

2598

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 2598 MAP

GEOCHEMICAL REPORT

EUPHRATES PROPERTY (CLAIMS A#1 TO A#8 INCLUSIVE)

9 MILES SOUTH OF NELSON, B. C.

49° 117° S. E.

by

Jack A. Millican, P. Eng.

Grand Forks, B. C.

for Robert Mines Ltd. (N.P.L.)

16 September, 1970

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Certificate

Maps: (*Rear Pocket*)

Map No #1 Nelson Area, Scale 1" = 4 miles

#2 Golden Age - Euphrates claims, Scale 1" = $\frac{1}{4}$ mile

#3 Geochemical Survey, Golden Age - Euphrates
Scale 1" = 400 ft.

#4 Sketch of Euphrates Adits Scale 1" = 400 ft.

Photocopy of Spectrographic Analysis of Sample #35 of Line #4

Geochemical Report

Euphrates Property (Claims A#1 to A#8 inclusive)

9 miles South of Nelson, B. C. $49^{\circ} 117^{\circ}$ S. E.

by Jack A. Millican, P. Eng.

for Robert Mines Ltd. (N.P.L.)

(16 August, 1970 to 16 September, 1970)

1. SUMMARY - In August and September, 1970 a geochemical survey was carried out on claims #3, 4, 5 and 6 of the Golden Age - Euphrates Group, 9 miles south of Nelson, B. C. to determine the possible extension of the Euphrates ore zones farther down the mountain to a more suitable location for possible development; to substantiate photogeological indications of ore zones and to discover any indications of additional ore zones.

197 soil samples were analysed of which 21 proved anomalous.

It now appears that the Euphrates ore zones do extend at least 2000 feet north westerly down the mountain and at least three new ore zones are indicated for future exploration.

2. PROPERTY - The Euphrates Property is part of the Golden Age - Euphrates Group, 9 miles south of Nelson, B. C. and consists of the following 8 claims:
A #1 to A #8 inclusive - Record Numbers 12796 to 12803 inclusive -
expiry date 23 September, 1970.
3. GEOLOGY - The country rock on the Euphrates Property is highly schistose Rossland Volcanics (Triassic), mainly augite porphyry and andesite. The foliation strikes $N 40^{\circ}W$ and dips south westerly. Minor basic dykes occur and a light-colored dyke (reported to be largely plagioclase) up to 14 feet wide forms the ground mass of the Nickel Plate vein. About 800 feet south

west of the main Euphrates workings (practically all of claim A#8 and most of A#6) is a tongue of Nelson granite (Cretaceous) from which probably originated the solutions responsible for the mineralization.

Mineralization occurs largely in quartz shear zones which strike parallel to the schistosity. The dip of some of the shear zones parallels the schistosity but in others cuts across it. Quoting from the 1938 Minister of Mines Report: "From an inspection of the Golden Age and Euphrates properties it would seem that the deposits coinciding with the foliation of the enclosing schists are lensey and that the veins cutting the schistosity offer more promise of continuity and contain higher values". Minerals occurring in the ore zones are pyrite, chalcopyrite, galena and sphalerite. (B. C. Minister of Mines Reports mention tetrahedrite, scheelite and free gold but these were not seen by the writer.) Mineralization is lensey and varies from 3 inches up to at least 9 feet.

4. PURPOSE OF THE GEOCHEMICAL SURVEY - The geochemical survey was carried out as part of the recommended exploration program. Anomalous areas were to be stripped and/or diamond drilled in an attempt to trace the Euphrates ore zones north westerly down the mountain to the river. This would have the following advantages:
1. eliminate the need for a road to the existing workings - approximately 1200 feet above the river.
 2. eliminate the need to haul supplies up and haul ore down.
 3. it would be closer to a water supply for exploration and possible future mining and milling.
 4. it would give an additional 1100 to 1200 feet of backs.

5. SAMPLING GRID - The location line (S 40°) for staking claims

A#1 to A#8 inclusive followed the old tram line so this line was used as the base line for sampling and the sampling lines were laid out normal (N 50° E) to it. Sampling was laid out to cover major geological structures indicated from the study of the aerial photographs so the number of samples per line varied. Sample #25 of each line was taken on the base line; the lower numbers to the north east of the line and the higher numbers to the south west of the line. (See Map #3). The five sample lines were located as follows:

Line #1 - 250' north west of the center of the Euphrates dump.

Samples #1 to #49

Line #2 - 300' north west of Line #1. Samples #5 to #49

Line #3 - 600' north west of Line #2. Samples #5 to #40

Line #4 - 500' north west of Line #3. Samples #F to #35

Line #5 - 300' north west of Line #4. Samples #F to #4 and
#20 to #40.

6. SAMPLING - Samples spaced at 50 ft intervals were taken with a shovel from the "B" zone and placed in 9½" x 3½" heavy, kraft paper geochemical sample envelopes. Most of the samples were taken at a depth of 12 to 18 inches but this varied from a minimum of 6 inches to a maximum of 24 inches. Where the sample location coincided with a creek no sample was taken.

Number of samples taken:

Line #1 - 48

Line #2 - 43

Line #3 - 35

Line #4 - 41

Line #5 - 30 Total 197 samples.

7. ANALYSIS - All testing was done in a laboratory. Drying was not necessary. The soil samples were first screened through 80 mesh, mixed and a 2 mg portion "cold tested" for "Total Heavy Metals" using ammonium citrate "buffer" and dithizone (with Xylene) indicator. All analysis were done by the writer but sample #35 of Line #4 was later sent to Coast Eldridge, Vancouver for Semi Quantitative Spectrographic Analyses (photocopy attached) - main values were: copper .01%, lead .05% and silver <.001%

21 samples showed the following values in "Total Heavy Metals":

Line #1 -	Sample #40 -	200 ppm (parts per million)	
Line #2 -	" #23 -	150 ppm	Sample #42 - 100 ppm
	" #33 -	100 ppm	" #44 - 100 ppm
	" #35 -	100 ppm	" #46 - 150 ppm
	" #36 -	100 ppm	" #47 - 100 ppm
	" #37 -	100 ppm	" #48 - 150 ppm
			" #49 - 100 ppm
Line #3 -	" #5 -	100 ppm	" # 7 - 150 ppm
	" #6 -	100 ppm	" #18 - 100 ppm
Line #4 -	" #15 -	100 ppm	" #35 - 200 ppm
	" #22 -	100 ppm	
Line #5 -	" #B -	100 ppm	" #39 - 100 ppm

All of the other samples were blank.

8. INTERPRETATION - The lines, sample locations and values (Parts per million) were plotted on Map No. 3, Scale 1" = 400'. The scattered values did not lend themselves to the "contour type" geochemical anomalies but did correlate fairly well with photogeology.

Two major structures, striking approximately N 40° W, can be traced on the aerial photographs of the area for at least two

miles on either side of the Salmo River. Sample #33 of Line #2 and sample #35 of Line #4 lie on the south westerly structure and sample #23 of Line #2 lies on the north easterly structure. These structures are believed to be the main Euphrates veins. (Map No. 4). The fact that these structures were not reflected in the samples on Lines #1, #3 and #5 is probably due to the very lensey nature of the ore bodies and the sparse base metal mineralization.

Sample #40 of Line #1 lies approximately on the contact of the Nelson granite and the Rosslund volcanics.

The anomalous area on Line #2 from sample #35 to #49 correlates very well with a fracture which shows on the aerial photographs. As this mineralized zone cuts directly across both the strike and dip of the schistosity and could extend from sample #23 to #49 (1300 ft) it could prove to be very interesting. The overburden in this area is very shallow (mostly less than 2 ft deep) and the intention is to strip the south westerly half of Line #2 to explore it further.

The aerial photos also show another structure in the general line of sample #6 of Line #3 and sample #B of Line #5 and a minor structure between sample #18 of Line #3 and sample #22 of Line #4.

As mentioned previously it is difficult to obtain continuity geochemically in this area because of:

1. the lensey nature of the veins.
2. the sparse base metal mineralization.

(B. C. Minister of Mines Index #3 shows the 326 tons of ore shipped from the Euphrates averaged 1.4 oz/ton gold; 7.3 oz/ton silver; 2.7% lead and 1.8% zinc.

9. CONCLUSIONS - The geochemical survey of claims A #3 and #4 and parts of claims A #5 and #6 of the Golden Age - Euphrates Group indicates an extension of the main Euphrates ore zones at least 2000 feet north westerly down the mountain. Geochemistry correlated with photogeology also indicates two additional ore zones striking north westerly and a persistent ore zone (possibly 1300 ft long) striking north easterly along Line #2 which appears to be normal to the main Euphrates ore zones. It is recommended that stripping and diamond drilling be carried out to prove up the anomalous areas.

10. DECLARATION OF COSTS

(Labor costs for sampling obtained from Robert Mines Ltd.)

Sampling

Crew - 3 men

Rate of pay - #36.00 per man per day (12 hours)

Days worked - 17, 18, 19, 20, 21 Aug. 1970 5 days

6 Sept. 1970 1 day

Total 6 days

Total wages - 3 men x 6 days x #36.00 648.00

Food and lodging 284.15

Mileage - Vancouver to Nelson and return (2) and trips to property 173.04

Tool rental, geochemical supplies, telephone 117.21

Analysis

197 samples for "THM" 232.00

Spectrophotographic analysis 15.00

Reports and letters via Greyhound bus 2.60

RECEIVED
 PROVINCE OF BRITISH COLUMBIA (112)
 1970
 249.60
 Decided before me at 176

249.60

Declared before me at the

City

of Vancouver, in the

Province of British Columbia, this

22nd

day of

Sept

1970, A.D.

Karl Blinder

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

[Signature]

SUB-MINING RECORDER

Engineering

Laying out sampling, maps, consultation,
photogeological correlation and report

750.00

TOTAL COST

\$ 2,222.00

References

- B. C. Minister of Mines, Index No. 3, 1955 and Index No. 4, 1966.
- B. C. Minister of Mines Annual Reports - 1912, 1917, 1922-24, 1926-31, 1933-42, 1945-46, 1960, 1963, 1966-67.
- B. C. Dept. of Mines, Bulletin No. 10 - Tungsten Deposits of British Columbia.
- B. C. Government Air Photographs: B. C. 1474 - 98, 99, 100 - 10 July, 1952.

Geological Survey of Canada:

Memoir 191 - Lode Gold Deposits of Ymir-Nelson Area,
British Columbia

Memoir 308 - Nelson Map-Area, West Half (1960)

Paper 51-4 - Ymir Map-Area, British Columbia, (1951).

Jack A. Millican
Jack A. Millican, P. Eng.

16 September, 1970.

Declared before me at the *City*
of *Vancouver*, in the
Province of British Columbia, this *22nd*
day of *Sept* *1970* A.D.

Karl Caliche

GP Millican

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

C E R T I F I C A T E

I, Jack A. Millican, Professional Engineer, of the City of Grand Forks in the Province of British Columbia do hereby certify:

1. I am a Registered Professional Mining Engineer in the Province of British Columbia, and my address is Box 728, Grand Forks, B. C.

2. I attended the University of British Columbia for one year and Queen's University, Kingston, Ontario for three years.

3. I have had some twenty-five years professional experience in mines in British Columbia and other parts of Canada and hold a British Columbia "Shiftboss Certificate".

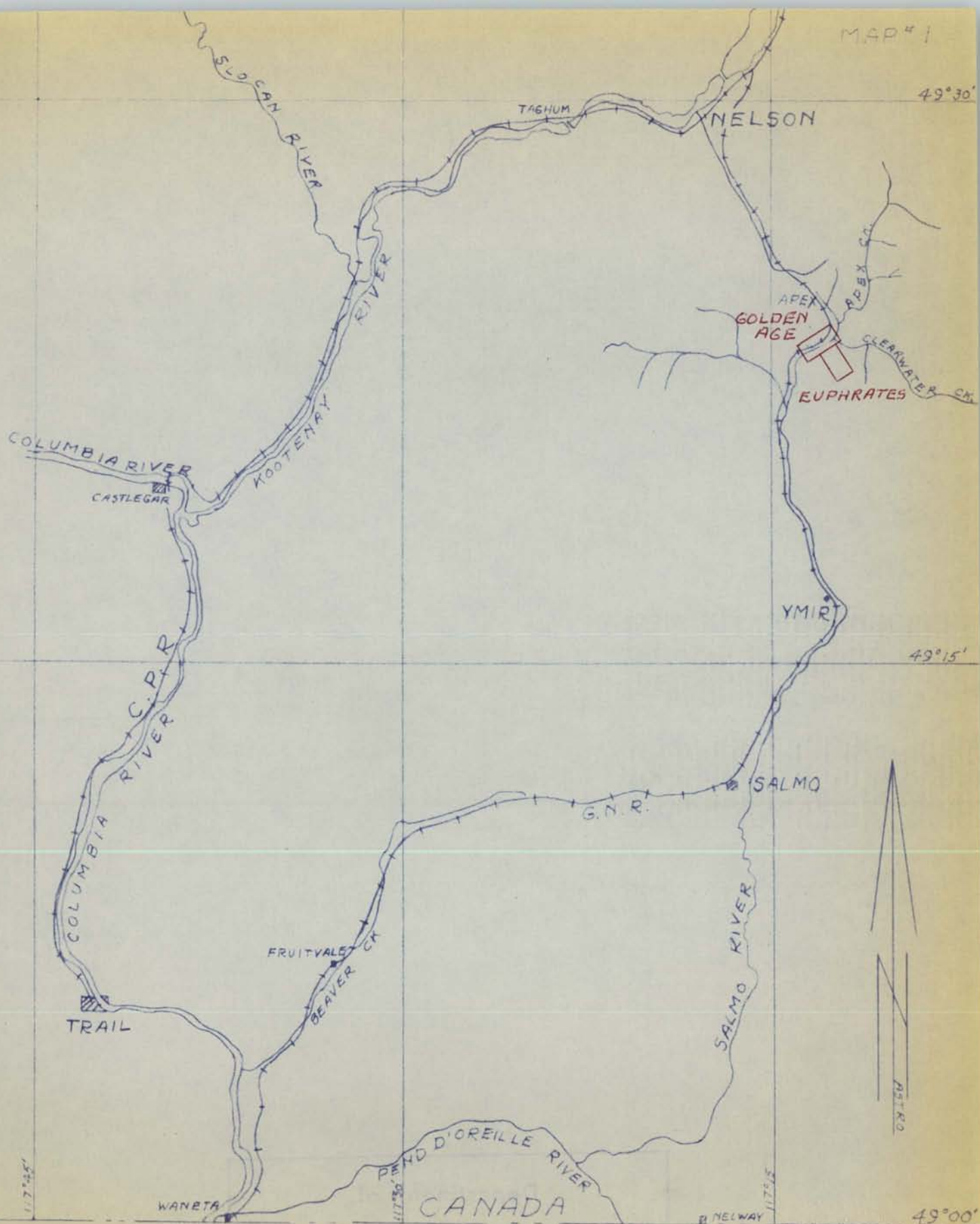
4. My report of the Euphrates Property (Claims A#1 to A#8 inclusive) dated 16 September, 1970 is based on personal examination of the property on 9 August, 1966, intermittent work on the claims during 1966, and 1967, 1969 and 1970.

5. I have no personal interest, direct or indirect, in the property covered by the said report nor in the shares of the company operating the property, nor do I expect to receive any.

Dated at Grand Forks, B. C.
this sixteenth day of
September, 1970.


.....

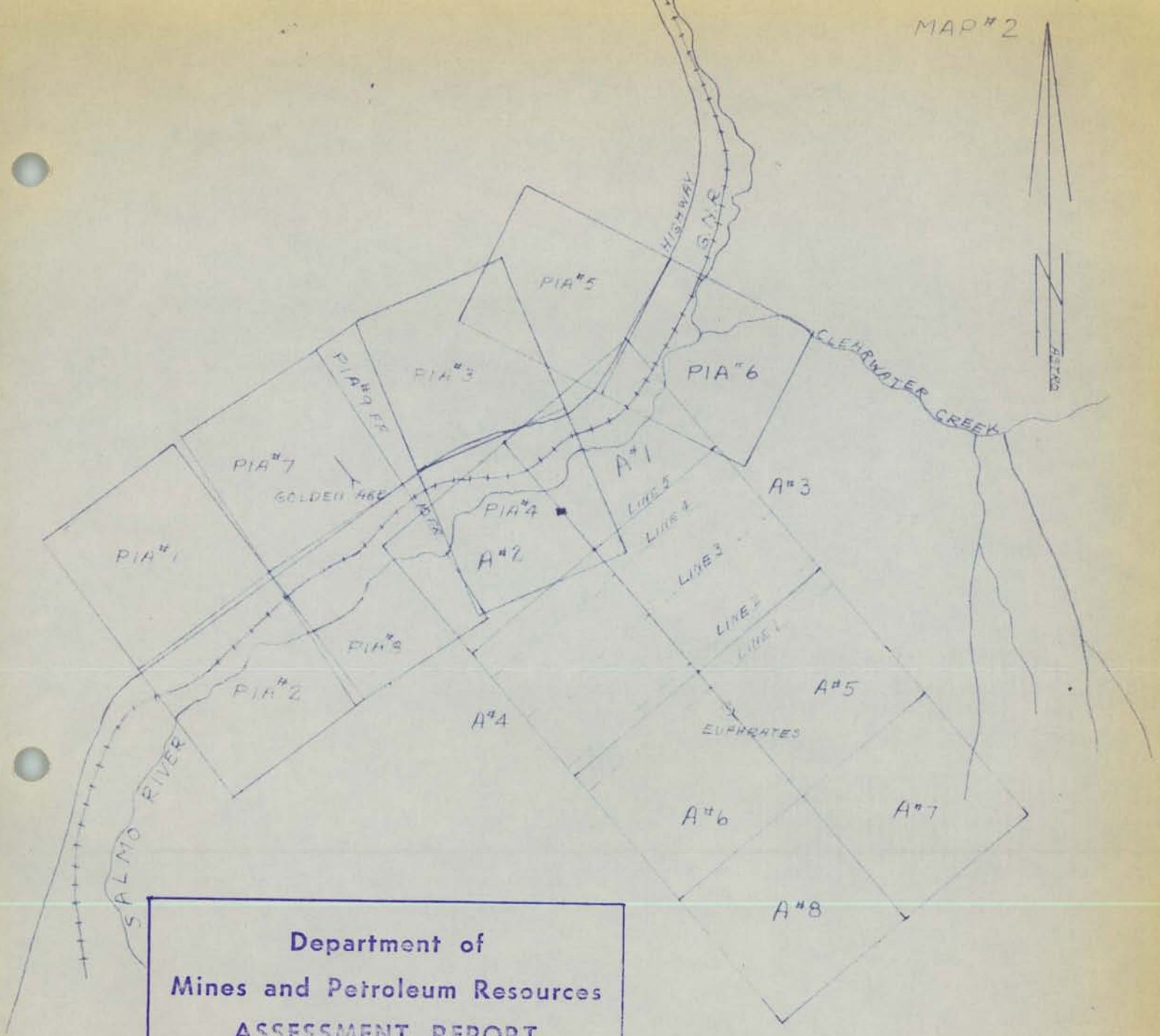
49°30'



49°15'

49°00'

NELSON AREA
 SCALE 1" = 4 MILES



Department of
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NO. 2598 MAP # 2

ROBERT MINES LTD.
 GOLDEN AGE - EUPHRATES
 NELSON, B.C.

SCALE 1" = 1/4 MILE

SEPT 1970

HIGHWAY

MAP #3

G.N.R.

RIVER

OLD GRS SH

A#2

A#1

CLAIM BOUNDARY

A#4

A#3

LINE #5

LINE #4

LINE #3

LINE #2

LINE #1

A#6

GRANITE

EUPHRATES DUMP

A#5

GEOCHEMICAL SURVEY
ROBERT MINES LTD.

GOLDEN AGE-EUPHRATES

NELSON, B.C.

LEGEND



GEOCHEM VALUES ppm

--- GEOLOGICAL STRUCTURES

(FROM PHOTOGEOLOGY)

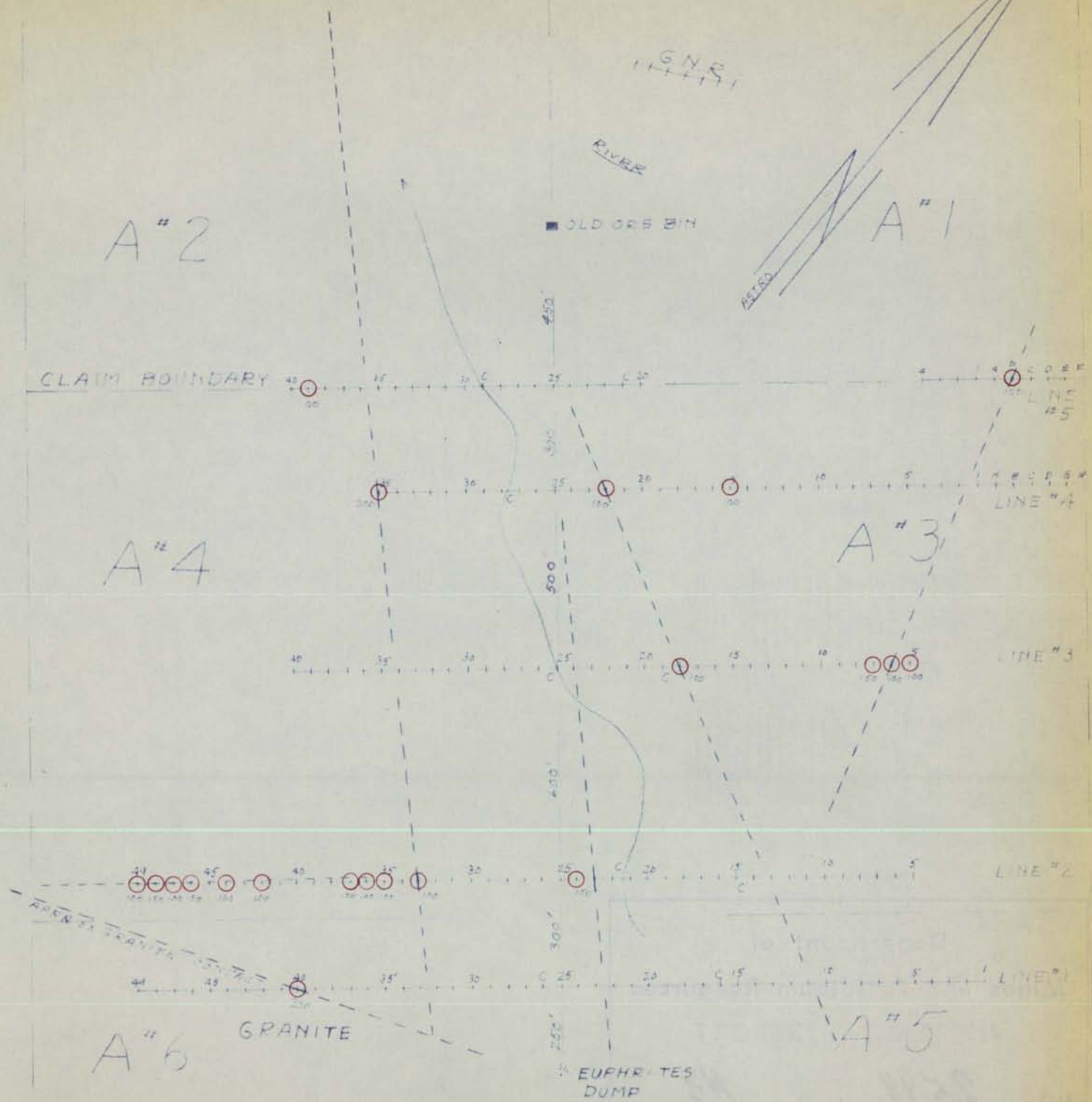


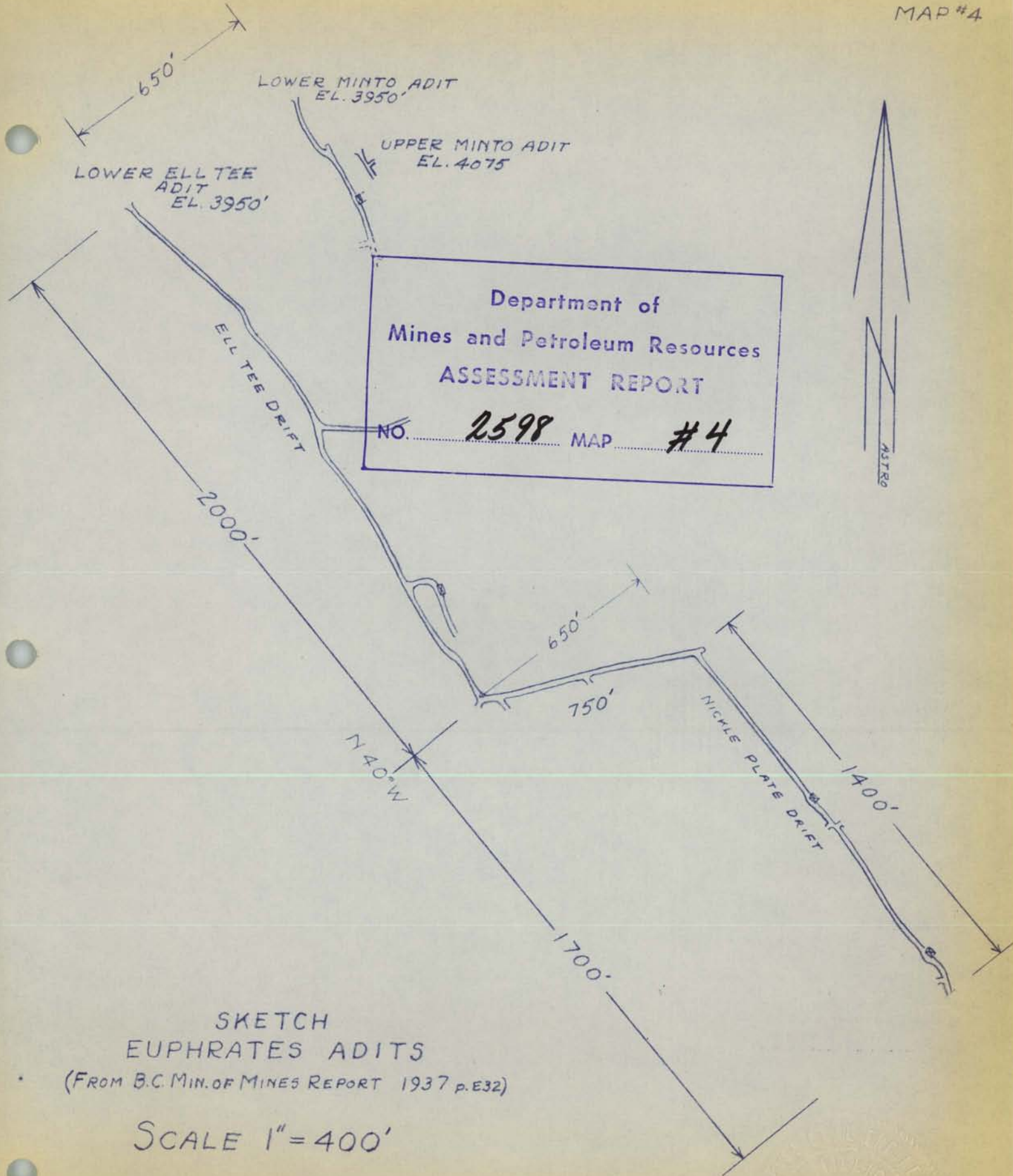
CREEK

SCALE 1"=400'

SEPT 1970

J.A. MILLICAN P.E.N.S.





Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2598 MAP #4

SKETCH
EUPHRATES ADITS
(FROM B.C. MIN. OF MINES REPORT 1937 p. E32)

SCALE 1" = 400'

ert Mines Company

214 - 475 Howe Street

Vancouver 1, B.C.

ATTENTION: Mr. Carl Schindler

COAST ELDRIDGE

PROFESSIONAL SERVICES DIVISION

WARNOCK HERSEY INTERNATIONAL LIMITED

125 EAST 4TH AVE. VANCOUVER 10, B.C., CANADA

FILE NO: 468 - 1264

DATE September 3, 1971

SEMI QUANTITATIVE SPECTROGRAPHIC ANALYSES

We Hereby Certify that the following are the results of semi quantitative spectrographic analyses made on **SOIL**

PLC IDENTIFICATION	Al	Sb	As	Ba	Bc	Bi	B	Cd	Ca	Cr	Co	Cu	Ga	
35 Euphrates Line #4 Sample #35	Major	ND	ND	0.05	<0.001	ND	0.001	ND	Major	0.001	0.001	0.01	ND	Trace 2.5
PLC IDENTIFICATION	Pt	N ₂	Mn	Mo	Nb	Ni	Si	V	Na	W	Zn			
	0.05	1.0	0.03	<0.001	ND	<0.001	Major	<0.001	0.05		0.5	ND	0.01	ND

VERIFIED BY REPORT

< 0.05

COAST ELDRIDGE PROFESSIONAL SERVICES DIVISION

FOR GOLD ANALYSIS IF ANALYSIS IS CRITICAL

Handwritten signature and notes