

ASSESSMENT REPORT
GEOLOGICAL AND GEOCHEMICAL SURVEY
RAM CLAIM
Atlin Mining Division
Tatsamenie Lake Area, B. C.
N.T.S. 104K/Tulsequah Sheet

58°17'N
132°26'W

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

10,760

OWNER: CHEVRON CANADA LIMITED

OPERATOR: CHEVRON STANDARD LIMITED

Authors: Derek Brown
Ken Shannon

November, 1982

TABLE OF CONTENTS

	<u>Page</u>
LOCATION AND ACCESS	1
CLAIM	1
REGIONAL GEOLOGY	1
GEOLOGY OF THE CLAIM	1
MINERALIZATION	4
GEOCHEMICAL SURVEY OF THE CLAIM	4
GEOCHEMICAL RESULTS	6
CONCLUSIONS	7
RECOMMENDATIONS	7
REFERENCES	8
COST STATEMENT	9
STATEMENT OF QUALIFICATIONS	
FIGURES 2-8	in pockets

LIST OF FIGURES

	<u>Page</u>
FIGURE 1: Location Map	2
2: Geology	pocket 1
3: Rock Sample Location	pocket 2
4: Soil Sample Location	pocket 2
5: Soil Geochemistry: Gold	pocket 3
6: Soil Geochemistry: Silver	pocket 3
7: Soil Geochemistry: Arsenic	pocket 4
8: Soil Geochemistry: Antimony	pocket 4

LOCATION AND ACCESS

The RAM claim is situated at 58°17' north and 132°26' west (Figure 1). The legal corner post is on the delta of the west end of Tatsamenie Lake. Access to the property was by helicopter from a base camp at Trapper Lake.

CLAIM

The RAM claim was staked during August, 1981.

<u>Claim</u>	<u>Record Number</u>	<u>Record Date</u>	<u>Number of Units</u>
RAM	1483	August 21, 1981	20

The property is owned by Chevron Canada Limited with Chevron Standard Limited acting as the operator. The claim is situated on previously unstaked ground.

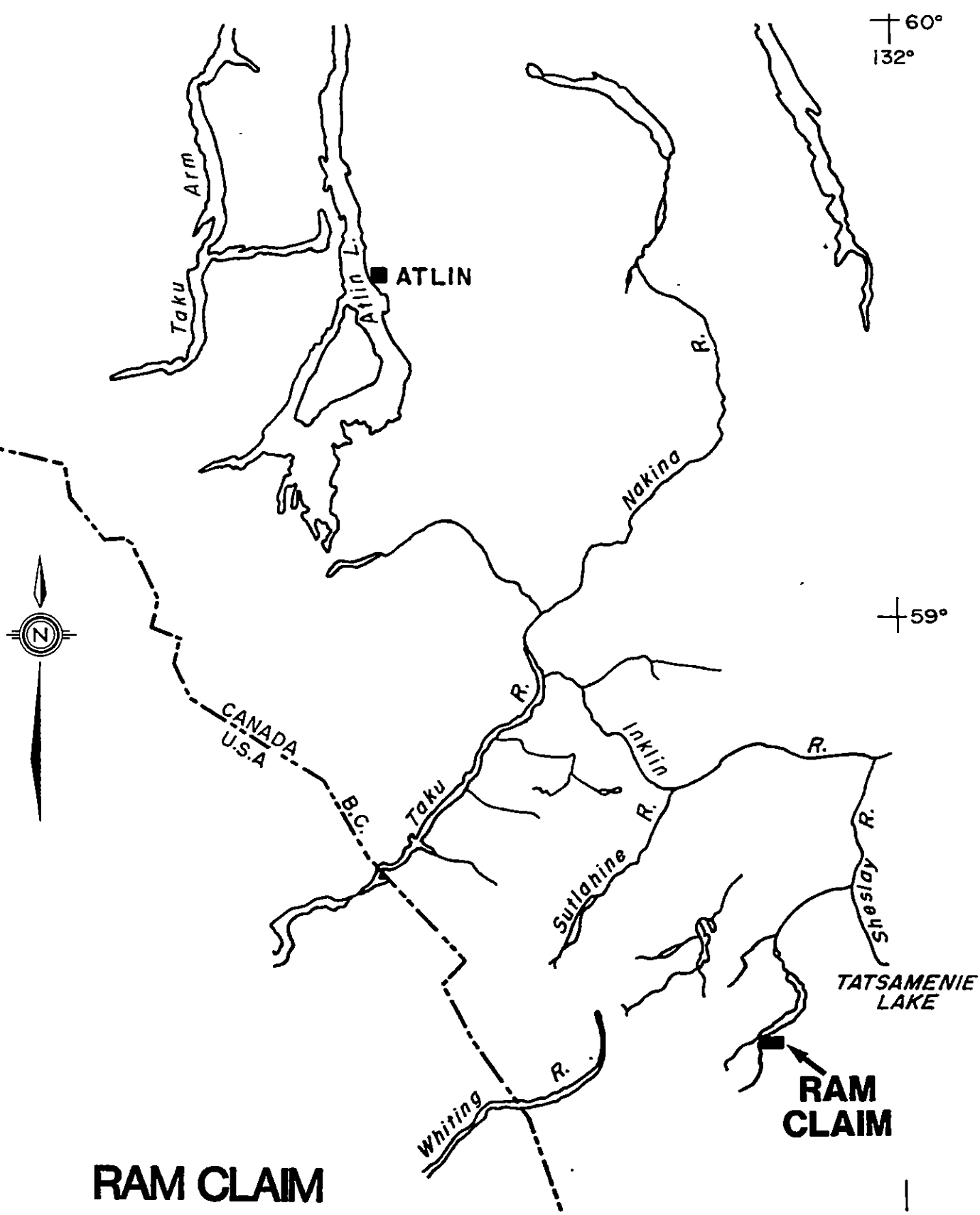
REGIONAL GEOLOGY

The RAM claim is on the east margin of the Coast Plutonic Complex as mapped by Souther (1971). The claim is underlain by Triassic and older oceanic rocks, mainly limestone and phyllitic sediments. Small intrusive bodies related to the Coast Plutonic Complex intrude the limestone and phyllite.

GEOLOGY OF THE CLAIM

Pre-Triassic and Older

On the claim rounded, light grey outcrops of limestone (Unit 1A) are exposed (Figure 2). A Permian age has been reported for similar limestone in the region by Monger and Ross (1971). The limestone is silicified, dolomitized and pyritized over limited areas.



RAM CLAIM
LOCATION MAP
 M504

0 30
 Km
FIGURE 1

The limestone is intruded by an extremely rusty brown weathering basalt(?) dyke. Evidence of contact metamorphism adjacent to the dyke is manifested by development of epidote-rich layers and recrystallization of the limestone. This basalt may be related to the the Level Mountain Group as mapped by Souther (1971).

Phyllites have been divided into two separate units on the claim. A limited exposure of dark green phyllitic greenstone (Unit 1C) was found on the southern edge of the claim. It lies structurally above a grey to light brown felsic phyllite (Unit 1B). The felsic phyllite locally contains limestone beds and limy sections. Where observed the folds are tight and the compositional layering is subparallel to the phyllitic foliation.

Post Middle-Jurassic Diorite

A massive hornblende diorite (Unit 2) intrudes Unit 1. The diorite is greenish grey and fine-to medium-grained. Hornblende is partially altered to chlorite and feldspar is slightly sericitized.

Unit 2A is a medium-grained, massive dioritic to granodioritic intrusion with prominent rusty brown joint sets. Hydrothermal alteration extends up to 10 centimeters from the joints into the intrusive. The unaltered diorite contains both hornblende and biotite phenocrysts.

Tertiary(?) Felsite

A large felsite sill (Unit 3) over 200 m thick is exposed in the southeast corner of the RAM claim. Felsite dykes elsewhere on the claim are correlated

to this sill. Quartz-albite-sericite are the dominant mineral constituents. Silicification and pyritization of the phyllites is common within one meter of the felsite dykes.

MINERALIZATION

The significant mineral showings are plotted on Figure 2. Stringers cutting the light brown altered limestone contain malachite, azurite and minor tetrahedrite. Dark grey to black siliceous veins, stringers and pods with yellow staining cut the light brown limestone. The veins are up to one meter wide, occasionally vuggy and they contain disseminated pyrite, arsenopyrite and rare chalcopyrite. Sample KS2T1-58 is from one of these veins and it contains 5250 ppb gold. Pink weathering pegmatitic potassic feldspar-specularite dykes up to 50 centimeters wide cut Unit 1. The specularite has a grey metallic lustre, red streak and it is a very hard variety ($H \approx 6$). Gossanous zones, as indicated on Figure 2, consist of extensively silicified, iron-carbonate altered rock with up to 8% pyrite.

White quartz veins within the Jurassic diorite (Unit 2) contain acicular stibnite needles and disseminated arsenopyrite. The diorite is rusty brown and fractured in the vicinity of these 2-4 cm wide veins.

GEOCHEMICAL SURVEY OF THE CLAIM

Sixteen rock and ninety-six soil samples were collected from the RAM claim. The rock samples location is plotted on Figure 3 and their corresponding geochemical results are listed in Table 1. Soils were sampled over a grid, lines bearing at 55° east of north spaced 100 meters apart. Soils were taken every 100 meters along the lines as shown in Figure 4.

TABLE 1

ROCK GEOCHEMISTRY

<u>Sample Number</u>	<u>Au (ppb)</u>	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Sb (ppm)</u>
DB2T1-202	35	0.1	20	23.0
-203	20	0.1	45	16.4
-204	30	0.2	14	6.8
-208	20	0.3	17	11.4
-209	10	0.1	35	14.6
-210	20	0.1	185	56.0
TZ2T1-29	850	0.2	550	88.0
-30	5	5.1	425	136.0
-31	65	0.4	83	32.0
-32	30	0.2	1000	52.0
-33	625	0.1	17	4.2
-39	5	2.5	900	130.0
-40	35	1.0	250	26.0
KS2T1-58	5250	0.4	2150	145.0
-177	40	0.1	69	31.0
-178	2000	0.3	875	67.0

Soils were collected from B-horizon soil where possible, otherwise C-horizon was used. They were then placed in kraft wet strength soil bags and air dried. Rocks were placed in plastic sample bags. Both soil and rock samples were then shipped to Chemex Labs, North Vancouver, B. C. Soils were further dried, then sieved, with the -80 mesh portion retained for analysis. The entire rock sample was crushed and then pulverized in a ring grinder to -100 mesh. Gold was done using fire assay and atomic absorption techniques with the fire assay bead dissolved in HCl and HNO₃, then analysed by conventional atomic absorption techniques. For silver, a mixture of HClO₄ and HNO₃ was used to digest the sample, followed by atomic absorption spectrophotometry. Arsenic was done by standard colorometric techniques following an HClO₄ and HNO₃ digestion. For antimony, the sample was digested in HCl, potassium iodide was added, extracting with TOPO-MIBK and then analysing by atomic absorption spectrophotometry.

The geochemical results are plotted on Figures 5 to 8.

GEOCHEMICAL RESULTS

Several rocks with more than 600 ppb gold and over 1.0 ppm silver are present however no significant soil geochemistry results were recorded for gold or silver. Soils are locally anomalous in arsenic and antimony. High antimony values are probably due to local stibnite bearing quartz veins.

CONCLUSIONS

Thirteen field man-days were spent on the RAM claim. Geological mapping of the claim indicates some of the Pre-Upper Triassic limestone has been silicified and iron-carbonate altered. Several isolated showings of chalcopyrite, stibnite and tetrahedrite were found. Some dark grey siliceous veins with disseminated pyrite appear to be gold bearing, however relatively low gold values and narrow widths are discouraging.

RECOMMENDATIONS

More detailed prospecting in conjunction with geological mapping is required to determine the extent of mineralization on the claim.

REFERENCES

- Monger, J.W.H. and Ross, C.A. (1971). Distribution of Fusulinaceans in the Western Canadian Cordillera. Canadian Journal of Earth Sciences, Vol. 8, pp. 259-278.
- Monger, J.W.H. (1975). Upper Paleozoic rocks of the Atlin Terrane, Northwestern British Columbia and South-Central Yukon; Geological Survey of Canada, Paper 74-47.
- Souther, J.C. (1971), Geology and mineral deposits of Tulsequah map-area, British Columbia. Geological Survey of Canada, Memoir 362, 84 p.

1982 EXPLORATION PROGRAM
RAM CLAIM
TATSAMENIE LAKE AREA, B. C.
COST STATEMENT

PERIOD: July 6, 7, 8, 22, 23 and August 4, 1982.

COSTS:

1. LABOUR:

<u>Name</u>	<u>Position</u>	<u>Field Days</u>	<u>Office Days</u>
Derek Brown	Geologist	3	2
Terry Zanger	Sampler	1	-
John Hawthorne	"	3	-
Franz Wohlgemuth	"	2	-
James Armstrong	"	1.5	-
Lorne Rowan	"	1	-
Mike Gray	"	0.5	-
Steve Goertz	"	0.5	-
Rob Lazenby	"	0.5	-
	Total Days	13	2

Average cost per field man day = \$100. x 13 = \$ 1,300.00

Average cost per office man day = 175. x 2 = 350.00

2. ANALYSES:

Rocks (Au, Ag, As, Sb)	16 samples	@\$17.40	\$ 278.40	
Soils (Au, Ag, As, Sb)	96 samples	@\$15.50	<u>1,488.00</u>	1,766.40

3. CAMP COSTS:

13 man days @\$79.50/man day = 1,033.50

4. HELICOPTER:

5 hours @\$510./hr. including fuel = 2,550.00

5. DRAFTING:

2 man days @\$100./man day = 200.00

6. SAMPLE SHIPPING:

112 samples @\$0.60 each = 67.20

ASSESSMENT WORK TOTAL \$7,267.10

STATEMENT OF QUALIFICATIONS

I, Derek Brown, graduated in May, 1981 with a B.Sc. (Hons. Geology) from Carleton University, Ontario. I have worked as a geologist since graduation and am presently employed on a temporary basis by Chevron Standard Limited of Vancouver, B. C.

Derek Brown

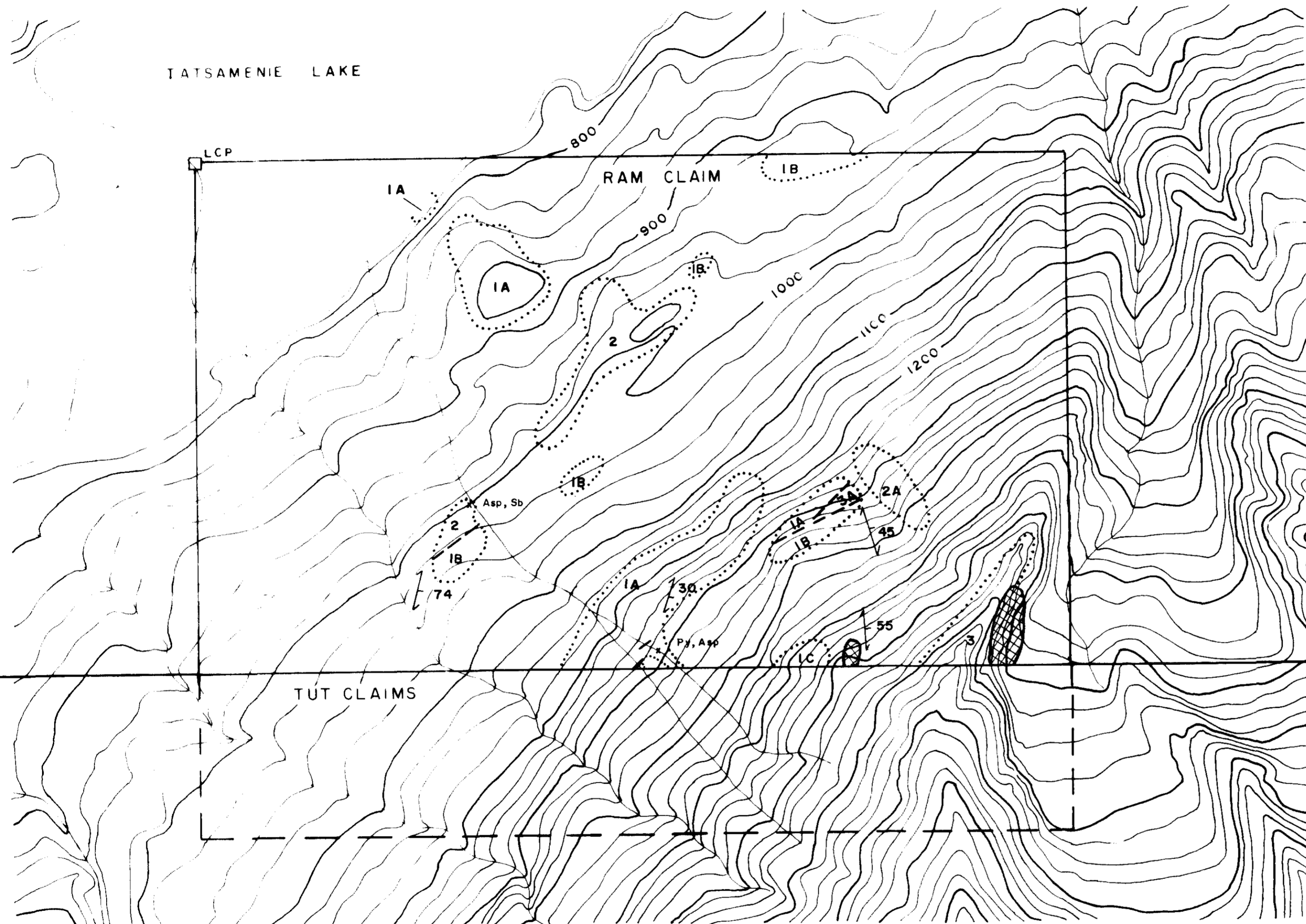
DEREK BROWN

STATEMENT OF QUALIFICATIONS

I, Ken Shannon, have worked as a geologist in B. C. on a seasonal basis since graduation from the University of British Columbia with a B.Sc. (Hons. Geology) in 1975. A M.Sc. degree was awarded from the Department of Geology at U.B.C. in May, 1982. I am employed as a geologist by Chevron Standard Limited of Vancouver, B. C. Work on the RAM claim was done under my supervision.

A handwritten signature in cursive script that reads "Ken Shannon". The signature is written in black ink and is positioned in the lower right quadrant of the page.

KEN SHANNON



LEGEND

- TERTIARY (?)**
- 3 FELSITE SILL AND DYKES
 - 3a BASALT (?) DYKE- RUSTY WEATHERING
- POST MIDDLE-JURASSIC**
- 2 HORNBLENDE DIORITE
 - 2a HORNBLENDE - BIOTITE DIORITE / GRANODIORITE
- PRE- TRIASSIC AND OLDER**
- 1a GREY AND BROWN LIMESTONE
 - 1b FELSIC PHYLLITE
 - 1c PHYLLITIC GREENSTONE

SYMBOLS

- Asp ARSENOPYRITE
- Sb STIBNITE
- Py PYRITE
- QUARTZ VEIN
- - - GEOLOGICAL CONTACT (APPROXIMATE)
- X GOSSAN
- OUTCROP

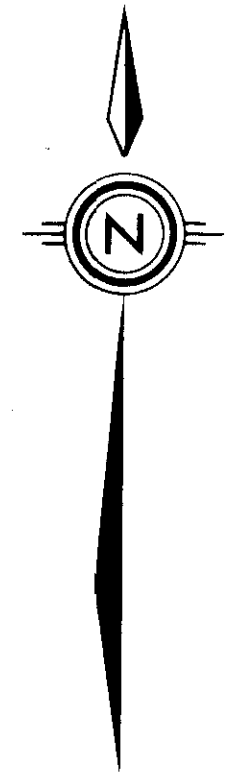
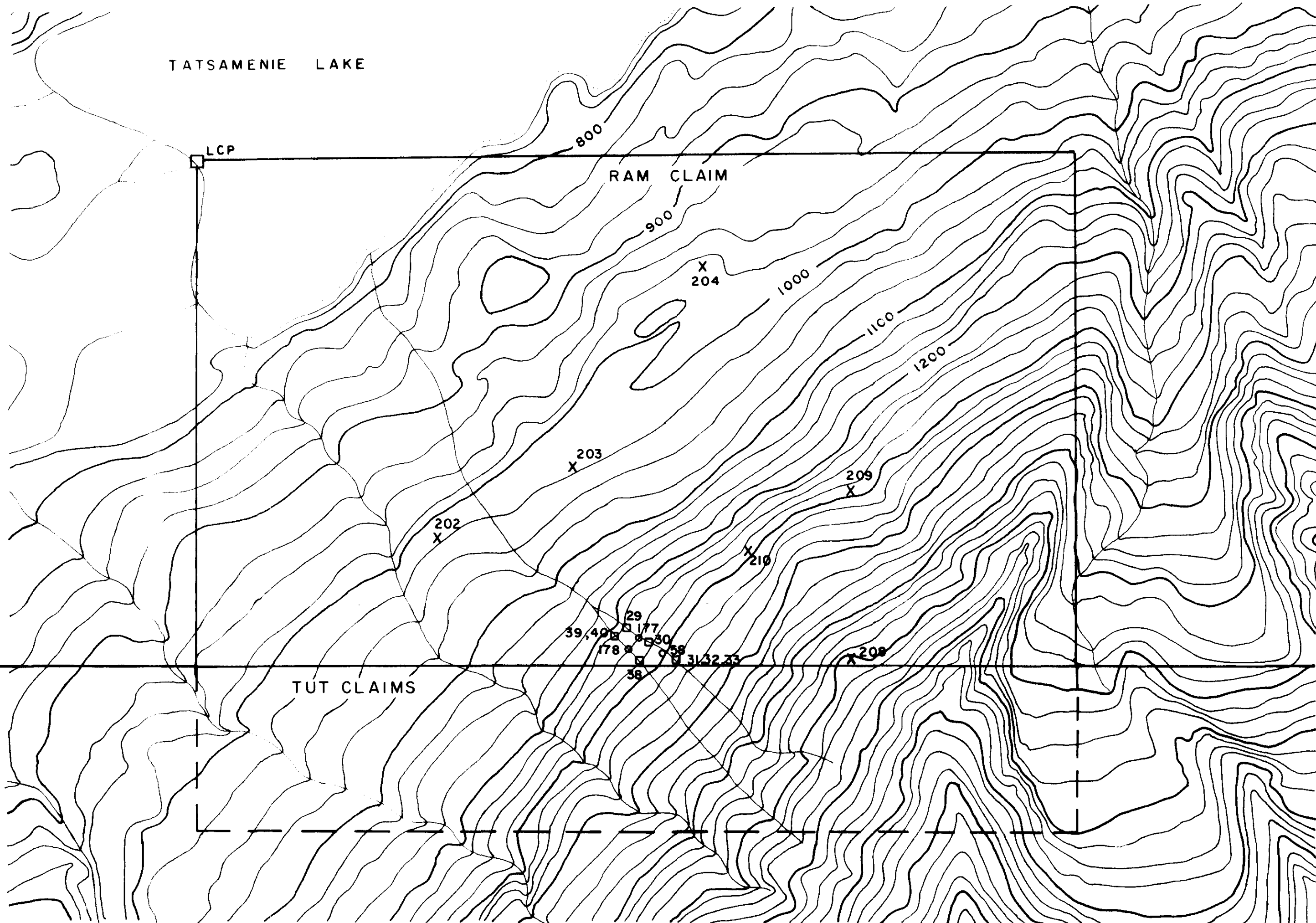


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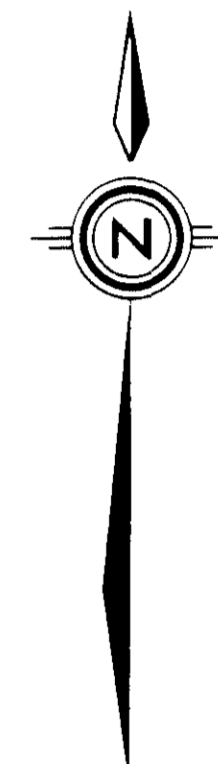
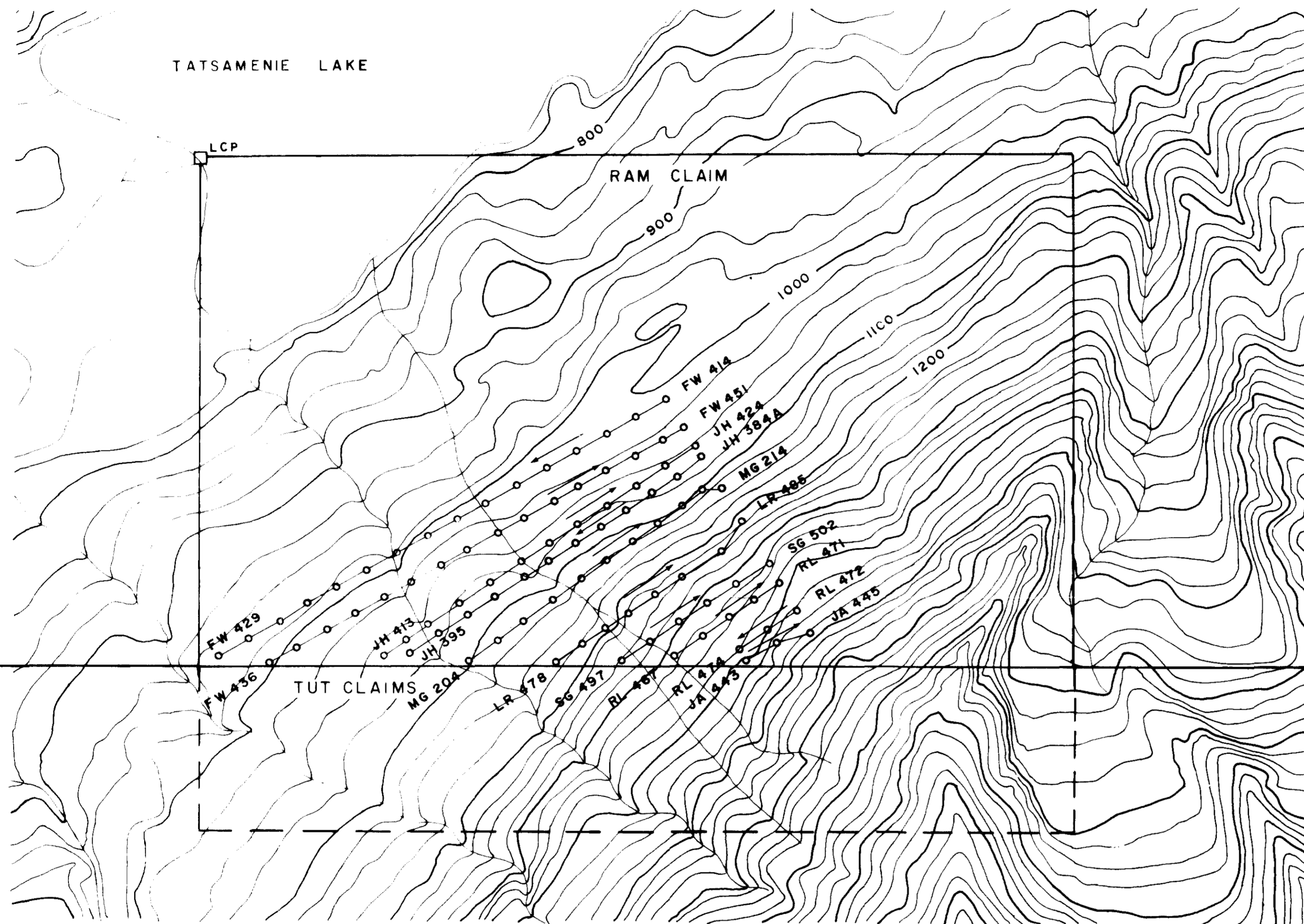
**GEOLOGICAL BRANCH
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10,760

SYMBOLS

- X DB 2TI
- o KS 2TI
- D TZ 2TI

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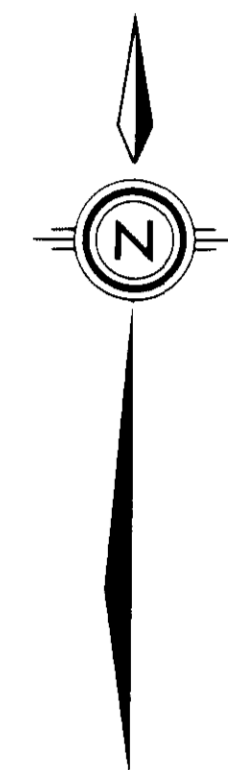
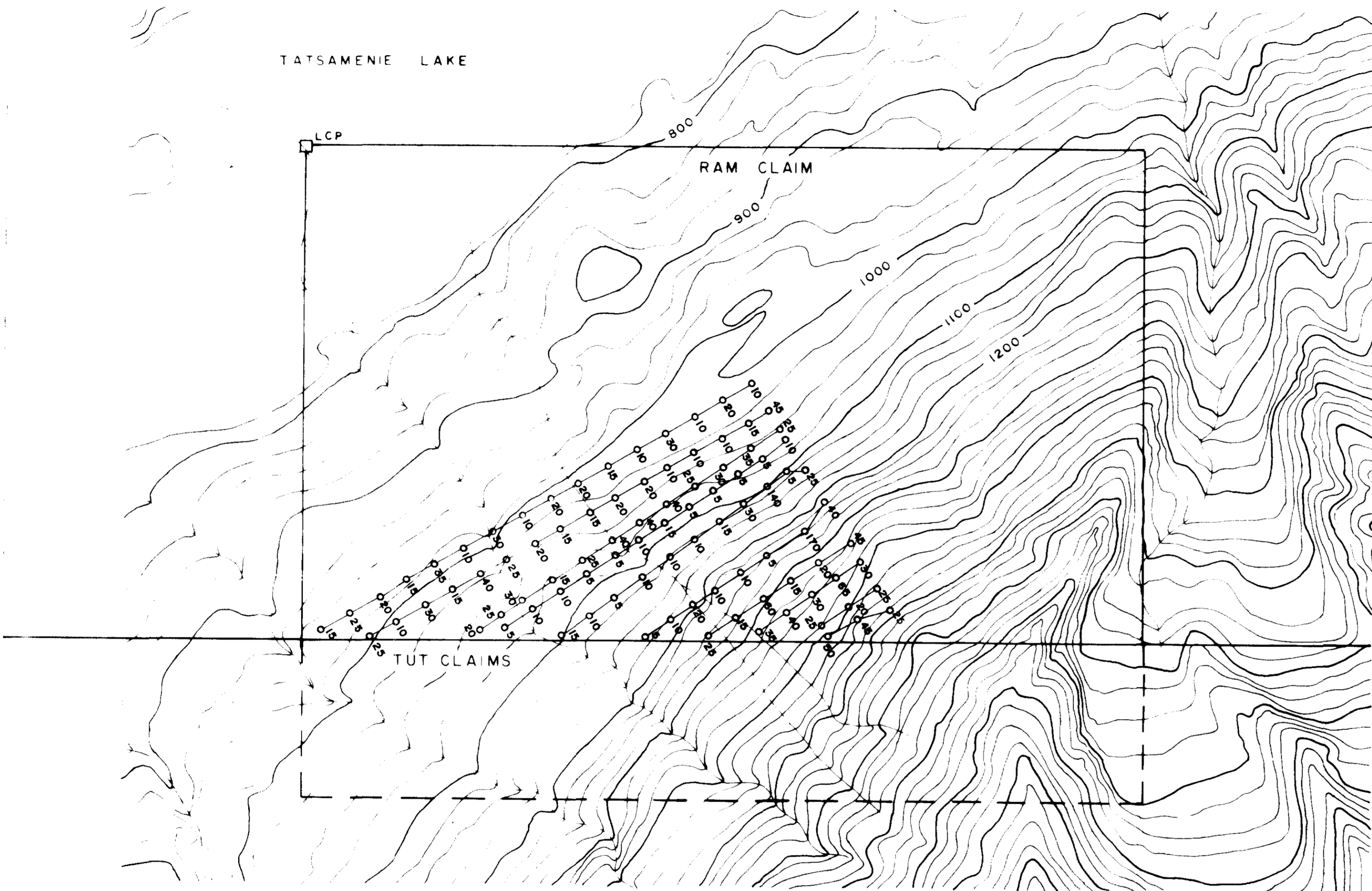
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**RAM CLAIM
SOIL SAMPLE LOCATIONS**


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**GEOLOGICAL BRANCH
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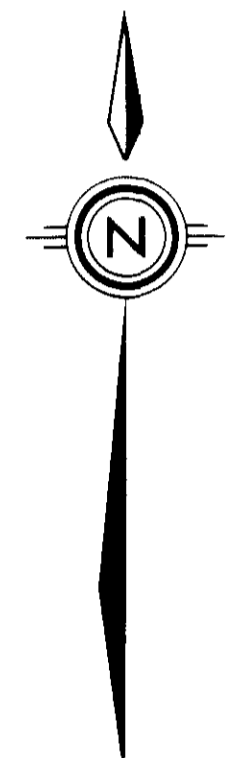
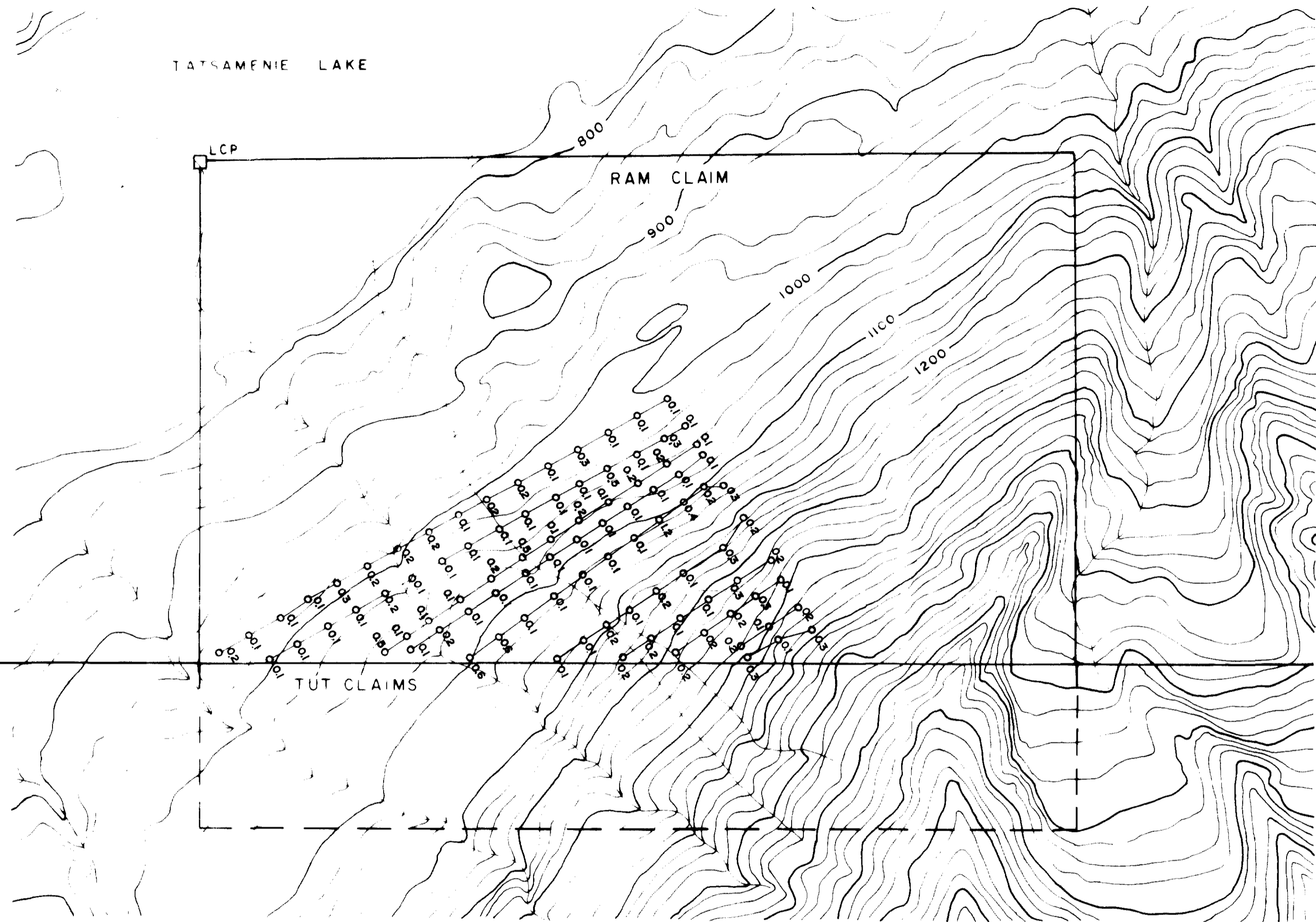
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RAM CLAIM SOIL GEOCHEMISTRY Au - ppb	
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TATSAMENIE LAKE

LCP


RAM CLAIM

TUT CLAIMS



**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

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 Chevron Standard Limited
Mineral Services

RAM CLAIM
SOL GEOCHEMISTRY
Ag - ppm

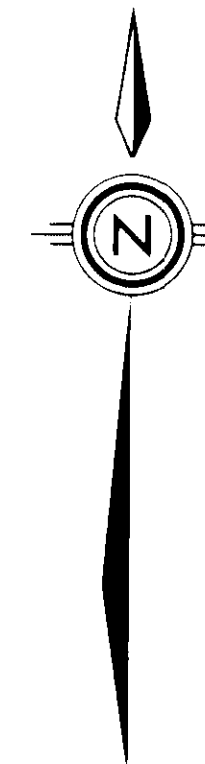
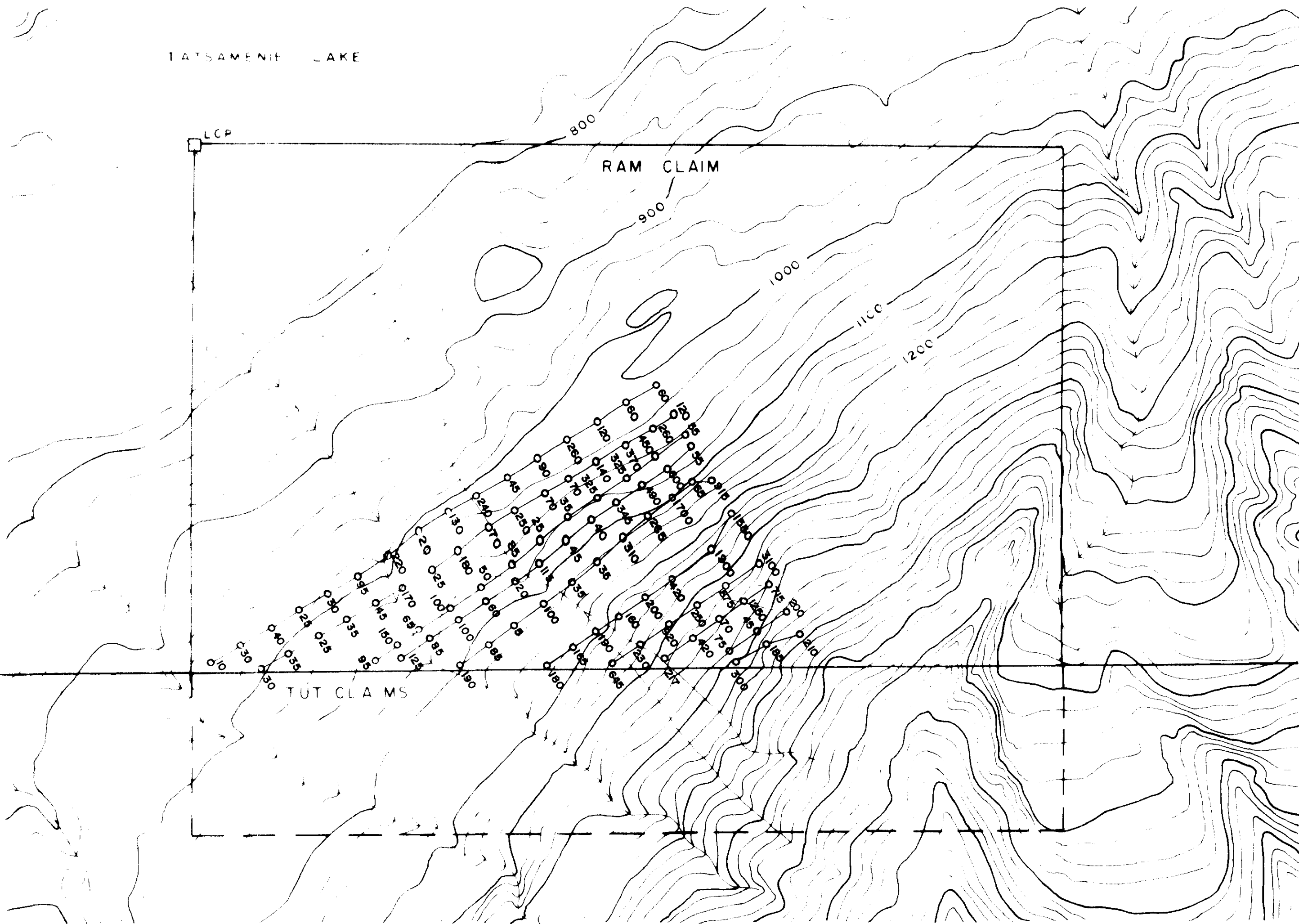
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TATSAMENIE LAKE

LCP


RAM CLAIM

TUT CLAIMS



**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

10,760

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RAM CLAIM
SOL. GEOCHEMISTRY
As - ppm

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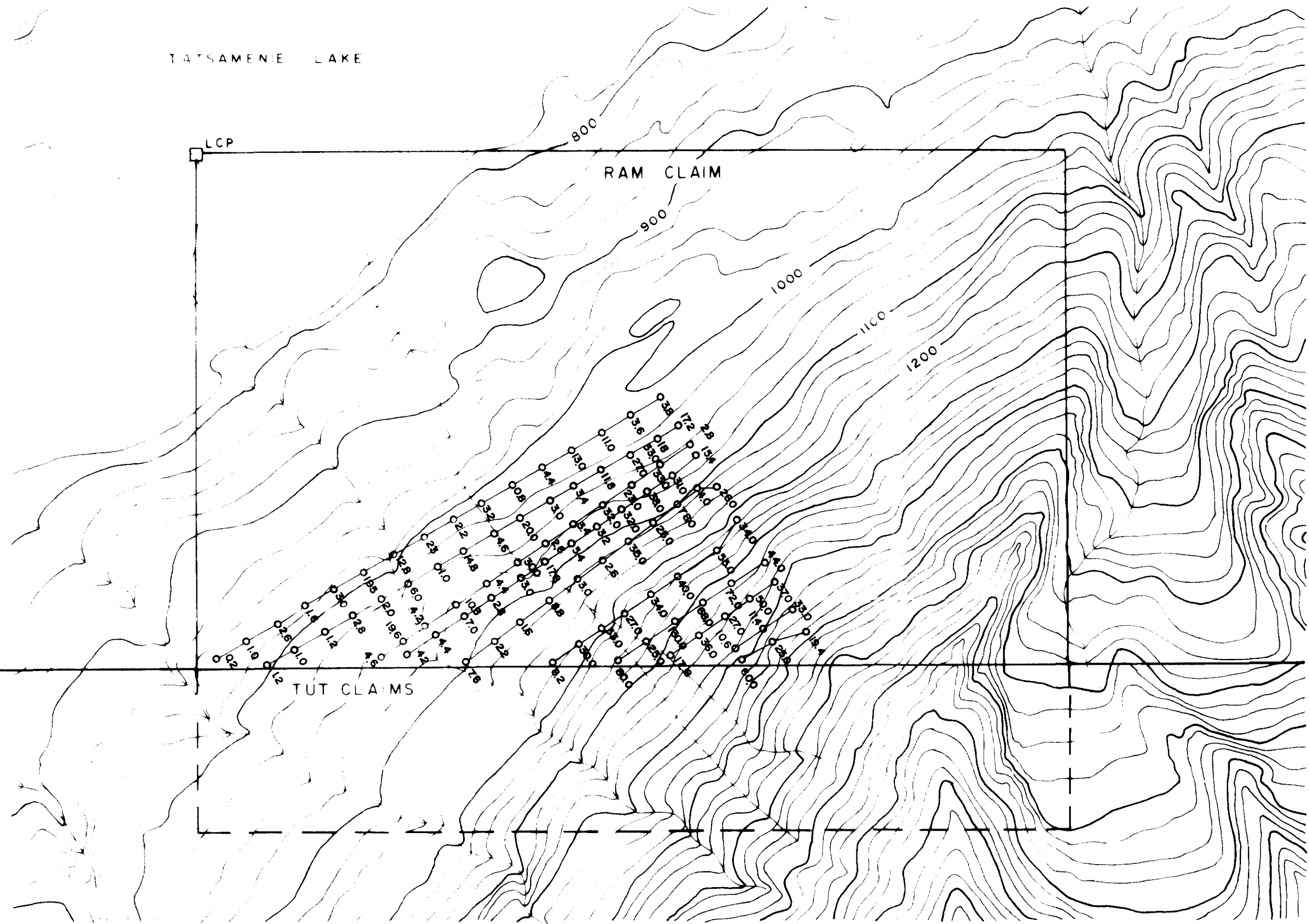
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TATSAMENIE LAKE

LCP

RAM CLAIM


TUT CLAIMS



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**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

10,760

 Chevron Standard Unit for
Minerals Staff

**RAM CLAIM
SOIL GEOCHEMISTRY
Sb - ppm**

8

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