

Dave

#4692

862375

PROJECT 117 - TARGET PROJECT

FIRST QUARTER REPORT JAN. - MARCH 1977

① Nechako U 3 months 15000

② Heber R
Car
in volcanic
near diorite
intrusions also
most planned
geothermal

3500

by

J.C. STEPHEN

10,000

③ Lion Group
State & examine
GSWB to participate

North Vancouver, B.C.

March 1977

(1) all sounds good
(2) acknowledge
(3) participate in exam

J.C. STEPHEN EXPLORATION LTD.

1124 WEST 15th STREET
NORTH VANCOUVER, B.C.
V7P 1M9

TELEPHONE (604) 988-1545

March 31, 1977

Mr. G.S.W. Bruce
Dome Exploration (Canada) Ltd
600 - 365 Bay Street
Toronto, Ontario.
M5H 2V9

Re: Target Project # 117

Dear Mr. Bruce:

Enclosed is the Target Project First Quarter Report, together with a Financial Report and a request for further money to be deposited to the Trust Account for this Project.

As a result of the three small uranium anomalies in the Nechako area, samples were selected from areas of varied geology to the north, through the Babine and Takla Lake areas, which were run for uranium.

Although these samples represented a considerable variety of geology there were no anomalies of any significance. A few weakly anomalous results were obtained over one granitic area but all other samples ran less than .5 ppm U.

Charles Barrie, who did the work on the BAR group last year, has been hired primarily to do follow up work for TARGET project if you are in agreement with the programs as set forth in the quarterly report. His assistant will be George Watson. Work is not expected to start until May. This crew can be relied on to get a good deal of work done with a minimum of direction as I expect to be very much tied up with the D.C. Syndicate program for most of June and July. By that time we should have that program in a make or break situation.

I am personally in favour of an aggressive program on the LION group but as a "Proposed Program" have outlined a minimum of work for this summer. Snow may not be off the hills there until June 10 or so but if possible I would like to look at the property with you as soon as possible after that date.

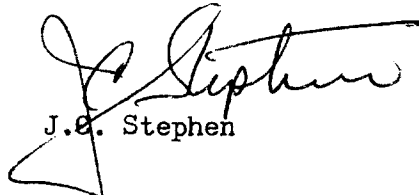
A summary of some statistics for Target Project are as follows: -

Number of Samples Run	Number of Determinations									Total	Cost
	Pb	Zn	Mo	Ag	As	U	W	Au			
886	249	665	56	327	425	590	197	43	2552	\$ 3267.	

No "hot" situations have been directly evolved from the lab work so far done. A fair amount of field checking is warranted however.

Enclosed with this letter is a request for an additional \$5,000. deposit for this program to continue work until the field season has started. At that time further funds will be requested in accordance with your feelings toward the programs outlined in my report.

Yours very truly,



J.E. Stephen

JCS/ms

J.C. STEPHEN EXPLORATION LTD.

1124 WEST 15th STREET
NORTH VANCOUVER, B.C.
V7P 1M9

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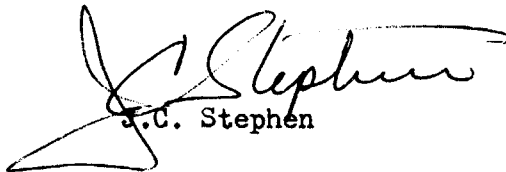
April 1, 1977

Dome Exploration (Canada) Ltd
600 - 365 Bay Street
Toronto, Ontario
M5V 2V9

Re: Project No. 117
Target Project

Request is made herewith for a deposit of \$ 5000.00
to J.C. Stephen Exploration Ltd., Trust Account #1, Account No. 87-01016
Canadian Imperial Bank of Commerce, Pender and Bute Branch, Vancouver, B.C.

This money is to be used exclusively for operation of
the Target Project Number 117.


J.C. Stephen

JCS/ms

TARGET PROJECT - PROJECT 117
FINANCIAL REPORT MARCH 31, 1977

<u>Account</u>	<u>Year to date</u>
Assays	3266.75
Casual Labour	11.25
Blueprinting, drafting & supplies	8.80
Purchases - maps, photos, publications etc.	23.45
Bank charges	1.75
J.C. Stephen Services	<u>1238.75</u> *
TOTAL EXPENDITURES	\$ 4552.43
+ Bank Balance - March 31, 1977	<u>447.57</u>
TOTAL CONTRIBUTIONS - 1977	\$ 5000.00

* This does not include J.C. Stephen Services
March 1 - 31 which are \$536.60

March 31, 1977

PROJECT 117 - TARGET PROJECT
FIRST QUARTER REPORT JAN. - MARCH 1977

As a result of research and analysis of geochemical samples several targets are proposed for follow up during summer 1977.

These targets, proposed by J.C. Stephen Explorations Ltd., are to be covered by our agreement providing an interest in any claim groups staked.

<u>Targets</u>	<u>Map Sheet</u>	<u>Estimated Cost</u>
1) Nechako Uranium	93 F, G	\$ 15,000.
2) Heber River Vancouver Island	92 F/13	3,500.
3) Lion Group	93 M/16	<u>10,000.</u>
	Total	\$ 29,500.

A brief summary of current information is enclosed for each target. The one of greatest potential is "Nechako Uranium" and a fairly wide ranging reconnaissance program is proposed.

In order to carry out these programs it seems advisable to have a two man crew employed all summer with possible aid from other crews early in the spring and again in the fall if necessary. In other words some of the D.C. Syndicate crew could help on this project before the Yukon program starts and again in September after the Yukon program is completed.

TARGET 'Nechako Uranium'

Introduction

Relatively high air scintillometer readings are reported over some parts of the Topley intrusives west of Prince George. Uranium bearing mineralization occurs in a rhyolite dyke on Nithi Mountain.

This information suggested available source rocks for uranium. Leaching of this uranium and redeposition near the base of Tertiary volcanics and sediments might produce economically viable uranium deposits.

Research has listed several analogous geological situations in B.C., Washington, Mexico, and Japan where economic uranium deposition provides geological models for this program.

The relatively few silt samples available for this region were analyzed for uranium and three somewhat anomalous zones have been indicated.

Geological Models

1) Fuki - Donen British Columbia 82E/10W

From B.C. Department of Mines Geological Fieldwork 1975 p 31

"Secondary uranium minerals mainly (Autunite) have accumulated in unconsolidated gravel and sand deposits that are preserved below a cap of Miocene plateau lavas. ...low grade disseminated uraninite in basement rocks (for example, Carmi molybdenum prospect) may be the source."

From G.S.C. Paper 75 - 1 Part C Report of Activities.

"Preliminary results would seem to indicate that the lake sediment and stream sediment anomalies coincide with the drilled buried uranium mineralization."

2) Midnight Uranium Mine, Stevens County, Washington

J.T. Nash U.S.G.S. N.J. Lehrman Dawn Mining Co.

"Ore bodies are in metamorphosed ...rocks of a roof pendant adjacent to a Cretaceous? porphyritic quartz monzonite..."

"Deposits are bounded on at least one side by unmineralized intrusive ribs of granite rock, and the thickest mineralization zones invariably occur at depressions in the intrusive contact."

"Economic zones ...have been secondarily enriched in late Tertiary time by ...migration of uranium into permeable zones ...influenced by ground water controls..."

- 3) Genesis of Uranium Deposits of the Tono Mine, Japan in Formation of Uranium Ore Deposits, International Atomic Energy Agency Athens 1974 p 437.

"The uranium deposits of the Tono Mine... occur in the basal part of the Toki group of Miocene age, and are distributed in the tributaries or at the heads of channels on the plane of unconformity under the formation."

- 4) Notes from a paper presented to the G.A.C. Vancouver, Jan. 1977

"The Geology and Geochemistry of the Mount Taylor Uranium Deposit" Walter C. Riese, Gulf Mineral Resources Co., New Mexico.

Uranium occurs in fluvial sandstone deposits of Morrison formation between mudstones below and tuffaceous mudstones above.

Ore trend seven miles long, up to $\frac{1}{2}$ mile wide and 30 to 70 feet thick.

Whereas the first three geological models above are situated in upper tributaries or channels at an unconformity or contact directly associated with a uraniferous source rock (granite) the fourth model occurs in a mature, wide, paleovalley. The uranium source is thought to be tuffs originally bearing 4 to 8 ppm uranium which have been leached.

The uranium is concentrated upon redeposition in sandstone channels rich in organic debris.

Without citing all the available literature, both types of potential source rocks, granites and widespread acid tuffs, occur in the Nechako area. Paleochannels, both as upper tributaries in contact with granitic rocks, and as mature valleys with organic debris (lignite) exist.

Geochemical Results of TARGET PROJECT Jan. - March 1977

Figures II, III, and IV forwarded with this report depict the general geology and geochemical results so far obtained in the Nechako region.

The silt samples available were collected during programs oriented toward porphyry copper type deposits and, in general, areas of Tertiary sediment and volcanics were avoided.

Uranium analysis was by the fusion method rather than by neutron re-activation and this results in a general background level of less than 0.5 ppm U. This is in contrast to the general background of about 4 ppm in the G.S.C. program in south eastern B.C.

Values of 10 to 30 ppm U should be considered as distinctly anomalous while the results plotted on the distribution graph Figure I - indicate values over 5 ppm to be anomalous.

The three anomalous zones warrant a ground check this summer but are not in themselves high priority targets.

The potential of this program lies in the possibility that a hitherto unrecognized field of uranium deposition may exist at or near the unconformity at the base of the widespread Tertiary volcanics and sediments in the Nechako area.

Proposed Program

A two man party would carry out a reconnaissance silt sample program from roads in the region. Uranium is relatively mobile with fairly extensive dispersion trains. This preliminary

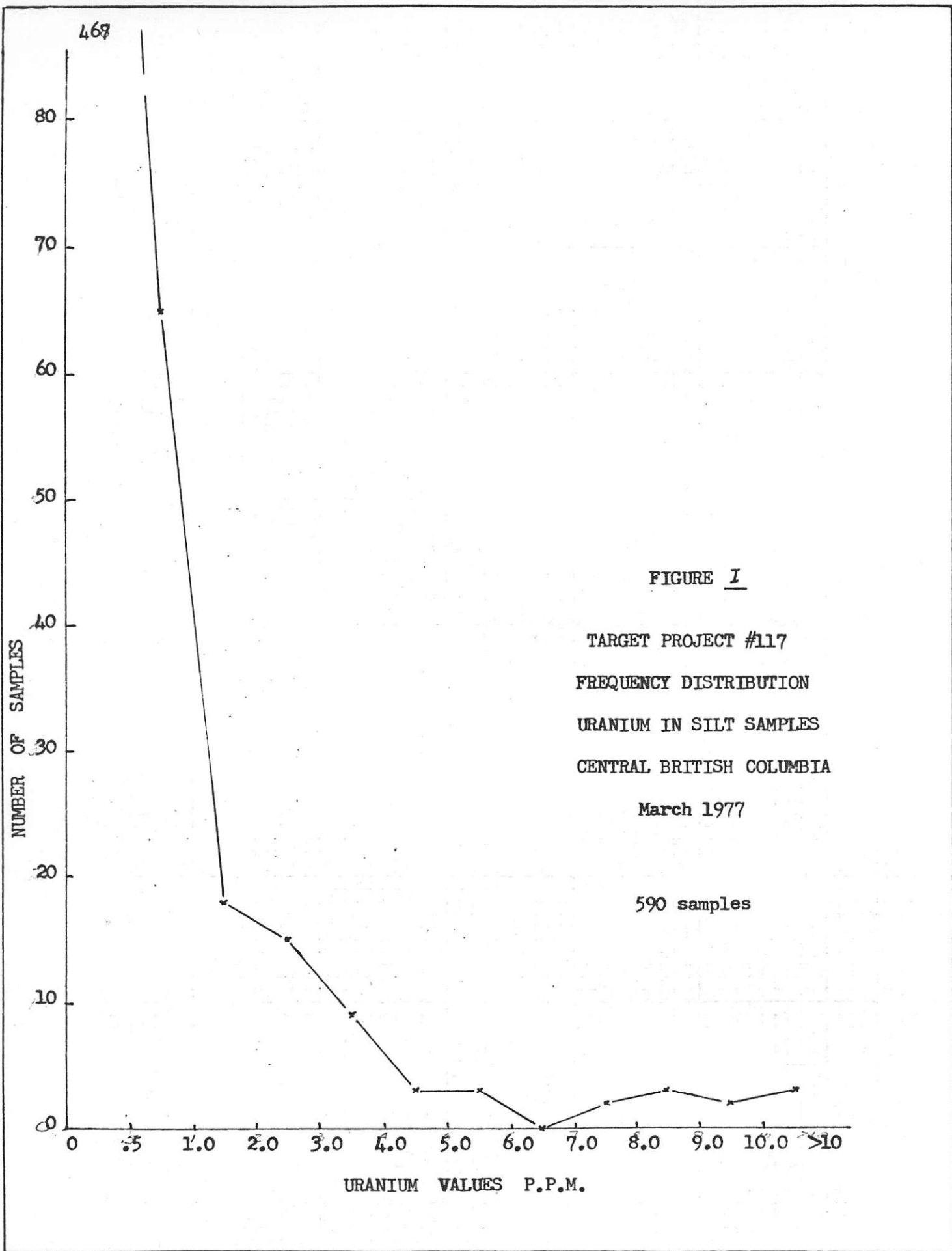
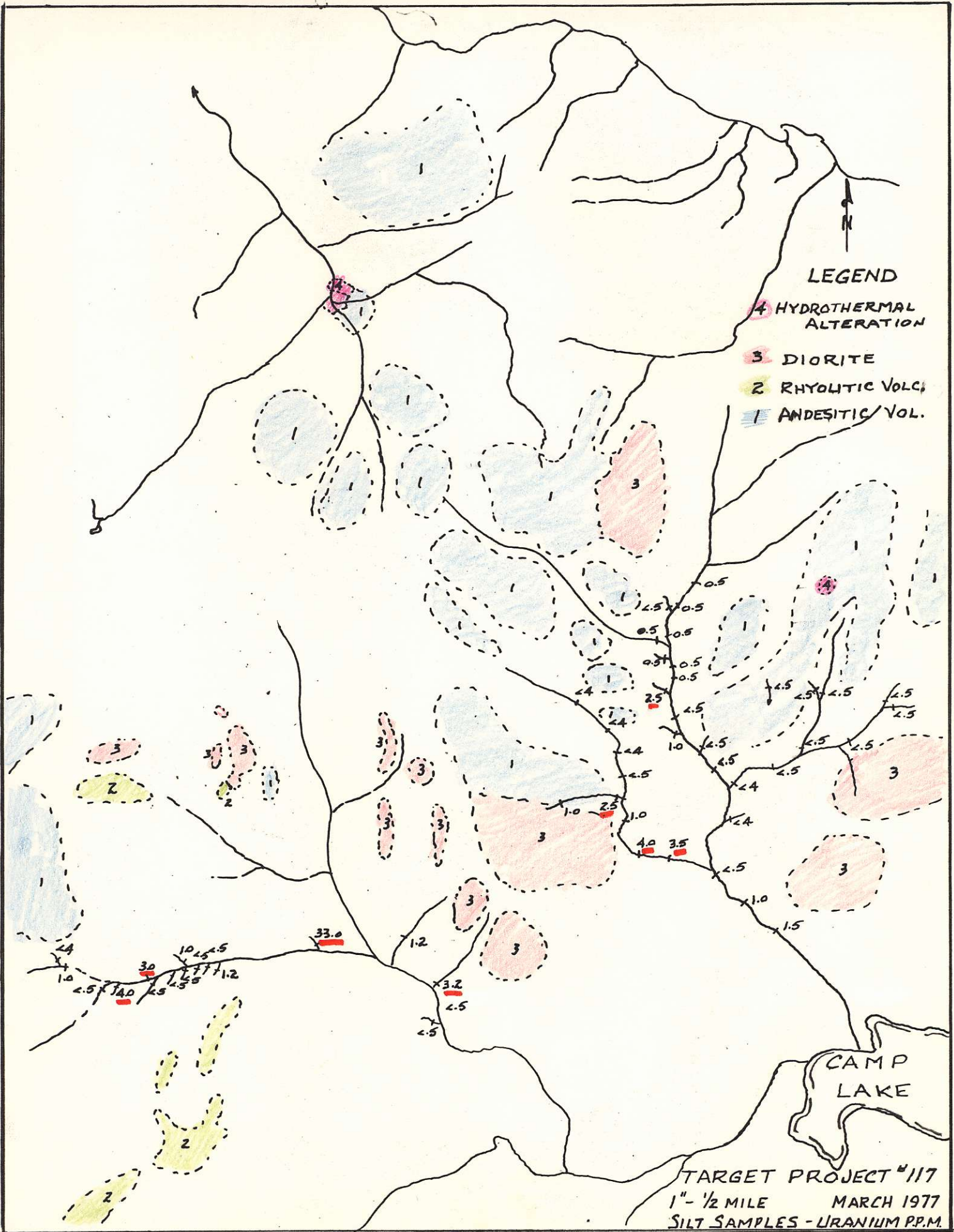


FIGURE I

TARGET PROJECT #117
 FREQUENCY DISTRIBUTION
 URANIUM IN SILT SAMPLES
 CENTRAL BRITISH COLUMBIA
 March 1977

590 samples



93F/14E

FIGURE II

regional reconnaissance would be followed by more detailed examination of some apparently favourable geological conditions such as the region near Batnuni cone (93F/8) and the presently known three anomalous areas.

Upon receipt of results of the preliminary silt sampling, prospecting would be directed toward anomalous areas.

If it can be demonstrated that significant uranium mineralization is associated with either the granitic terrain - Tertiary unconformity or with Tertiary fluvial deposits in major pre Tertiary valleys, a very extensive staking and exploration program could be envisaged.

Even with only limited anomalous results from the first road oriented silt sample program consideration should be given to a helicopter supported lake sampling program.

Minimum Cost Estimate - Monthly Basis

1) Geologist	\$ 1,400.
2) Helper	900.
3) Vehicle Rental and Fuel	500.
4) Food and Supplies @ \$10.00 per day	600.
5) Geochem 250 samples @ \$3.00	750.
6) J.C.S. Services	500.
7) Telephone, Express, Insurance	150.
8) Equipment, Maps, (Prorated)	<u>200.</u>
	\$ 5,000.

A three month program is proposed at a cost of \$ 15,000.

TARGET 'Heber-River' Vancouver Island 92F/13

A copy of a J.C. Stephen report on the area dated 1963 and a memo to LUC Syndicate 1971 follow as pages of this report.

Geochemical testing was done in the field using rubenic acid kits and as a result no numerical values are available for silt samples.

It is proposed a two man party visit the area early in the 1977 season to silt sample streams, examine new logging areas and prospect.

Priority should be given to the south margin of the intrusive body where the best grade copper mineralization was found in veins and fractures in the volcanics.

It is suggested the program should take three weeks and on the basis of estimated costs for a two man party would cost approximately \$3,500.

HEBER RIVER

92F/13

The accompanying notes and sketch map describe the area to be prospected. From present knowledge, the south and southwest contact area of the granitic intrusive deserve the most attention.

- (A) All creeks should be silt sampled.
- (E) Geology should be mapped with particular attention being paid to the structural attitudes of the volcanics, and to fracture patterns.

Access to the area has changed considerably in the past few years. The main access road is the Campbell River - Gold River highway but the Heber River valley access is by logging road. This area was held by Elk River Logging and in past years they have been extremely cooperative. Elk River Logging therefore should be approached and permission to use their roads arranged before any trespass is made on their roads or logging permits. Great care should be taken to maintain cordial relations and prospecting camps and vehicles must not impede logging operations. The strictest care should be taken with any possible fire hazards.

Our last permission to use these roads was for Mastodon Highland Bell Mines during 1963.

J.C. Stephen
LUC SYNDICATE

May 17/71

HEBER RIVER AREA:

There is abundant evidence of earlier prospecting in the Heber River area, particularly in the upper west branch and over the height of land toward Gold Lake.

As shown on the sketch opposite, this area is underlain by a dioritic intrusive. No mineralization was noted in this body but it appears to be the source of, or related to, quartz filled fractures in volcanics located in the contact areas at the north end of the intrusive. These quartz veins are often well mineralized with pyrite and occasionally with some chalcopyrite and magnetite. Fractures in the volcanics and in the diorite are often mineralized with pyrite. Rare examples of molybdenite were found. Well mineralized material from the west vein assayed 0.10 Au. and 0.10 Ag per ton across 12 inches.

South of the intrusive and west of the Heber River are massive dark green volcanics probably of the Karmutsen series. Widely scattered bornite and chalcopyrite mineralization was found in these volcanics. The best of this material assayed 2.40% copper, Trace - gold, 0.4 oz. silver. No definite zone was found.

A system of mineralized fractures was noted carrying magnetite and chalcopyrite over narrow widths. This system is approximately vertical and strikes N 50° E. Sub-parallel zones of quartz and pyrite were also found. These zones are sometimes offset by north or north-east striking faults which are unmineralized.

North of the intrusive and west of the east branch of the Heber River, silt sampling returned positive results, but in spite of widespread outcrop no mineralization of any kind was found. Check silt samples were also positive. The writer has no reasonable explanation. A small remnant of limestone was found to the east approximately on the boundary of Strathcona Park. Age of this limestone could not be determined.

LIST OF ASSAYS CORRESPONDING TO SAMPLE NUMBERS SHOWN ON GEOLOGY
SKETCH OF UPPER HEBER RIVER

<u>SAMPLE NO:</u>	<u>Cu%</u>	<u>Zn%</u>	<u>Au.oz.</u>	<u>Ag. oz.</u>
36013	0.85	0.59	Tr.	Tr.
36014	-	-	0.08	0.30
36015	0.25	0.23	Tr.	Tr.
36016	-	-	Tr.	0.10
36017	2.40	-	Tr.	0.40
36018	-	-	0.10	0.10
36019	-	-	Tr.	Tr.
36020	-	-	0.02	Tr.

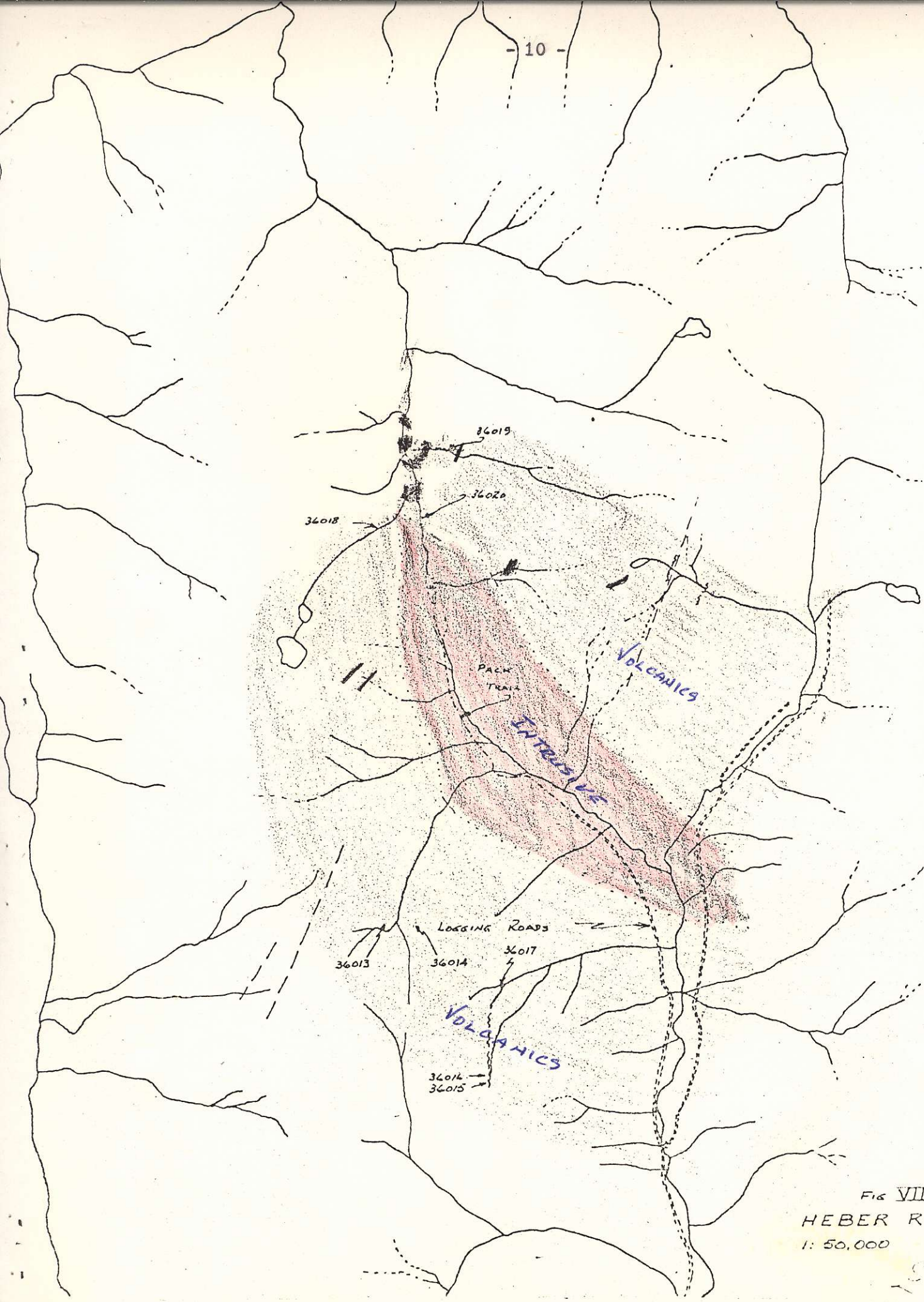


FIG VII
HEBER RIVER
1: 50,000 1963

950

TARGET 'Lion Group' 93M/16

Introduction

Reference - Geological, Geochemical, Geophysical Report on the LION
I and II Claim Groups November 30, 1973.

This report was forwarded to members of LUC Syndicate
in 1973. A soil sample program, preliminary geological mapping and
a small amount of IP work was completed and filed as assessment work.

Exploration Results

No significant mineralization other than copper was
found. A picked sample from No. 1 zone assayed 3.21% Cu; 0.55 oz Ag;
Tr Au. Chalcopyrite occurs in fractures in dark green andesite and
grey cherty rhyolite over widths of about 4 feet. Pyrite occurs in
fractures for several tens of feet on either side of the zone.

The best assay from No. 2 zone was 0.29% Cu across
10'. Average value for the zone was 0.14% across (or along?) 130'.

No 3 zone occurs on a cliff face and was not sampled.
Fragments containing malachite and up to $\frac{1}{2}$ " veins of chalcopyrite
occur in the talus.

These three showings occur over a north south distance
of about 7000' in a region of steep north east facing cliffs.

On the west side of the ridge fairly extensive quartz
limonite gossans occur which are the most anomalous areas for copper
in the soil sample results.

To the north west silt and soil sampling has indicated
another anomalous area. Limited IP was done here but the zone is not
well defined. In my opinion the ground should be restaked which would
require 3 British Columbia claims of 33 units minimum. More detailed
geological mapping should be done, trenches should be blasted into the
gossan zones in an attempt to reach fresh rock, and further geophysical
surveying should be done. Pulse type EM would probably be more useful
than IP.

Proposed Program

Contract staking 33 units @ \$100.	\$ 3,300.
Examination by G.S.W. Bruce and J.C. Stephen as early as possible in summer 1977	1,500.
Minimum line cutting, trenching program to hold claims for first year if warranted	<u>5,200.</u>
	\$ 10,000.

Quesnel River - Dragon Lake 93B/16

Three zones of anomalous geochemistry occur in the region north of Gibraltar Mines. The area had been extensively staked during exploration of the Gibraltar property but emphasis was on porphyry copper. Our geochemistry outlines zones of zinc, arsenic and weak copper values in three areas. Two of these are more or less coincident with aeromagnetic lows while the third is a seven mile long sedimentary formation with low zinc, copper, molybdenum and arsenic values. No significant gold values were obtained over these zones. No uranium values were obtained.

The area is underlain mainly by Lower Jurassic sediments though some intrusive dykes occur as well as Tertiary volcanics. A small gold prospect occurs at the north end of the anomalous trends.

It is proposed a two man crew will prospect these anomalies and run soil sample lines across them at relatively wide intervals if time and money permit at the end of the 1977 season. These are low priority anomalies.

General Geochemical Research

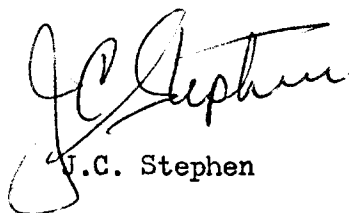
Analysis of 127 samples for uranium representing Topley intrusives, Tachek volcanics, Cretaceous sediments atc. from the Babine - Takla Lakes area, failed to indicate any significant uranium content in that region.

A few low tungsten values were obtained in scattered parts of the Topley intrusives and from a few samples in the vicinity of the Hogem batholith in the Omineca. None of these were consistent or high enough to be important. One small area however, east of the Fraser River and north of Quesnel warrants some prospecting.

A relatively large number of samples, mainly soils, from the old ROCK, TWIN, and LION claim groups were run for Zn, As, Ag, Pb. It was felt that one or more of these elements should be present in important amounts if the mineralization had a volcanogenic origin.

No significant values were obtained for any of these elements. As a result, the suggestion gains strength that the mineralization is related to nearby intrusives and is therefore primarily of a "porphyry" nature.

This report respectfully submitted.


J.C. Stephen

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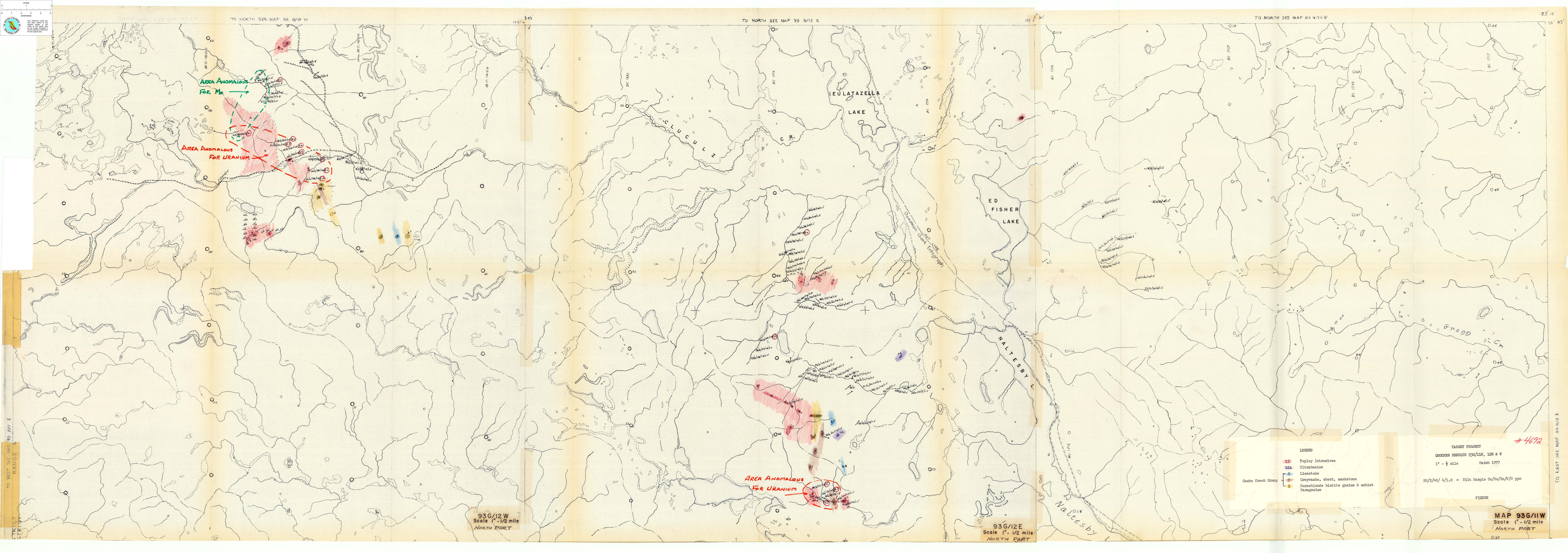
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This report is classified "SECRET"

GSWB	LBH	DRS	EAP
PROJECT			
FI	APR 6 1977	LE	
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<input type="checkbox"/> L. CUTTING	<input type="checkbox"/> LEGAL		
<input type="checkbox"/> TECHNICAL	<input type="checkbox"/> MISC.		
<input type="checkbox"/> OTHER			



TO NORTH SEE MAP 93 G/13 W

TO NORTH SEE MAP 93 G/13 E

TO NORTH SEE MAP 93 G/14 W

AREA ANOMALOUS
FOR Mo

AREA ANOMALOUS
FOR URANIUM

AREA ANOMALOUS
FOR URANIUM

93G/12W
Scale 1" = 1/2 mile
NORTH PART

93G/12E
Scale 1" = 1/2 mile
NORTH PART

MAP 936/11W
Scale 1" = 1/2 mile
NORTH PART

LEGEND

- 12 Topley Intrusives
- 13A Ultrabasic
- 13B Limestone
- 13C Graywacke, chert, sandstone
- 13D Homeblende biotite gneiss & schist
- 13E Pangeoiss

TARGET PROJECT
GEOCHEM RESULTS 93G/11W, 12E & W
1" = 1/2 mile March 1977

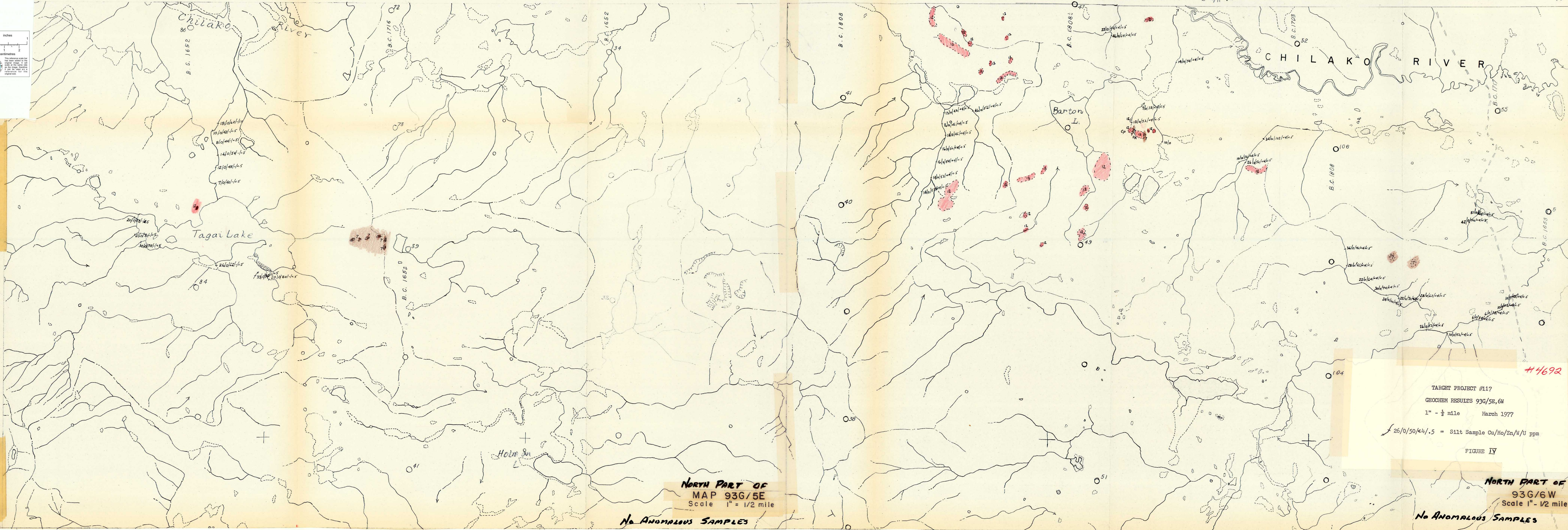
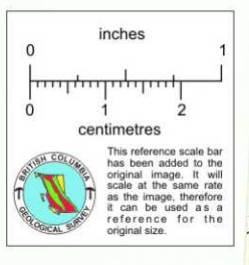
20/2/40/4/1.0 = Silt Sample Ca/10/20/1/0 ppm

FIGURE

#4692

TO WEST SEE MAP 93 F/9 E

TO EAST SEE MAP 93 G/11 E



NORTH PART OF
MAP 93G/5E
Scale 1" = 1/2 mile

No ANOMALOUS SAMPLES

NORTH PART OF
93G/6W
Scale 1" = 1/2 mile

No ANOMALOUS SAMPLES

TARGET PROJECT #117
GEOCHEM RESULTS 93G/5E, 6W
1" - 1/2 mile March 1977
26/0/50/24/.5 = Silt Sample Cu/Mo/Zn/Ni/U ppm

FIGURE IV

#4692