

2727

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 2727 MAP.....

TRO-BUTTLE EXPLORATION LTD.
Report on Geochemical Survey
Totem and Babine Mineral Claims
Topley Landing Area

ALRAE ENGINEERING LTD.

October 15, 1970

TO PROTECT OUR CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS AND EXTRACTS FROM OUR REPORTS MUST RECEIVE OUR WRITTEN APPROVAL.

ALRAE ENGINEERING LTD.
VANCOUVER, B.C.
ENGINEERS & GEOLOGISTS

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MAPS

- #1 Location of Claims
- #2 Soil Sampling Results - 1970

Scale

1" = 1,000'

1" = 1,000'

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INTRODUCTION

Between July 1st and 26th, 1970, a geochemical survey was completed on the Totem and Babine mineral claims by Alrae Engineering Ltd. on behalf of Tro-Buttle Exploration Ltd., the registered owners of the claims. This report covers the results of that survey.

The Totem and Babine claims are located approximately one mile south-southeast of Topley Landing. They lie to the north and east of the Tachek claims held by Noranda Exploration Co.

The geochemical survey was conducted by Mr. D. Reinke, foreman-pro prospector and Messrs. P. Haggerty, H. Malo and M. Primrose, field assistants. The work was supervised, and the results compiled, by Mr. F. Guardia, Senior Geologist, Alrae Engineering Ltd.

The Totem and Babine claims were staked in 1968 adjoining interesting copper-molybdenum mineralization on Noranda Exploration Tachek claims. During 1969 geochemical surveying revealed low anomalous values in several areas. The 1970 survey was designed to confirm these anomalies and to complete coverage of the northeastern and southern parts of the property.

LOCATION AND ACCESS

The claims are located at latitude $54^{\circ}50'N$ and longitude $126^{\circ}05'W$, and are adjacent to the west shore of Babine Lake.

Access is by good gravel road that leads from Topley, on the Prince George-Smithers highway, to Topley Landing. A summer road, leading to Babine Lake traverses the property.

Elevation of the property is between 2,335 feet and 3,300 feet above sea level. The claims are forest covered and underbrush is generally heavy.

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PROPERTY

The property consists of 118 mineral claims and one fraction as follows:

<u>CLAIM NAME</u>	<u>RECORD NUMBER</u>	<u>RECORD DATE</u>
Babine 1 - 12	64707 - 64718	November 5, 1968
Babine 63 & 64	65458 & 65459	December 13, 1968
Babine 67 - 100	64719 - 64752	November 5, 1968
Totem 1 Fr.	65114	November 27, 1968
Totem 17 - 64	65056 - 65103	November 27, 1968
Totem 67 - 88	65104 - 65471	December 13, 1968

GEOLOGY

The regional geology of the Topley-Babine Lake area is shown on the Smithers-Fort St. James map sheet (G.S.C. Map 971A). A geological report on the claim group has been prepared by R. Woolverton, P. Eng.; the survey being applied as assessment work in 1969.

Glacial drift of varying depth covers much of the property but several bedrock exposures can be seen on the western and south-eastern parts of the claim group. The property is principally underlain by Topley granites of Triassic age. Two varieties of intrusive, a medium grained granite to granodiorite and a finer grained granite, comprise the oldest rock groups on the property. Irregular contacts divide the two varieties of granite which are often weakly epidotized and chloritized. Secondary biotite and quartz veining also characterize the intrusives.

Overlying the eroded Topley granites are amygdaloidal and porphyritic andesites and andesitic breccias of the Hazelton and Tachek group. These extrusives are prominent in topographic highs on the western edge of the property. Characteristic of the andesites are calcite amygdules, quartz-epidote stringers, and varying magnetic expression.

Dykes, varying from basalt to rhyolite, trend from 10° to 20° east of north, dip steeply, and cut both the intrusives and volcanics. Some of the mafic dykes carry pyrite.

Minor chalcopyrite in quartz veins was noted in a southerly outcrop. Other mineralization on the claim group includes disseminated chalcopyrite associated with minor fracture zones on the east side of the property.

GEOCHEMICAL SURVEY

Field work was conducted between July 1 and July 23, 1970. Approximately twenty-four miles of flagged lines, as indicated on the accompanying map, were put in by chain and compass survey. Line spacing was 800 feet.

A total of 690 soil samples were taken on the grid at 200 foot intervals. The 'B' horizon was sampled where possible. All samples were placed in numbered paper envelopes and shipped directly to Fraser Laboratories Ltd., North Vancouver, where they underwent geochemical analysis for concentration of copper and molybdenum. The samples were dried, sieved to -80 mesh and digested by hot perchloric acid. The instrument utilized for analysis was a Techtron AA5 - Atomic Absorption Spectrophotometer. Twenty-five samples were re-analyzed for confirmation of the original values. The check analysis was within acceptable limits. The results of the analyses were compiled and a histogram of Frequency of Occurrence versus Copper Concentration (in parts per million) was prepared in order to determine the background and threshold anomalous values, and appears at the back of this report. The results are as follows:

Background	0 to 30	p.p.m. Copper
Weakly Anomalous	31 to 60	p.p.m. Copper
Anomalous	61 to 90	p.p.m. Copper
Strongly Anomalous	over 90	p.p.m. Copper

A total of 29 samples with anomalous copper concentrations were collected, 16 of these being classified as highly anomalous.

A classification resulting in 24 anomalous molybdenum samples was defined by inspection as follows:

Background	0 to 3	p.p.m. Molybdenum
Anomalous	over 3	p.p.m. Molybdenum

The results are plotted on the accompanying map.

COSTS

Costs as submitted on Form 'B' pertaining to the Mineral Act are as follows:

Geochemical Survey

<u>Wages:</u>	P. Haggerty - survey crew - July 1-23/70	690.00	
	H. Malo - survey crew - July 1-23/70	690.00	
	M. Primrose - survey crew - July 1-26/70	534.59	
	D. Reinke - foreman - July 1-26/70	849.42	
	F. Guardia - supervision and report (5)	500.00	
	R. Jury - crew organization	50.00	\$ 3,314.11

Disbursements:

Panorex Services Ltd. - Expediting	137.58	
Fraser Laboratories Ltd.		
680 samples (Cu and Mo)	1,156.00	
Groceries and supplies	426.97	1,720.55

Rentals:

Truck rental - July 1-28/70	740.64	
Field and survey equipment	297.00	1,037.64

TOTAL		\$ <u>6,072.30</u>
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CONCLUSIONS AND RECOMMENDATIONS

As indicated on the accompanying map, several small copper and molybdenum anomalies occur on the property.

Nothing of significance, other than a large area (4,800 feet north-south by 4,000 feet east-west) of weakly anomalous copper values

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and three anomalous samples within 1,000 feet of each other, occurs on the northern half of the survey.

Three anomalies on the south half of the claims warrant further investigation. East on lines 80S, 88S and 96S, eight anomalous molybdenum samples occur within 2,000 feet of each other.

Several anomalous copper and molybdenum samples occur reasonably close to baseline 'C' between lines 112S and 136S.

Another anomalous molybdenum area occurs easterly on lines 136S and 144S.


A geochemical survey in greater detail, for instance 200 foot lines with 100 foot spacing, would aid in confirming and defining these anomalous areas, prior to consideration of possible geophysical methods.

Respectfully submitted:



Robert M. Harvey, B.Sc.

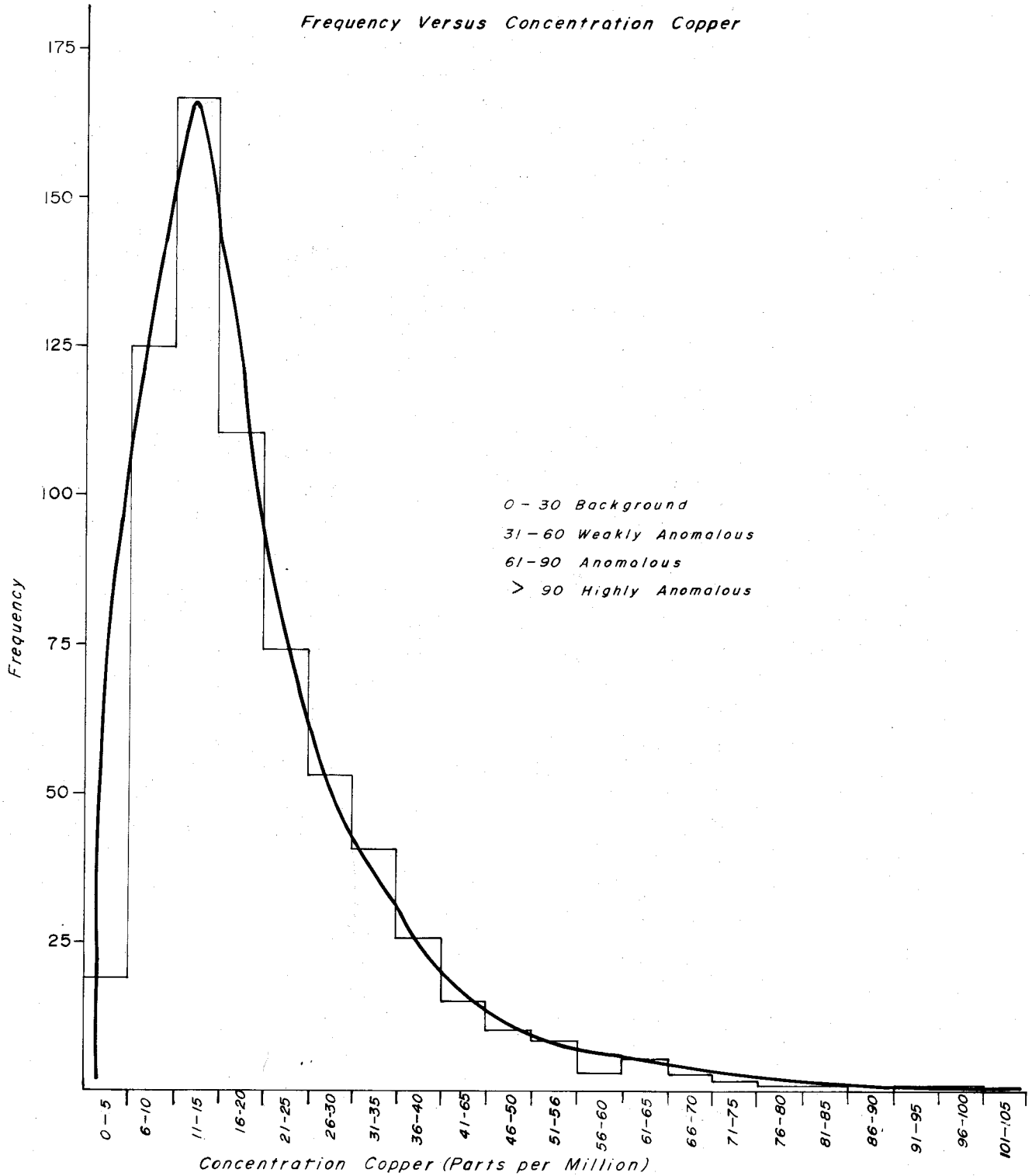
Endorsed by:



Rae G. Jury, P. Eng.

TRO - BUTTLE MINES LTD.

Frequency Versus Concentration Copper





LEGEND

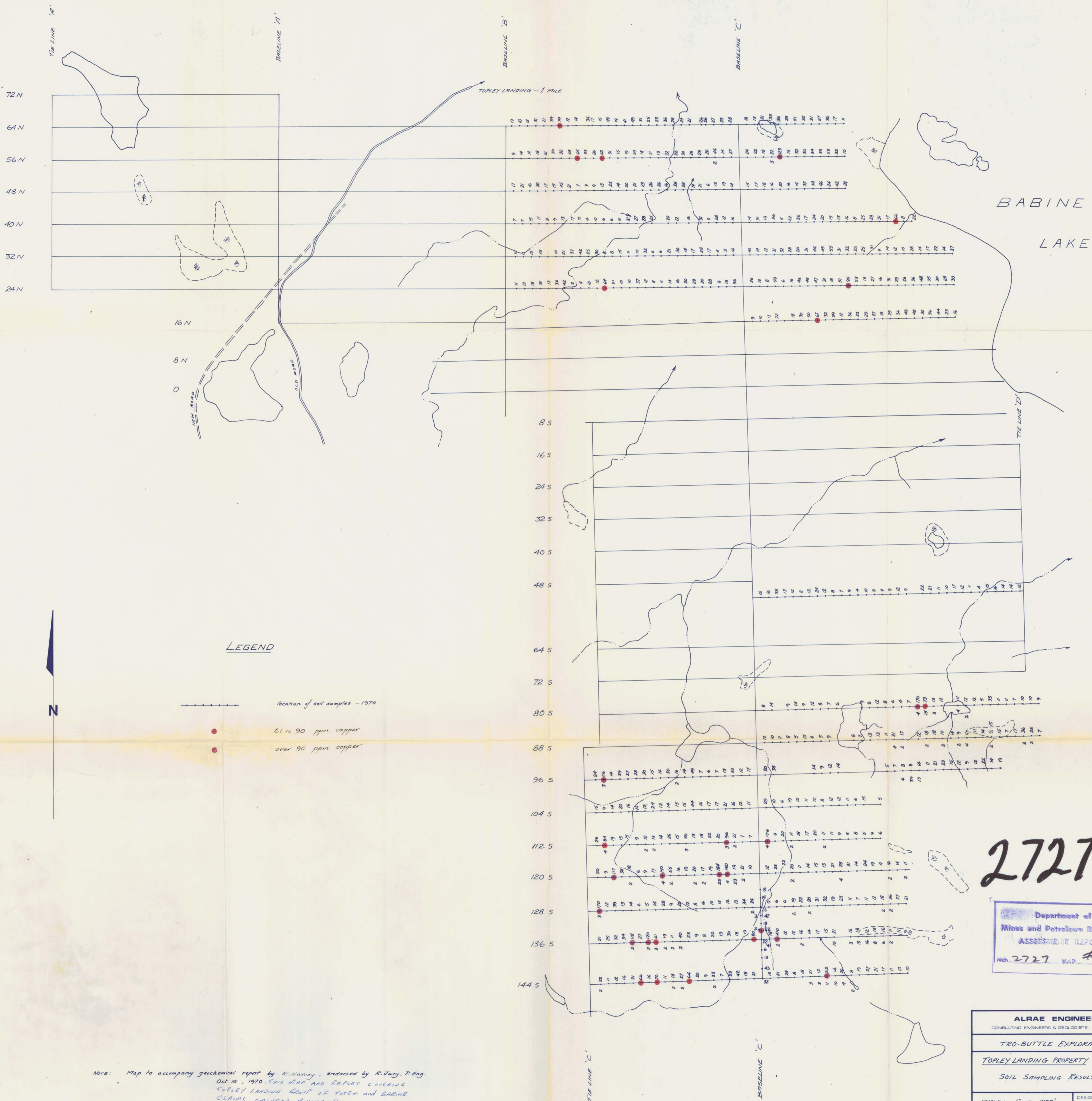
2727 M-1

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2727 MAP #1

NOTE: Map to accompany geochemical report by R. Harvey, endorsed by R. Jury, P. Eng.
Oct 15, 1970. THIS MAP AND REPORT COVERING
TOPLEY LANDING GROUP OF TOTE AND BABINE
CLAIMS, OMINCA MINING DIVISION

R. E. Jury

ALRAE ENGINEERING LTD. CONSULTING ENGINEERS & GEOLOGISTS VANCOUVER, CANADA	
TRO-BUTTLE EXPLORATION LTD	
TOPLEY LANDING PROPERTY	
LOCATION OF CLAIMS	
SCALE: 1" = 1000'	DESIGNED: F.G.
DATE: OCTOBER 1970	DRAWN: F.G.
REVISED:	CHECKED: R.G.J.
	MAP NO:



2727 M-2

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2727 MAP #2

ALRAE ENGINEERING LTD. CONSULTING ENGINEERS & GEOLOGISTS - VANCOUVER, CANADA	
TRO-BUTTLE EXPLORATION LTD	
TOPPLEY LANDING PROPERTY	
SOIL SAMPLING RESULTS - 1970	
SCALE: 1" = 1000'	DESIGNED: F.G.
DATE: OCTOBER 1970	DRAWN: F.G.
REVISED:	CHECKED: R.G.J.
	MAP NO:

NOTE: Map to accompany geochemical report by R. Harney, endorsed by R. Juty, P. Eng. Oct 15, 1970. THIS MAP AND REPORT COVERING TOPPLEY LANDING GROUP OF TOTEM AND BABINE CLAIMS, OMINECA MINING DIVISION.

R. Juty