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2095

4554 WEST 6TH AVENUE
VANCOUVER 8, B.C.

GEOCHEMICAL REPORT

TOPLEY, BABINE & TOTEM CLAIMS

1 to 5 Miles South of Topley Landing,
Omineca Mining Division, B.C.
54° 126° N.E.

by

Gavin A. Dirom, P. Eng.

for

Tro-Buttle Exploration Ltd. (NPL)

Date of Report:

October 15, 1969

Date of Field Work:

October 15, 1968
to July 15, 1969.

Mining Recorder's Office
RECORDED

OCT 20 1969

AT.....
SMITHERS, B.C.

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ATTACHMENTS

Appendix #1	Chemex Labs Ltd., Statement of Procedures, April 2, 1968.
Figure #1	Graph Showing <u>Cu</u> ppm Concentration Frequency
Map #1	Claim Map 1" - 4,000'
Map #2	Portion of B.C. Dept. of Mines & Petrol. Res. Map 69-1. Showing Regional Geology. 1" - 4 miles.
Map #3	Geochemical Survey 1" - 1,000'.

Department of	
Mines and Petroleum Resources	
ASSESSMENT REPORT	
NO.	2095' MAP

INTRODUCTION

The following report summarizes a geochemical soil survey completed on the Topley, Babine and Totem claims from October 15, 1968 to July 15, 1969.

The writer, who is Consulting Engineer for Tro-Buttle Exploration Ltd. (NPL), made a day's visit to this area on June 7, 1969.

The field work was done under the general direction of Geo. A. Burdett, Exploration Manager.

The analyses (Cu & Mo) were all run by Chemex Labs Ltd., North Vancouver, B.C.

This report is submitted along with a separate Geological Report by R.W. Woolverton, P. Eng., dated September 3, 1969.

The present writer feels that these surveys qualify for full assessment credits. Affidavits Form B are being filed claiming a total credit of \$15,200 for these surveys and reports, - this to be applied at \$100 each on the 152 claims comprising this property. Distribution of this credit is as follows:

<u>Topley-Babine Group:</u> (37 claims)	Topley 19-50 & 51 Fraction Babine 1-4	\$ 3,700
<u>Babine-Totem Group #1:</u> (36 claims)	Babine 5 & 6 Babine 67-74 Babine 87-92 Totem 17-36	\$ 3,600
<u>Babine-Totem Group #2:</u> (39 claims)	Babine 7-12 Babine 75-82 Babine 93-98 Totem #1 Fraction Totem 37-44 Totem 67-76	\$ 3,900
<u>Babine-Totem Group #3:</u> (40 claims)	Babine 63 & 64 Babine 83 - 86 Babine 99 & 100 Totem 45 - 64 Totem 77 - 88	\$ 4,000
	Total	\$15,200

GENERAL CONCLUSION

The property lies adjacent to a known mineralized "porphyry" environment. The geochemical and geological surveys do not outline specific exploration targets but do indicate that further exploration is warranted of some of the drift covered areas.

PROPERTY & OWNERSHIP

Details on the Topley, Babine & Totem claims are as follows:

<u>Claims</u>	<u>Tag Nos.</u>	<u>Record Nos.</u>	<u>Record Dates.</u>
Topley 19 - 50	875219 - 50	64298 - 329	Oct. 15
Topley 51 Frac.	875251	64330	Oct. 15
Babine 1 - 12	912301 - 12	64707 - 18	Nov. 5
Babine 63 & 64	820073 & 74	65458 - 59	Dec. 13
Babine 67 - 100	875267 - 300	64719 - 52	Nov. 5
Totem 17 - 64	912317 - 64	65056 - 103	Nov. 27
Totem 67 - 76	912367 - 76	65104 - 113	Nov. 27
Totem 1 Frac.	875252	65114	Nov. 27
Totem 77 - 88	912377 - 88	65460 - 71	Dec. 13

All are recorded in the name of Tro-Buttle Exploration Ltd. (NPL) whose present address is 9th Floor, 850 West Hastings St., Vancouver 1, B.C.

LOCATION, ACCESS & TOPOGRAPHY

These claims are located 1 to 5 miles southerly of Topley Landing. They lie to the north and east of the Tachi claims held by Noranda Exploration Co., between the latter ground and Babine Lake.

The road and powerline between Topley and Topley Landing (& Granisle) run through the Topley group. A branch road to Spindrift Lodge on Babine Lake extends through the northern part of the Babine Group.

Elevations range from 2335' at Babine Lake to about 3300' at the west and south limits of the property. Topography is shown on the accompanying geochemical map and is also shown on the separate geological map. Forest cover includes widespread underbrush.

GEOLOGY

Regional geology is provided by B.C. Dept. of Mines & Petroleum Resources Map 69-1, portion of which is included with this report as Map #2.

Geology of this property is covered by the separate "Geological Report" by R.W. Woolverton, P. Eng., dated September 3, 1969.

Outcrops predominate in the SE third of the property, where mostly Topley intrusives, but elsewhere are limited to Tachek Creek (Sustut sediments), along the west boundary of the Topley claims (Hazelton volcanics) and an outcrop (Topley) along the shore of Babine Lake, just NE of the property. Covered areas consist mostly of glacial drift of varying thickness, possibly over 300' in places.

GEOCHEMICAL SURVEY

Field Work -

The field work was done during October - December, 1968 and March - July 15, 1969 by a field crew under the supervision of Geo. A. Burdett, Exploration Manager. The field team was headed by Anthony Evans.

Total of 47 line miles of blazed, picketed and flagged grid was put in, all by compass and tape. Most of it was well brushed out. Line spacing is 800' and sample interval, 200'. 1267 soil samples (and a few silts) were taken.

The soil samples, taken using shovel and grubhoe, consisted, wherever possible, of the "B" horizon. The samples were packaged in standard, high wet strength, kraftpaper, soil sample bags.

The samples were shipped to Chemex Labs Ltd., North Vancouver, where they were dried, screened and analysed for Cu and Mo on November 20, December 6 & 19, 1968; and June 27, July 3, 14 & 18, 1969. Attached hereto, as Appendix #1, is a brief synopsis dated April 2, 1968 from Chemex Labs Ltd. covering their laboratory procedures.

A topographic base map was prepared by Lockwood Survey Corporation from May and July, 1968 B.C. Government photography. Scale of this map is 1" - 1,000', with 25' and 50' contours.

Costs -

The following figures are approximate but are reasonably correct:

Wages & Salaries - Field Personnel:	\$ 8,200
Geo. A. Burdett	
Anthony Evans	
N. Sworyk	
A. Axem	
Accommodation, Board & Supplies	3,330
Transportation	1,140
Geochemical Analyses	2,000
Geological Survey & Report (R.W. Woolverton)	2,065
Topographic Base Map	600
Consulting Engineer - Field trip & Report	<u>725</u>
Total	<u>\$18,060</u>

Results -

The soil survey grid and copper and molybdenum results are shown on accompanying map #3. The Concentration Frequency (Cu) is illustrated on Figure #1.

Molybdenum - All but 59 (4.65%) of the samples returned zero ppm value. Background would seem to be under 1 ppm, with threshold between 3 & 4 ppm. Only 4 samples are 3 ppm & over; and highest value is only 5 ppm.

Copper - Background is about 15 ppm. Threshold is an arbitrary figure. It can be taken as low as 30 ppm and as high as 50 ppm. Number of samples over 30 ppm is 169 or 13%; above 50 ppm, 35 samples or about 3%. Highest value was a silt sample running 298 ppm; the next highest, 150 ppm; and all other are 87 ppm or less.

Significance - The soil sampling must be considered inconclusive over most of the survey area where deep glacial drift obscures bed rock geochemistry. Outcrops and shallow drift largely are confined to the SE (Totem group) portion of the property, which is only incompletely covered by the soil survey. This SE area is largely underlain by Topley intrusives but includes a local remnant of unconformably overlying "Tachek volcanics".


The only, barely significant, anomalous values in the SE portion of the property are two of the higher Mo values. These straddle an outcrop area of Topley intrusives containing some secondary biotite alteration. As a whole, however, this SE outcrop area appears to offer limited exploration possibilities.

Soil survey coverage of the NE part of the property is also not complete. However, the results to date indicate an area of low anomalous Cu values between the C-Base Line and Babine Lake. This NE section warrants further survey coverage.

There are some spotty, low anomalous Cu values in the NW portion of the property; and some clustered values in proximity to Tachek Creek. These latter may in part reflect down drainage transportation from the "Discovery" Cu Mo showing higher up on this creek on ground optioned by Noranda Exploration.

The highest Cu value of the survey lies in proximity to the main road and powerline and at the south end of the A-Base Line. This is a silt sample from drainage from the small lake hereabouts. This sample drainage warrants checking but largely lies on adjoining ground.

Respectfully Submitted,


Gavin A. Dirom, P. Eng.



CHEMEX LABS LTD.

1416 CROWN STREET
NORTH VANCOUVER, B. C.
988 - 6955

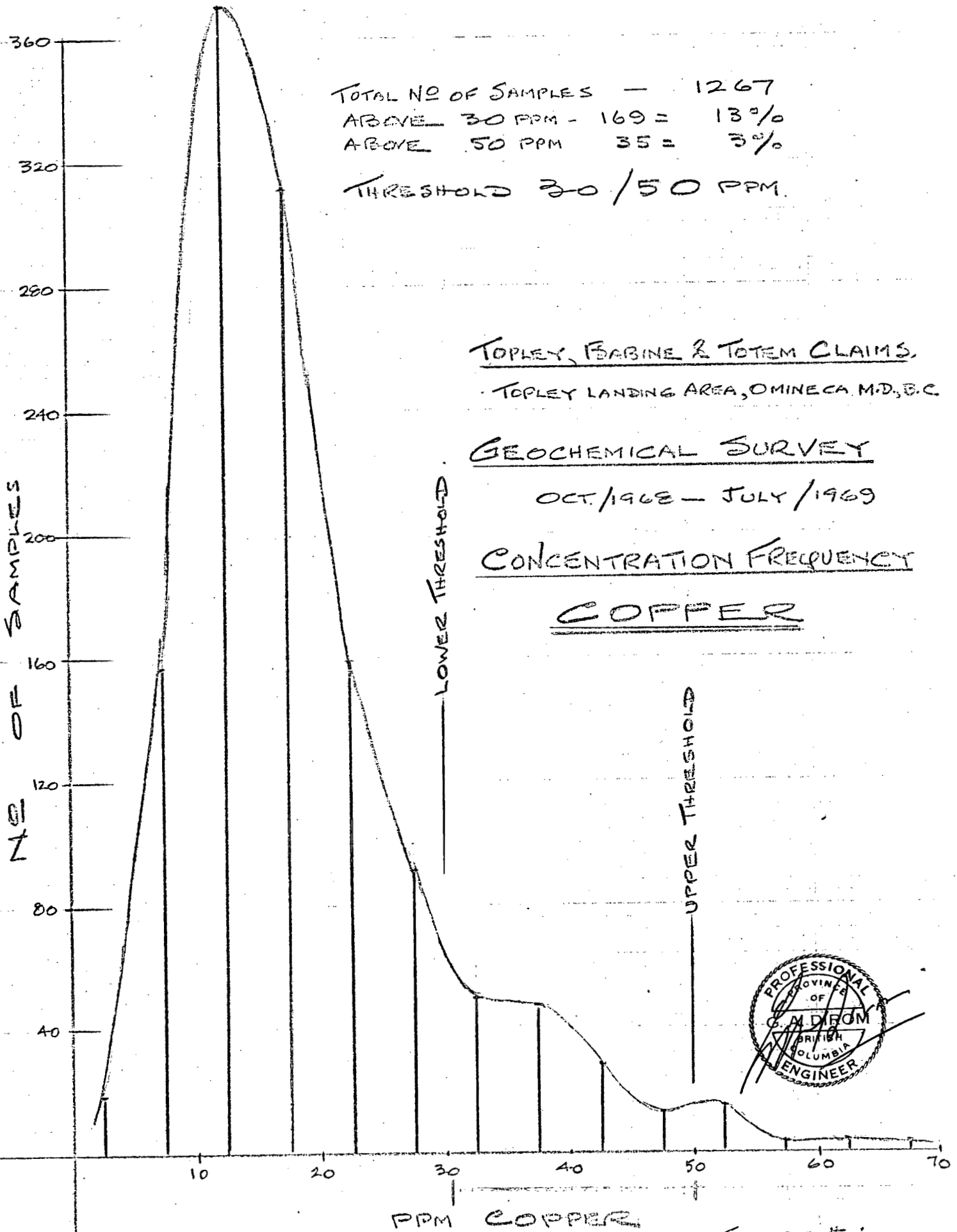
Laboratory Processing and Analyses of Soil and Stream Sediment Samples

1. Samples are sorted, recorded and dried at 60°C.
2. Dried samples are sieved to -80 mesh fraction in nylon and stainless steel sieves.
3. 1 gram of -80 mesh fraction is weighed into test tube and digested with hot 70% perchloric and concentrated nitric acid.
4. Digested samples are diluted to 50 ml. volume with demineralized H₂O and mixed thoroughly. Solutions are settled until clear.
5. Copper and Zinc are analyzed in aqueous solution with Techtron A-A-3 Atomic Absorption Unit - Detection Limit in soils and stream sediments is 1 p.p.m.
6. Molybdenum is analyzed colorimetrically, with stannous chloride - ammonium thiocyanate extraction and "Moly" complex is read on Bausch and Lomb Spectronic -20. Detection Limit - 1 p.p.m.

April 2, 1968



*To accompany Report by G. A. D. Irom
Oct. 15, 1969*



TOTAL NO OF SAMPLES - 1267
 ABOVE 30 PPM - 169 = 13%
 ABOVE 50 PPM 35 = 3%
 THRESHOLD 30 / 50 PPM.

TOPLEY, FABINE & TOTEM CLAIMS,
 TOPYLANDING AREA, OMINECA M.D., B.C.

GEOCHEMICAL SURVEY

OCT/1968 - JULY/1969

CONCENTRATION FREQUENCY

COPPER



PPM COPPER

FIGURE # 1

TO ACCOMPANY REPORT BY G. A. DIROM, P. ENG.
 OCT. 15, 1969.

Department of
Mines and Geotechnical Research
ANNUAL REPORT

NO. 2095 MAP Fig 1

FULTON RIVER

TOPLEY LANDING

BABINE LAKE

TACHEK IS

TOPLEY 27	TOPLEY 29	TOPLEY 31	TOPLEY 33	TOPLEY 43	TOPLEY 45	TOPLEY 47	TOPLEY 49	BABINE 1	BABINE 3	BABINE 5	BABINE 7	BABINE 9	BABINE 11		
TOPLEY 28	TOPLEY 30	TOPLEY 32	TOPLEY 34	TOPLEY 44	TOPLEY 46	TOPLEY 48	TOPLEY 50	BABINE 2	BABINE 4	BABINE 6	BABINE 8	BABINE 10	BABINE 12		
TOPLEY 26	TOPLEY 24	TOPLEY 22	TOPLEY 20	TOPLEY 35	TOPLEY 37	TOPLEY 39	TOPLEY 41	BABINE 87	BABINE 88	BABINE 91	BABINE 93	BABINE 95	BABINE 97	BABINE 99	BABINE 63
TOPLEY 25	TOPLEY 23	TOPLEY 21	TOPLEY 19	TOPLEY 36	TOPLEY 38	TOPLEY 40	TOPLEY 42	BABINE 89	BABINE 90	BABINE 92	BABINE 94	BABINE 96	BABINE 98	BABINE 100	BABINE 64

BABINE 67	BABINE 69	BABINE 71	BABINE 73	BABINE 75	BABINE 77	BABINE 79	BABINE 81	BABINE 83	BABINE 85
BABINE 68	BABINE 70	BABINE 72	BABINE 74	BABINE 76	BABINE 78	BABINE 80	BABINE 82	BABINE 84	BABINE 86

TOTEM 16	TOTEM 17	TOTEM 18	TOTEM 19	TOTEM 20	TOTEM 21	TOTEM 22	TOTEM 23	TOTEM 24	TOTEM 25	TOTEM 26	TOTEM 27	TOTEM 28	TOTEM 29	TOTEM 30	TOTEM 31	TOTEM 32	TOTEM 33	TOTEM 34	TOTEM 35	TOTEM 36	TOTEM 37	TOTEM 38	TOTEM 39	TOTEM 40	TOTEM 41	TOTEM 42	TOTEM 43	TOTEM 44	TOTEM 45	TOTEM 46	TOTEM 47	TOTEM 48	TOTEM 49	TOTEM 50	TOTEM 51	TOTEM 52	TOTEM 53	TOTEM 54	TOTEM 55	TOTEM 56	TOTEM 57	TOTEM 58	TOTEM 59	TOTEM 60	TOTEM 61	TOTEM 62	TOTEM 63	TOTEM 64	TOTEM 65	TOTEM 66	TOTEM 67	TOTEM 68	TOTEM 69	TOTEM 70	TOTEM 71	TOTEM 72	TOTEM 73	TOTEM 74	TOTEM 75	TOTEM 76	TOTEM 77	TOTEM 78	TOTEM 79	TOTEM 80	TOTEM 81	TOTEM 82	TOTEM 83	TOTEM 84	TOTEM 85	TOTEM 86	TOTEM 87	TOTEM 88	TOTEM 89	TOTEM 90	TOTEM 91	TOTEM 92	TOTEM 93	TOTEM 94	TOTEM 95	TOTEM 96	TOTEM 97	TOTEM 98	TOTEM 99	TOTEM 100
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MAIN ROAD

TACHEK CREEK

HORANDA OPTION

HORANDA EXPLORATION COMPANY LIMITED

BETHEX EXPLORATION LTD

Δ EL 3660



TO ACCOMPANY REPORT BY GADIROM, PENG OCT. 15, 1969

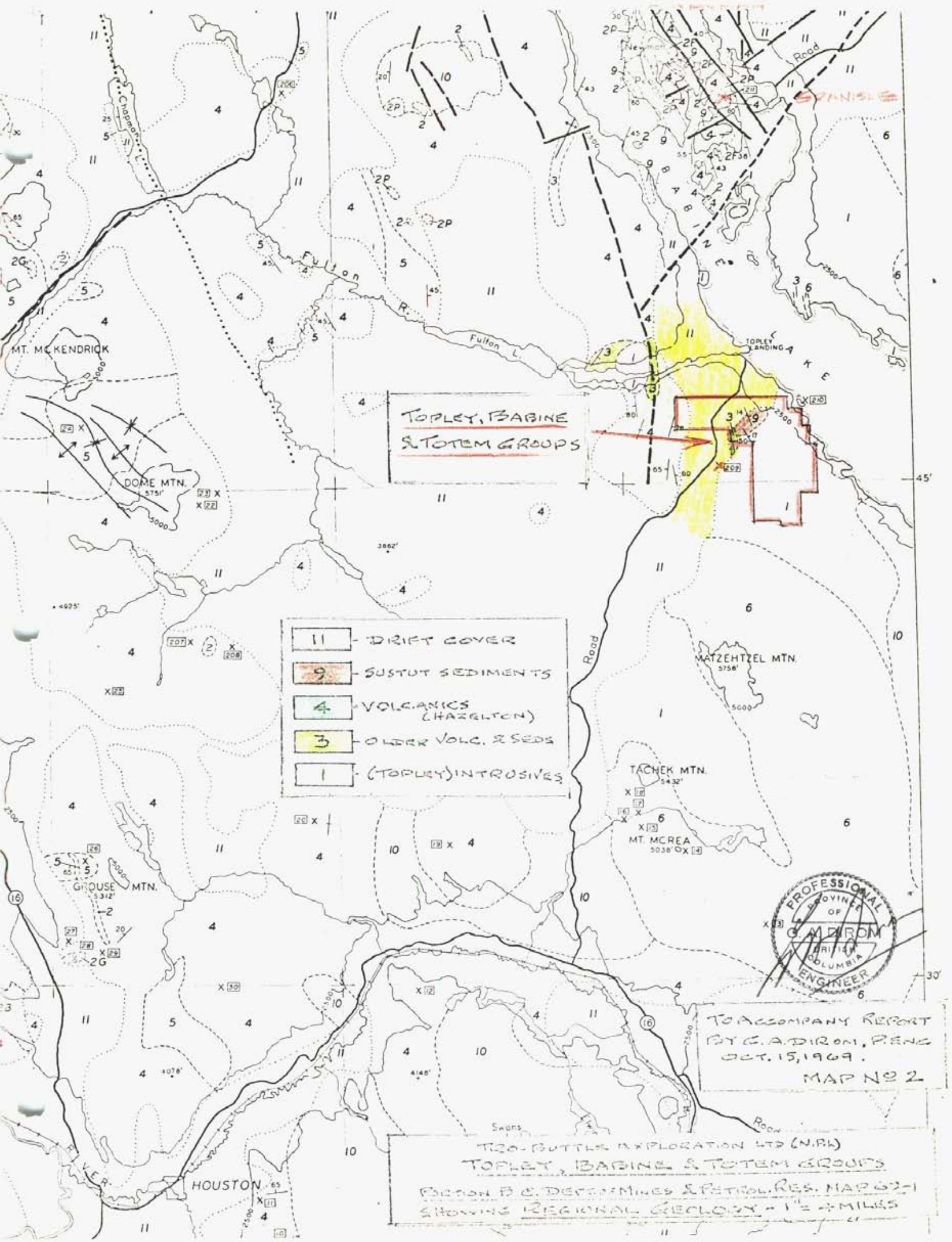
BUTTLE LAKE MINING CO. LTD. (NPL)
TROYAN CONSOLIDATED MINES LTD. (NPL)
TOPLEY, BABINE AND TOTEM CLAIMS
SCALE 1" = 4,000'. OMEGA MD JAN 1969

MAP NO 1

Department of
Mines and Petroleum Resources

ASSESSMENT REPORT

NO. **2095** MAP **#1**



TOPLEY, BABINE
& TOTEM GROUPS

- | | |
|----|------------------------|
| 11 | - DRIFT COVER |
| 9 | - SUSTUT SEDIMENTS |
| 4 | - VOLCANICS (HAZLETON) |
| 3 | - OLDER VOLC. & SEDS |
| 1 | - (TOPLEY) INTRUSIVES |



TO ACCOMPANY REPORT
BY G. M. DIXON, P. ENG.
OCT. 15, 1969.
MAP NO 2

T20-BUTTE EXPLORATION LTD (N.B.)
TOPLEY, BABINE, & TOTEM GROUPS
DIXON B.C. DETERMINED & PETROL. RES. MAP 62-1
SHOWING REGIONAL GEOLOGY - 1" = 1/4 MILES

Department of

Mines and Geology

Geological Survey

NO. **2095** MAP **#2**



69-87

SCALE 1000 FEET
TO 1 INCH

(BASE MAP)
RECONNAISSANCE MAP
CONTROL BASED ON MAP 93 1/2 E

PENCIL
MANUSCRIPT

LICKWOOD SURVEY CORPORATION LTD.
WEST COAST DIVISION
8409 WEST PENDER STREET
VANCOUVER 8, B.C.

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2095 MAP #3

GEOCHEM VALUES -
CU ppm 0-16 ppm Mo ppm
Mo 0 ppm
COPPER -
31-50 ppm
50-100 ppm
> 100 ppm
MOLYBDENUM -
ZERO ppm UNLESS SHOWN
2 ppm
5 ppm & OVER

2095

PROFESSIONAL
GEOLOGICAL
ENGINEER
TRIO-BUTTE EXPLORATION LTD. (NPL)
TOPLEY, BABINE & TOTEY CLAIMS
TOPLEY LANDING AREA, OMINICA M.D., B.C.
GEOCHEMICAL SURVEY

To ACCOMPANY REPORT BY G. ADIRAM, PENG. OCT. 15, 1969

1" = 1000' G. ADIRAM, OCT. 15, 1969, MAP #3