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Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2655 MAP

REPORT ON GEOCHEMICAL SURVEYS
TUT CLAIM GROUP
CAPOOSE CREEK AREA, BRITISH COLUMBIA

93 F/6E, 6W by

M. B. Mehrtens, Ph.D.
H. W. Marsh, BSc., P. Eng.

Vancouver, B.C.
September, 1970

Surveys executed by
Rio Tinto Canadian Exploration Limited

CLAIMS:

Names	Record Numbers
Tut 1-18	78805 - 78822
Tut 19-28	78967 - 78976

LOCATION:

Area surrounding the headwaters of Capoose Creek
NTS 93-F-6
125° 10' W 53° 18' N
Omineca Mining Division

DATES:

August 19, 1969 to August 19, 1970.

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REPORT ON GEOCHEMICAL SURVEYS
TUT CLAIM GROUP
CAPOOSE CREEK AREA, BRITISH COLUMBIA

LOCATION AND ACCESS

The property consists of 28 mineral claims situated within NTS 93-F-6 at latitude 53° 18' and longitude 125° 10'. The claims are located within the Fawnie Range at the headwaters of Capoose creek which drains a lake referred to as Green Lake (see Drawing No. L-6044). The area is 70 airmiles south of the town of Burns Lake and is accessible by aircraft.

GEOLOGICAL SETTING

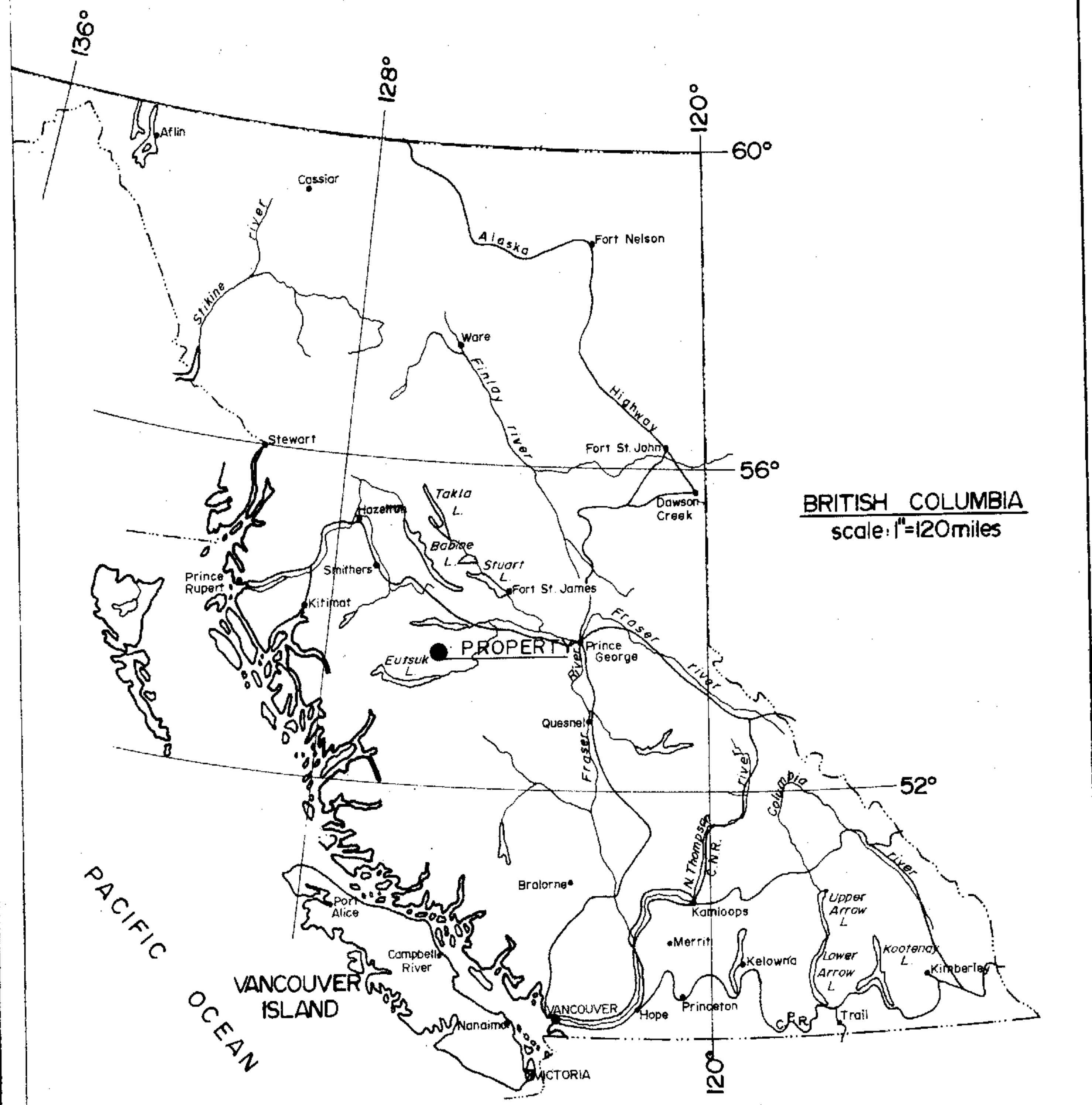
The geological map published on the area by the G.S.C. shows the property to be underlain by andesitic and basaltic flows, tuffs and breccias with interbedded argillite and minor limestone of the Takla Group (see Mem. Geol. Surv. Canada No 324, 1963). However, detailed geological mapping by Rio Tinto Canadian Exploration Ltd., has shown that granitic rocks occur at outcrop near the headwaters of Capoose Creek in the vicinity of Green Lake. The evidence would indicate the presence of a granitic intrusive body immediately west of Fawnie Ridge intruding the volcanic and sedimentary rocks. The intrusive may be an extension of the Capoose granodiorite (Drawing No. G-8095).

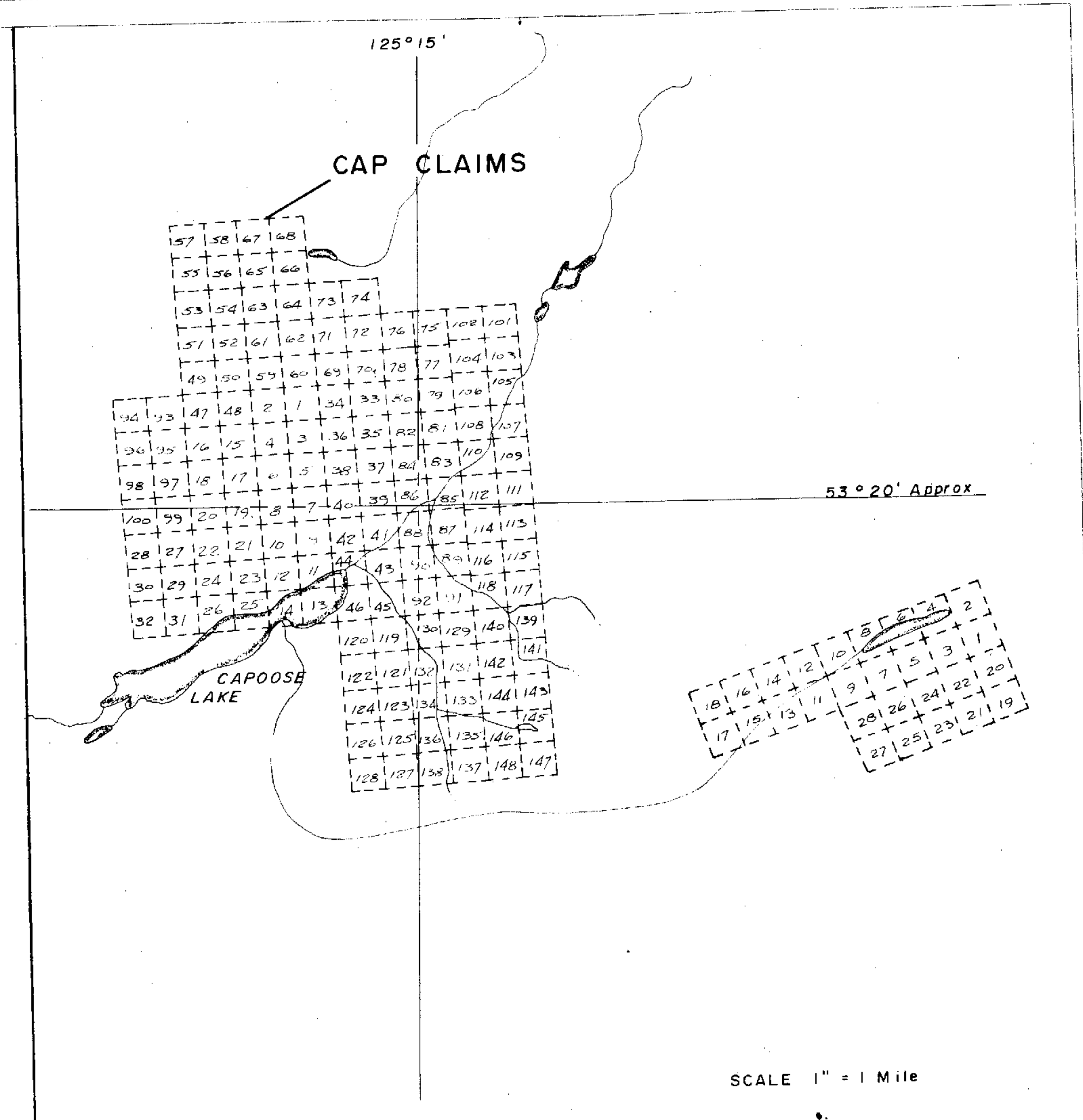
Overburden of glacial moraine obscures much of the bedrock beneath the 5,500 ft. contour; the moraine having been deposited by sheet ice which appears to have moved towards the northeast.

SAMPLING, SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

The geochemical sampling was carried out from a base camp at Capoose Lake some 5 airmiles to the west-north-west. The survey was supported by helicopter.

Soil samples from the 'B' horizon were collected at 200 ft. intervals from lines 400 ft. apart over the area held





N.T.S.
93-F-6

RIO TINTO CANADIAN EXPLORATION LTD.

CAPOOSE PROJECT B.C.

LOCATION MAP

MAY, 70	/rwr	DWG. L-6044

SCALE
One Inch =

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by the mineral claims. At each sample station an entrenching tool was used to obtain the sample which was then placed in a kraft paper envelope. The samples were oven dried at temperatures not exceeding 60°C and sieved through 80 mesh bolting cloth; the oversize fraction being discarded.

Chip samples from bedrock were taken along the soil sampling transects wherever possible. Adequate bedrock exposure however, was available only on the 10 claims near the southern boundary of the claim group. Care was taken to collect samples of fresh rock. These samples were crushed and ground to minus 80 mesh.

Analysis was by atomic absorption spectrometer after digestion of both soil and rock samples with hot concentrated nitric acid/perchloric acid in the Company's Vancouver Laboratory. The results for Cu, Mo, Ni, Pb and Zn, expressed in ppm, were obtained by analyst Mr. E. Paski Jr.

PRESENTATION OF RESULTS

The results of the survey are shown on 12 accompanying drawings all on a scale of 1" = 800'.

The soil geochemistry is shown on drawings GC-7071 to 7076, and the rock geochemistry on drawings GC-7077 to 7082.

Threshold levels for each of the metals investigated were derived (Table 1) and used in the interpretation of the soil geochemical data. The rock samples however, are not sufficiently representative for statistical purposes. Accordingly, the threshold values derived for soils has been used to assist in the interpretation of the rock geochemical data.

Table 1 Threshold metal values in 'B' horizon soils, TUT Claims

Metal	Threshold value, ppm
Cu	50
Mo	5
Ni	50
Pb	15
Zn	150

(Data on the minus 80 mesh fraction; analysis on the A.A. after digestion with hot concentrated nitric acid/perchloric acid)

DISCUSSION OF THE RESULTS

The major features of the metal distribution patterns are as follows:

1. A strong and extensive Pb anomaly, oriented N-S characterises the Takla rocks and is reflected by both the soil and rock data. The anomaly persists beyond the north and south boundaries of the claim group. Anomalous Zn values are absent, except in the extreme southwestern section of the property where they coincide with the high Pb concentrations.

2. Cu-Mo soil anomalies are located in a E-W zone essentially confined to the Green Lake - Capoose Creek valley. The anomalies are developed over both Takla rocks and the granitic rocks, but are particularly strongly developed over the latter.

3. Ni has no anomalous distribution pattern.

The geochemical data demonstrates that both the sedimentary and volcanic units of the Takla Group, which are exposed on the property, are enriched in Pb with minor and erratic amounts of Zn, Mo and Cu. These rocks have also been intensely silicified and in addition contain up to 15% pyrite in fractures and disseminations. Detailed mapping of these rocks however, has so far not revealed any commercial deposits but would indicate that the mineralization has been pervasively introduced.

The Cu-Mo soil anomalies developed in the Capoose Creek-Green Lake valley are apparently underlain by granitic rocks and the available evidence would suggest that the metal has not been transported far from the bedrock source. In addition the Takla rocks contain inadequate concentrations of Cu and Mo to provide such a source. These soil anomalies probably reflect mineralization within the underlying intrusive.

CONCLUSION

The geological environment together with the metal distribution patterns present a community of features indicative of porphyry-type mineralization which warrants further investigation.

M. B. Mehrtens

:kw

M. B. Mehrtens, Ph.D.

H W Marsh

H. W. Marsh, BSc., P. Eng.

PROFESSIONAL
PROVINCE OF
H. W. MARSH
BRITISH COLUMBIA
ENGINEER

QUALIFICATIONS - M. B. MEHRTENS

Academic

1957	BSc.	Honours Geology:	Hull University, England
1966	DIC	Applied Geochemistry:	Royal School of Mines, Imperial College, England
1966	Ph.D.	Applied Geochemistry:	Royal School of Mines, Imperial College, England

Practical

1957-1961	Exploration Geologist:	Zambia for Anglo American Corp. of S. Africa Ltd.
1961-1963	Mine Geologist:	President Steyn Gold Mining Co. Ltd., S. Africa
1963-1966	Ph.D. Field Work:	In Central Norway.
1966-1968	Base Metal Exploration: in U.K.:	Rio Tinto Finance & Exploration Ltd.
1968-1970	Consulting Geochemist:	Rio Tinto Canadian Exploration Ltd.

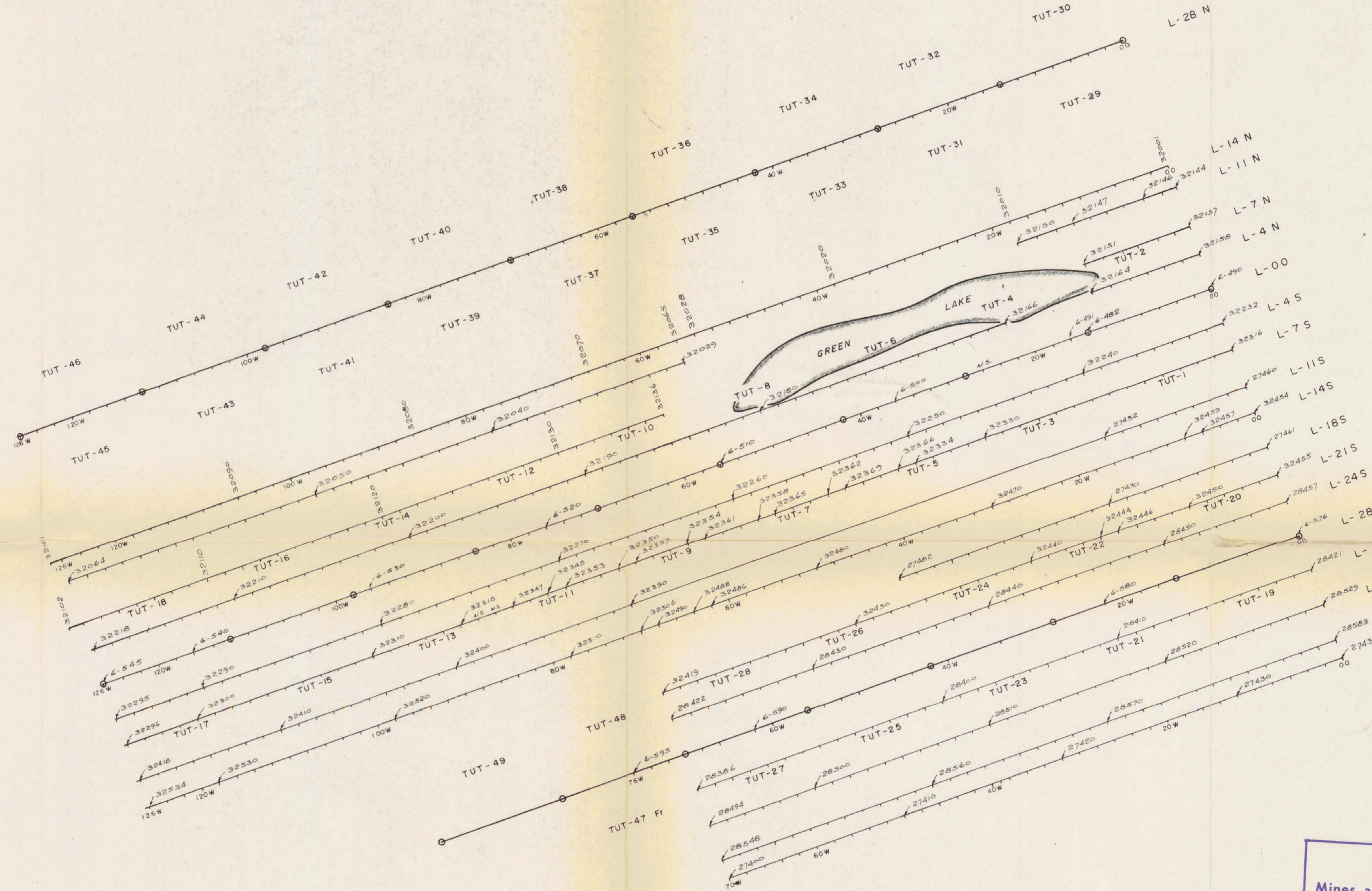
QUALIFICATIONS - A. TROUP

Academic

1967	BSc.	Honours Geology:	McMaster University, Ontario
1969	MSc.	Geochemistry:	McMaster University, Ontario

Practical

1964-1966	Geological Mapping and Geochemical Exploration:	Student Vacation Work
1967-1970	Geologist-Geochemist:	Placer Development and Rio Tinto Canadian Exploration Limited.



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N

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93-F-6

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K.W. MARSH

SCALE

800' 0' 800' 1600' 2400' 3200'

One Inch = 800 Feet

RIO TINTO CANADIAN EXPLORATION LIMITED
CAPOOSE PROJECT B.C.
(TUT CLAIMS) SOIL SAMPLE LOCATION MAP
AUG, 70 | AT / rwr | DWG. GC-7071

LEGEND:

50+ P.P.M. Cu. IN SOILS

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SCALE

One Inch = 800 Feet

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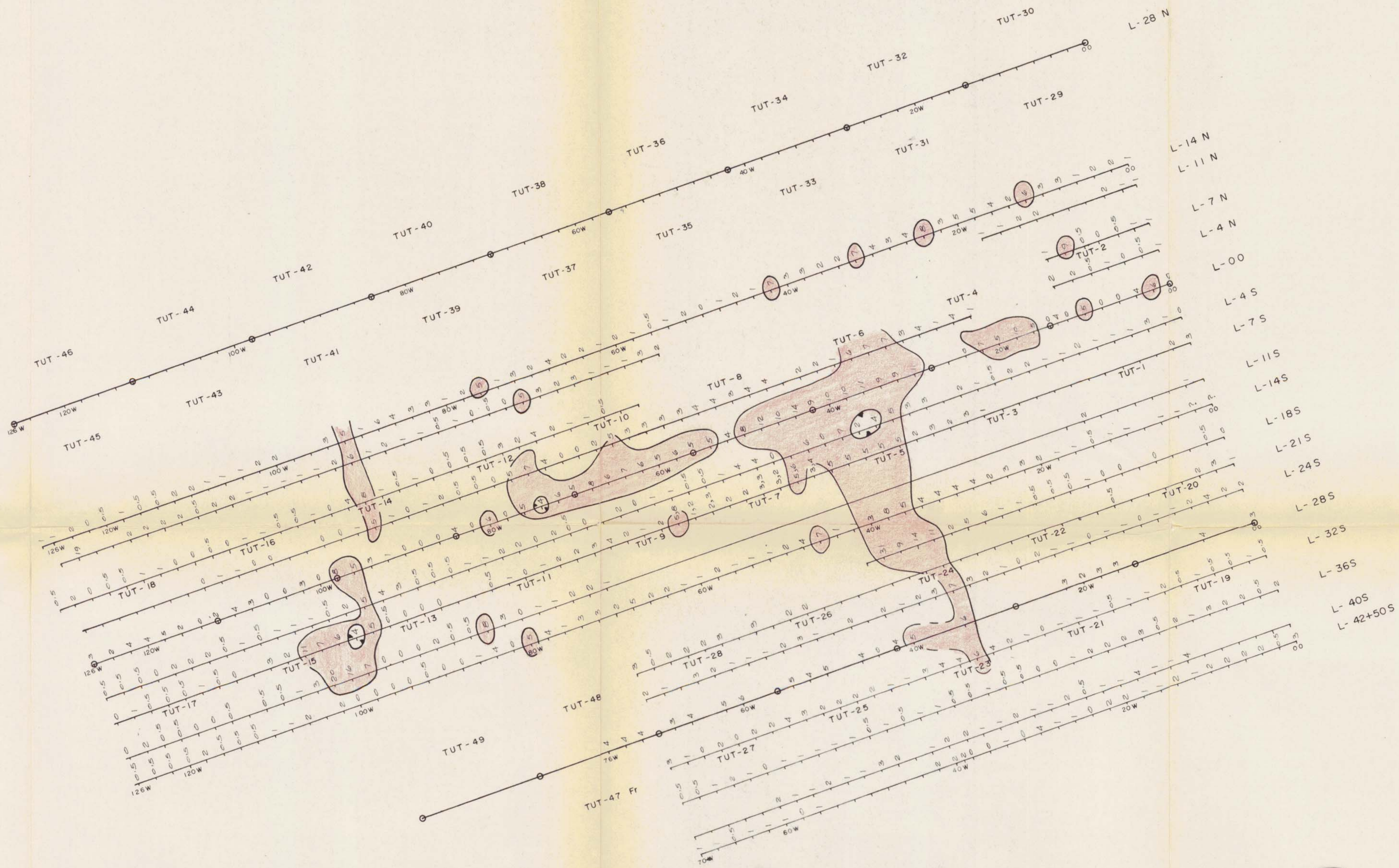
RIO TINTO CANADIAN EXPLORATION LIMITED

CAPOOSE PROJECT B.C.
(TUT CLAIMS)

GEOCHEM. MAP SHOWING
Cu RESULTS IN P.P.M.

AUG, 70	AT / rwr	DWG. GC-7072



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LEGEND:

5+ PPM. Mo. IN SOILS

GEOCHEM. LOW

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SCALE
800' 0' 800' 1600' 2400' 3200'
One Inch = 800 Feet

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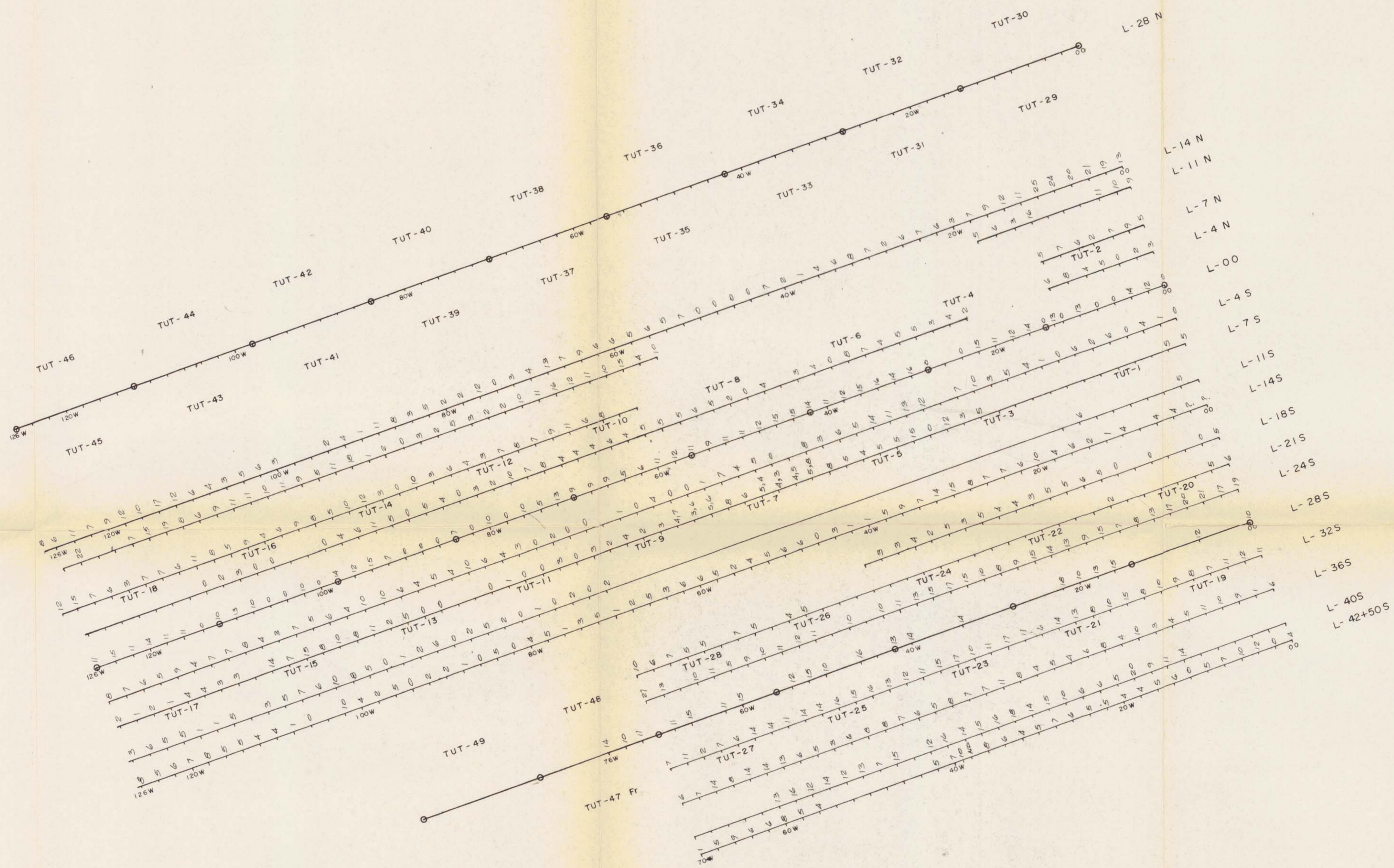
H. W. MARSH

RIO TINTO CANADIAN EXPLORATION LIMITED

CAPOOSE PROJECT B.C.
(TUT CLAIMS)

GEOCHEM. MAP SHOWING
Mo RESULTS IN P.P.M.

AUG, 70	AT / rwr	DWG. GC-7073



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LEGEND:

Ni. VALUE IN PPM. IN SOILS

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H. W. MARSH

SCALE

800' 0' 800' 1600' 2400' 3200'

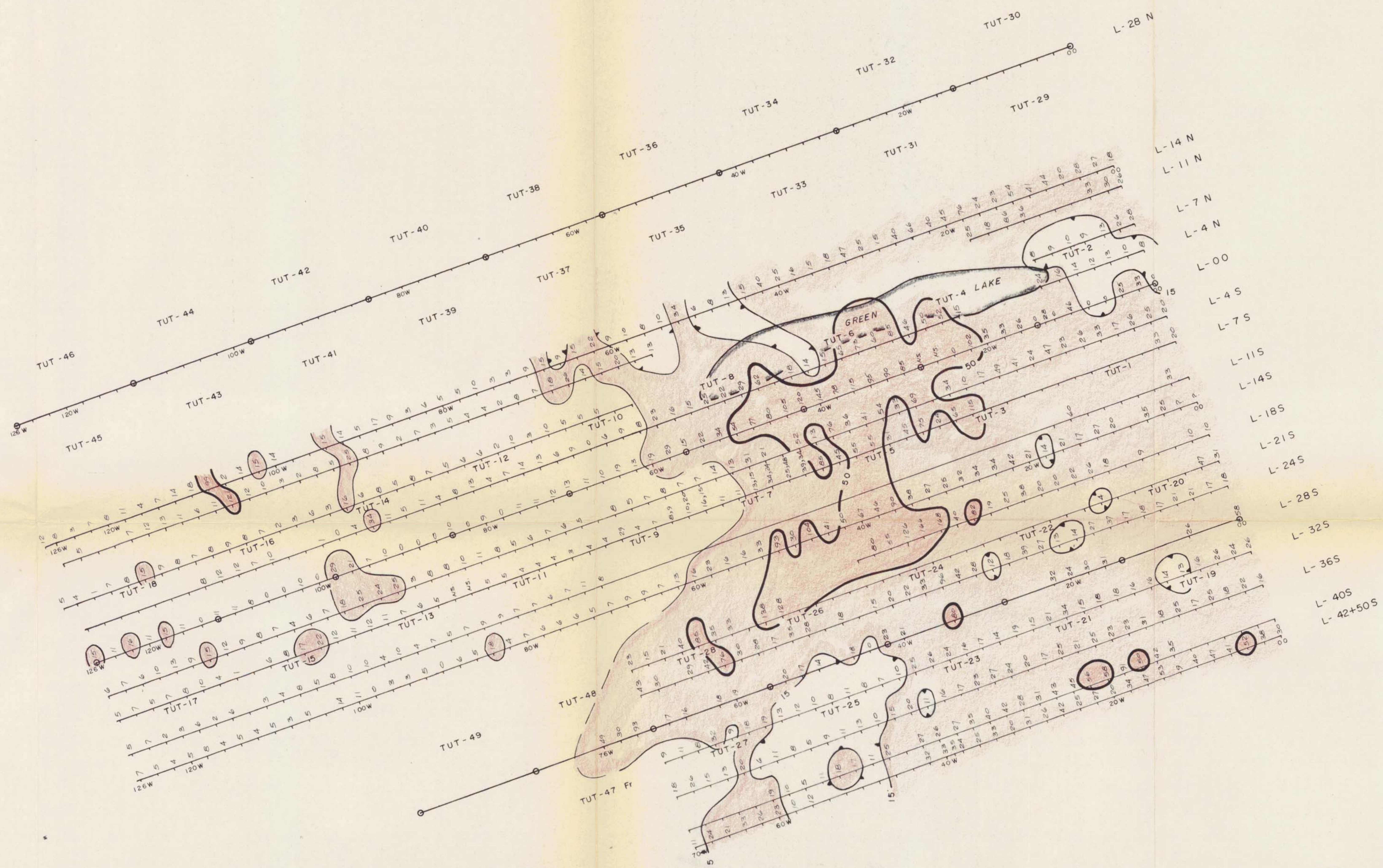
One Inch = 800 Feet

RIO TINTO CANADIAN EXPLORATION LIMITED

CAPOOSE PROJECT B.C.
(TUT CLAIMS)

GEOCHEM. MAP SHOWING
Ni RESULTS IN P.P.M.

AUG, 70	AT / rwr	DWG. GC-7074



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LEGEND:

15+ P.P.M. Pb IN SOILS

50+ P.P.M. Pb IN SOILS

GEOCHEM. LOW

N.T.S
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SCALE

800' 0' 800' 1600' 2400' 3200'

One Inch = 800 Feet

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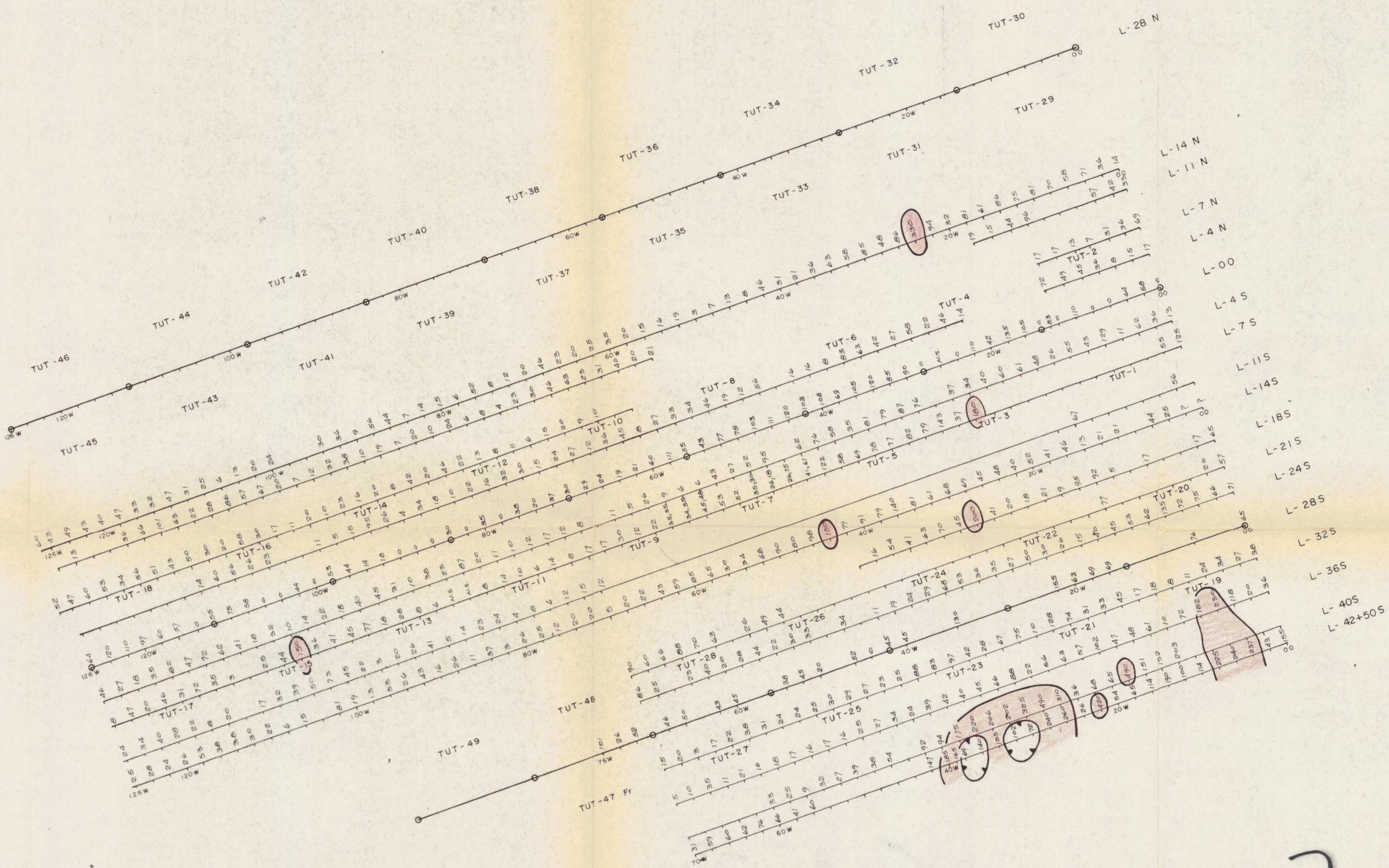
RIO TINTO CANADIAN EXPLORATION LIMITED		
CAPOOSE PROJECT B.C. (TUT CLAIMS)		
GEOCHEM. MAP SHOWING Pb RESULTS IN P.P.M.		
AUG, 70	AT / rwr	DWG. GC-7075



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LEGEND:

150 + P.P.M. Zn IN SOILS

GEOCHEM. LOW

N.T.S
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SCALE

800' 0' 800' 1600' 2400' 3200'

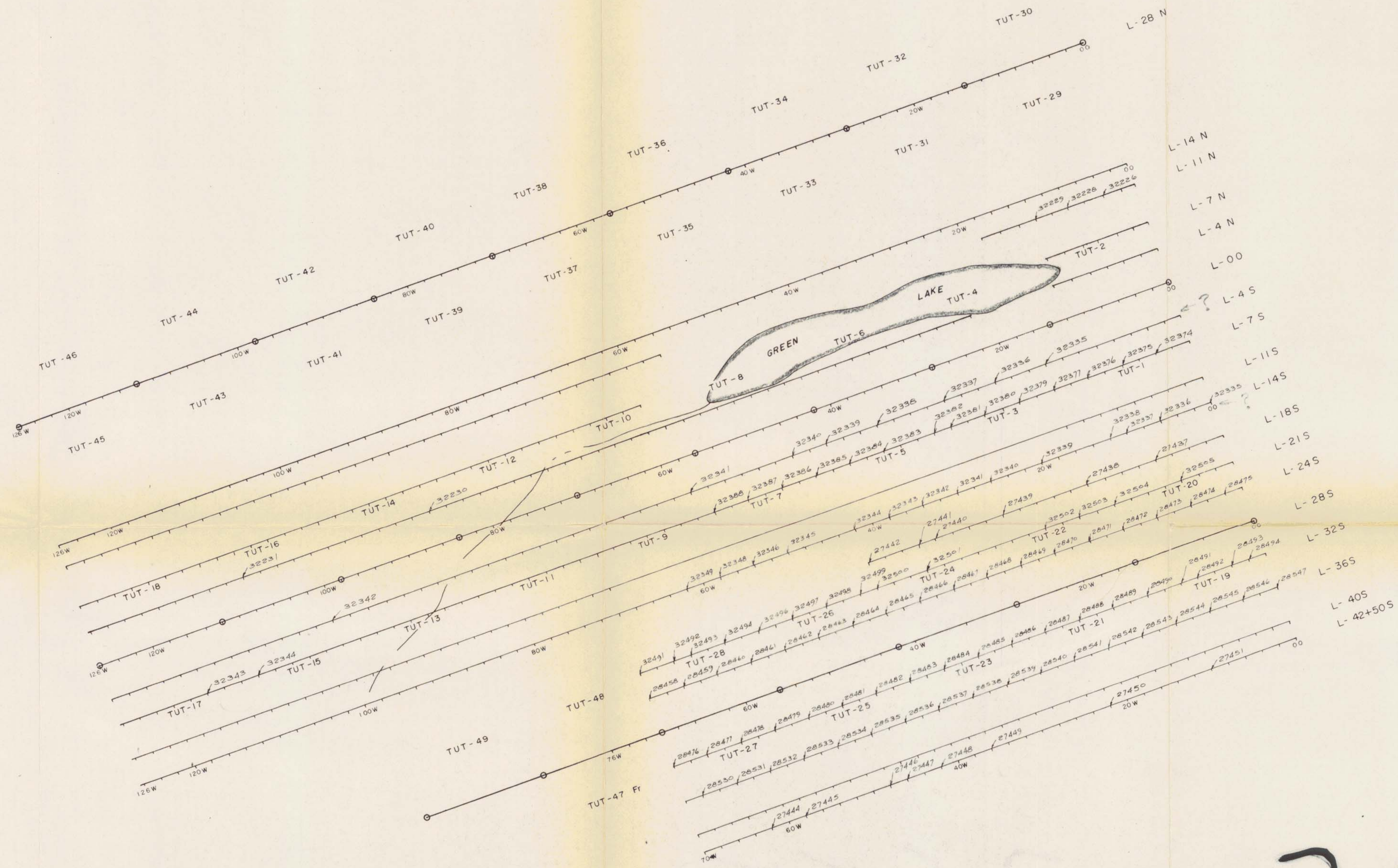
One Inch = 800 Feet

RIO TINTO CANADIAN EXPLORATION LIMITED

CAPOOSE PROJECT B.C.
(TUT CLAIMS)

GEOCHEM. MAP SHOWING
Zn RESULTS IN P.P.M.

AUG, 70	AT / rwr	DWG. GC-7076



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PROFESSIONAL ENGINEER
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H. W. MARSH

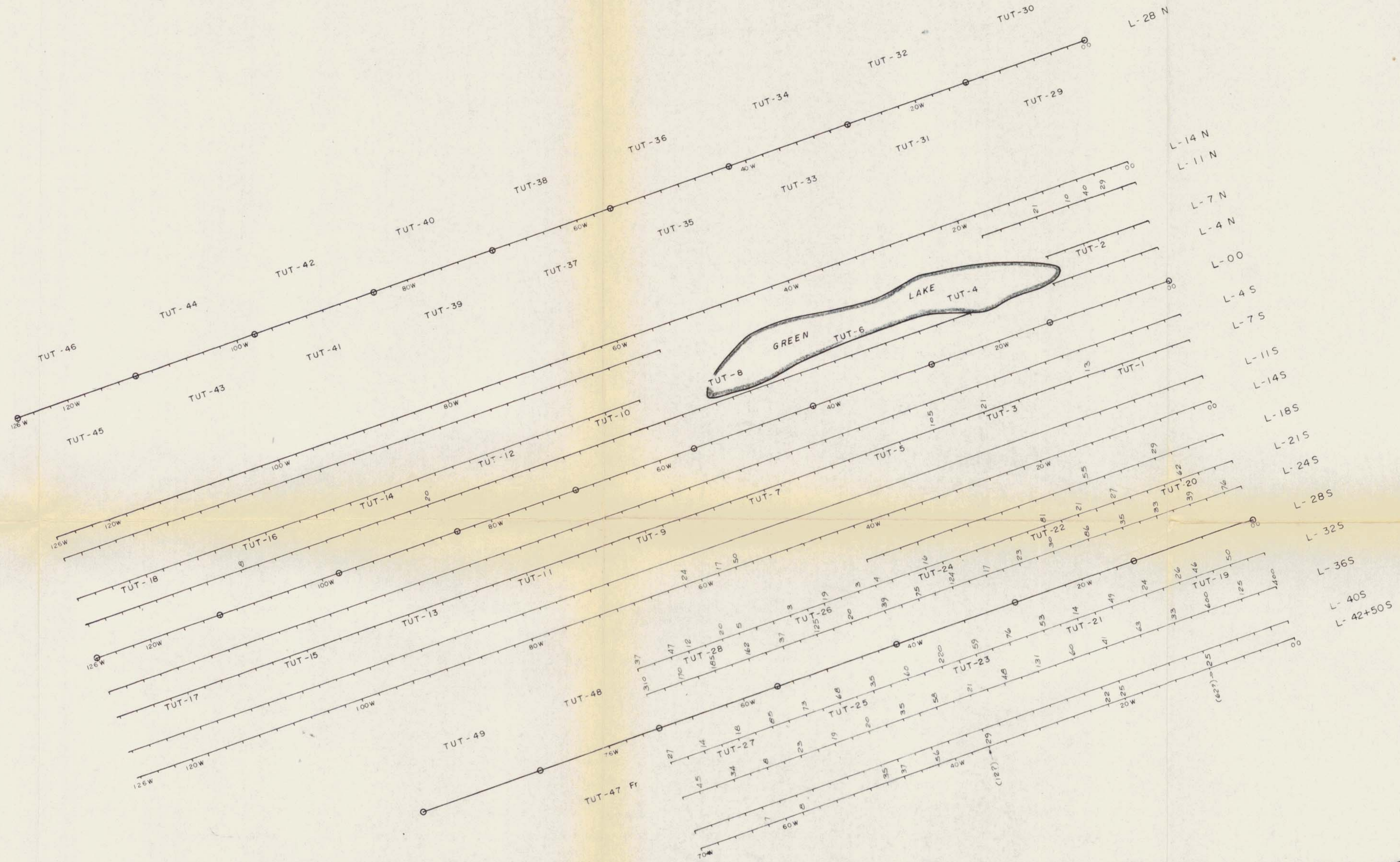
SCALE
800' 0' 800' 1600' 2400' 3200'
One Inch = 800 Feet

RIO TINTO CANADIAN EXPLORATION LIMITED

CAPOOSE PROJECT B.C.
(TUT CLAIMS)

ROCK SAMPLE LOCATIONS

AUG, 70	AT / rwr	DWG. GC-7077



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H. W. MARSH

SCALE

800' 0' 800' 1600' 2400' 3200'

One Inch = 800 Feet

RIO TINTO CANADIAN EXPLORATION LIMITED

CAPOOSE PROJECT B.C.

(TUT CLAIMS)

GEOCHEM. MAP

Cu ROCK RESULTS IN P.P.M.

AUG, 70	AT / rwr	DWG. GC-7078

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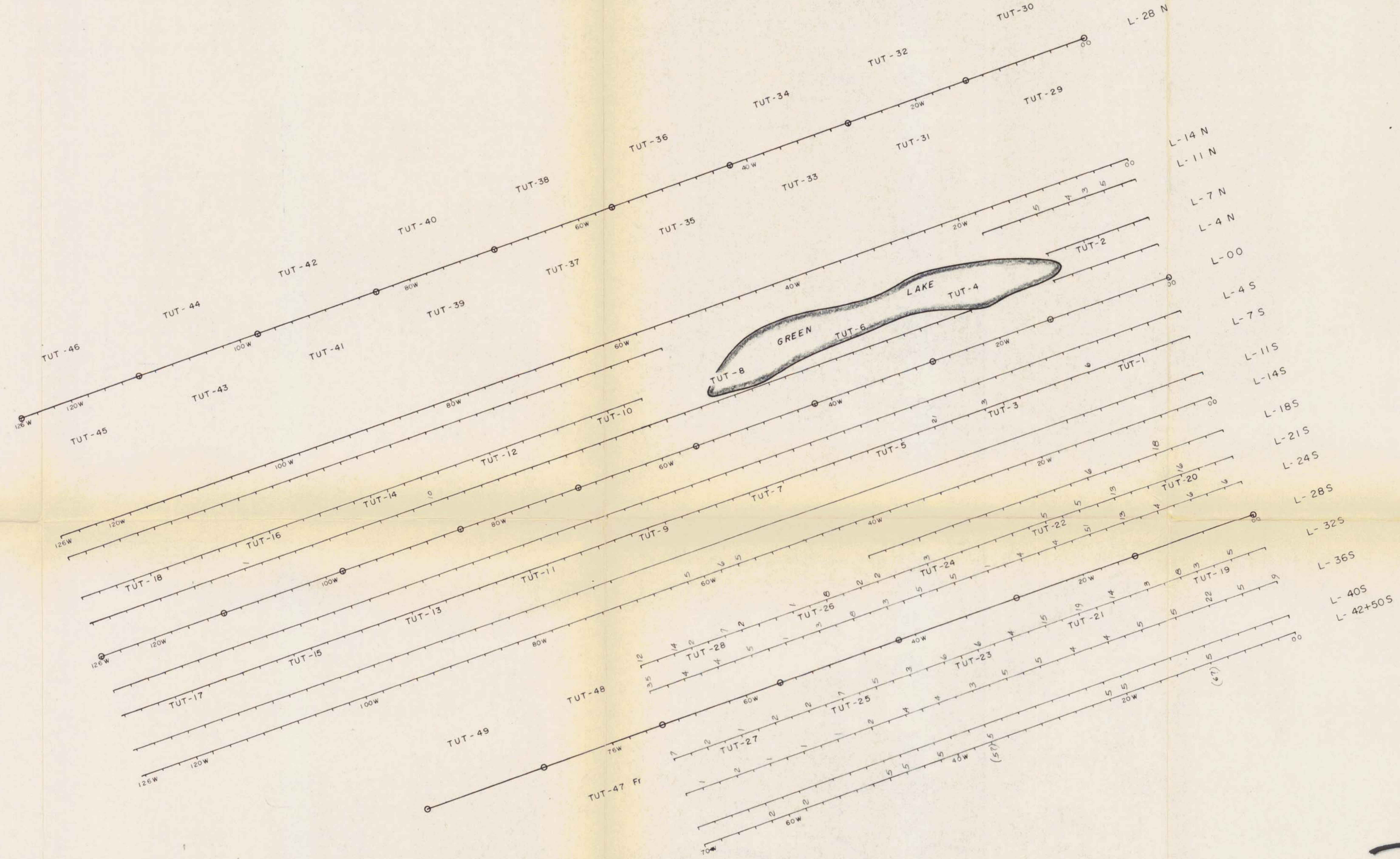
CAPOOSE PROJECT B.C.

(TUT CLAIMS)

GEOCHEM. MAP

Mo ROCK RESULTS IN P.P.M.

AUG, 70 | AT / rwr | DWG. GC-7079



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N

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SCALE
800' 0' 800' 1600' 2400' 3200'
One Inch = 800 Feet

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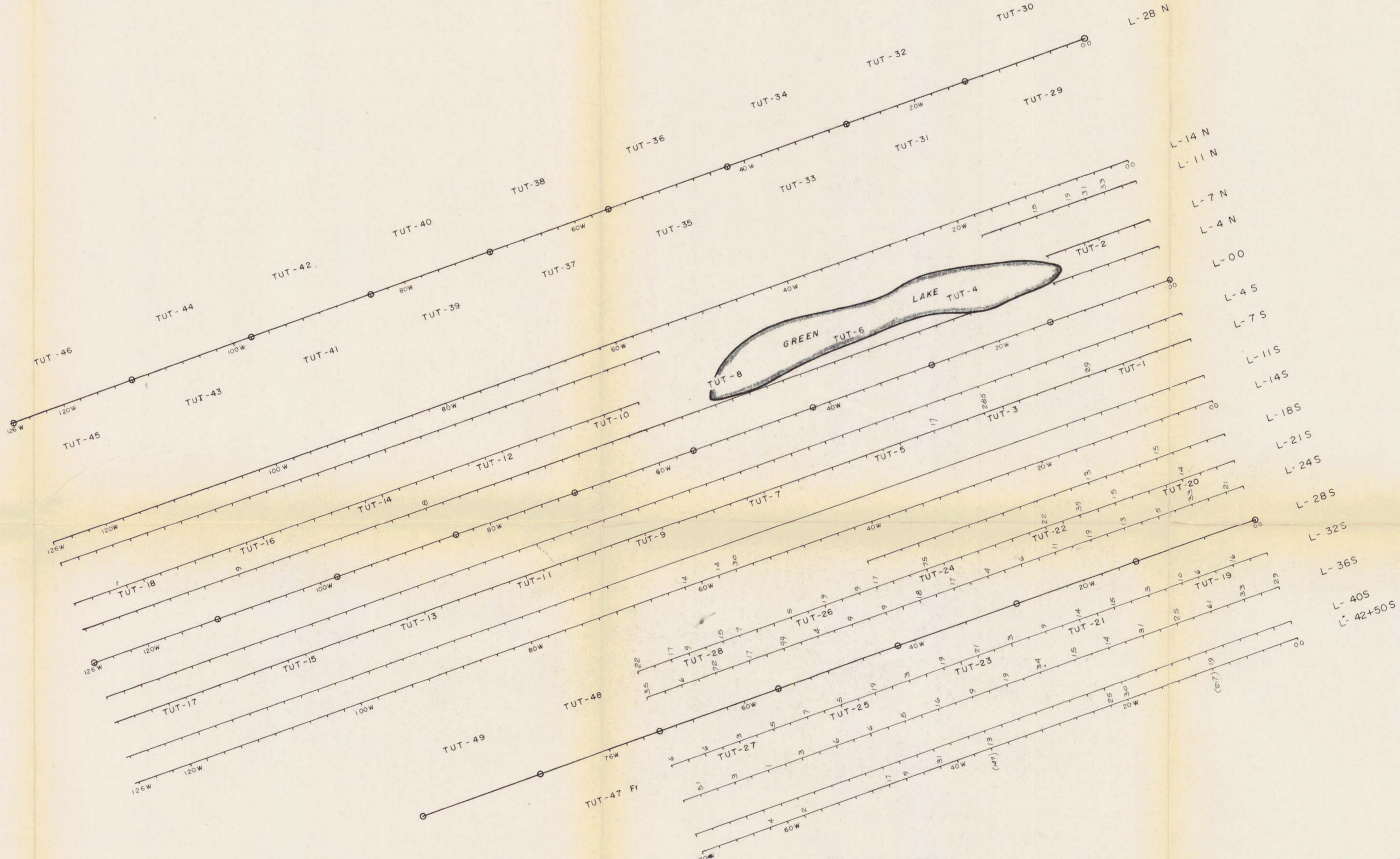
H.W. MARSH

RIO TINTO CANADIAN EXPLORATION LIMITED

CAPOOSE PROJECT B.C.
(TUT CLAIMS)

GEOCHEM. MAP
Ni ROCK RESULTS IN P.P.M.

AUG, 70	AT / rwr	DWG. GC-7080



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N

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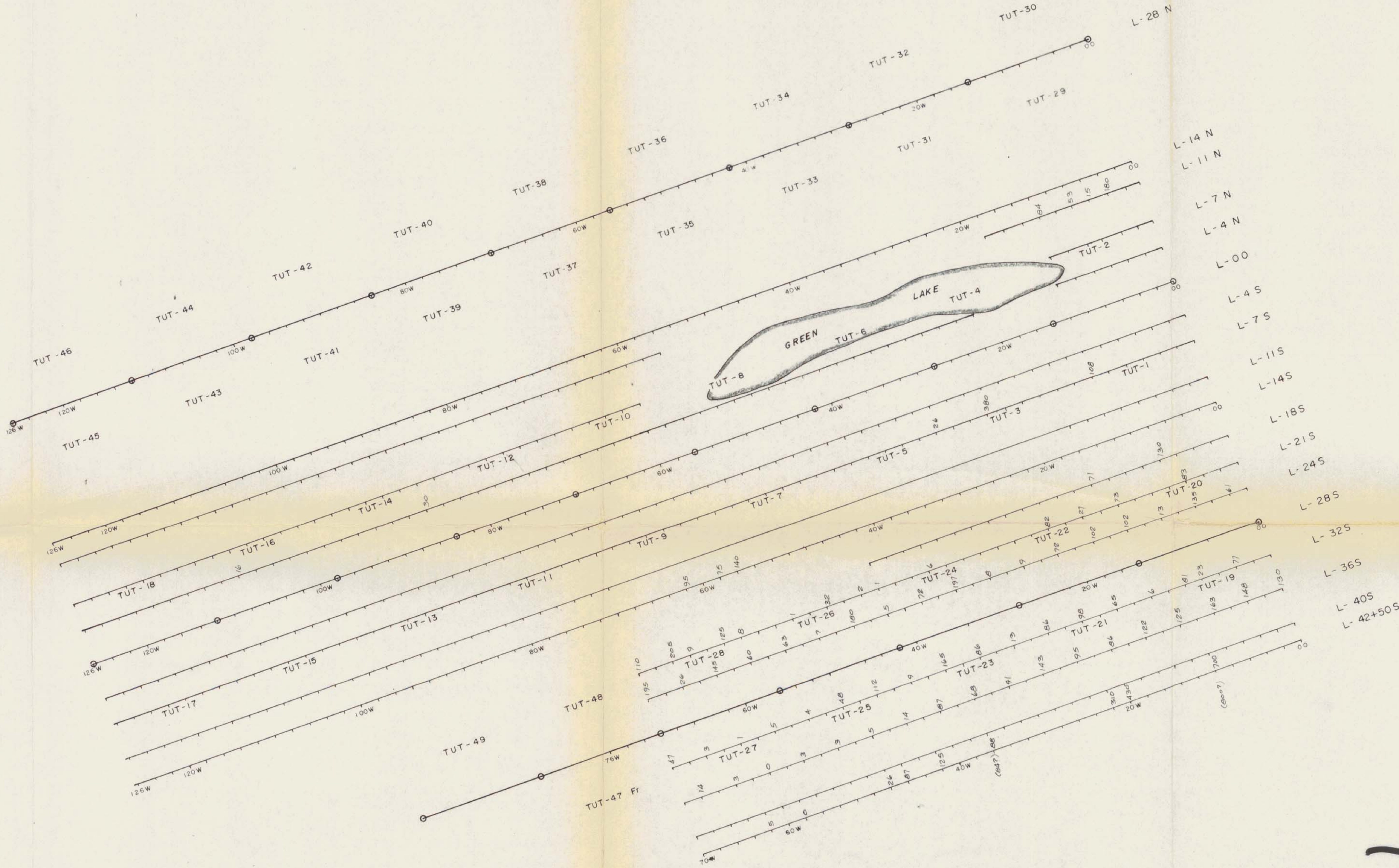
PROVINCE OF BRITISH COLUMBIA
H. W. MARSH

SCALE
800' 0' 800' 1600' 2400' 3200'
One Inch = 800 Feet

RIO TINTO CANADIAN EXPLORATION LIMITED		
CAPOOSE PROJECT B.C. (TUT CLAIMS)		
GEOCHEM. MAP Pb ROCK RESULTS IN P.P.M.		
AUG, 70	AT / rwr	DWG. GC-7081



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N.T.S
93-F-6

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
H. W. MARSH

SCALE
800' 0' 800' 1600' 2400' 3200'
One Inch = 800 Feet

RIO TINTO CANADIAN EXPLORATION LIMITED

CAPOOSE PROJECT B.C.
(TUT CLAIMS)

GEOCHEM MAP
Zn ROCK RESULTS IN P.P.M.

AUG, 70 | AT / rwr | DWG. GC-7082

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Legend:

ANDS. HRFL.	Andesite - hornfels
GRNC.	Fine to medium grained GRANITIC intrusion
S.&L.	Sheared & Leached zones

BOARDER ZONE OF GRANODIORITE

ANDS.	ANDESITE, porphyritic andesites, breccia flows, vesicular
VLCC.	VOLCANIC tuffs
G.Q.	GARNETIFEROUS QUARTZITE (sedimentary or igneous ?)
SEDS.	SEDIMENTS, limestone, argillaceous limestone, gray wacke, shales & quartzitic sediments
X	Xenoliths of sediments in andesite flows

Pyrite zone
Contact defined, approximate
Strike & dip of bedding
Strike of banding
Fault

N.T.S
93 - F - 6

SCALE
800' 0' 800' 1600' 2400' 3200'
One Inch = 800 Feet

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA H. W. MARSH

RIO TINTO CANADIAN EXPLORATION LIMITED

CAPOOSE PROJECT B.C.

TUT CLAIMS

GEOLOGICAL MAP

SEPT, 70 | AN / rwr | DWG. G - 8095