarse grained, calcitic. Trace of white mica at 12'. Massive bedded.	M2-1	9.0	14.0	5.0	93.7	2.97	9.68	0.14	0.18	
14.0	15.0		Gneiss: Pale grey, fine grained, biotite-pyrite-quartz gneiss. Foliation is 30° to core axis.										
15.0	19.0	Fair	Marble: Uniform, pale blue-grey, coarse grained, dolomitic.	M2-2	15.0	19.0	4.0	93.4	13.8	17.2	0.42	0.43	
19.0	33.0	Excellent	Marble: Mostly white, coarse grained, calcitic; with rarely a trace of white mica and very slight yellow staining on some fracture surfaces. Occasional faintly grey patches. All without obvious accessory minerals. Last half of core badly broken by drilling problems, and more or less stained and spattered by grease and oil.	M2-3	19.0	33.0	14.0	94.4	1.26	1.68	0.04	0.05	
33.0	48.0	Good	Marble: Uniform as above, but slightly greyish with rare specks of pyrite. Core badly broken and stained by the drillers.	M2-4	33.0	48.0	15.0	94.0	1.63	1.73	0.03	0.12	
48.0	66.0	Excellent	Marble: Uniform, white, coarse grained, massive bedded, calcitic marble with only the slightest trace of fine white mica and pyrite. Core is less broken and stained.	M2-5	48.0	66.0	18.0	94.6	1.71	1.52	0.13	0.11	

DIAMOND DRILLHOLE LOG

DIAMOND DRILLHOLE LOG				COMPANY		PROPERTY NAME			HOLE NO. 84-M2	PAGE 2		
DRILLING COMPANY			COLLAR ELEV.	BEARING OF HOLE	TOTAL DEPTH	LOCATION OF HOLE			PROJECT NO.			
DATE STARTED		DATE COMPLETED	DATE LOGGED	DIP OF HOLE AT COLLAR	AT				LOGGED BY			
DEPTH		VISUAL QUALITY	DESCRIPTION	Sample Number	Sample	Interval	Sample	Raw analyses				
From	To				From	To	Length	colour	SiO ₂	MgO	Al ₂ O ₃	Fe ₂ O ₃
feet	feet				feet	feet	feet	%	%	%	%	
66.0	81.0	Good	Marble: Uniform, grey-blue, coarse grained, calcitic, massive bedded, with only rarely disseminated white mica.	M2-6	66.0	81.0	15.0	93.8	3.54	2.76	0.55	0.06
81.0	107.0	Excellent	Marble: Uniform, white with occasional patches of pale grey, coarse grained calcitic marble with rarely disseminated flakes of white mica and pyrite. Massive bedded. Core is less broken and less oil stained.	M2-7	81.0	94.0	13.0	94.2	3.52	2.14	0.48	0.09
				M2-8	94.0	107.0	13.0	95.0	1.21	1.46	0.02	0.09
107.0	116.0	Poor	Marble: Grey-white, medium grained, uniform, dolomitic with relatively common disseminated pyrite and mica, and a little talc on fractures.	M2-9	107.0	116.0	9.0	87.4	1.83	19.8	0.05	0.36
116.0	131.0	Good	Marble: Coarse grained white and pale blue-grey calcitic marble with traces of white mica and pyrite.	M2-10	116.0	131.0	15.0	95.0	2.69	1.29	0.29	0.07
131.0	132.5	Poor	Marble: White, medium grained siliceous marble with disseminated mica and pyrite.									
132.5	136.0	Good	Marble: Massive bedded, coarse grained, grey-white, calcitic.	M2-11	132.5	136.0	3.5	95.2	4.84	1.39	0.43	0.11
136.0	144.0	Poor	Marble: Rather impure, coarse grained, cream-white-grey, siliceous (?) marble.									
144.0	162.0		Gneiss: Green and grey banded, quartz-biotite-garnet gneiss, with foliation varying from 60° to 90° to core axis.									
162.0			End of hole.									

DIAMOND DRILLHOLE LOG

DIAMOND DRILLHOLE LOG				COMPANY Guillet-Kriens-Morton		PROPERTY NAME Blue River Calcite			HOLE NO. 84-M1	PAGE 1		
DRILLING COMPANY Phil's Diamond Drilling Ltd.		COLLAR ELEV.	BEARING OF HOLE 030°T	TOTAL DEPTH 32 feet		LOCATION OF HOLE On bush trail in south central part of deposit			PROJECT NO.			
DATE STARTED		DATE COMPLETED May 1984	DATE LOGGED June 18/84	DIP OF HOLE AT COLLAR 45° AT					LOGGED BY G.R. Guillet			
DEPTH From To		VISUAL QUALITY	DESCRIPTION		Sample Number	Sample From	Interval To	Sample Length				
feet 0.0	feet 12.0		Mixed: Two feet of excellent coarse grained white calcitic marble followed by 1 foot of broken white pegmatite. Remainder lost.			feet	feet	feet				
12.0	26.0	Fair	Marble: Grey-white, medium grained, calcitic marble with disseminated white mica and pyrite. Faint foliation is about 60° to core axis.		M1-1	12.0	26.0	14.0				
26.0	32.0		Pegmatite: Coarse white, rather rusty stained quartz-feldspar pegmatite. Badly broken core.									
32.0			End of hole. Hole terminated because of drilling difficulties.									

BLUE RIVER CALCITE

WEIGHTED AVERAGE DRILLCORE ANALYSES (Unbeneficiated marble)

	TOP 47 FEET (19.0'-66.0')	LOWER 70 FEET (66.0'-136.0')*	AVERAGE* (19.0'-136.0')
	%	%	%
SiO ₂	1.55	2.89	2.30
Al ₂ O ₃	0.07	0.35	0.23
CaO	54.3	53.0	53.6
MgO	1.63	1.89	1.78
Na ₂ O	0.01	0.01	0.01
K ₂ O	0.01	0.04	0.03
Fe ₂ O ₃	0.10	0.08	0.09
MnO	0.01	0.01	0.01
TiO ₂	0.01	0.01	0.01
P ₂ O ₅	0.04	0.04	0.04
L.O.I.	41.9	41.4	41.6
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	99.6	99.7	99.7
 Brightness **	 94.3	 94.5	 94.4

* Minus 9.0' dolomite; 107'-116'
and 1.5' siliceous marble; 131'-132.5'

** By tri-stimulus reflection metre CG166, performed by the
research laboratories of Indusmin Limited, Toronto.

SAMPLE	Core Length	SI02	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	LOI	SUM	
M-2-1	5'	2.97	0.14	43.7	9.68	<0.01	<0.01	0.18	0.02	<0.01	0.02	42.9	99.7	9
M-2-2	1'	13.8	0.42	31.3	17.2	<0.01	0.12	0.43	0.02	<0.01	0.02	36.8	100.1	9
M-2-3	14'	1.26	0.04	54.3	1.68	<0.01	<0.01	0.05	<0.01	<0.01	0.04	41.8	99.5	9
M-2-4	15'	1.63	0.03	53.8	1.73	<0.01	<0.01	0.12	<0.01	<0.01	0.03	42.2	99.8	9
M-2-5	18'	1.71	0.13	54.6	1.52	<0.01	<0.01	0.11	<0.01	<0.01	0.04	41.8	100.1	9
M-2-6	15'	3.54	0.55	51.8	2.76	<0.01	0.02	0.06	<0.01	<0.01	0.04	40.7	99.7	9
M-2-7	13'	3.52	0.48	52.3	2.14	0.03	0.09	0.09	<0.01	<0.01	0.04	41.2	100.1	9
M-2-8	13'	1.21	0.02	53.9	1.46	<0.01	<0.01	0.09	<0.01	<0.01	0.04	42.2	99.2	9
M-2-9	9'	1.83	0.05	33.0	19.8	<0.01	<0.01	0.36	0.04	<0.01	0.02	45.2	100.4	2
M-2-10	15'	2.69	0.29	54.2	1.29	<0.01	0.04	0.07	<0.01	<0.01	0.04	41.6	100.5	9
M-2-11	3-5'	4.84	0.43	52.2	1.39	<0.01	0.03	0.11	<0.01	<0.01	0.03	40.8	100.1	9

SAMPLE	CR	RB	SR	Y	ZR	NB
M-2-1	<10	10	330	<10	<10	30
M-2-2	<10	20	380	<10	<10	40
M-2-3	<10	<10	2320	<10	<10	30
M-2-4	<10	<10	2620	<10	10	30
M-2-5	<10	<10	2210	<10	<10	30
M-2-6	<10	10	2300	<10	10	30
M-2-7	<10	10	1980	<10	<10	30
M-2-8	<10	10	1940	<10	10	30
M-2-9	<10	10	370	<10	<10	40
M-2-10	<10	10	2080	<10	10	40
M-2-11	<10	<10	2080	<10	<10	30

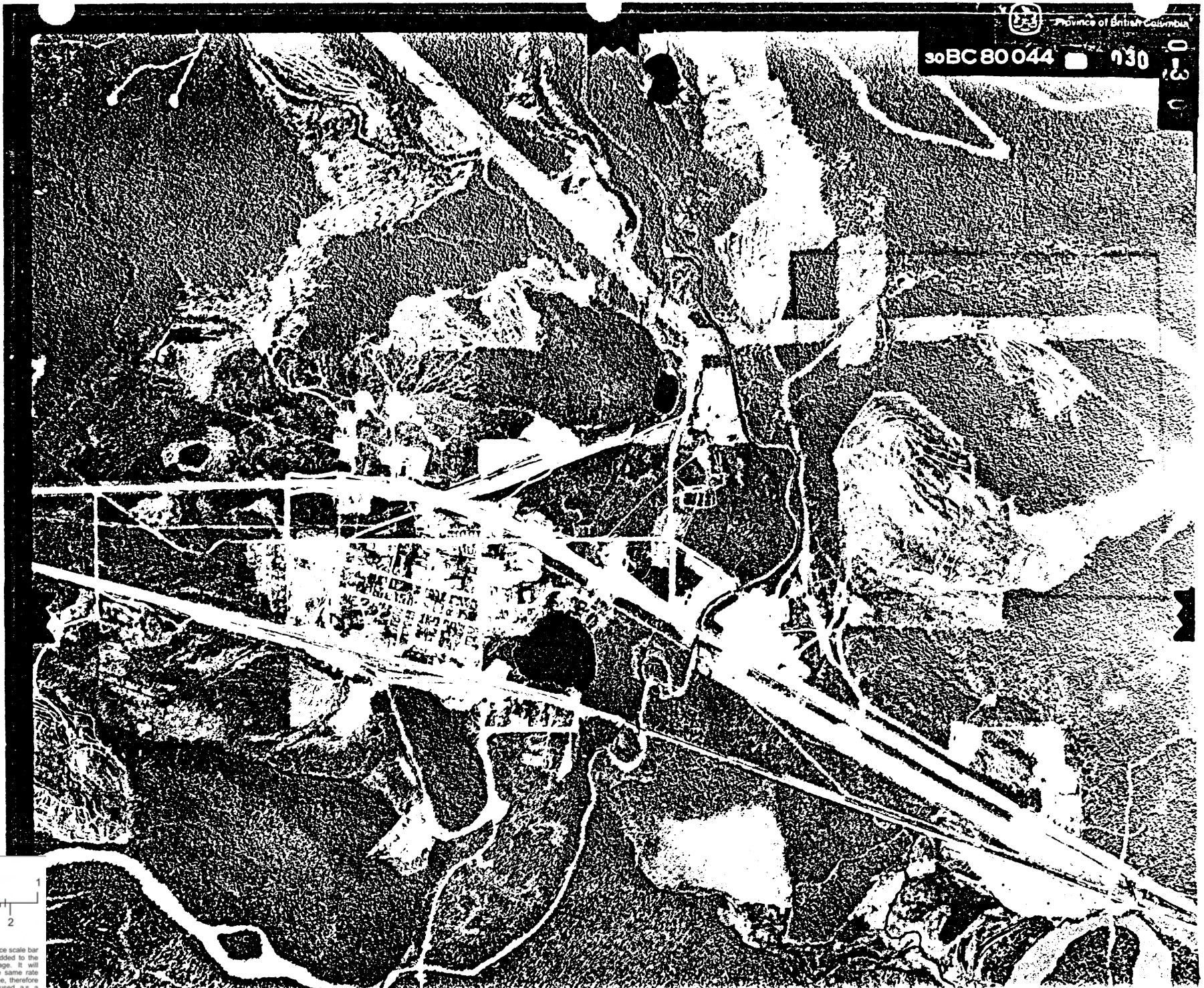
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Province of British Columbia

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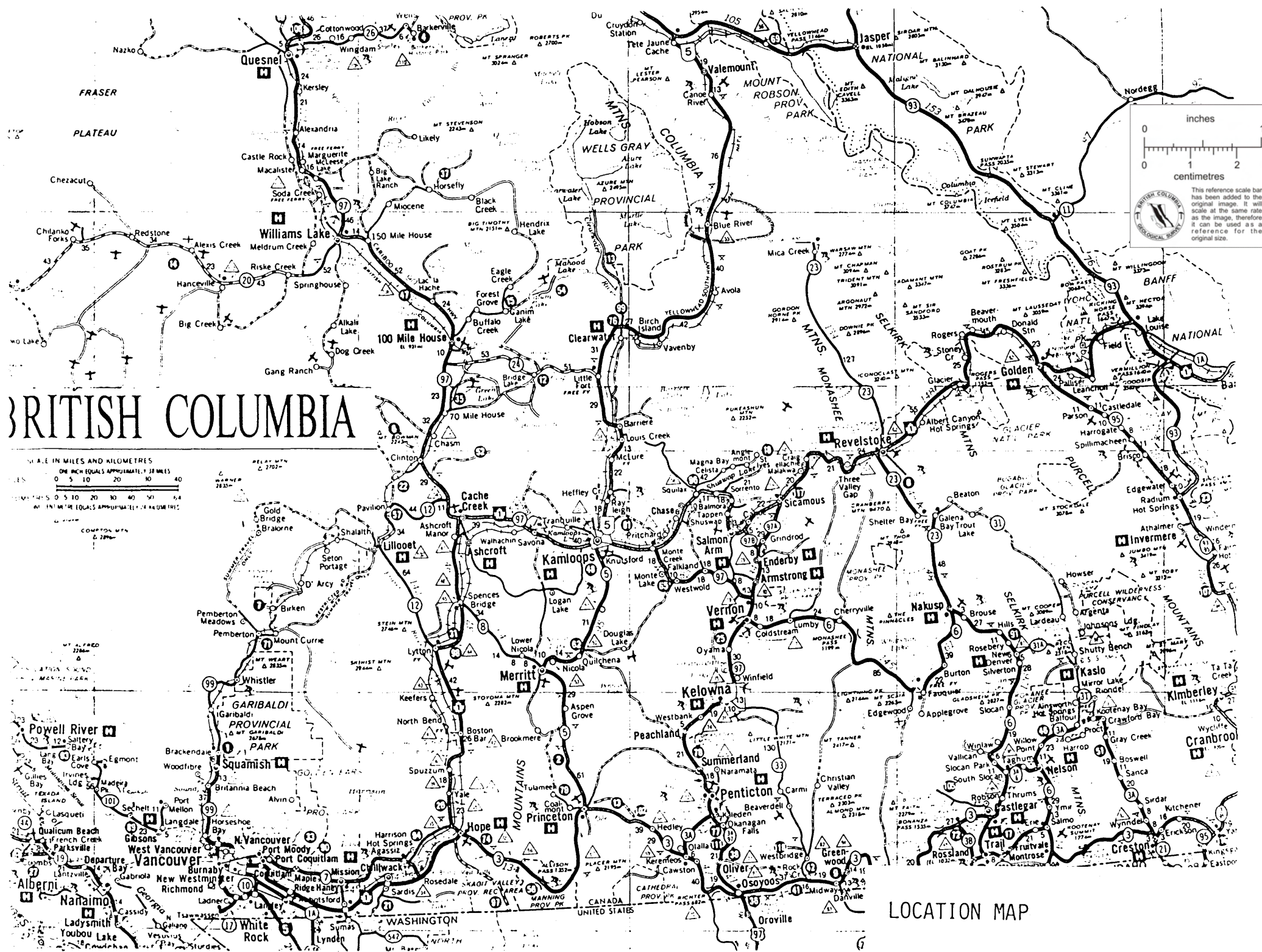
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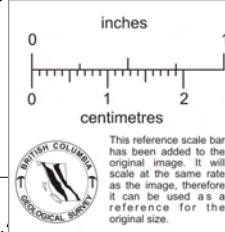
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BRITISH COLUMBIA

SCALE IN MILES AND KILOMETRES
 ONE INCH EQUALS APPROXIMATELY 25 MILES
 0 5 10 20 30 40
 0 5 10 20 30 40 50 64
 ALL DISTANCES IN THIS MAP APPROXIMATELY 25 PERCENT



LOCATION MAP



I.M.D. Laboratories Ltd.

Industrial Minerals Processing
260 Lesmill Road
Don Mills, Ontario
M3B 2T5
(416) 447-8820

1983, November 24

Mr. G.R. Guillet
P.O. Box 370
Mount Albert, Ontario
LOG 1M0

Dear Rob:

Enclosed is a short report on the tests conducted on the calcite samples from British Columbia.

As you will see from the report, the material is of excellent chemical quality. The processed material, i.e., grinding has excellent dry brightness and low acid insoluble residues. I have not detected any fibrous minerals in these samples. I have saved the residues so you can examine them at your convenience.

A copy of this letter and the report has been forwarded to John Morton in Vancouver.

Best Regards,

I. M. D. LABORATORIES LTD.



J. Kriens

Encl.
c.c. Mr. J. Morton

/vl



I.M.D. Laboratories Ltd.

Industrial Minerals Processing

260 Lesmill Road

Don Mills, Ontario

M3B 2T5

(416) 447-8820

EVALUATION OF FIVE CALCITE SAMPLES

Project 90008 - November 1983.

Prepared for:

Mr. G.R. Guillet, P.Eng.

Consulting Geologist

Prepared by:

J. Kriens

I.M.D. Laboratories Ltd.

November 23, 1983.

1.0 SUMMARY

Five samples of calcite have been processed and analyzed for chemical and mineralogical purity. Results show all of the samples to be of excellent quality, chemically and mineralogically and eminently suitable for production of a high quality mineral filler.

The samples are low in silica and other acid insoluble substances and when ground to a fine particle size are equivalent in dry brightness to the highest quality commercially available calcite fillers.

2.0 INTRODUCTION

Five samples of calcite from a deposit in British Columbia were submitted for evaluation by Mr. G.R. Guillet, Consulting Geologist, with the request to evaluate the samples for their potential use as a filler/extender and other industrial applications.

3.0 TEST PROCEDURE

The rock samples were soaked for 24 hours in water to loosen any surface dirt. They were scrubbed clean, dried and crushed to 1/2".

The crushed products were further ground to approximately 30 mesh, after which samples were split out for fine grinding, chemical analysis, determination of acid insolubles and dry brightness.

3.1 ACID INSOLUBLE RESIDUE

Fifty (50) grams of -30 mesh material was placed in a beaker of cold water and while stirring, dilute hydrochloric acid was added to dissolve the calcite and other soluble components.

The insoluble residues were filtered off, dried and weighed. The percentage of acid insolubles was calculated as to be as follows:

<u>Sample #</u>	<u>% Acid Insoluble</u>
3	0.44
5	0.80
10	0.16
11	0.24
12	0.50

The acid insoluble residues were saved for future reference.

3.2 CHEMICAL ANALYSIS

Each sample was analyzed by x-ray fluorescence for the major elements and several trace elements of interest. The analysis showed the material to be very pure, low in silica, which is very important in filler/extender applications

CHEMICAL COMPOSITION

<u>Element</u>	<u>%</u> <u>Sample 3</u>	<u>%</u> <u>Sample 5</u>	<u>%</u> <u>Sample 10</u>	<u>%</u> <u>Sample 11</u>	<u>%</u> <u>Sample 12</u>
SiO ₂	<.01	1.18	<.01	<.01	0.15
Al ₂ O ₃	<.01	0.07	<.01	<.01	<.01
CaO	55.1	54.4	54.6	54.3	54.2
MgO	0.32	0.31	0.33	0.95	0.96
Na ₂ O	<.01	<.01	<.01	<.01	<.01
K ₂ O	0.04	0.06	0.04	0.04	0.04
Fe ₂ O ₃	0.02	0.02	<.01	0.03	0.02
MnO	<.01	<.01	<.01	<.01	<.01
TiO ₂	<.01	<.01	<.01	<.01	<.01
P ₂ O ₅	0.03	0.04	0.03	0.03	0.03
L.O.I.	43.5	42.8	43.5	43.2	43.2

P.P.M.

CR.	<10	<10	<10	<10	<10
RB.	<10	<10	<10	<10	<10
SR.	2440	1190	2540	2400	2210
ZR.	<10	<10	<10	<10	<10

3.3 DRY BRIGHTNESS

High dry brightness is an important physical attribute of high quality calcium carbonate used in filler/extender application. Dry brightness is critical in such applications as paint extenders and plastic fillers. Particle size influences the dry brightness with brightness improving with decreasing particle size, i.e., increased reflective surface.

Each of the samples was ground to 100% passing 325 mesh (44 micron). Dry brightness was determined using the tri-stimulus method. A sample of Thompson Weinman Snowflake, a 20 micron calcium carbonate considered a top quality product in the industry, was used as a comparative sample. The yellowness index (Y.1) was also determined. The brightness results were as follows:

Sample	Green Filter %	Blue Filter %	Amber Filter %	Dry Brightness %	Y.1 %
3	92.0	90.0	92.7	95.5	0.029
5	90.8	88.9	91.1	95.1	0.024
10	91.7	90.0	92.1	95.5	0.022
11	91.4	89.9	91.6	95.5	0.018
12	91.2	89.3	91.8	95.2	0.027
"Snow- flake"	91.3	89.7	91.6	95.4	0.021

The samples are as good as "SNOWFLAKE" in every respect except they have a slightly higher yellowness index. This may be attributable to a coarser grind and the fact that the samples had some surface discolouration even after scrubbing.

4.0 CONCLUSIONS

These samples are of high quality with excellent potential for filler/extender applications. The silica is so low that potential use as a paper filler or paper coating is excellent.

5.0 RECOMMENDATIONS

Further sampling, surface as well as diamond drilling.