3393

GEOLOGICAL & GEOCHEMICAL REPORT ON

KELVER MINES'

BURSARY MOUNTAIN FLUORITE PROPERTY

WHITEMAN CREEK, B.C.

VERNON M.D. NTS 82 L/3 W

LAT 50°13'N LONG 119°28'W

for

KELVER MINES LTD. (NPL)

505 BURRARD STREET

VANCOUVER, B.C.

by

C.B. CAMPBELL

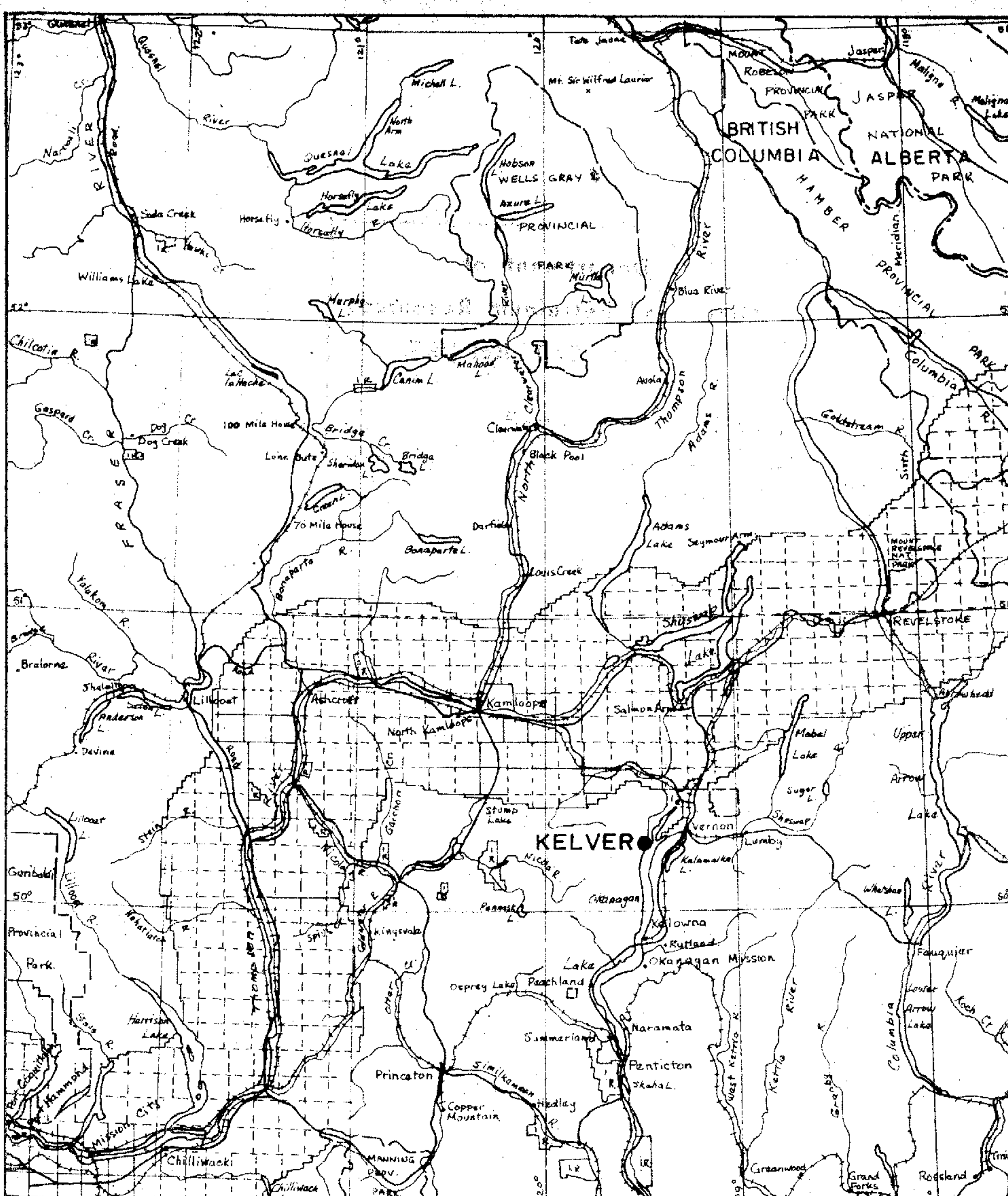
D.K. MUSTARD P. ENG.

CERRO MINING COMPANY OF CANADA LIMITED

401 - 1111 West Georgia Street

Vancouver, B.C.

June 15, 1971



CERRO MINING COMPANY of CANADA
TORONTO CANADA

INDEX MAP

BRITISH COLUMBIA & ALBERTA

NTS ref.
82 E,L,M. 83 D
92 H,I,P. 93 A

Scale 1: 2 000 000 — 1" = 32 m — JUNE 1971

Figure 1 KELVER MINING - LOCATION MAP

CONTENTS & ILLUSTRATIONS

KELVER MINES

BURSARY MOUNTAIN FLUORITE PROPERTY

SUMMARY - From May 10th to May 13th, a party composed of three geologists, a consulting geochemist, and two geochemical samplers conducted an examination of the Bursary Mountain Fluorite Property owned by A. Holmwood of Kelowna and held under option by Kelver Mines of Vancouver.

Previous work had exposed, in cuts and trenches, a number of fluorite showings in widely separated parts of the property.

The purpose of the present examination was to determine if a large low-grade fluorite ore body existed on the property.

Reports by J.F McIntyre (Jan. 4, 1968) and Franklin L.C. Price (March 23,1970) and verbal reports from A. Holmwood to B. Fenwick-Wilson of Cerrocan, indicated the possibility of disseminated fluorite occurring over large areas on the property.

During the examination, conversations with Mr. Holmwood indicated that by "disseminations" he himself meant "closely spaced fracture fillings."

After a tour of the showings by Mr. Holmwood, the party carried out its examinations in two groups. The geochemical group conducted a survey of ground water on the property and along roadsides for a number of miles to the NW and SW of the property to determine if any anomalous areas existed on the ground surveyed.

The geological party conducted a series of traverses which gave good coverage of all the exposed areas.

Attention was given to examination of possible extensions of the known occurrences particularly the main and west showings. (See Fig. 2, areas A&B, Figs 3 & 4)

With the purpose of the examination in mind it is clear that the geological evidence alone is sufficient to conclude that the property, although possessing many scattered occurrences of fluorite, does not show fluorite of sufficient grade or extent to constitute an ore body of interest to Cerro Mining Company of Canada Limited.

None of the showings or occurrences had surface continuity, nor, it should be noted, was any disseminated fluorite seen during the examination.

A general observation made by the writer was that fluorite float and veins were most often seen along the flanks of the roughly parallel N-S to NNE-SSW trending ridges. In some cases, steep bluffs at the flanks showed signs of faulting and movement. It is tentatively suggested that the valleys between the ridges may be topographic expressions of selectively eroded fault zones within which higher concentrations of fluorite may have occurred.

INTRODUCTION: The Bursary Mountain Fluorite Property is located at the NW end of Okanagan Lake approximately 2 miles west of the mouth of Whiteman Creek. Access is by paved road from Vernon 16 miles distant from the property. Within the property, four-wheel roads lead to the main showings.

The property consists of 31 mineral claims staked by Mr. A. Holmwood of Kelowna - (Fluorite 1-6, Sparite 1-4, Spar 2-5, Lakeview 1-3, Ah 1-5, and Jac 1-8).

The property has long been known and there are a number of references to it in the B.C.M.M. annual reports. (1966-p.265, 1967-p.303).

In 1966 CANEX carried out 1000' of bulldozer work and a few short diamond drill holes. The main bench showing was examined by CM&S in 1966 and Bethex in 1967. The main bench showing was also geologically mapped in 1967 by J.F. McIntyre. In 1968, three diamond drill holes were completed to the south of the bench showing.

The area covered by the examination is approx. 4000' X 3000'. Rock exposures are fair to good from the main bench showing at approximately 1800' elevation to the summit of the mountain at approximately 2800'.

The mountain is made up of a series of ridges running N-S to NNE-SSW which is roughly parallel to the fault and fracture zones. All the ridges were covered by geologists (see fig. 2).

GEOLOGY - General: The G.S.C. map of the Vernon area shows the property to be underlain by granite, granodiorite and allied rocks comprising part of the Coast Range Intrusions of Jurassic and/or Cretaceous age. Six miles to the east a syenite stock of Cretaceous or Tertiary age, approximately two miles in diameter, intrudes these rocks.

continued . . . 3

Property: The property is underlain mainly by a grey to reddish medium grained quartz monzonite although locally monzonite, syenite, granodiorite and diorite were seen. This has been intruded by a number of dykes of various size and type. Those observed are grey to greenish relatively fresh feldspar porphyries and trend from 5°W of N to 65°E of N. All the rocks have been cut by N. trending fault and fracture zones. It is within these zones that the fluorite occurs.

The fluorite occurs alone or with milky quartz as fracture fillings in the quartz monzonite. Where fractures are incompletely filled, vugs and drusy faces occur. The fluorite is mainly coarsely crystalline green, white or purplish. All occurrences tended to swell and pinch rapidly and are best described as veins, narrow lenses and pods. Locally coarse calcite and K-feldspar were seen as fracture fillings. Very minor pyrite was occasionally seen along fine fractures. No other sulphides were seen.

The quartz monzonite shows a variety of textures and locally contains feldspar or quartz phenocrysts. In general it is fresh. In the more intensely fractured zones there is slight to moderate alteration (chloritic, K-feldspar), iron staining and, in particular where fluorite occurs, black manganese dioxide staining.

The dyke rocks are generally fresh.and where seen contacts are sharp over a few inches.

SHOWINGS: MAIN BENCH SHOWING - See fig. 2 Block B, See Fig. 4

WEST SHOWING - See Fig. 2 Block A, See Fig. 3

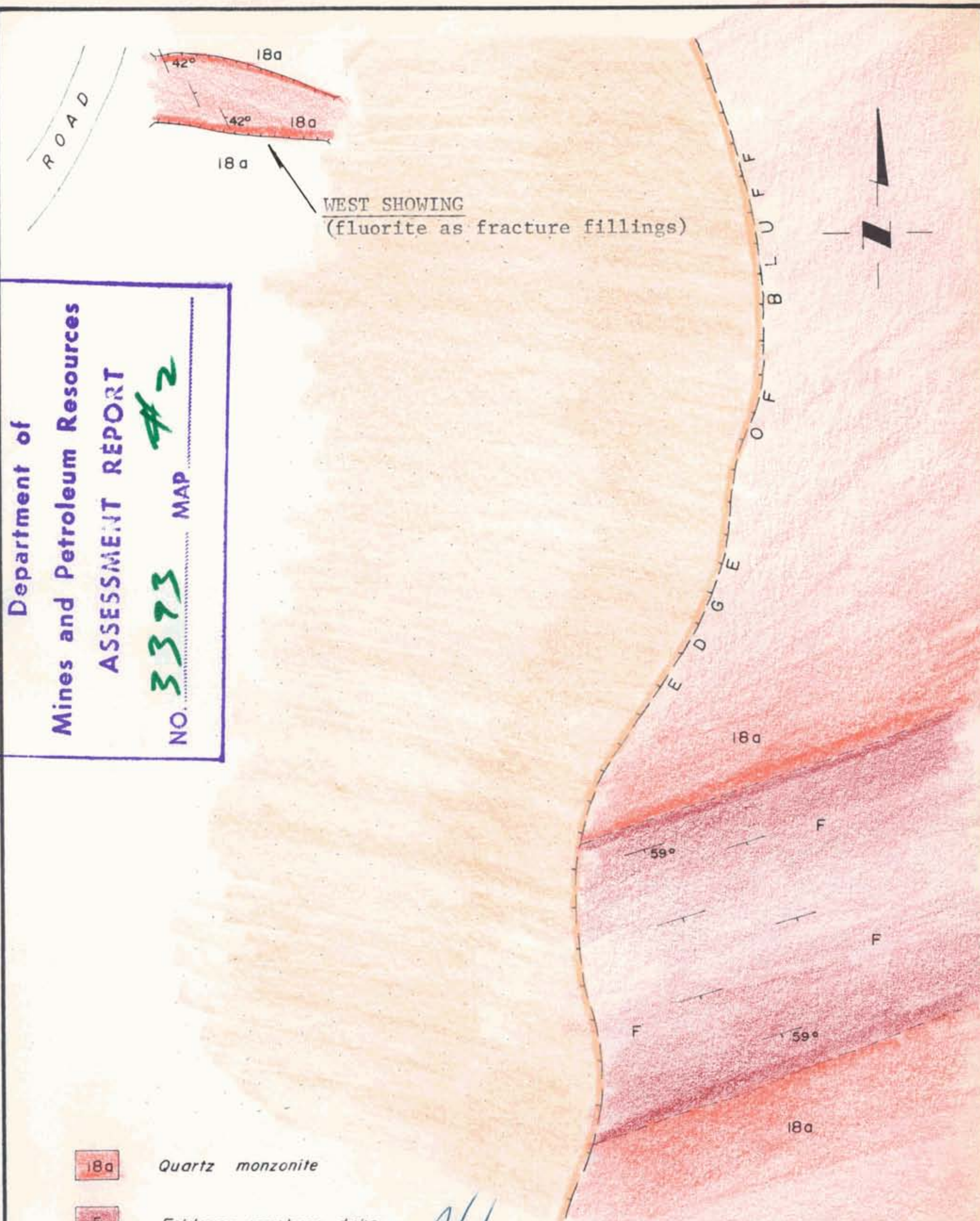
A well fractured altered quartz monzonite is exposed in a trench 12 feet by 35 feet. The fractures, spaced from 6 inches to 1 foot apart, strike 160° and dip 40° NE.

Fluorite occurs across 30 feet as fracture fillings up to 4 inches wide. Individual white, green and purple fluorite cyrstals up to 1 inch across are present. Much of the rock has been flooded by quartz which can be seen as coatings on the fluorite crystals.

Scree and overburden obscure bedrock on all sides of the trench.

The bluff above and to the East of the trench is composed of massive to poorly fractured coarse grained altered quartz monzonite intruded by a 50 foot wide grey weathering feldspar porphyry dyke. The contact is quite sharp over 2-3 inches.

continued . . . 4



18a	*Quartz monzonite*
F	*Feldspar porphyry dyke*
	Scree
	Trench edge
42°	*Fracture orientation and dip*

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
D. K. MUSTARD

CERRO MINING COMPANY OF CANADA LIMITED

DIVISION: WESTERN PROVINCE: B.C.

KELVER MINING
WEST SHOWING
BURSARY MOUNTAIN FLUORITE PROP.

SCALE: 1 inch = 20 feet		N.T.S: 82 L 3,4
DRAWN: P.T.M	CHECKED:	PROJ. NO: 40-076
REVISED:	DATE: JUNE, 71	DWG. NO: 3

The dyke is well fractured with a fracture density as high as 10 per foot. Fractures trend parallel to the strike of the dyke at 72^{o}, dipping 60^{o}S. Brown staining is seen along the fractures.

The dyke is composed of a fine grained green (chloritic alteration ?) matrix with pale pink feldspar phenocrysts averaging 4 mm in length. The phenocrysts all exhibit white reaction rims.

No fluorite nor sulphides were observed.

LAKE SHOWING - A traverse around the lake showed a number of scattered narrow veins of fluorite occurring in altered quartz monzonite.

OTHER SHOWINGS- All other showings were essentially scattered occurrences of fluorite veins, pods and lenses in fractured, altered quartz monzonite.

An examination of core from D.D.H. 1,2, &3 drilled in 1968 approximately 1000' south of the main bench showing, revealed pyrite and very minor fluorite occurring occasionally in fractures in quartz monzonite cut in places by quartz porphyry dykes. The rock was slightly altered in places and locally contained quartz veinlets.

One sample was taken where a bluish black coloration in a vein, attributed to carbonaceous material, might have been due to the presence of MoS_2. The assay returned 0.003 Mo.

These D.D. holes largely negated the possibility of a southward extension of the main bench showing.

GEOCHEMISTRY -See Fig. 2. A report by B.W. Smee is included with this report. (See Appendix A).

The high fluorine values recorded from some of the sample sites is attributed to proximate isolated fluorite occurrences.

CONCLUSIONS & RECOMMENDATIONS: Fluorite occurs in discontinuous pods, lenses and veins in fracture zones throughout the property. Nowhere is there evidence to suggest the presence of a large low-grade ore body.

C.B. Campbell,
Project Geologist

D.K. Mustard,
Division Geologist

D. K. MUSTARD
BRITISH

CERRO MINING COMPANY OF CANADA LIMITED
Division: Western Province: B.C.

Kelver Mining
MAIN SHOWING
Bursary Mountain Fluorite Property

June, 1971

Proj. 40.076
Figure 4

from: "B.C. Minister of Mines and Petroleum Resources, Annual Report, 1967" (p. 304)

APPENDIX A

GEOCHEMICAL REPORT ON:

KELVER MINES'

BURSARY MOUNTAIN FLUORITE PROPERTY

12 MILES W OF VERNON, B.C.

MAY 11 TO MAY 14, 1971

PREPARED FOR

CERRO MINING CO. OF CANADA LTD.

401-1111 W. GEORGIA ST.

VANCOUVER, BC

PREPARED BY

B.W. SMEE

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1170 HORNBY ST.

VANCOUVER, B.C.

INTRODUCTION

The Bursary Mountain fluorite property, also known as the Whiteman's Creeks fluorite showing has been known for many years as massive fluorite veins in a feldspar porphyry. Although these veins were extremely high grade, the strike seemed to be of a limited length, and a sufficient tonnage of fluorite to form an economic deposit was not thought to be available. The main showing as drawn on Figures 3 and 4 has had three diamond drill holes placed on it. It was thought that a good possibility existed of locating disseminated fluorite above the main showing where very little work had been done previously.

The purpose of my visit to the property was to perform a preliminary orientation on the fluorite property using a specific ion electrode The analysis was to be performed in camp, so a day to day fluoride content of the ground and surface waters would be available to the geologists to guide them in locating hidden fluorite veins and disseminated fluorite.

The property is located about 12 miles due west of Vernon, on the west side of Lake Okanagan. Access is extremely good, with

... Pg. 2

roads to all parts of the property. The topography is moderately steep on the lower section of the property, but becomes very steep as the crest of the mountain is reached. Numerous cliffs and skree slopes occur at these higher elevations. The total relief on the property is approximately 1000 feet. The climate is typical of interior southern B.C., with little rainfall and extremely hot summers. Plant life consists of sparse conifer forest with a grass forest cover on the lower slopes, and grass on the upper slopes. In depressions where the ground water is near surface, deciduous trees such as poplar occur, along with willow and alder. The soil consists of one major type, that of a regosol which has a 1-4 inch organic horizon, an indistinct A horizon of 1-6 inches and a somewhat loamy B horizon which in some cases is not present at all.

There are no active streams on the property, and no stream beds were found. However small stagnant pools of water were present and many ground water seeps were found in topographic depressions. As these seeps formed pools of water only a few inches deep and surface water movement was extremely small, one would expect the surface water to contain concentrations of fluorine similar to that of the ground water. In fact, in some instances it may be possible for the surface water to yield a higher concentration of fluorine than the ground water because of the high evaporation rate in the hot, dry enviroment of the property. The ground water flow

... Pg. 3

from the property to the lake must be fairly high, for the diamond drill holes located near the main showing yield flows of artesian water, which forms small ponds and finally a small lake and bog in a depression below the main showing. It is also possible that ground water flowing from the main showing would also surface in this depression.

The water samples consisted of two types at most localities. The first sample taken was usually a surface water sample, and the second was a ground water sample. The purpose of taking these two types was to ascertain if dilution of the surface water would prevent the detection of a fluoride anomaly. The ground water samples were taken from pits which were usually dug from 2 to 15 feet away from the surface water, usually in the upslope direction, that is, the direction from which the largest proportion of ground water was originating. A sample of from 60 to 80 millilitres was taken in each case in plastic screw-top bottles. When taking ground water samples it is extremely important to try and avoid carrying solid particles of clay or silt into the sample bottle. If solids are contained in the sample, they must be allowed to settle out and only the upper portion of liquid should be taken for the analysis. All large foreign particles such as twigs and leaves should be filtered out. If this is not done, low readings for fluorine will result.

Soil samples were usually taken at the ground water-soil interface in the pits where the ground water samples were taken. These samples are to be analysed for mercury which is usually associated with fluor-

... Pg. 4

ide deposits. Samples prefixed AH were taken by P.T. Midgley, J.D. Wilfert and B.W. Smee. Other samples were taken by the geologists during traverses.

Upon speaking to the property owner it was discovered that fluorite veins extended over a fairly large area of the property. This being the case,it was feared that the intrusive might be abnormally high in fluorine throughout and an upwards biasing of supposedly background samples would result. Therefore it was decided to obtain water samples of drainages unrelated to the intrusive in order to establish a true background for the area. These samples are not plotted and are referred to only in the histogram.

A detailed description on the operation of the specific ion electrode will be found at the back of this report. A few things should be noted at this time however when the instrument is to be operated in the field camp. The detection limit of the specific ion electrode is .02 ppm F- and has a linear response to concentration only if the instrument is calibrated correctly. For values of fluorine near the detection limit, at least 20 minutes should be allowed for the electrodes to come to equilibrium in the sample solution. If this is not done, high fluorine values will result, and therefore a higher threshold value will be calculated and anomalies may be missed. For higher values of fluorine equilibrium in solution is reached much more quickly. The instrument's calibration should be checked after every fifth sample is analysed. The field kit should contain a stock solution of 20 ppm F-, from which the working stan-

... Pg. 5

dards should be made, a large quantity of distilled water, and sufficient buffer solution for the number of samples anticipated.

RESULTS

The choice of suitable background and threshold values for the fluorite property was a difficult one. The histogram, although containing only a small number of samples, shows three separate peaks for fluorine in the range of .1 to 1.1 ppm F-. The first peak appears at .1 ppm F- and probably represents background fluoride in the non intrusive area. Only one sample taken in the background intrusive area falls into this category. The second peak probably overlaps with the first and peaks about .55 ppm F-. This seems to represent the higher background in the intrusive area, for no true background sample falls near this value. This would tend to confirm earlier suspicions of an intrusive which is high in fluorine throughout. The third peak falls at 1.0 ppm F- and probably represents samples related to fluorite veins or disseminated fluorite. This peak does not statistically represent a true anomalous value at the 95% confidence limits, but one must keep in mind that the number of samples taken over possible fluorite bearing rocks is high in comparison to the total number of samples. The values chosen for background and threshold appear in TABLE 1.

... Pg. 6

TABLE 1

	F- ppm
BACKGROUND	0 - .89
THRESHOLD	.89
3RD ORDER ANOMALY	.90 - 1.09
2ND ORDER ANOMALY	1.10 - 1.30
1ST ORDER ANOMALY	1.30

Figure 2 shows two anomalies, one of first order magnitude, at the top of the mountain along the geological traverses. It is suspected that these values represent small fluorite veins found in the immediate vicinity. Figure 4 shows many anomalies taken on the detailed geochemical traverse. The most prominent series of anomalies occur on the north-east shore of the small lake. It is interesting to note that in a larger body of water such as this, the surface water samples are very constant in their fluoride content, while the ground water samples reflect the fluoride content in their separate watersheds. GEological mapping was subsequently done on the north east side of the lake and small fluorite veins were found.

The geochemical samples taken on the ground water seep running north

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south are constantly anomalous in fluoride. The ground water and surface water samples correlate very closely, which indicates that very little movement or dilution is taking place on the surface. These samples indicate a fluorite source in a cliff face situated to the east and running parallel to the samples.

The third area of anomalous samples occurs beneath the main showing. The water is probably originating from the artesian flows from the drill holes, although the samples taken in the bog at the base of the cliff may also represent true ground water seeps.

CONCLUSIONS AND RECOMMENDATIONS

The specific ion electrode for use on fluorite properties to detect fluorine in ground and surface waters is highly recommended. If used properly under camp rather than field conditions, excellent results can be obtained in a very short time.

The use of this instrument on the Bursary Mountain fluorite showing indicated mineralization in known areas as well as areas which were poorly known. Because of the poor drainage conditions on Bursary Mountain, a detailed coverage was not obtained, so a recommendation on the property itself cannot be given on the basis of instrumental data.

... Pg 8

If this method is to be used in the future, a man trained in its use must operate the instrument. Both ground water and surface water samples should be taken, with emphasis being placed on ground water samples. Care should be taken to note the change in geological and surface conditions of each watershed.

Respectively Submitted by

B.W. Smee

Geochemist

BARRINGER RESEARCH LIMITED

PROCEDURE FOR FLUORIDE CONCENTRATION DETERMINATIONS
IN GROUND AND SURFACE WATERS

Measurement of Fluoride ion concentration can be made with a sensitive millivolt meter such as the Orion 401 and a Fluoride ion electrode.

The potential developed at the Fluoride electrode is dependant on the concentration of F ions in solution: i.e. the potential is proportional to the logarithm of the concentration. However, the potential is also dependant on the total ionic strength of the solution. Further in solutions of high pH, OH- ions interfere with measurement, and if Aluminium is present in solution, some of the F- ions will be complexed by the aluminium into a form which cannot be measured by the Fluoride ion electrode.

The above problems can be eliminated by the addition of a TOTAL IONIC STRENGTH ADJUSTMENT BUFFER (TISAB) to the sample solution. The TISAB 1) provides a high constant ionic strength to the solution 2) buffers the solution to pH 5.5 3) complexes the aluminium such that all F- is released and can thus be measured.

Determination of Fluoride Ion Concentration

The meter and electrodes should be set up in accordance with the instruction manuals, with the reference electrode filled with the filling solution (#90-00-01) to within ½" of the filling hole.

The batteries can be tested with BATT setting and should read in the Battery OK region.

To conserve the batteries,the meter should only be switched on when readings are to be taken.

The electrodes should be rinsed with distilled water, and patted dry with tissue. The electrodes are delicate and should be kept clean and care should be taken to avoid scratching the ends of the electrodes.

Calibration

TISAB and a standard 20 ppm Fluoride solution are included with the kit. By dilution of the 20 ppm solution with distilled water, 0.02 ppm, 0.2 ppm and 2.0 ppm solutions should be made up.

The instrument may now be calibrated by pipetting 10 ml of the appropriate standard into one of the plastic beakers, and adding 10 ml of TISAB. The appropriate standard chosen for calibration should have approximately the same concentration as the expected readings of the sample solutions.

...Pg. 2

e.g. Calibration with 2.0 ppm solution

1. Pipette 10 ml 2.0 ppm solution into beaker
2. Add 10 ml TISAB
3. Swirl the beaker to mix the solution
4. Place the electrodes in the solution let stand 8-10 minutes
5. Set the meter switch to F-
6. Adjust the Calibration control so the the needle reads 100 on the RED SCALE
7. Rinse and wipe both electrodes
8. Repeat steps 1 to 5 with 20 ppm solution
9. Adjust the temperature compensation control so that the needle reads 1000 on the RED SCALE
10. Adjust the % Slope control (plastic dial) so that the Temperature Compensator control is set at the temperature of the solutions.
11. Rinse and wipe the electrodes. The meter is now calibrated and sample readings may be taken. Final concentration readings are given by F- ppm = $\frac{\text{meter reading}}{100} \times 2$. The scale is linear between 0.2 ppm and 20 ppm

If the sample solutions are in the less than 0.2 ppm range, the meter may be calibrated in the same manner by setting 0.2 ppm at 100 and 2.0 ppm at 1000.

However for concentrations less than 0.2 ppm the scale is not linear and the calibration curve must be used to determine the final concentration readings.

Sample readings

The procedure for reading F- concentrations in samples is the same as steps 1 to 5 above.

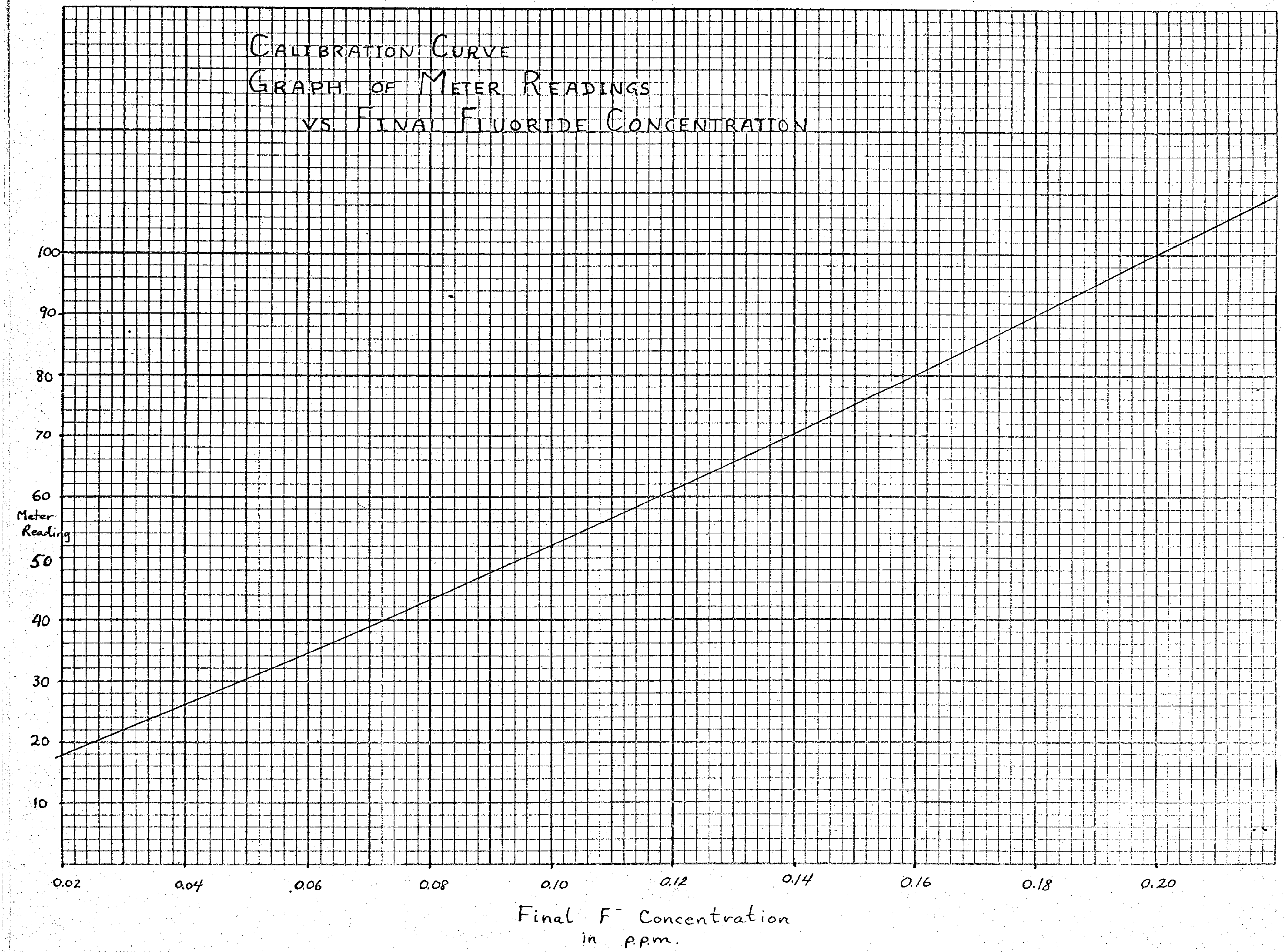
The temperature of the samples should be the same as the standards. (If they are not, the Temperature Compensation control may be used to correct for the temperature difference by setting the control at the temperature of the samples)

...Pg. 3

If calibration has been with 2.0 ppm at 100 and 20.0 ppm at 1000, the final concentration readings are given by $F^{-}\ \text{ppm} = \frac{\text{meter reading}}{100} \times 2$

If calibration has been with 0.2 ppm at 100 and 2.0 ppm at 1000 the final concetration readings are given by $F^{-}\ \text{ppm} = \frac{\text{meter reading}}{10} \times 2$

However, for concentrations below 0.2 ppm, the calibration curve should be used.



Calibration Curve
Graph of Meter Readings
vs. Final Fluoride Concentration
100
90
80
70
60
Meter Reading
50
40
30
20
10
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16
0.18
0.20
Final F⁻ Concentration
in p.p.m.

BARRINGER RESEARCH

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REXDALE, ONTARIO, CANADA
PHONE: 416-677-2491
CABLE: BARESEARCH

GEOCHEMICAL LABORATORY REPORT NO. DATE

SAMPLE NO.	F- ppm	Sample No.	F- ppm	Sample No.	F- ppm
AH-1	.58	AH-27	.96	AH-49	.14
AH-2	.22	AH-29	.96	AH-51	.600
AH-3	.118	AH-30	.92	AH-54	.560
AH-6	.68	AH-31	.92	AH-52	2.08
AH-7	.68	AH-32	1.00	AH-55	6.60
AH-9	.56	AH-34	.96	AH-57	.70
AH-10	.57	AH-36	1.04	AH-58	4.90
AH-11	.57	AH-37	.74	AH-60	.470
AH-13	.60	AH-38	.78	AH-61	.122
AH-14	.62	AH-40	.74	AH-63	.360
AH-15	1.22	AH-41	.70	AH-64	.260
AH-17	14.2	AH-42	.68	AH-66	.40
AH-19	.56	AH-43	.80	AH-67	.24
AH-21	.96	AH-44	.46	AH-69	.44
AH-22	.78	AH-45	.92	AH-71	.32
AH-23	.96	AH-46	.92	AH-73	.44
AH-24	.45	AH-47	1.06	AH-74	.144
AH-26	1.00	AH-48	.144	AH-77	.120

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CABLE: BARESEARCH

GEOCHEMICAL LABORATORY REPORT NO. DATE

	SAMPLE NO.		F-								
			ppm								
	AH-79		.220								
	AH-81		.176								
	AH-83		.30								
	AH-85		.24								
	AF-1		1.08								
	C-1		.50								
	C-4		1.32								
	C-10		.68								
	C-11		.68								
	C-22		.32								
	tap water		.75								

FLUORINE vs FREQUENCY

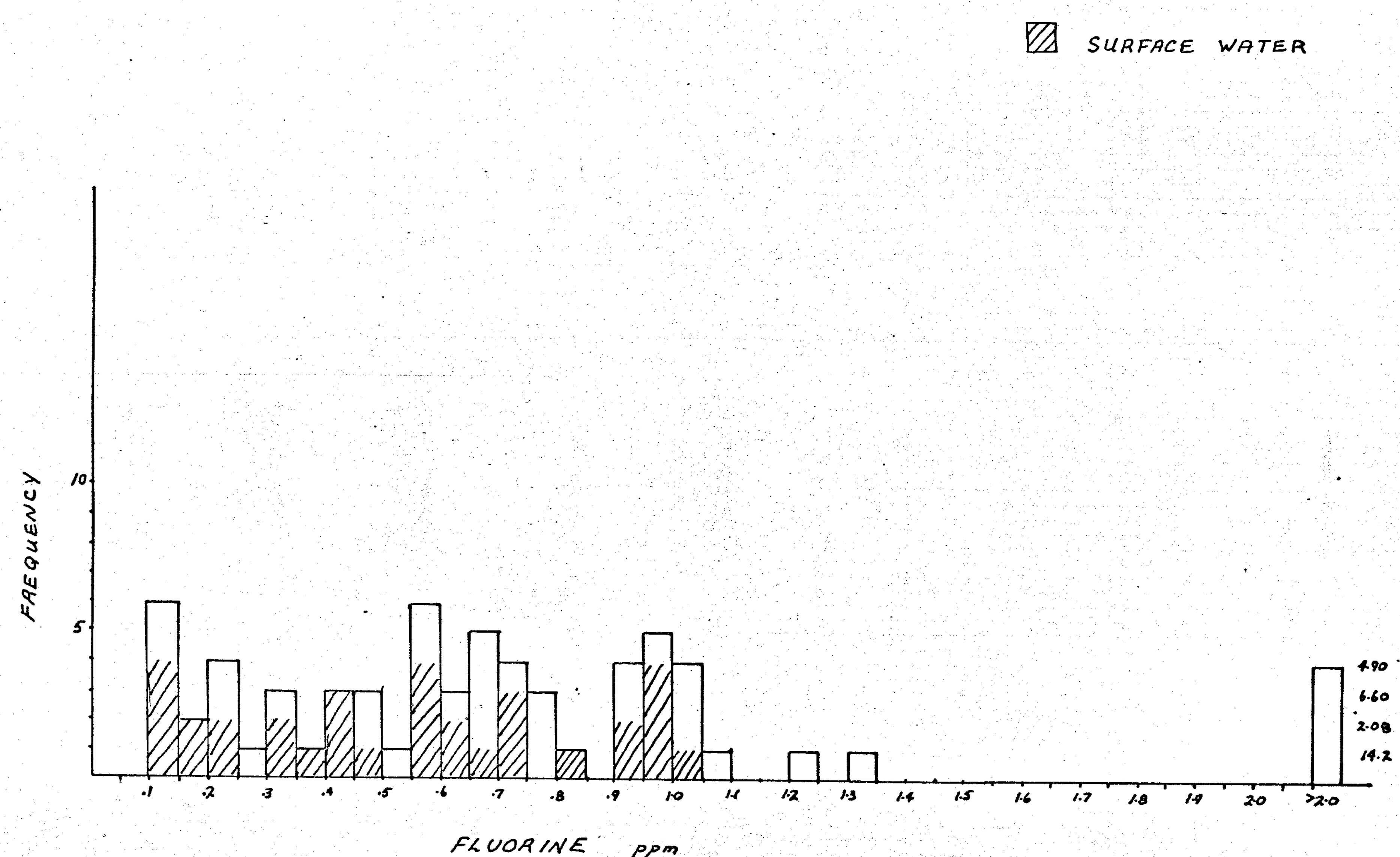
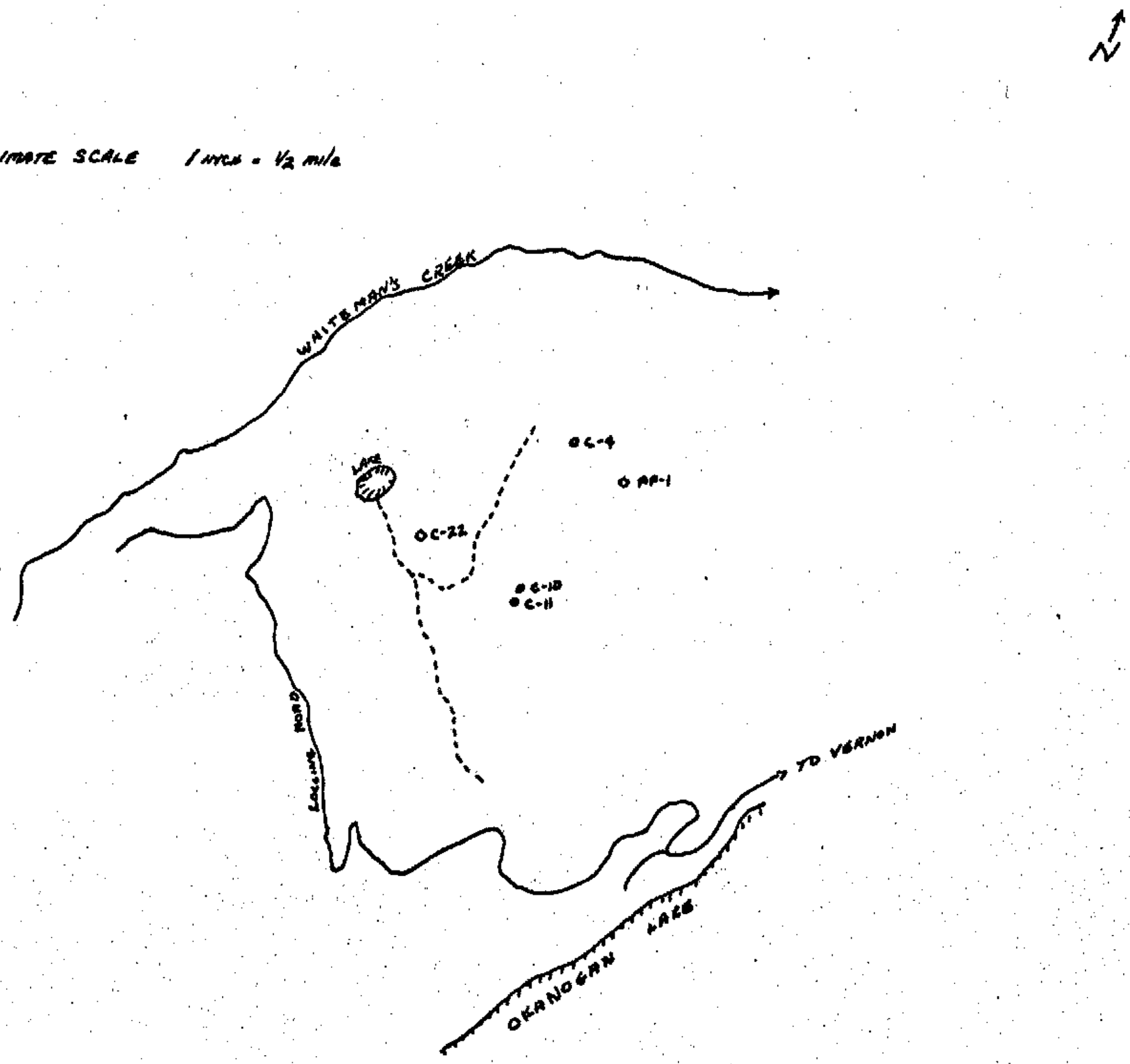


FIG 1

APPROXIMATE SCALE 1 inch = 1/2 mile



KELVA MINING
BURSARY MOUNTAIN FLUORITE PROPERTY
GEOCHEMICAL SAMPLE LOCATIONS (WATER SAMPLES ONLY)

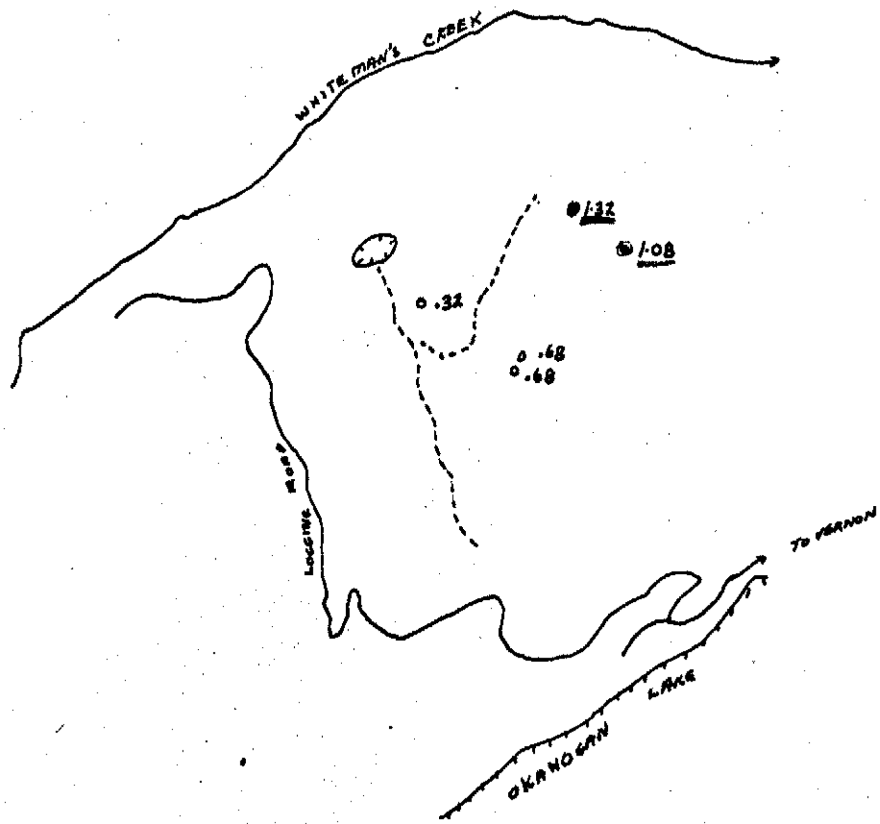
WORK UNDERTAKEN FOR
CERRO MINING OF CANADA

MAY 1971

FIG 2

N

APPROXIMATE SCALE 1 INCH = ½ mile



LEGEND

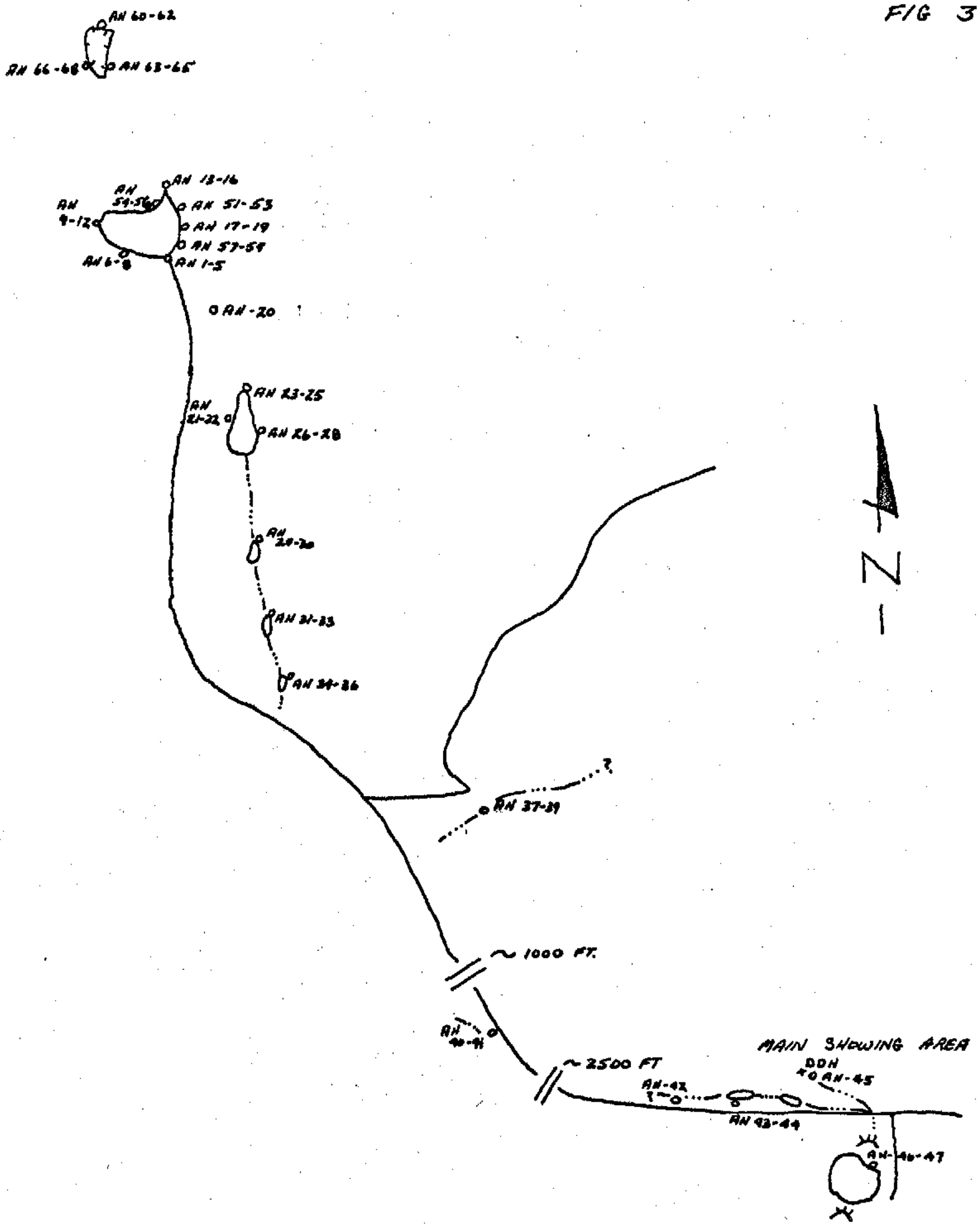
BACKGROUND	0 - .89	ppm F^-
THRESHOLD	.89	ppm F^-
3RD ORDER ANOMALY	.90 - 1.09	ppm F^-
2ND ORDER ANOMALY	1.10 - 1.30	ppm F^-
1ST ORDER ANOMALY	>1.30	ppm F^-
o SAMPLE LOCATION		

WORK UNDERTAKEN FOR
CERRO MINING OF CANADA

KELVA MINING
BURSARY MOUNTAIN FLUORITE PROPERTY
FLUORIDE ANALYSIS
(WATER SAMPLES ONLY)

MAY 1971

FIG 3



LEGEND

o AN-1	SAMPLE LOCATION
x DDH	DIAMOND DRILL HOLE
------ . . .	GROUND WATER SEEP OR INTERMITANT STREAM
———	ROAD

KELVA MINING

BURSARY MOUNTAIN FLUORITE PROPERTY

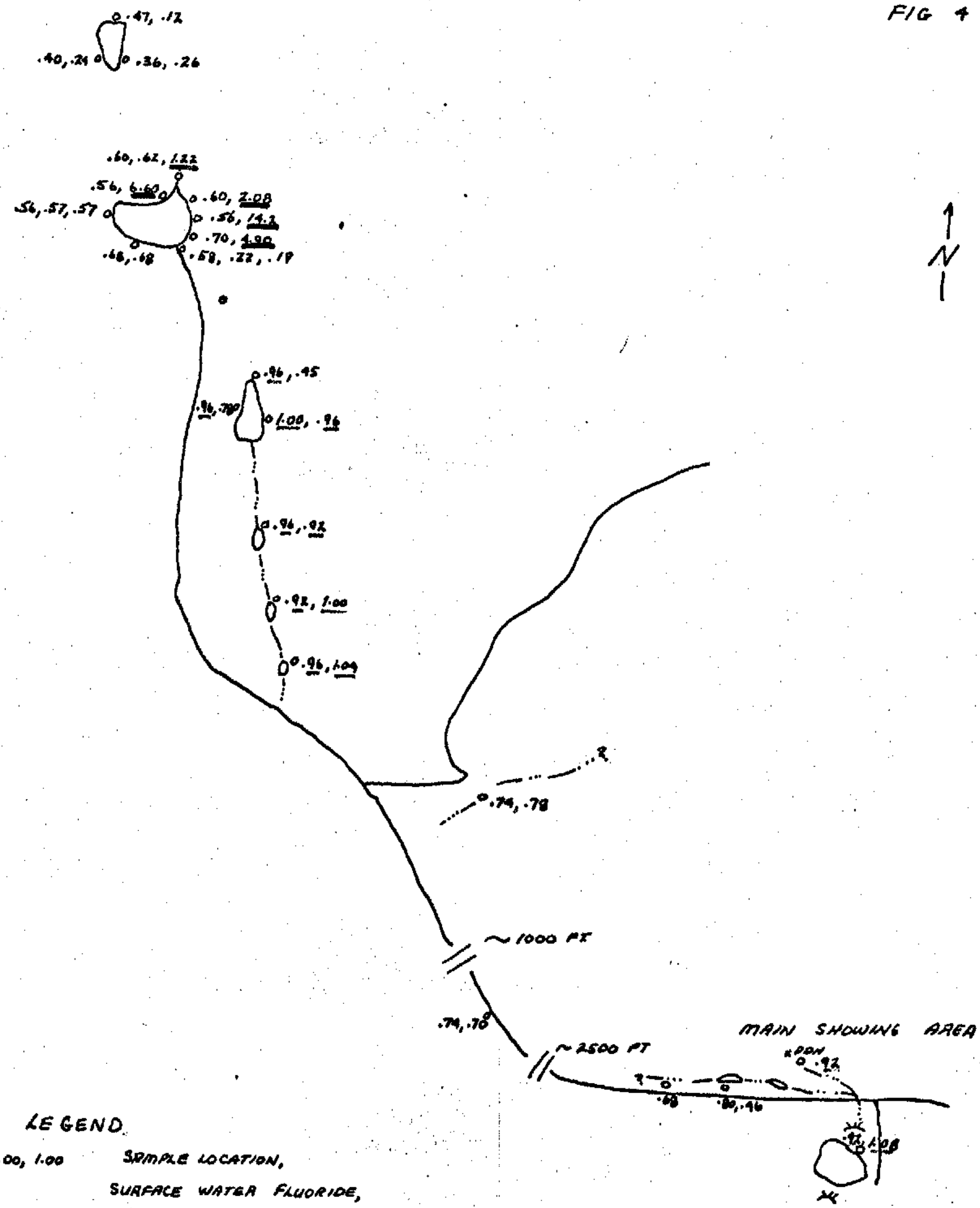
GEOCHEMICAL SAMPLE LOCATIONS

SCALE = 1" = 100'

MAY 1971

WORK UNDERTAKEN FOR
CERRO MINING OF CANADA

FIG 4



LEGEND

o .92, 1.00, 1.00	SAMPLE LOCATION, SURFACE WATER FLUORIDE, GROUND WATER FLUORIDE.	
BACKGROUND	0 - .89	ppm F⁻
THRESHOLD	.89	ppm F⁻
3RD ORDER ANOMALY	.90 - 1.09	ppm F⁻
2ND ORDER ANOMALY	1.10 - 1.30	ppm F⁻
1ST ORDER ANOMALY	> 1.30	ppm F⁻

KELVA MINING
BURSARY MOUNTAIN FLUORITE PROPERTY

FLUORIDE ANALYSIS
(WATER SAMPLES ONLY)

WORK UNDERTAKEN FOR
CERRO MINING OF CANADA

SCALE ≈ 1" = 1000'

MAY 1971

APPENDIX B

COST DISTRIBUTION

SALARIES:

C.B. Campbell - Project Geologist May 10th, 11th, 2 days @ $75.00	150.00	
N.G. Cawthorn - Field Geologist May 10th, 11, & 12th, 3 days @ $30.00	90.00	
A.R. Findlay - Field Geologist May 11th 1 day @ $40.00	40.00	
P. Midgley - Geochemical Supervisor May 10th, 11th, 12th 3 day @ $30.00	90.00	
J. Wilfert - Field Assistant May 10th, 11th, 12th, 3 days @ $20.00	60.00	
		430.00
ACCOMMODATIONS:		
C.B. Campbell, N.G. Cawthorn, A. Findlay, P. Midgley, J. Wilfert, 12 man days @ $10.00		120.00
B.W. Smee, Barringer Research Ltd. 1 day @ $10.00		10.00
TRANSPORTATION:		
2 wheel drive 700 miles @ 12¢/mile	84.00	
4 wheel drive 20 miles @ 15¢/mile	3.00	87.00
PROFESSIONAL CONSULTANTS:		
Barringer Research Ltd. analysis, fieldwork and report		469.42
RENTAL:		
Fluoride Ion Electrode and Orion 401 Millivolt meter		100.00
REPORT PREPARATION:		
C.B. Campbell 1½ days @ $75.00		112.50
		$1437.64

Declared before me at the

of VANCOUVER, B.C. in the

Province of British Columbia, this DEC 2 1971

day of , A.D.

Sub - Mining Recorder

A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia.

PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA — D.K. MUSTARD

to Vernon
Browns Creek
Whitemans Creek
Bouleau Creek
to Westbank
3393 M-4
All weather gravel road
Earth road
— 1500 — Topographic contour (100' interval)
QUATERNARY
21 Glacial, lacustrine, and fluviatile gravel
TERTIARY (KAMLOOPS GROUP)
20 Basaltic lava, flow breccia
CRETACEOUS or TERTIARY
19 Syenite, quartz syenite, and granite
JURASSIC and/or CRETACEOUS (COAST INTRUSIONS)
18 Coast intrusions (undivided)
18a Quartz monzonite (locally porphyritic)
18b Syenite
18c Altered biotite diorite
Feldspar porphyry dykes
Felsite dykes
PALAEOZOIC (CACHE CREEK GROUP)
15 Limestones
Geological contact (after G.S.C. 1059A)
Fracture orientation: vertical
Fracture orientation: dip
Fluorite occurrence
Diamond drill hole
Approximate claim boundary
Detail: West showing (Fig. 3)
Detail: Main showing (Fig. 4)
Traverse location references
Geochemical sample locations (Report by B.W. Smee)
Area of anomalous samples
To Accompany Geological and Geochemical Reports
On Kelver Mines Bursary Mountain Fluorite Property
By C. B. Campbell, B.W. Smee June 15th 1971
Department of Mines and Petroleum Resources
ASSESSMENT REPORT
3393 MAP #4
CERRO MINING COMPANY OF CANADA LIMITED
DIVISION: WESTERN PROVINCE: B.C.
KELVER MINING
BURSARY MOUNTAIN FLUORITE PROPERTY
SCALE: 1 inch = 1,000 feet
N.T.S: 82·L·3,4
DRAWN: P.T.M.
CHECKED:
PROJ. NO: 40·076
REVISED:
DATE: JUNE, 1971
DWG. NO: 2