

ZEN CLAIMS

FORSTER CREEK AREA

GOLDEN & SLOCAN MINING DIVISIONS, BRITISH COLUMBIA

FOR

CANADIAN JOHNS-MANVILLE COMPANY, LIMITED

EXPLORATION DEPARTMENT

P.O. BOX 1500 -- ASBESTOS, QUEBEC

COVERING : ZEN CLAIMS #1-4 (Golden M.D.) ZEN CLAIMS #5-8 (Slocan M.D.)

LOCATED : 1. 50 40'N, 116 36'W

- 2. N.T.S. Map 82 K/NE
- 3. Over Whirlpool Lake, Headwaters of Forster Creek, approximately 25 miles west of Radium Hot Springs, British Columbia

Mining Recorder

MAY 31 1972

SUSP REC. 4601911

GOLDEN, M.D.

C.J-M PROJECT: 407

WORK PERIOD : AUGUST 17-29, 1971

REPORT DATE : AUGUST 1972 (REPARTMENTS (RAL)

SUBMITTED BY

EST BELLE

C.P. LIN, M.A. (AUTHOR)

H.K. CONN, P. ENG.

oun OVINCE OF H. K. CONN BRITISH OLUMO GINEE

Expiry Date: Jan. 28, 1973

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- C.P. Lin	
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LIST OF MAPS: # INDEX MAP 1" = 50 Miles SIX (6) ELEMENT DISTRIBUTION MAP SHEETS - Mo, U, Cu, Pb, Zn, Ag 1" = 1/2 Mile MAP A - LOCATION MAP MAP B - WHIRLPOOL LAKE AREA, RECONNAISSANCE GEO-1" = 1,000CHEMICAL SURVEY MAP C - DETAILED GEOCHEMICAL SURVEY - OBSERVED 1" = 100' MOLYBDENITE ZONE MAP D - CHIP SAMPLING ZONE - ROCK ASSAY RESULTS]"= 50' MAPS Distribution #2 Mo #3 U #4 Cu 1 Pb #5 11 #6 Zn Aq u #7 Sample Locations, Claims, Detailed Geology #8

INTRODUCTION:

General:

Molybdenite mineralization was initially discovered by K. Schrijver at Whirlpool Pass in early August 1971. Claim staking, geochemical sampling, chip sampling, and detailed mapping followed. Work was carried out by the personnel of Canadian Johns-Manville Company, Limited during the period August 17 - 29, 1971.

Prior to this discovery, the same company had been in search of at first uranium, then molybdenum, mineralization in the Horsethief Stock area for three years. Attention was drawn to the contact type of enrichment since the discovery of the Can-Sup Creek showing in August 1970. By the time of the Whirlpool discovery, the mineralized nature of the stock contact was well-recognized.

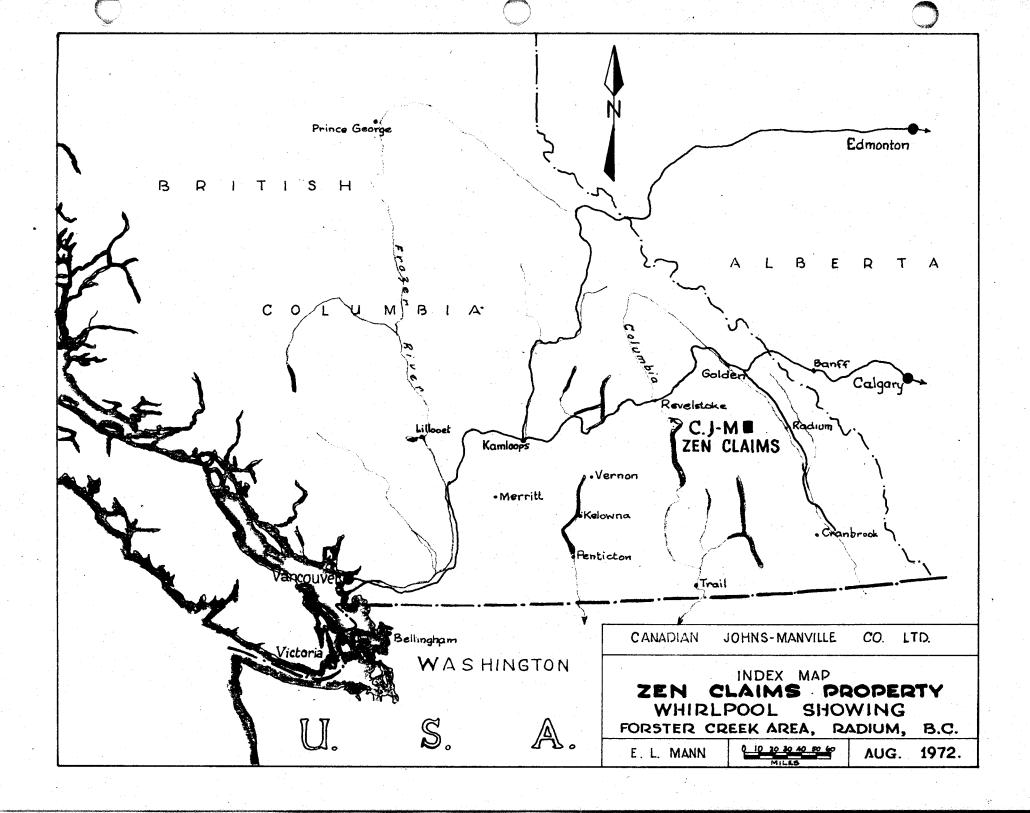
A total of 152 geochemical samples was collected, mainly from talus fines over the claim area. Detailed chip sampling covered the bestexposed section. The distribution and the statistics of the geochemical results are discussed in this report.

Location and Access:

The Zen claims are situated over Whirlpool Lake at the headwaters of Forster Creek (see Map A - 1" = 1/2 Mile). The practical access is by a logging road that leads from Radium Hot Springs westward for approximately 22 miles to the base camp. From there on, the service of a helicopter is suggested for reaching the claim site over the precipitous terrain (see index map - 1" = 50 Miles).

The claim block straddles the boundary of Golden and Slocan Mining Divisions. Half of the claims, Zen #1-4, belong in the former and the other half, Zen #5-8, in the latter. Since the major part of the work was done over Zen #4, the claims were grouped under Golden Mining Division.

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Physiography and Vegetation:

The area, adjacent to the Whirlpool Glacier to the southeast, is largely devoid of vegetation. High altitudes ranging from 6,500 to 8,600 feet above sea level allow snow cover to prevail during most of the year. Although depressions and troughs are always under snow cover, certain fresh outcrops result from thawing towards the end of August. These provide excellent exposure for observations. In this area, true B horizon soil is extremely rare. Limited amounts of vegetation exist. Juniper and alpine grass stud the area sparsely.

The claim block straddles a divide. Forster Creek flows easterly to join the Columbia River, and Howser Creek flows southeast to the west Kootenay valley.

GEOLOGY:

Located at the northwest margin of the Horsethief Stock, the claim block is underlain by a Mesozoic quartz monzonite and Proterozoic metasediments of the Horsethief Creek series and the Toby Formation. The distinct contact interface has been observed to be vertical at Whirlpool Pass*.

The quartz-monzonite is coarse-grained (0.05" - 0.5"), equigranular (phenocrysts less than 5%), and light pink in color. It demonstrates a slight deviation from the typical rock that forms the outer portion of the stock.

*The exposed area of the Horsethief intrusive body is approximately 50 square miles. The distinct contact interface around this pluton has been generally observed to be vertical. No magmatic fusion with country rock is in evidence. These criteria place the pluton more suitably under the terminology "Stock" than "Batholith", which is characterized by its immense size, an outwardly dipping contact interface - hence an ever-increasing size with depth and by features of magmatic fusion with country rock.

GEOLOGY: (Cont'd)

This is extremely coarse-grained (up to two inches), distinctly porphyritic and marked by abundant purple feldspar.

The local stock rock is chiefly composed of quartz, alkalifeldspar, plagioclase and biotite. The purple alkali-feldspar (perthite?) is often altered to pink color adjacent to mineralized veins. At contact the feldspar becomes curiously pale. The white plagioclase may show a slight green alteration (saussuritization). Biotite is the only dark mineral.

Common pink aplite dykes, at places containing molybdenite, may be cut across by quartz veins. Mineralized quartz veins tend to be vuggy and rusty. Barren quartz veins are usually massive and are tightly flanked by a swarm of parallel, closely-spaced and almost shear-like joints. Tourmaline, absent in the mineralized veins, occurs in the barren quartz veins as fine aciculae.

Along the chip sampling zone (see map D), the mineralized veins strike approximately east-west and dip 35° - 75° south, while the barren veins strike N30 E and dip 65° southeast.

The major local metasedimentary rock of the Horsethief Creek series is a grey to dark green quartzite. At places it tends to be conglomeratic with well-rounded quartz grains thickly separated by dark green matrix. The matrix may be impregnated by abundant, fine stringers of sulphide, such as chalcopyrite and pyrrhotite. Heavy chocolate stain is common.

An apophesis outside the stock has been observed at the west wall of Whirlpool Pass. Basically, similar to the quartz monzonite at the contact, the rock is bleachingly pale in color.

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Rich molybdenite mineralization occurs along the contact in the coarse-grained quartz monzonite. The observed mineralization is contiguous to the north-east - south-west contact, occupying an elongated zone 300 feet wide and at - least 1,100 feet long. At its northern end, talus starts prevailing and covers 1,000 feet of contact. A possible 1,000 foot extension of mineralization remains yet to be verified by means of trenching or blasting.

Chip Sampling: (See Map D - 1" = 50')

At the northern portion of the observed molybdenite zone, chip sampling was carried out.

The chip sampling zone, a 300 foot long mineralized exposure, is cut across by 23 molybdenite veins. Their widths, dominantly two inches, may measure up to six inches. The spacing between veins varies from five feet to 35 feet, the average being 13 feet.

Detailed chip sampling was applied to the zone and a description of the sampling method follows.

A total of 300 chips were collected by chiselling rock and mineralized veins. The sample spacing was uniformly one foot. The traverse was sub-parallel to the contact and cut across the mineralized veins. Every 50 chips, covering a 50 foot span, were combined into one 4.5 to six pound sample that yielded one assay result. The size of chip samples varied only slightly, from 2" x 2" x 1", to 2" x 1" x 1". Since the onefoot spacing of chip samples was much closer than the five foot to 35 foot vein spacing, the purpose of sampling all mineralized veins was achieved. Objectivity was maintained with reasonable ease as the closeness of sample spacing far exceeds the frequency of vein occurrence.

Chip Sampling: (Cont'd)

Moreover, it adds to the merit of this sampling exercise that the mineralized veins were just freshly exposed after a snow thaw. Minimum chemical decomposition allowed a maximum access to estimating the natural mineralization.

In conclusion, this chip sampling, in the author's opinion, has evaluated the exposed mineralization effectively.

Grade Evaluation:

An average grade of $0.152\% \text{ MoS}_2$ was given by the chip sampling that covers 300 feet of mineralized zone across the molybdenite veins. The sample results vary from 0.018% to $0.283\% \text{ MoS}_2$.

Assuming the grade remains the same throughout the 300 foot by 1,100 foot zone of observed mineralization, it would give approximately three million tons of ore with 0.15% MoS₂ for a depth of 100 feet.

Modes of Mineralization:

The molybdenite mineralization in the Whirlpool area occurs primarily in the plutonite. The molybdenite in the metasedimentary rocks is extremely rare. The major mineralization is associated with the vuggy quartz veins that seem to represent one joint system - $N90^{\circ}-120^{\circ}$; $35^{\circ}-75^{\circ}S$. The other joint system - $N30^{\circ}-35^{\circ}$; $65^{\circ}S--$, filled by massive quartz veins, is simply barren.

The various modes of molybdenite mineralization are described, with type occurrences given, as follows (Map D, 1" = 50'):

- (a) In thick (two inch to six inch), vuggy and rusty quartz veins, coarse molybdenite rossettes occur with common pyrite and some specularite flakes (Station FT 3324).
- (b) Along the interface of quartz veins and host rocks, a rich layer of molybdenite, 1/16" to 1/4" thick, extends (outcrop 40 feet northwest of Station FT 3323).

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Modes of Mineralization: (Cont'd)

- (c) On both sides of the quartz veins contiguous bands of host rock contain disseminated molybdenite flakes (0.1" - 0.2") with common pyrite and occasional sericite. These bands, 0.5" - 2.5" across, are distinctly pink, apparently due to alteration (FT 3318).
- (d) In pegmatitic lenses and pods, rosettes of molybdenite occur with pyrite, mica, very coarse euhedral pink feldspar and glassy quartz (FT 3317-18).
- (e) In aplite dykes, six inches to one foot across, tiny molybdenite flakes are disseminated or fracture-bound (Map C, FT 3367).

GEOCHEMICAL SURVEY:

A total of 152 goeehemical samples were collected for reconnaissance survey of the claim area (Map B) and for detailed investigation of the mineralized zone (Map C). From the well-exposed northern section of the mineralized zone (Map D), detailed chip samples were collected for grade evaluation.

A. Field Methods:

Reconnaissance samples were collected predominantly from talus fines at 200 foot spacing. Detailed samples were taken at 50 foot spacings. The traverses were sub-parallel to contours and were controlled by use of an altimeter, compass and chain. Each station was marked on the ground by red ribbons.

Data recorded at sample sites include:

- 1. Color
- 2. Texture
- 3. Direction of drainage slope
- 4. Grain size of sample
- 5. Remarks concerning mineralization, rock types, and limonitic stain

B. Analytical Techniques:

All samples were analyzed in the Vancouver laboratories of

Bondar-Clegg & Company, Limited.

B. Analytical Techniques: (Cont'd)

The geochemical samples were dried at $40^{\circ}-50^{\circ}$ C in infra-red ovens and sieved to -80 mesh in Tyler sieves. An aliquot of -80 mesh fraction was digested in various agents for extraction of the elements. A description of the methods used and the detection limits is presented as follows:

Element	Extraction Method	Determination Method	Detection Limit
Mo U Cu	Hot Aqua Regia HNO ₃ Hot Aqua Regia	Atomic Absorption Fluorometric	1 ppm 0.2 ppm 1 ppm
Pb Zn Ag	ο (1) 		1 ppm 1 ppm 0.2 ppm

C. Statistical Analysis:

The analytical results were categorized statistically as negative, possibly anomalous, probably anomalous, and anomalous.

In data dealing with trace elements, the skew frequency curves are the rule rather than the exception. As the survey data form lognormal rather than normal distribution, they are computerized where ppm values were transformed to logarithm scales and frequency to probability scales.

The median which approaches the geometric mean is taken as the background "b". The anomalous categories are determined by successive classes of probits - pl, p2, p3, etc. Each succeeding probit is increased by one factor, "s" or geometric deviation, where s' = $\frac{p1}{b} = \frac{p2}{p1} = \frac{p3}{p2}$, etc.

The statistical categories are illustrated as follows:

Negative	0 - b
Possibly Anomalous	(b+1) - p1
Probably Anomalous	(p1+1) - p2
Anomalous	(p2+1) +

A distribution formed by a single population is the ideal

situation.

C. <u>Statistical Analysis</u>:

In some cases two populations are present. Attention is then drawn to the "break" point which is considered as the "lower threshold" and signifies the base of the anomalous population.

In some distributions, significant high values occur. They are noted in terms of the probit scale.

D. Data Presentation:

Geochemical sample results are plotted at each station (Map B and C) on separate element distribution map sheets. Standard symbols for categories of anomalies mark the station. Rock assay results of the chip samples are plotted along the sections of the traverse where the chips were collected (Map D).

Statistical analyses of results are presented on cumulative frequency distribution papers (see Discussion, Statistical Studies).

DISCUSSION:

The survey results are discussed in two aspects. In the section "Statistical Studies" the computerized data are analyzed with the diagrammatic aid of the cumulative frequency distributions; in the section "Ground Distribution" the element distributions, plotted on separate map sheets, are discussed for their significance.

Statistical Studies:

The 152 geochemical results, statistically treated, are summarized in the following table. It shows that Mo is the only significant element and the rest are weak values.

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DISCUSSION: (Cont'd)

	Background b (ppm)	Threshold Probit 2 (ppm)	Peak (ppm)	Geometric Deviation pl/b
Мо	10	165	750	3.91
U	10	56	240	2.31
Cu	19	98	157	2.25
РЬ	37	193	250	2.27
Zn	46	98	133	1.45
Ag	0.9	1.8	2.3	1.38

Summary of Geochemical Results*

*The background (b) is the median that approaches the geometric mean; the threshold is the 97.5 percentile or the second probit. The first probit occurs at 84 percentile, the ratio of which over the background gives the geometric deviation. It expresses the contrast among the values and shows the "steepness" of the cumulative frequency distribution.

The cumulative frequency distributions for each element are examined separately as follows:

<u>Mo:</u>

A wide gap (115 ppm - 220 ppm) clearly marks two separate populations. The anomalous population is strictly associated with the observed molybdenite veins contiguous to the contact (see Map C - 1'' = 100').

The local Mo values are compared with/samples widely collected from the Horsethief Stock. Please refer to the excerpted cumulative frequency distribution of "Horsethief Stock, Forster Creek area". A similar gap exists between 115 ppm and 190 ppm. Moreover, the geometric deviation (s') is 3.70, interestingly close to s' = 3.91 of the Whirlpool area. In both areas, high values exceed the third probit.

<u>U</u>:

An inflection point occurs at 92 percentile and is marked as the lower threshold (35 ppm). It is significant in being the base of the anomalous population, which is interpreted as representing the concentration of uranium minerals at catchment basins or drainages.

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DISCUSSION:

Statistical Studies:

U: (Cont'd)

High values exceed the third probit.

<u>Cu</u>:

Lognormal distribution.

Pb:

Largely a lognormal distribution.

Zn:

Basically a lognormal distribution with a minor deviation of low values.

<u>Ag</u>:

Lognormal distribution.

Ground Distributions:

Please refer to the element distribution map sheets. Mo shows surmounting strong anomalies in converged patterns. The distributions of all other elements are generally associated with the contact. Their values are weak and distributions rather dispersed.

Mo:

Two broad anomalous zones are grossly parallel to the contact (see Map B). The western zone shows increasing Mo values northward towards the contact. There (see Map C), the zone harbors segments of strong anomalies that are controlled by the orientations of molybdenite veins. The eastern zone (Map B) thrusts through an area of intermingled talus and low brush, where some molybdenite hosted by aplite dykes has been observed.

It appears not unlikely that strong Mo anomalies in the western zone may extend northwards along the contact under the talus cover.

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DISCUSSION:

Ground Distributions:

Mo: (Cont'd)

Blasting or trenching is therefore recommended to expose the contact for examination.

The reader is advised to refer to the section "Mineralizat-

ion - Grade Evaluation" for information on the chip sampling zone (Map D).

<u>U</u>:

Strong anomalies, caused by concentration in drainage, occur at lower elevations (see Map B, FT 3267-3278). Only a weak anomaly broadly coincides with the molybdenite showing zone (see Map C). This shows low affinity between the two elements in the area.

<u>Cu</u>:

Copper values are low. Weak anomalies roughly follow the stock contact.

A substantial anomaly superimposes on and supports molybdenite zones (Map C). This Cu anomaly may open to the northwest into the metasediments.

Pb:

The Pb values are generally weak.

In the molybdenite zone (Map C), the tightened and clearly trended Pb anomalies suggest their association with the molybdenite veins that also show the similar trend (see Map D).

In comparison to the Mo distribution in the detailed survey zone (Map C), Pb results tend to increase away from the contact, whereas the high Mo values rim immediately around the contact and decrease drastically inward. Such distributions seem to suggest that a halo-like Pb zone occurs inside the Mo-Cu envelope that rims the contact.

DISCUSSION:

Ground Distributions:

Pb: (Cont'd)

The reconnaissance survey (Map B) shows a broad anomalous pattern suggesting, similarly, an inner halo, sub-parallel to the stock contact.

<u>Zn</u>:

Irregular and dispersed patterns are shown by very weak zinc values.

Two zones of weak anomalies are present. One zone goes parallel to the contact inside the stock. A second zone strikes E-W in the southern portion of the claims.

Ag:

Slightly anomalous Ag values are associated with the contact in the molybdenite zone. General values are weak.

CONCLUSIONS:

 Vein-oriented molybdenite mineralization was found in stock rock contiguous to the contact.

2. The mineralized zone, 300 feet by 1,100 feet in size, was estimated to contain three million tons of 0.15% molybdenite.

3. Geochemical survey results suggest that the molybdenite mineralization may continue northwards under the talus to double the size of the mineralized zone.

RECOMMENDATIONS:

1. It is recommended that trenching or blasting be carried out over the observed molybdenite zone (Map C).

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RECOMMENDATIONS: (Cont'd)

The objective is to verify whether or not the MoS_2 grade in the chip sampling zone prevails over the 300 by 1,100 foot observed molybdenite zone.

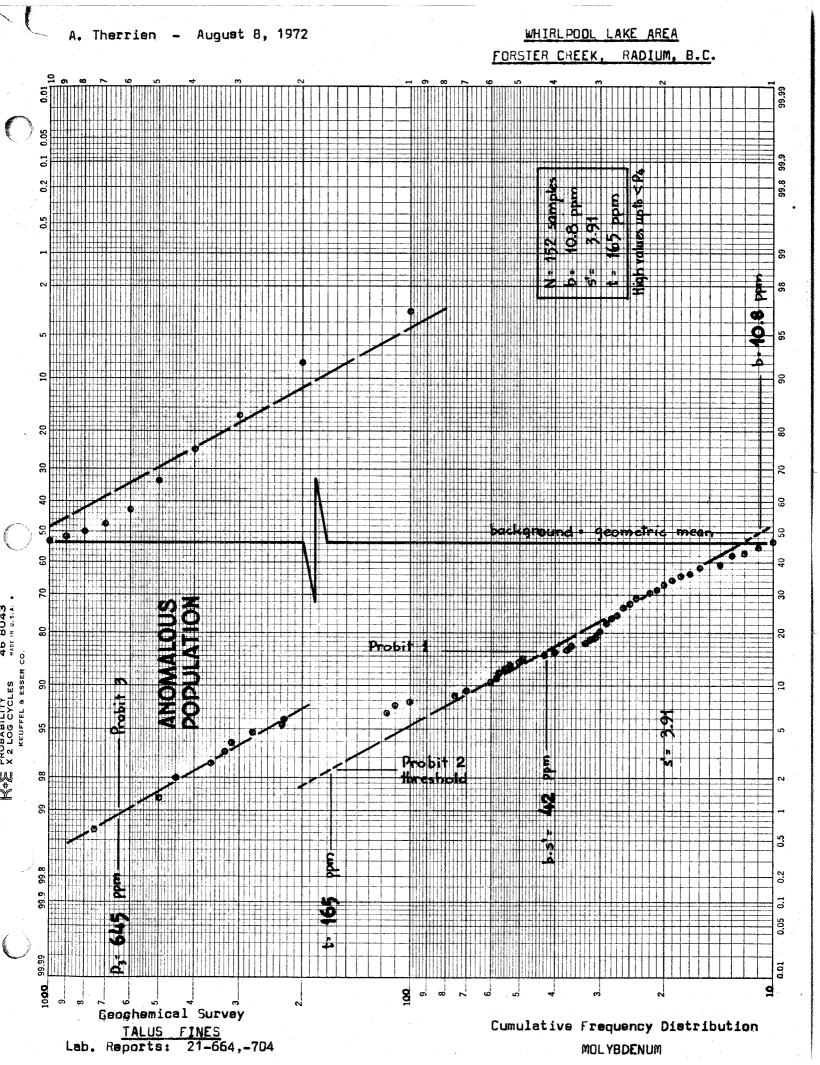
2. Providing the above-mentioned trenching returns favorable results, then similar measures are recommended to evaluate the possible northern extension of the observed molybdenite zone in an area of talus covering.

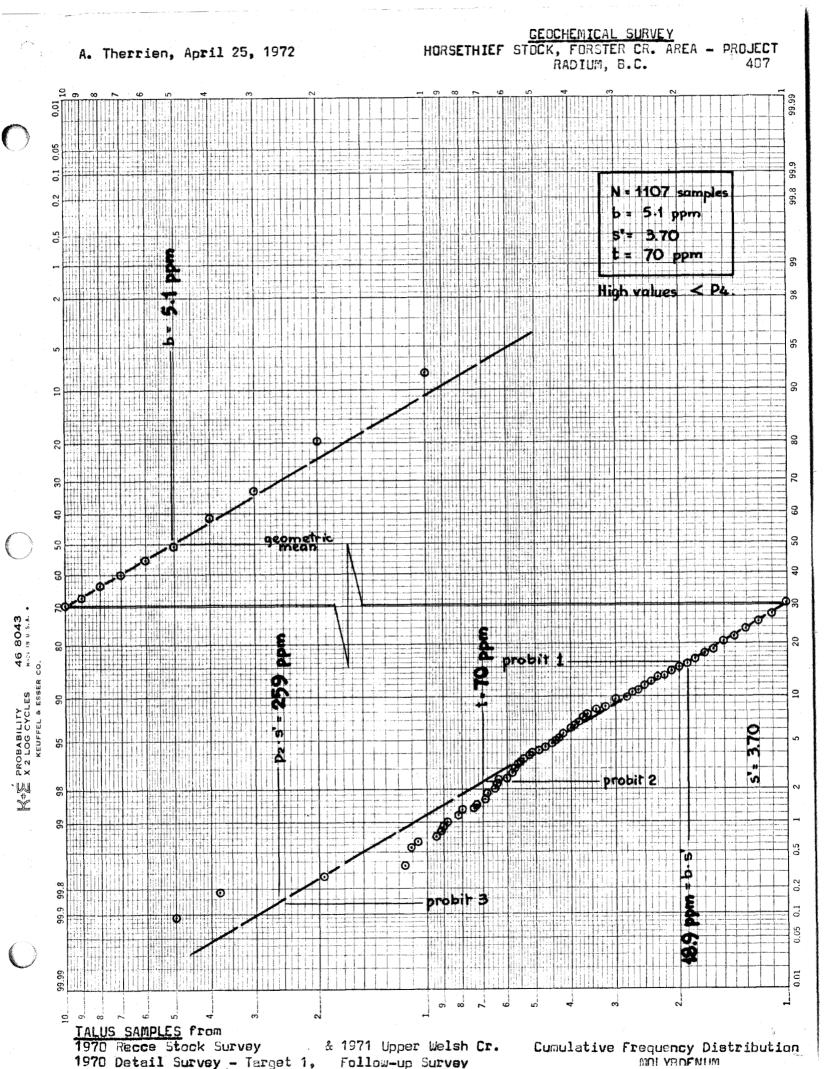
3. If the northern extension proves to be economic, then a small preliminary drilling program will be recommended.

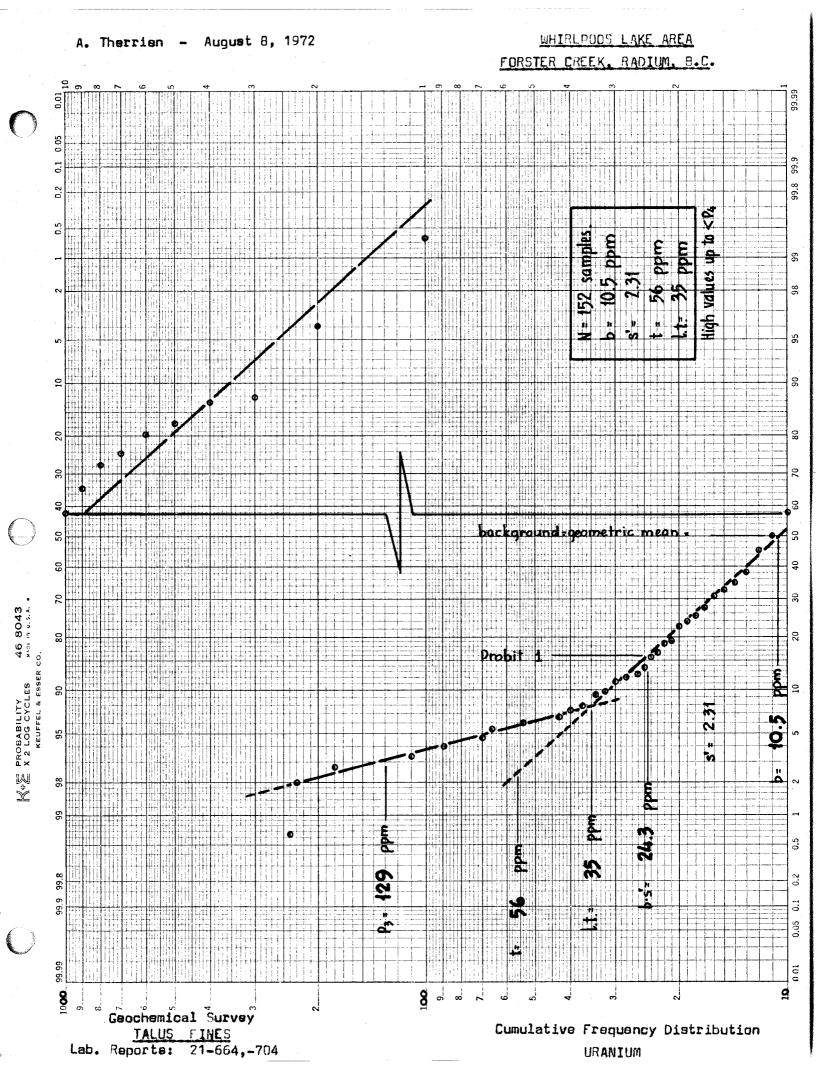
BIBLIOGRAPHY:

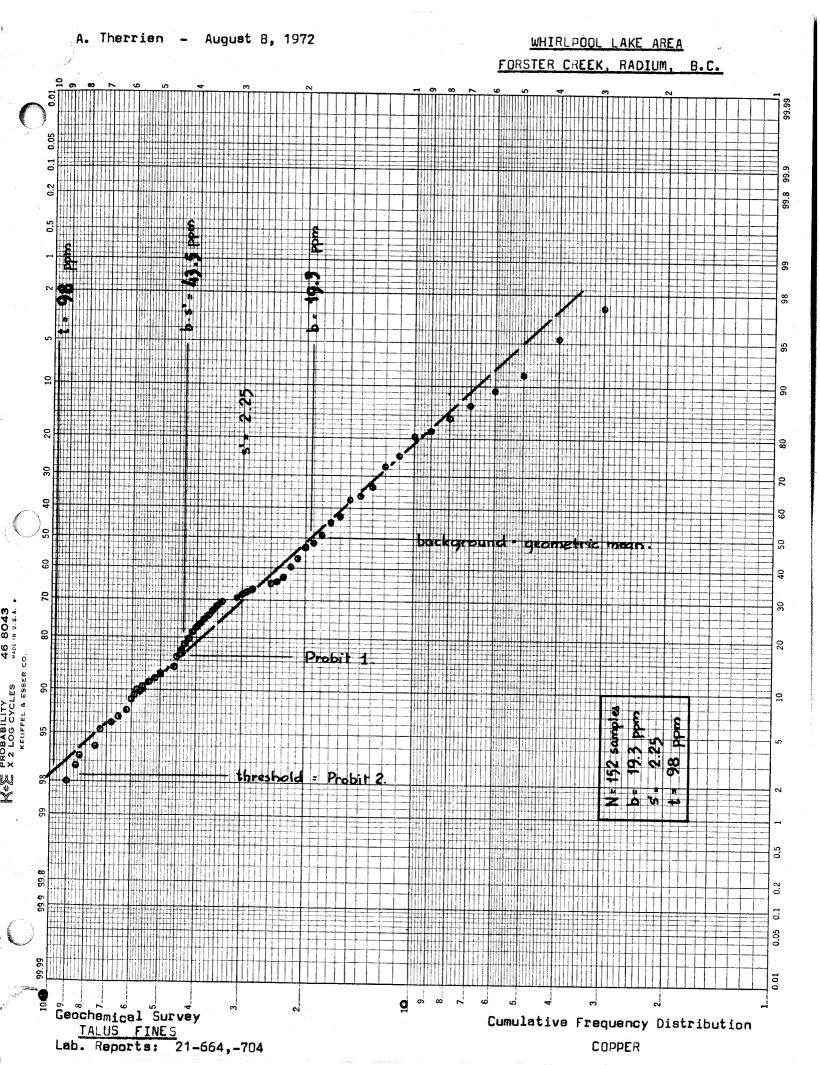
Schrijver, K., 1971:	Interim Geological Report on Horsethief Stock Internal Report, C.J-M
Lin,,C.P., 1972:	Geochemical and Geological Report on Detailed Surveys on the Slide
	Group of Claims, Forster Creek Area

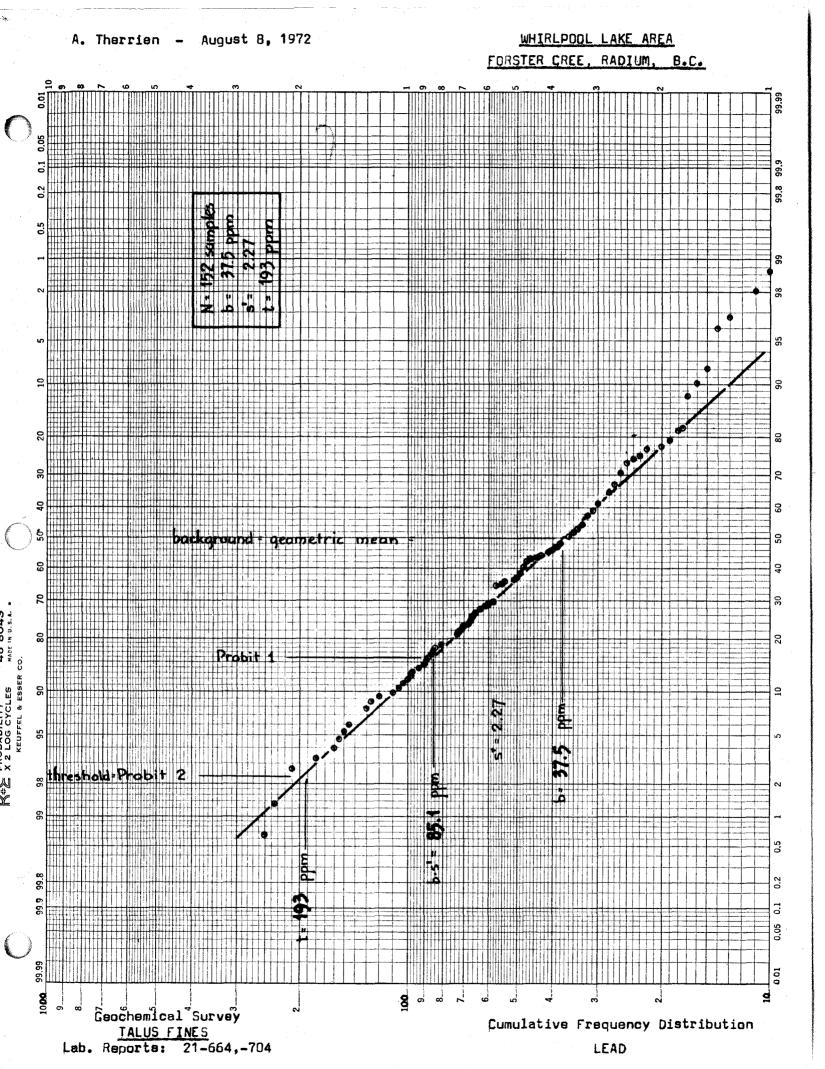
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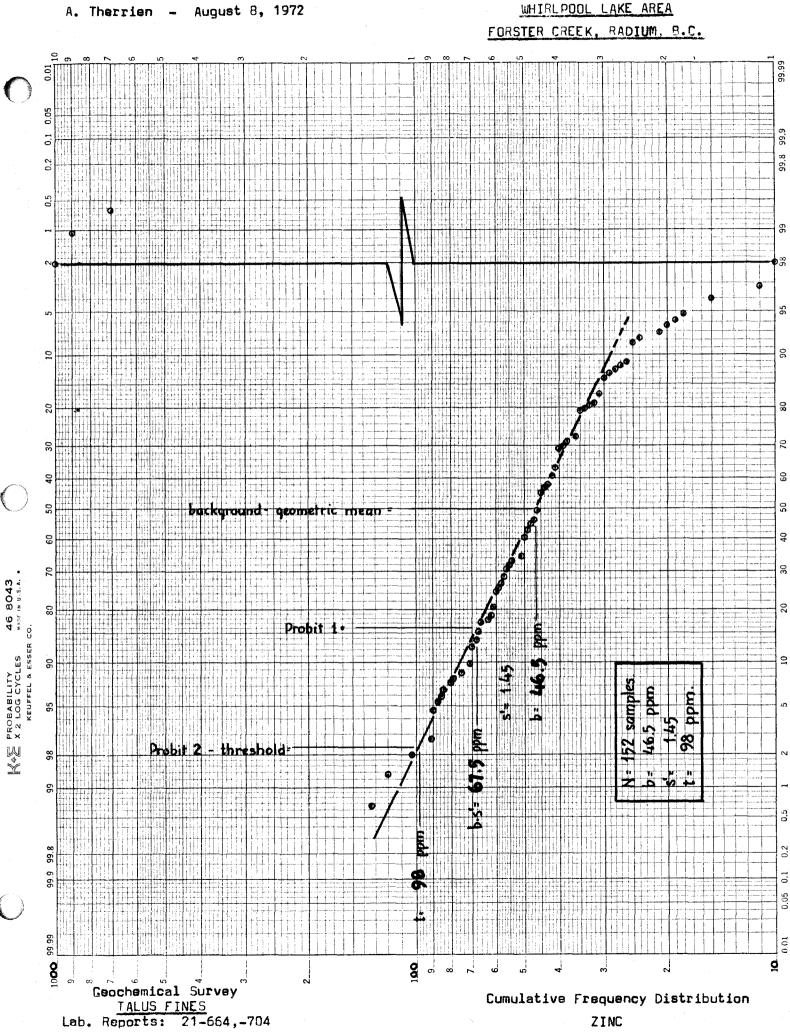


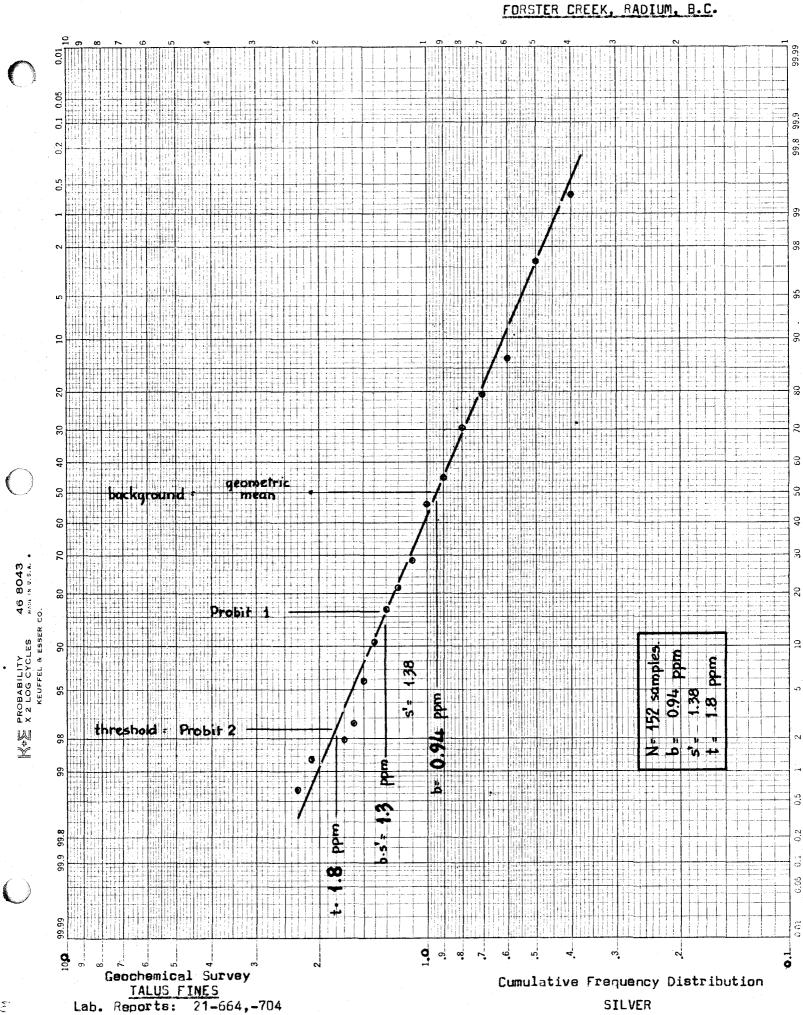












A. Therrien - August 8, 1972

WHIRLPOOL LAKE AREA FORSTER CREEK, RADIUM, B.C.

COST ANALYSIS - WHIRLPOOL AREA

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1. Labor: (August 17 to August 29, 1971):	
D. Binnie – Sampler 6 days @ \$20.00 \$ 120.00	
N. Cook - Sampler 7 days $@$ \$20.00 140.00	
Wm. Burry - Sampler 6 days @ \$25.00 150.00	
C.P. Lin - Geologist 7 days @ \$38.46 <u>269.22</u>	\$ 679.22
2. <u>Camp Costs</u> :	
26 man days @ \$8.00	208.00
3. <u>Analytical Cost</u> :	
152 soil samples - Cu, Pb, Zn, Mo, Ag, U @ 729.60 @ \$4.80	
12 rock assays - Mo @ \$4.00 48.00	
1 rock assay Mo, Cu, Pb, Zn, Ag, Cb <u>50.80</u> @ \$50.00	828.40
4. <u>Consulting Report</u> :	
K. Schrijver's report (see Bibliography of Geochemical Report), November 1971 – \$3,684.29 (see enclosed invoice). Relevant portion to Zen claims = 1/8 x \$3,684.29	460.53
5. <u>Report Preparation</u> :	
A. Therrien - Senior Tech- 5 days @ \$34.00 170.00 nician	
D. Williamson - Draftswoman 5 days @ \$14.62 73.10	
C.P. Lin - Author 5 days @ \$41.00 <u>205.00</u>	448.10
ΤΟΤΑΙ	\$ 2,624.25

GEOCHEMICAL SURVEY DATA

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O IM CANADIAN JOHNS-MONVILLE Co. Ltd.

GEOCHEMICAL SOIL JURVEY DATA

WHIRLPOOR KARE

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COLLECTORILO BURRY D BINNIE

AREA: FORSTER CREEK

DATE: AUG 17/71

407 PROJECT:

RAPIUM LOCATION REF.:

AMPLE NO.	LOCATION	DRAINAGE	PHYSIOGRAPHY	SOIL	HORIZON	COLOUR	TEXTURE	REMARKS		ANALY	ESULTS	
		SLOPE		ТҮРЕ	DEPTH							
F3 3265	0	<	SIDE OF STEFR. CIRASSY SKOPE	57/6	3*	В	M	Low BRUSH				
FS 3266 FS	200	<-			4			GRASS TALUS	н 			
FS 3267 Fl	400	K		5:16	6-8	GB	· F·	SIFEP				
F1 3268	550	K		STREAM		в	C					
7 3269	600	K.		8:16		GB		QUARTZ IN GRAVIEL				······
2 3270	800	K		si/n	6	GB	M	QUARIZ IN GRAVEL				
3271	900	2		57/4		·B	C				•	
3 <u>271</u> 15 1272 FL	1000	K		51/6	6	68	M	GUTREZ PEOBLES - SUIL				
	1200	4	STREAM 12-18"	51	2	6	C					
3273 12 3274 12	1400	K	DRY CREEK	ST								
FL 3275	1600	~	SMALL SEEP	57								
FL 3276 FS	1800	K		51								
3277	2000	K		8/37	6	B	M	TALUS				
FX 3278	2200	K	SIMALL SEEP	57		6	M	MU. ABOUT 1000 ABOUE				
1°T 32.7948	2400	K	TALUS BOULPERS	57/4	2	B	F	MO IN TALUS 500' BELOW MC S'MWING				



23 CANADIAN JOHNS-MONVILLE Co. Ltd. WHIRLFOCK

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GEOCHEMICAL SOIL JURVEY DATA

407

PROJECT:

COLLECTOR: BURRY P BINNIE

DATE:

AUG 18/11

LOCATION REF .: RADIUM

AREA: FORSTER CREEK

SAMPLE	100471011	DRAINAGE		SOIL	HORIZON	COLOUR	TEXTURE	REMARKS		ANALY	TICAL R		
NO.	LOCATION	SLOPE	PHYSIOGRAPHY	TYPE	& DEPTH	COLOOK	TEATORE	LIMANJ					
FT 3281	6/7 INTERSFETTION WHIRE POCK - 0		TALUS SLOPE	57/6	JURFACE	GREY	MED	TAKUS FROM MI BR GRACIER					
1-1 3292	200	7						MO. IN TAKUS BASS of Chiff					· · · · · · · · · · · · · · · · · · ·
FT 3283	250	>			• · · · · · · · · · · · · · · · · ·	 March & Juny & House and a series (see a set of the s	•	DETAIL					
FT 3284	300	7						CUARSE GRANITE					
FT. 32.85	350	~~						SAME		-			
11 32.8 6	400	->	·					MO IN BOULDER	} 			•	
F1 3287	45°C	~>	F					TALUS SEIME LIM STAIN				•	
F5 3289	500	~>	••••					NO SAMPLE BETWEEN					
F1 3289	750		•					506-700 5New					
11 32.80	800	->						EPGE of LARE		<u>.</u>			
FT 3280	850	>						SAME					
FT 32.99	900	>					····						
FT 3293	950	>			and a second		No. 100 100 100 100 100 100 100 100 100 10						
FT 3294	1000	~~~~											
FT 32.95	1050		ere monte est.				-						

C IM CANADIAN JOHNS-MOIVILLE Co. Ltd.

GEOCHEMICAL SOIL JURVEY DATA

1107

PROJECT:

Whime Poca KARE

COLLECTOR & BURRY D BUNGER

DATE: AUG 18 /11

AREA: FORSTER CREEK

LOCATION REF .: RADION

MPLE NO.	LOCATION	DRAINAGE SLOPE	PHYSIOGRAPHY	SOIL TYPE	HORIZON & DEPTH	COLOUR	TEXTURE	REMARKS	 ANALYTICAL RESULTS				
10 5296	1206		TALLS BEDROCK SNELL	G	SCARAGE	G	М	TALUS NEAR MU. SHOWING					
10 297	12 50	>	entre de tentes de la secon				area data matematika data data data data data data data da						
710 298 72	1300												
77 299 70	1350												
90 300	1400			5/10		G/B	M	FALUS , PYRITE					
TD	1450												
301	1500	>		G			Harmon .				-		
302 TD 303	1550	>		sile .		G	F	CIC/BARREN GUARTZ					
10	1600							250 FROM LARE					
304 TH 305	1650	>		376				SAME 360 From Land					
70 / 316	1700			SAND		BR		MC. IN C.C. AELLE ISO' HOULE SAMPAG 3" x 12' SLU			•		
1.0	1150	-7		31/61		BR	14	MINIKALIZIO ZOWE MC DESE LINE CETZ VEINS 400 FRONT LART					
3207 70 308	1800			\$75				NO ME AT THIS LEVEL					
FTP	1850	->						600 Above Lake					
-72					21			75 BEALS ME. LTZ VEIN					

O UM

CANADIAN JOHNS-MONVILLE Co. Ltd.

GEOCHEMICAL SOIL JURVEY DATA

WHIRKPER LAKE

COLLECTOR: [BORRY D BINNIE

AREA: TOBSEER CREEK

DATE: AUG 19 / 71 LOCATION REF. RADIUM PROJECT: Alot ANALYTICAL RESULTS HORIZON MPLE DRAINAGE SOIL COLOUR TEXTURE REMARKS LOCATION PHYSIOGRAPHY & DEPTH NO. SLOPE TYPE MO. LIS' TO EAST TALUS SOME 4/2 9110 Cle 01 SURFACE F G -2" 1950 311 TALUS MC. IN FACAT FDT. in the <u>_____</u> 312 20.00 609. TALUS 2050 3313 FO; MO. IN C.C. -7 37/5 3314 2100 DEVAIL SAMPLING 106 .19/11 Som Acres Anonanos Lexie SURFACE EDT 50 ABOUE MAR 3367 M V TALUS BEDROCK 6 BR 50 - 2 " 3315 GRAMMITE OC FRANTORED FOT. . -----V G...... 100 3316 MO. IN BEDRUCK + Ĝ F COT 3311 51/5 TALUS 150 ANENTALOUS LONE EPT B M 55/4 MOL IN CUARIX 3318 V 200 -34 MP26 FROM MC BEARING FRI BUTRIX VEIN IN DIP SC (1500) **-**~. <u>3074.</u> 707 250 4" BEAON GTT. USIN 20-24" MO F 51/5 -----STRIKING 240 . HO EN DUP- THEAR -----3320 300 MINERARIZED GERALCHISS CREESED BY CTE VEINS NOWNERS Nº 5 Port 26.10 505 DK/BR 51/6 -----BUT ARE BARREN 350 3321 MINERGENERY USING HART FROM 101 10% 50° APARTA WORNYONG IN W. FTH Į. ST 400 -----6 REM 2"-2' 3228 SAMPLE THREE FROM MINESALIZED GIL VEIN

AC9 6707-

C

IM CANADIAN JOHNS-MONVILLE Co. Ltd.

GEOCHEMICAL SOIL JURVEY DATA

COMMENTOCH & ARE

AREA: CONSECT CREEK

COLLECTOR: 6 BURRY D BINNIE

ACP 6797

DATE:	Aug 19/1	ţ		PRC	JECT:	407		LOCATION REF. Rain	710.cj-						
NPLE O.	LOCATION	DRAINAGE SLOPE	PHYSIOGRAPHY	SOIL TYPE	HORIZON & DEPTH	COLOUR	TEXTURE	REMARKS		ANALY	TICAL R	ESULTS			
1			r		508146			MINERALIKER ZONE M.O.							
7 323	450	K	FALUS/O.C. SNEW	PERCLOS	-2.	BL	F	ABOWER BEAUX 7590							
24	500	1		35/5/6			F	4-6" MU GUARSE VEIN							
25	660	L		5/6				PROVERS TOP 151 NO SANT 17 440 NERTANO OF GRANIES REJERCE PITTED WITH MO 15 SC							
26	100				=5"	BR	M	AAMOST VERTICAL GIZ VEINS SUHRISVERS ME KONECCENTACT							
7 7 27	150				2		F	COUTACT							
28	810	>				DK BR	F	GRAN.TE NO MIN							
τ 329	850							SAME LARGE THURA BUNDERS				-			
17 130	900							SHME 7700							
7 31	950			5.186 PEACS		BL		SAME							
27 27 332	1000		a spin - shine along and any a	37 6		138		MO ON DUSTING OF BUDDERS + IN GUARTE VEIN							
27 27 333	1850			\$/6				(UELL J. 19) 18-58 SK/2-52							
777 17 154	11604		-					BASE OF GRANITE CLIFF. NO ON SUMPLY AND IN V. SMARL WEIN							
1794 1755 1355	11850	->					M	DASK OF CALFF. 2002 OF MINICAN GIR VENN - N.S. DIFTING 5 - VENTICAS							
); 05 36	1700					BR		FISSORE SIDEL F CRIFF Provide CONTR VEIN							
01 ;;;]	1250				annaine an ann an			MEANAY FRANCED	1						

SM CANADIAN JOHNS OANVILLE Co. Ltd.

GEOCHEMICAL SOIL JURVEY DATA

WHIRK POOL KAKE

COLLECTOR. W BURRY D BINNIE

AREA: FORSTER CREEK

DATE: AUG 19 171

• • • •

PROJECT: 407

LOCATION REF .: RAPINA

SAMPLE	LOCATION	DRAINAGE	PHYSIOGRAPHY	SOIL	HORIZON	COLOUR	TEXTURE	REMARKS	ANALY	TICAL P	ESULTS	19-19-9
NO.	LOCATION	SLOPE	PHISIOGRAPHI	TYPE	& DEPTH	COLOOR	ILAIORE				Ĺ	
FDT	1210	-7	TALUS, O/C	57/5	SURFACE	BI	F	SMALA AL SIMILATE NOT. IN CRANITS NO PATTERN CRISS CRUSSED				
3338	1300		SCITRUBS			124		MO. IN GUANTE 4" WIDE				
3339	1350		MacDilling Coll Margine and A starts	5716		BR		ROSETTESS MOLDIP 45 55E				
FDF 3340	1400	->				BR		TALOS CONERED				
FD1 3341	1450			3/4		DK BR	M	HO TH TALIS				
FOT 3342	1500		meconomic State.	57/5		YIBR	F	Tope of the Mo. Facus				
FDT 3343	1550			576		9		- SAME NO HO				
FOT 3344	1100			<i>ST</i>		RIBR		- 7680		•		
FD1 3345	1650		-	57		BR	elimitator file a querer,	BISCHY TAKES CLAMMAINE				
FOT 3346	1700	-7		51/5		SATER	Management of States	Contraction of the second				
FOT 3347	1750	->		51/4								
FO1 3348	1800			51/6								
e an												

SM CANADIAN JOHNS-OANVILLE Co. Ltd.

GEOCHEMICAL SOIL JURVEY DATA

WHIRL POOL

COLLECTOR: (1) BURRY P. BINNIE

AREAS FORSTER CREEK

AUG 20/71

DATE:

PROJECT: 407

LOCATION REF .: RADIUM

SAMPLE	LOCATION	DRAINAGE	PHYSIOGRAPHY	SOIL	HORIZON	COLOUR	TEXTURE				TICAL R	ESULTS	
NO.		SLOPE		ТҮРЕ	DEPTH								
		1.	TALUS. OK	51/5/6	SURFACE	P	6						
FOT334P	50	, 1	SNOW	13/6	. 2"	B	F	300 ABOVE LAKE					
FDT 3350	100			57/5				GRANITE O.C.					
FOT 3351	150	V											
3352 FOT	200	T		5/6			M						
FRI			Security of the second					MO IN QUARTE VEINS					
3353 FOT	250		-	51/5/6			F	SMALL QUARTZ VEIN No. MO					
33.54	300			57576			/	C/C CRISS CROSSED WITH					
FDT 3355	350	\checkmark			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			QUARTE VEINS NUMC.					
FDT 3356	400	ł				G		AppeLITE + COUARTZ IN GRANITE					
FDT 3357	450					B							
5557 FOR 3358	500	L		5/4									
FDT 3359	550	V		575/6				TALUS/ GRANITE					
FOT 3360	600			3/4				O/C SMALL QUARTZ VIEINS					
FPT 3361	650	¥			-			CLAIMLINE					
FDT 3362	700	Ļ			· · ·								
FOT 3363	7.50	+		5/6			M						

•

DATE:

CANADIAN JOHNS ANVILLE Co. Ltd.

GEOCHEMICAL SOIL JURVEY DATA

WHIRLPOOL LAKE

COLLECTOR. WBURRY D BINNIE

AREA: FOR OSTIER CREEK

AUG 20/71 PROJECT:

4107

LOCATION REF. RADIUM

ANALYTICAL RESULTS HORIZON SOIL SAMPLE DRAINAGE COLOUR TEXTURE REMARKS LOCATION PHYSIOGRAPHY & DEPTH TYPE NO. SLOPE SIDE OF SHOPE SURFACE FOT TALUS / OK \checkmark M 2" BR 51/6 APPELITE PIKES 800 SNOW 3364 SNOW FIELD FOR K BL 800-1050 NOSAMPLES 51/4 1050 3365 FDT K 1150 51/6 3366 BASE OF GRANITE FDT 1 BR 5/6 BLUFF 3361 1200 BOUNDERS /OC FOR F 4 \$1/S/G BR -----1250 3368 FPT V 33.69 FDF. 1300 ____ Ĺ -----1350 3320 FAT R/B $\gg 4$ 51 1400 3371 FOT YK · ____ ST/G 1450 BR _____ 3771 FOT END of 50' SAMPIES NK 1500 3373 BROKIE AT RUGGED FOI C 5/6 BLUCKY TALUS \gg 3375 SIDE HILL 1700 -7 S/G FT 3374 1960 -7 M FT 3316 -2100 -7 -----TT3314 2300 -7 FT33.18 2500

IM

,∎ i 'v '• ■

DATE: AUG 20

CANADIAN JOHNS- ANVILLE Co. Ltd.

GEOCHEMICAL SOIL JURVEY DATA

PROJECT: 407

WHIRLFOOL LAKE

COLLECTOR	WB	RRY	P	BINNE	

AREA: FORSTER CREEK

LOCATION REF. RADIUM

SAMPLE	•	DRAINAGE		SOIL	HORIZON	co: oup	TOYTUDE	REMARKS	ANALYTICAL RESULTS						
NO.	LOCATION	SLOPE	PHYSIOGRAPHY	ТҮРЕ	& DEPTH	COLOUR	TEXTURE	KEMAKNJ .							
FT 3379	2700			51/6	SURFACE	BR	M	BRUKEN RUGGED SIDE 1116K							
11 3380	2900			37/G		BR									
FT 3881	3800		-	57/5											
FT 3382	3300	-7											1997 - 2019 2019 - 2019 2019 - 2019 - 2019		
FT 3383	35 OU	>	•												
	Aug	21/7	1												
FT 3384	0		<u></u>	57	SURFACE -2"	BL	F	TAKEN AT BASE OF SCH ZONE			-				
F1 3385	200			sils		BL	M	MO. IN GRANITE BOULDERS							
FT 3386	40.0			ST/G				6" QUARTE VEIN BASE OF OC NO VISIBLE MO.							
FT 3387	600	-7		31/6/5		_		MO IN PLACE AT LISU'							
F1 33,88	800			615				QUARTZ VEIN NO VISIBLE MO							
F1	1000			57/8/4		BR	M	ChAM LINE							
<u>3389</u> F1 3390	1200					DK.G		MU IN FLOAT							
FT 3391	1400			5/6	<u> </u>	BR	M	TALUS							
FT 3392	1600	-7		\$16		BR	COARSE	TALUS							

400 4009

CANADIAN JOHNS MANVILLE Co. Ltd.

GEOCHEMICAL SOIL JURVEY DATA

WHIRKFOOK.

AREA: FORSTER CREEK

COLLECTOR: (J BURRY	D BINNIE

JM

LOCATION REF .: RAPIOM

DATE:	AUG 20	/11		PRC	DJECT:	407		LOCATION REF. Rap	con1				
SAMPLE NO.	LOCATION	DRAINAGE SLOPE	PHYSIOGRAPHY	SOIL TYPE	HORIZON & DEPTH	COLOUR	TEXTURE	REMARKS -		ANALY	TICAL R	ESULTS	
1=T 3393	1800	-7	TALUS	5/9	SURFACE - 2"	G	M	TALUS					
FT 3394	2000	->				BR		BASE of ole					
FT 3395	2200	~>		57/5/6		BR	<u> </u>						
FT 3396	2400	~~~											
FT 3397	2600	->						TALUS					
FT 3398	2800							SIDE OF SLOPE					
F1 3399	3000	~~~~				, martin					•		
FT 3400	3200	>		ST	B		F	GRANITE BOULDIERS					
FT 3401	3400				3 "	L BR	F			No.			
FT 3402	3600	-7		ST/G					·				
FT 3403	3800	>						TAKEN AT MOUTH of Gopher Hoke DEPTH UNKN.					
FT 3404	4000	>		51/4					-				
FT 3405	4/200	~>	•	sila				EDGE of GRANIE BL.H					
14 340		7											
		P											

CANADIAN JOHNS OANVILLE Co. Ltd.

GEOCHEMICAL SOIL JURVEY DATA

FORSTER CR. AREA WHIRLPOOL SHOWING AREA: ZEN CLAIM NO. 8

COLLECTOR: N. COOK

Lin.

AUG. 28, 1971 DATE:

<u>U</u>M

407 PROJECT:

0+10: SW 800' FROM . FT 3281 LOCATION REF.:

SAMPLE	LOCATION	DRAINAGE	PHYSIOGRAPHY	SOIL	HORIZON &	COLOUR	TEXTURE	REMARKS	ANALYTICAL RESULTS					
NO.		SLOPE		ТҮРЕ	DEPTH									
FT2071	Otoosw		HILLY	TALOS	4"	BROWN	SILT	LIMONITIC STAIN					and the second sec	
FS 2072	2+00 SW		HILLY	B	•	2					•			
FT 2073	4+005W		•	TALUS			SAND, SILT							
FT 2074	E toosw		MEADOW	TALVS	5″		:							
FT 2075	8 toosw			TALVS	4"	3	:	3						
ET	10:400SW		\$	TALVS	*		2							
F S 2077	12+00 SW		2	B	6"		SICT, CLAY	LIMONITIC STAIN			•			
FS 2078	14+00 SW		•	В	5"	\$:							
2076 F S 2077 FS 2078 FT 2079	16-100 SW		HILLY	TAUS	4"	:	SILT	3						
FT 2080 FT	18+00 SW		MOUNTAINOUS	2	4"	3	:							
FT 2081	20 +00 SW		\$	3	3"		X			·				
													ļ	
		e e e e e e e e e e e e e e e e e e e												
								and a second a line, which all an any starting participation of the second second second second second second s				and the state of the	Arkentante	

STATEMENT OF QUALIFICATIONS

I, Herbert Keith Conn, of the Town of Asbestos, do hereby declare that:

 I am a mining geological engineer employed as Exploration Manager for Canadian Johns-Manville Company, Limited, P.O. Box 1500, Asbestos, Quebec.

2. I have practised in the geological profession for twentytwo years and specialized in economic geology and exploration procedures for the past twenty-one years.

3. I am a graduate of the University of Toronto, Toronto, Ontario, with a degree of B.A.Sc. (Mining Geology), 1948.

- 4. I am a member of the following professional associations:
 - (a) Corporation of Engineers of Quebec
 - (b) Non-resident member of the Association of Professional Engineers of the Province of British Columbia
 - (c) Fellow of the Geological Association of Canada
 - (d) Fellow of the Society of Economic Geologists
 - (e) Member of the Canadian Institute of Mining and Metallurgy
 - (f) Member of the American Institute of Mining Engineers

5. This report is based on published and unpublished inform-



H.K. Conn, P. Eng. Exploration Manager Expiry Date: Jan. 28, 1973 Canadian Johns-Manville Co., Limited

ation.

August 1972

STATEMENT OF QUALIFICATIONS

I, Chong-Pin Lin, of the town of Asbestos in the Province of Quebec, hereby certify that:

1. I am a mining exploration geologist with four years of experience.

2. I am a graduate of the following universities:

National Taiwan University B.A. (Geology) 1965 (Republic of China)

Bowling Green State University M.A. (Geology) 1969 (Ohio, U.S.A.)

3. I am employed by Canadian Johns-Manville Company, Limited,

P.O. Box 1500, Asbestos, Quebec, as a geologist. My permanent address is in Asbestos.

4. I am an affiliate member of the Association of Exploration Geochemists and a member of the Canadian Institute of Mining & Metallurgy, and a Fellow of the Geological Association of Canada.

5. I made the geological observations and carried out the chip sampling program in the Whirlpool Lake area.

6. I compiled and interpreted the technical data.

7. The cost analysis in Appendix I is, to the best of my knowledge, correct.

Chong-Pin Lin, M.A., Geologist Canadian Johns-Manville Co., Ltd.

August 1972

UM Canadian Johns-Manville Co., Limited

Asbestos Fibre Division Division de la fibre d'amlante

Asbestos, Québec, Canada Phone: 819-879-5431 Telex: 01-20411

September 18, 1972

Mr. E.J. Bowles Chief Gold Commissioner The Government of the Province of British Columbia Department of Mines and Petroleum Resources Victoria, B.C.

Dear Sir:

YOUR FILE NO. 166 - GOLDEN AND SLOCAN ZEN MINERAL CLAIMS GEOLOGICAL-GEOCHEMICAL REPORT

I acknowledge your letter of September 15.

Cu, Pb, Zn, and Ag were determined by atomic absorption. Thank you

for drawing this error to our attention.

Yours very truly, C.P. Lin Geologist

CC J. Kerr

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	C.C.
	D.C.C.C.
	D.C.C.
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10 million francis	C.1.
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