

6004

GEOCHEMICAL - GEOPHYSICAL
REPORT

93F/6E

A, C

Granges Exploration A.B.
1060 1055 W. Hastings St.
Vancouver, B.C.

OMINECA MINING DIVISION

"A" and "C" CLAIM GROUP

Capoose Lake Area

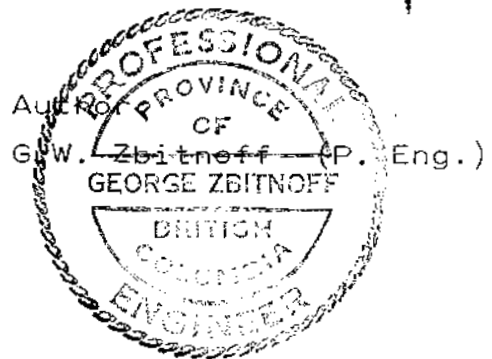
Latitude 53° 19'

Longitude 125° 13'

N.T.S. 93-F-6

Date of Work: July 4 - July 21, 1976

Dated at Vancouver
September, 1976



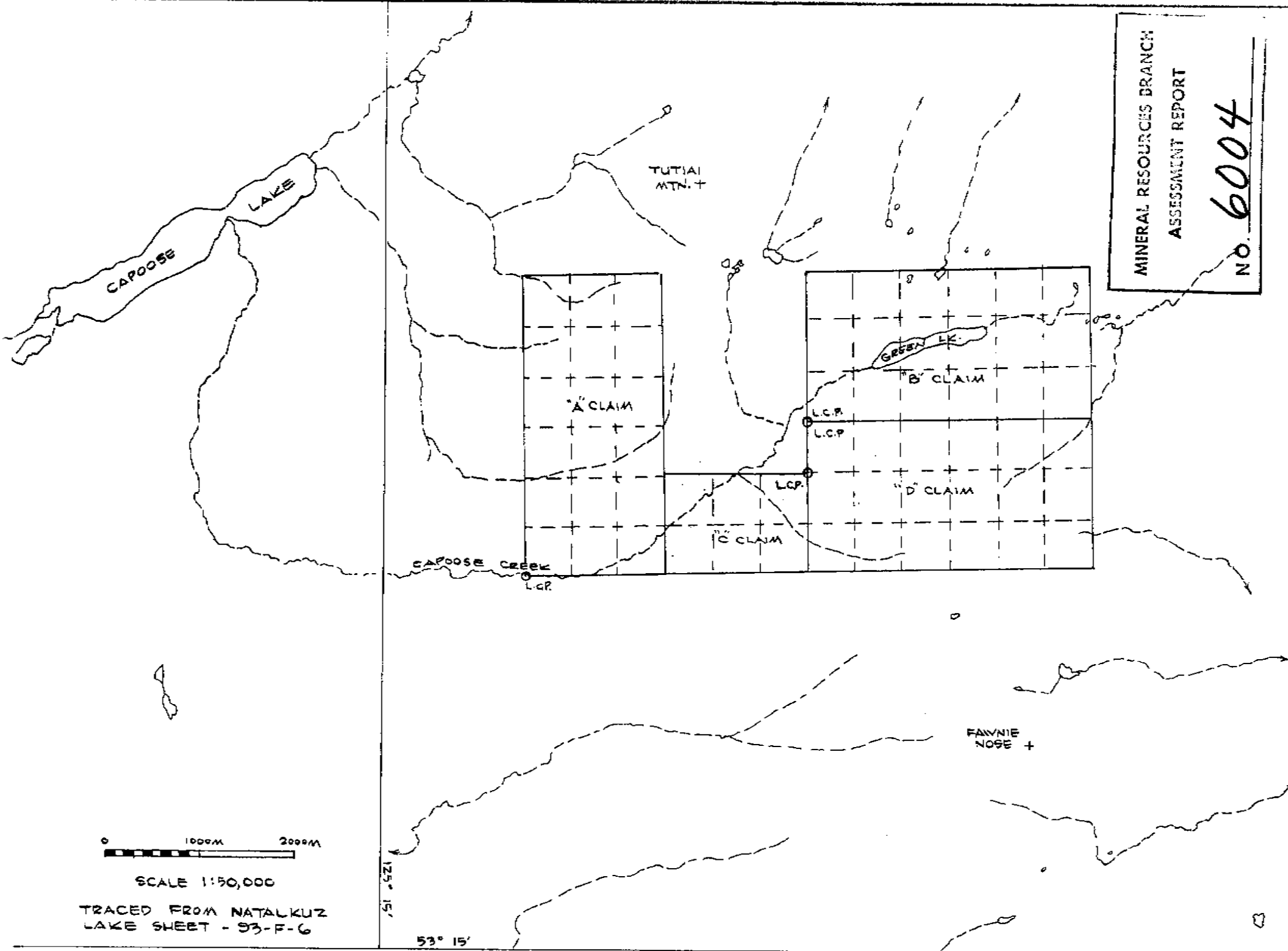
MINERAL RESOURCES BRANCH ASSESSMENT REPORT NO. <u>6004</u> MAP NO. _____

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- #1 Figure 2 - Geochemical Map (A claim) -
Copper, Molybdenum and silver;
- #2 Figure 3 - Vertical Magnetic Intensity and
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- #6 Figure 7 - Vertical Magnetic Intensity
(C claim)



0 1000M 2000M

SCALE 1:50,000

TRACED FROM NATALKUZ
LAKE SHEET - 93-F-6

125° 15'

53° 15'

INTRODUCTION

During the period of July 4th to July 21st, 1976, Granges Exploration Aktiebolag's exploration crew, which consisted of five personnel and headed by H.H. Shear (P. Eng.), conducted a grid establishing, geochemical soil sampling and magnetometer survey on the A and C claim groups in the Capoose Lake area.

The surveys were conducted on behalf of Granges Exploration Akteibolag and were undertaken to locate zones of interest for further detailed investigation.

PROPERTY

The survey area, as illustrated in figure 1, is located within mineral claim "A", tag 01381 and claim "C", tag 01384 of twenty-four contiguous units.

LOCATION AND ACCESS

The property is located 110 kilometers south southeast of Burns Lake, B.C. Accessibility is by helicopter from Burns Lake or fixed wing float or ski equipped aircraft to Capoose Lake, then by foot for four kilometers to the center of the claim group.

PHYSIOGRAPHY AND VEGETATION

The "A" and "C" claim group is situated in the Interior Plateau region of the Cordilleran folded mountain belt approximately two and one half miles S.S.E. of Capoose Lake. The survey area varies in elevation from 1340 to 1675 meters above sea level and is typified by gently sloping glacial terrain. The area is clear of snow during the summer months.

PHYSIOGRAPHY AND VEGETATION (cont'd)

The vegetation consists largely of lodge pole pine and black spruce. The lodge pole pine occurs homogeneously throughout the area and the black spruce is confined to stream channels and the bog peripheries. A transition zone occurs at approximately the 1525 meter above sea level where the vegetation is stunted lodge pole pine and balsom. The vegetation above this tree line is predominatly lichen and moss.

GENERAL GEOLOGY

The area is part of the large Nechako River area as mapped by H.W. Tipper. The ground geology of the property area is underlain by the Capoose batholith consisting of granite, granodiorite, quartz diorite and diorite of upper Jurassic and or Cretaceous age. The batholith is surrounded by a complex series of sedimentary and volcanic rocks ranging in ages from Tertiary to upper Triassic.

SURVEY SPECIFICATIONS

SURVEY GRID

The origin of the traverse grid is approximately midway between the No. 1 and No. 2 posts of the Ned claim and continued through the center of the "A" claim to the east boundary. At the East Bounday of Claim "A" the baseline projected 700 meters south to the north boundary of claim "C". The base line was established in an east-west direction from which south-north cross lines were turned at right angles at 100 meter intervals. Some 62.4 kilometers of base line and survey grid were established over the "A" and "C" claims.

GEOCHEMICAL SURVEY

Soil samples of the upper "B" horizon were obtained with augers at 100 meter intervals along the traverse lines. The samples were then placed in kraft soil envelopes and delivered to ACME Analytical Laboratories Limited, 6455 Laurel Street, Burnaby, B.C. The samples are dried and seived to -80 mesh, digested by hot perchloric nitric acid and analysed by atomic absorption. This was carried out under the supervision of professional geochemists. Some 624 soil samples were obtained and analysed for parts per million copper and molybdenum and parts per ten million for silver.

MAGNETOMETER SURVEY

The magnetometer survey was conducted using a Scintrex MF-2 fluxgate magnetometer. This instrument measures the vertical components of the earths magnetic field to an accuracy of ± 10 gammas. Corrections for diurnal variations were made by establishing a base station at which a second MF-2 Scintrex magnetometer was used to record the diurnal changes at fifteen minute intervals during the day. The corrections for the diurnal changes were made by tying into the established base station at various time intervals during the days operation. Readings were taken at 100 meter intervals along the lines.

GEOLOGICAL SURVEY

A geological survey was carried out over the established grid. The majority of "A" claim and all of "C" claim is overburden covered. In the N.E. corner of "A" claim much float and some outcrop was mapped. A fine grained biotite quartz diorite was mapped along with various phases of volcanics ranging from the basic andesites to the siliceous acidic rhyolites.

DISCUSSION OF THE RESULTS

The copper geochemical results reached a high of 310 P.P.M. on the "A" claim. The mean background of the "A" and "C" group is some 20 P.P.M. A large geochemical anomalous condition trending in an east-west direction as shown on the appended figure 2 exhibits a low area adjacent to the creek which traverses the "A" claim. Smaller geochemical copper anomalies may be attributed to low boggy areas where these copper ions can concentrate to give an anomaly and are highly erratic in their patterns.

The molybdenum map shows a high of 120 P.P.M. which coincides with a 104 P.P.M. copper located on the "A" claim. The anomalies show a north-south trend, but do not coincide directly with copper anomalies. This may be due to the greater mobility of the molybdenum ions. Several anomalous areas exist on the "C" claim with up to 28 P.P.M. along Capoose Creek.

The silver map showed a few erratic readings as high as 2.5 P.P.M. along the eastern boundary of the "C" claim.

Correlation of the geochemical maps show several interesting features:

- 1) The further downslope migration of the molybdenum which points out the higher mobility of the molybdenum;
- 2) The concentration of copper and molybdenum in low lying areas inturn produces copper and molybdenum geochemical anomalies.

The ground magnetometer data as plotted shows a sharp change from a low of -490 gammas to a high of 2775 gammas. The magnetic lows are generally associated with creeks or streams. An arcuate bedrock structure is also directly associated

with the low magnetic readings as noted in the mid portion of figure 3. This arcuate structure was first noted on the adjacent Ned claim and continues through the "A" claim. These low magnetic anomalies may outline fault structures which have been covered by glacial moraine. The molybdenum anomalies trending north to south tend to fall along the westerly flank of a high magnetic expression which also trend north-south.

CONSLUSION

During the first part of July a program of magnetometer, geochemical soil sampling and geological mapping was conducted over the "A" and "C" claim group, Capoose Lake area, B.C.

The survey located definite anomalous geochemical zones whose trend corresponds closely to the flank of a high intensity magnetic anomaly. The high magnetic trend appears to outline the perimeter of a quartz diorite intrusive which was located by geological mapping.

The continuation of the low magnetic responses from the Ned Claim, which persists throught the middle of the "A" claim and corresponds with the creeks.

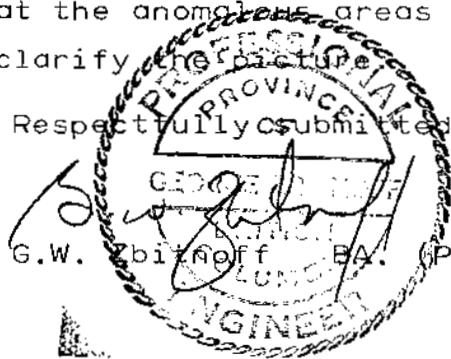
RECOMMENDATION

The geochemical anomalies and interesting magnetic responses require further investigation to determine the source of the copper-molybdenum geochemical anomalies.

It is recommended that the anomalous areas be sampled at closer intervals to further clarify the picture.

Respecttully submitted,

G.W. Zbitnoff B.A. (P. Eng.)



A P P E N D I X

Instrument Specifications

MAGNETOMETER

A. Instrument

- (a) Type - Fluxgate
- (b) Make - Scintrex MF-2

B. Specifications

- (a) Measurement - Vertical Magnetic Field
- (b) Range - ± 100 K gammas in 5 ranges
- (c) Sensitivity - Maximum 20 gammas per scale division
- (d) Accuracy - ± 10 gammas

C. Survey Procedures

- (a) Method - One and one half hour loops
- (b) Corrections - (i) Base
(ii) Diurnal
- (c) Station relationship - each station read for
intensity of vertical magnetic field.

STATEMENT OF QUALIFICATIONS

Name: Zbitnoff, George Wm.

Profession: Geologist

Professional Associations:

Member of the Association of Professional Engineers of the Province of Manitoba since 1969.

Member of the Association of Professional Engineers of the Province of British Columbia since 1973.

Experience:

Pre graduation experience in geology with the Department of Mineral Resources.

Two and one half years, field geologist with Hudson Bay Exploration and Development, Central Canada.

Six years, field and Resident Geologist with Noranda Exploration Ltd., Central Canada.

Five and one half years geologist and Assistant Manager with Granges Exploration Aktiebolag, Canadian Division.

Active experience in all geologic provinces of Canada and parts of the United States and Mexico.

A handwritten signature in cursive script that reads "George Zbitnoff". The signature is written in black ink and is positioned at the bottom center of the page.

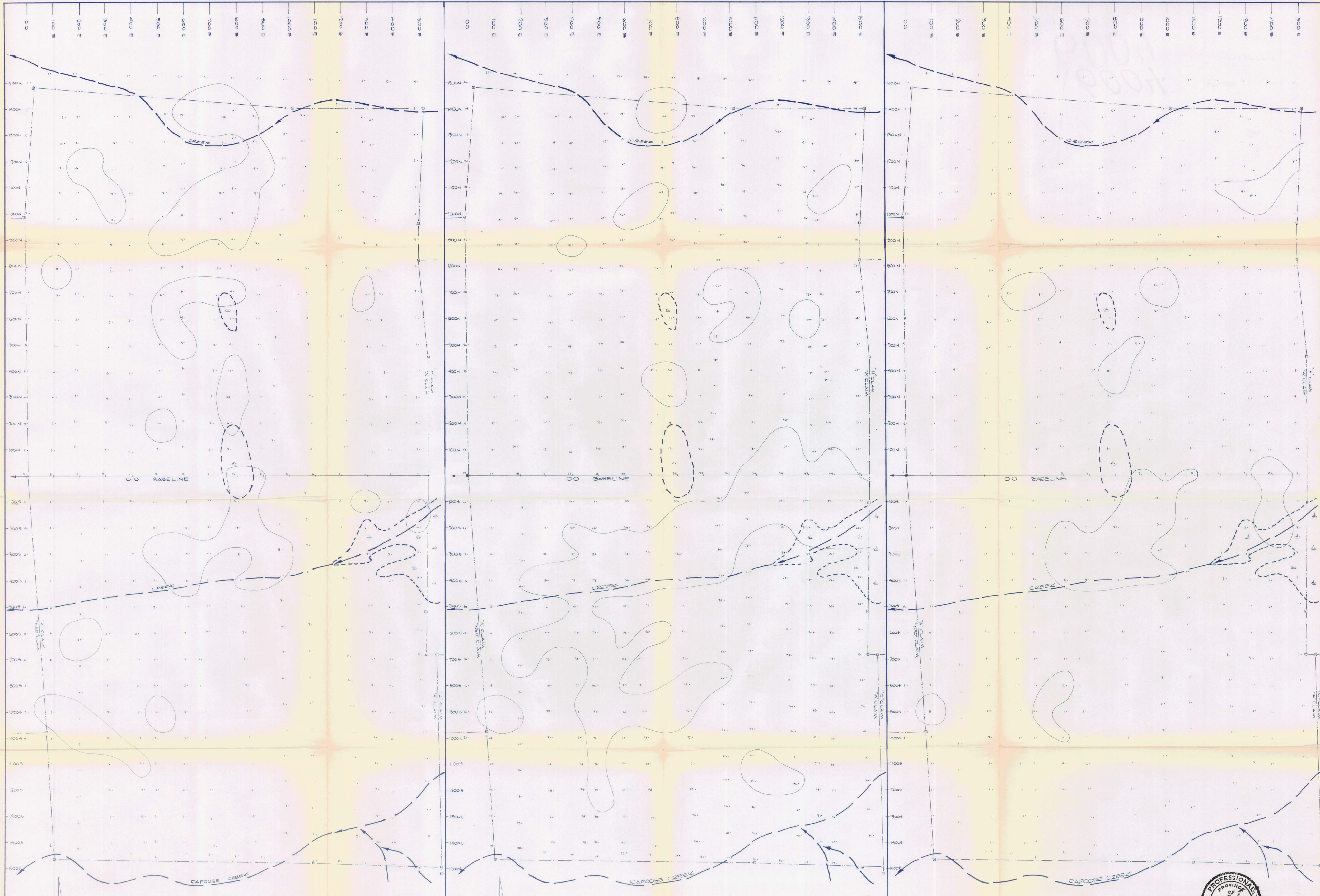
A AND C CLAIM GROUP

COST BREAKDOWN

<u>Personnel</u>	<u>Date of Work</u>	<u>Total</u>
Herb H. Shear	July 4 to July 21	\$ 1,330.56
Gordon Webb	July 4 to July 21	1,041.66
Al Hunter	July 4 to July 21	547.02
D.F. Pasco	July 4 to July 21	990.00
Grant Collins	July 4 to July 21	630.00

Meals and Accomodations.....	283.19
Camp Materials.....	154.17
Transporation.....	559.06
Communications.....	32.42
Geochemical Assay Costs.....	1,404.25
Map and Report Interpretation and Preparation.....	661.55
	<u>\$ 7,633.58</u>

George W. Zetser

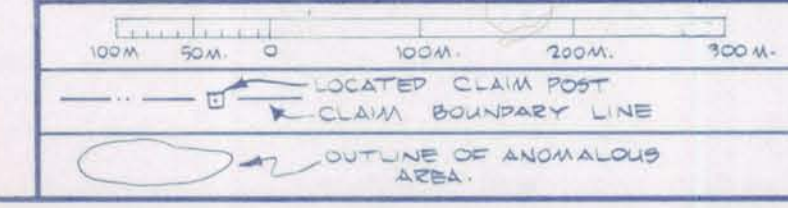


MOLYBDENUM
(IN P.P.M.)

COPPER
(IN P.P.M.)

SILVER
(IN PARTS PER TEN MILLION)

NOTE: SEE MAGNETOMETRIC & GEOLOGICAL PLAN FOR LOCATION MAP.



DRAWN BY: M.P.
DATE: JULY 1976
SAMPLE LOCATION (SEE ANALYSIS IN P.P.M.)

GRANGES EXPLORATION AB
CANADIAN DIVISION
VANCOUVER OFFICE

SOIL GEOCHEMICAL SURVEY FOR
MOLYBDENUM, COPPER & SILVER ON:
1/4 CLAIM (TAG NO. 38) RECORD N149)
CAPOOSE JOINT VENTURE
CAPOOSE LAKE AREA, B.C.

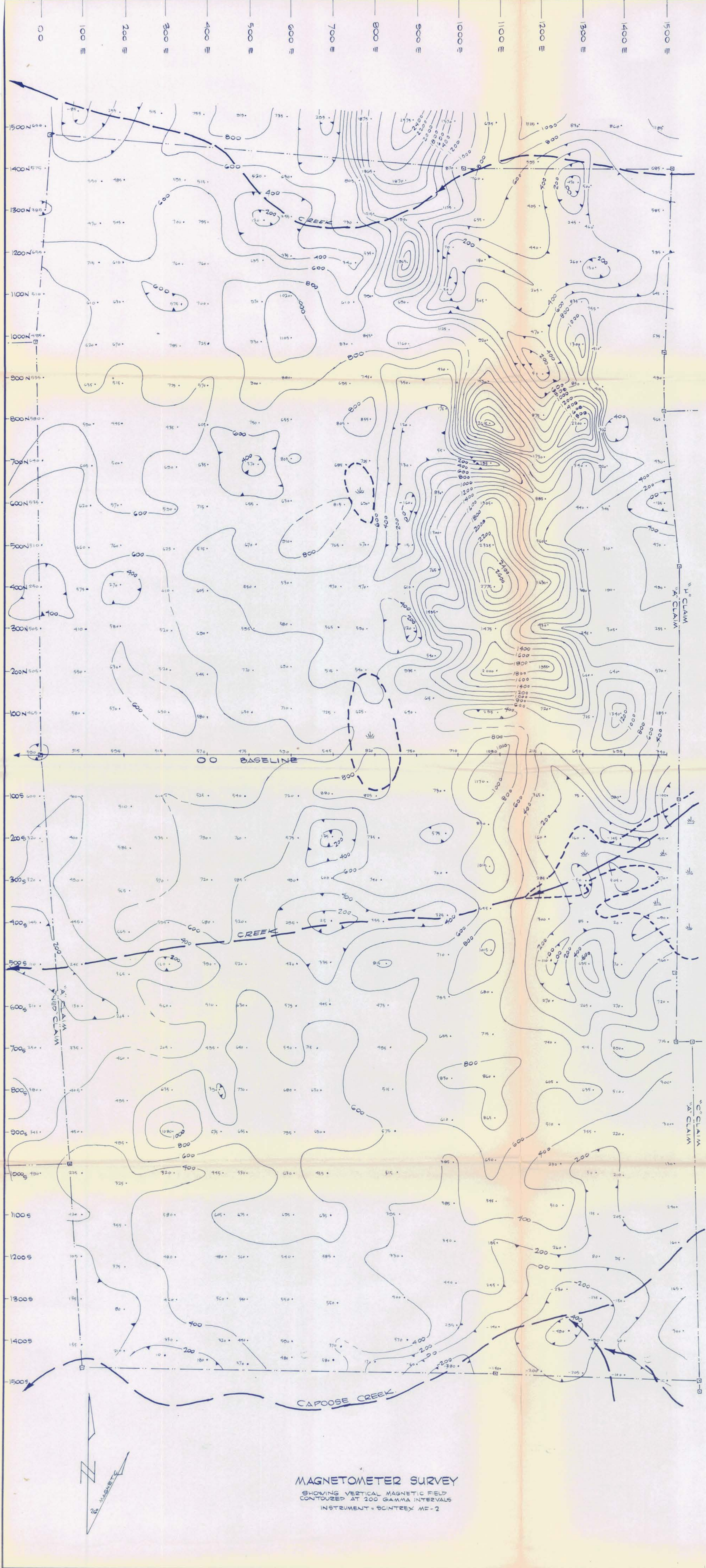
SCALE: 1:15000
PROJECT No.: 70113
N.T.S. No.: 93 F-6



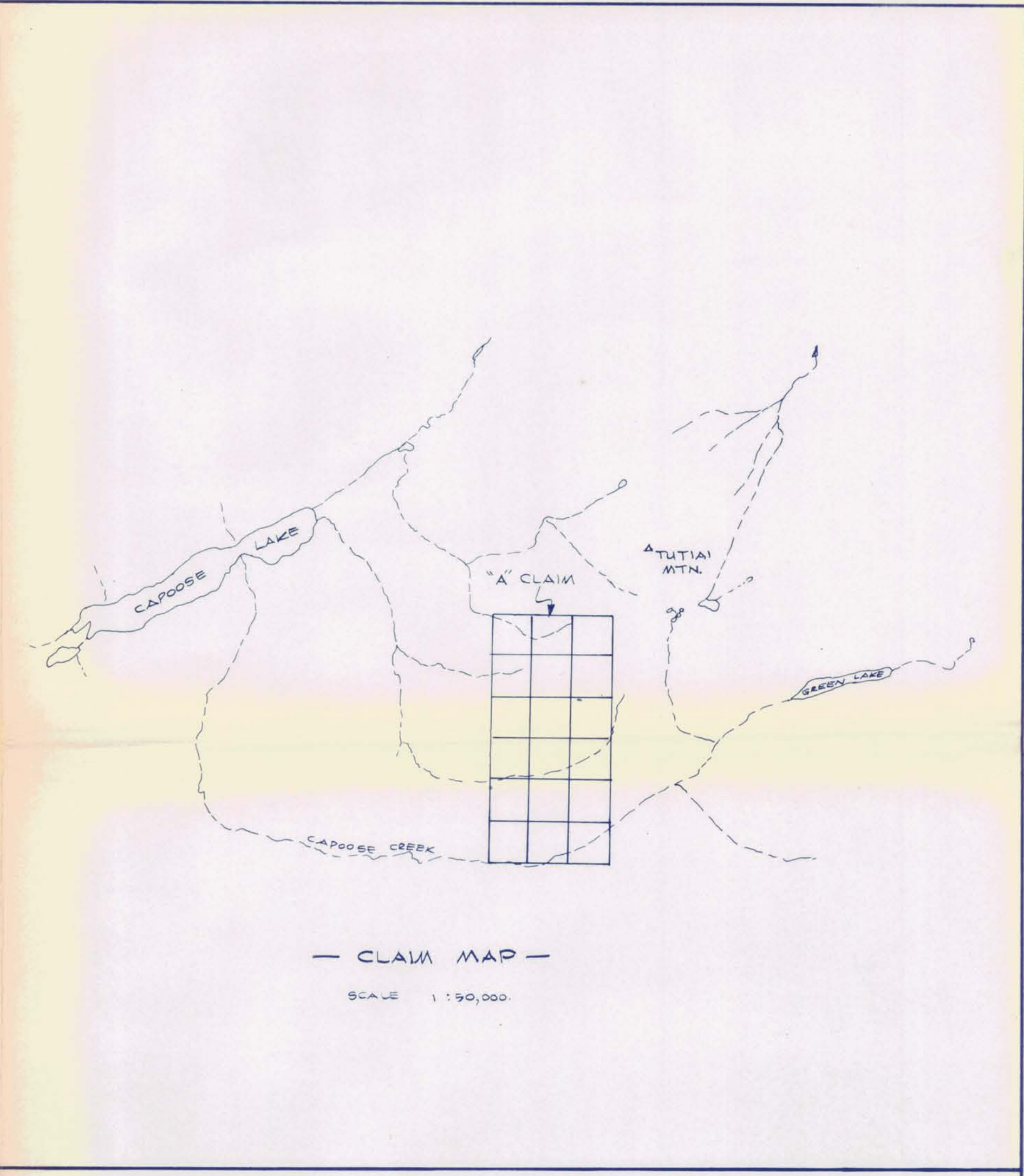
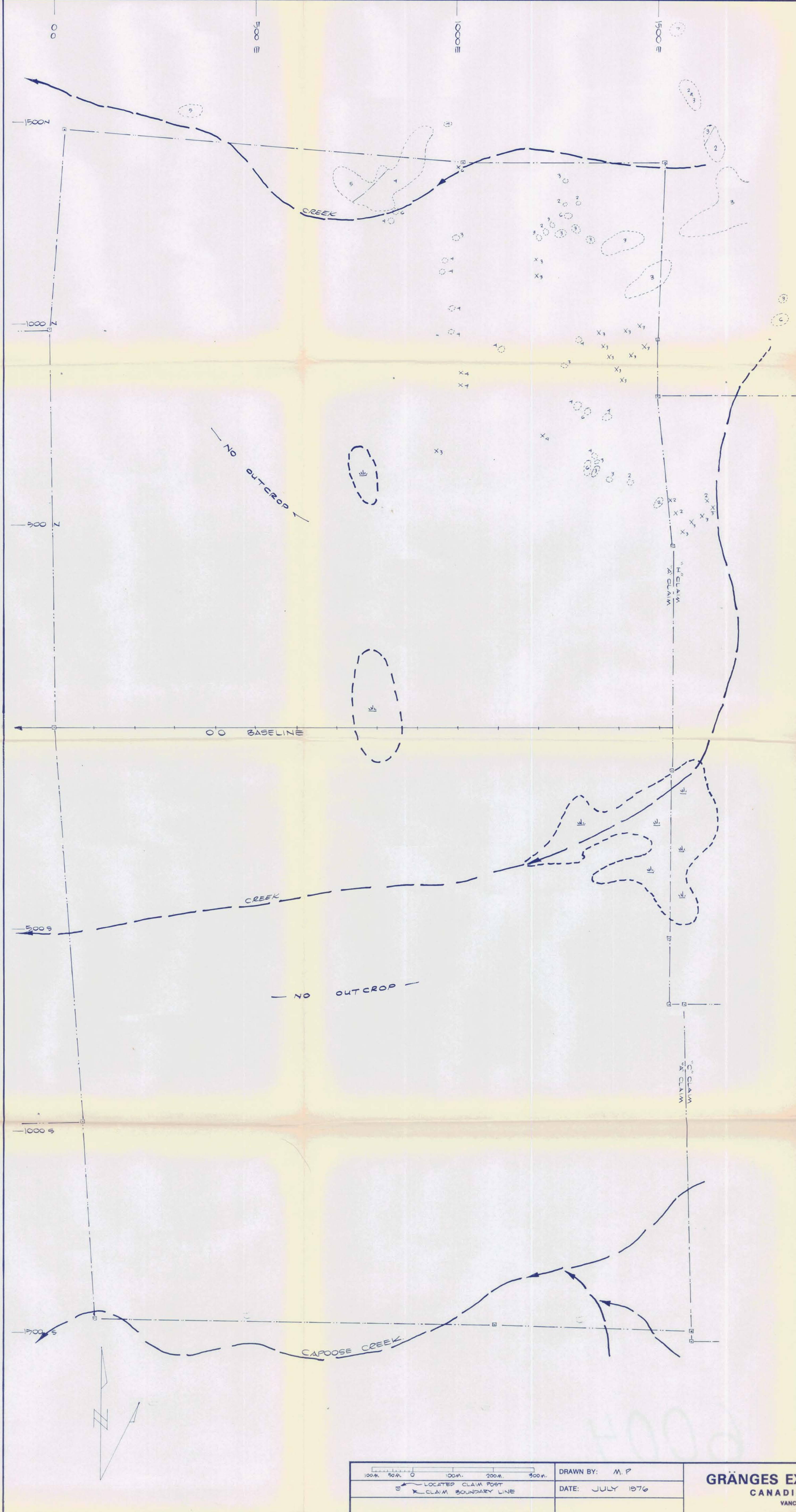
6004

MAP NO. 1

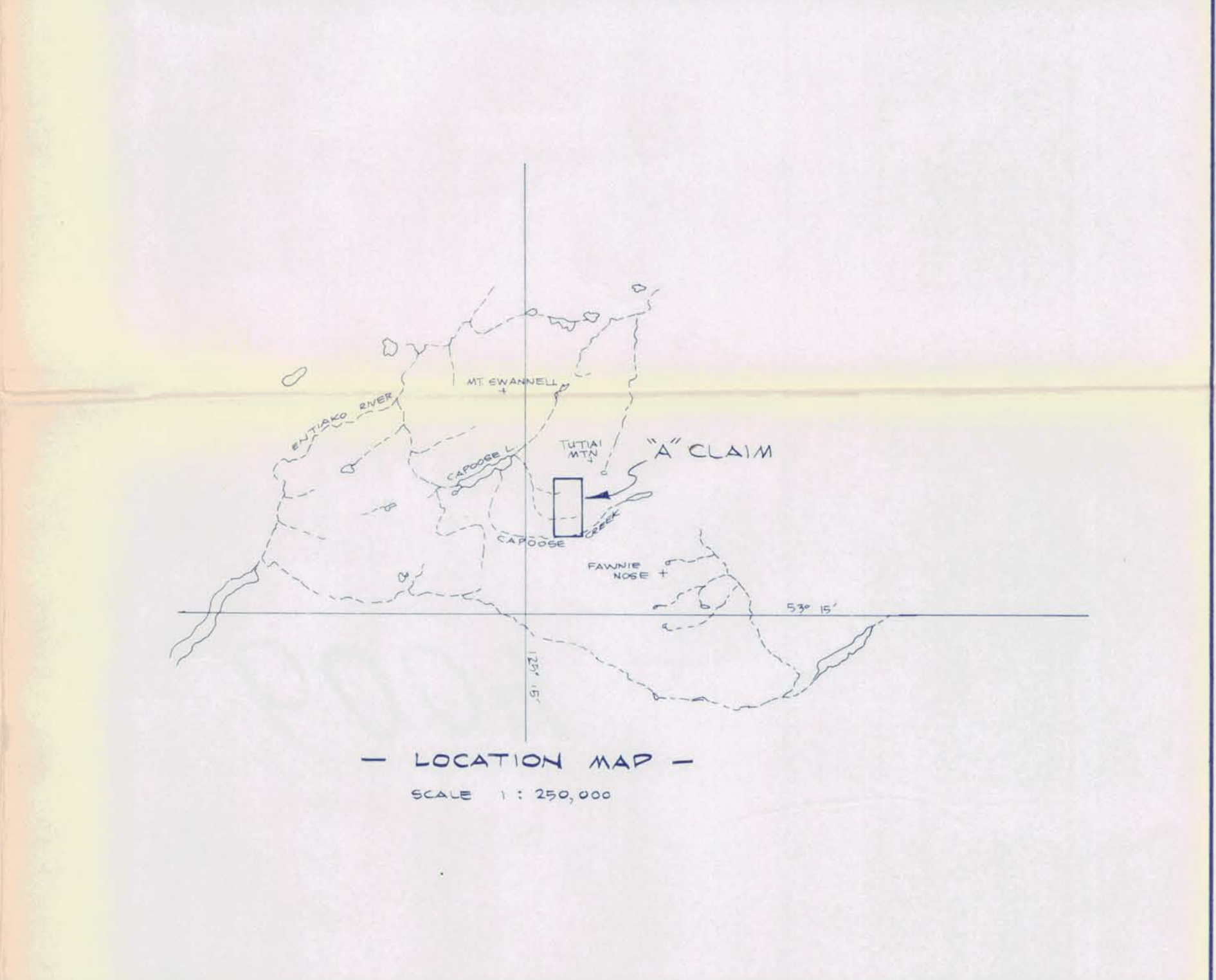
FIGURE 2



MAGNETOMETER SURVEY
SHOWING VERTICAL MAGNETIC FIELD
CONToured AT 200 GAMMA INTERVALS
INSTRUMENT - SCINTREX ME-2



— CLAIM MAP —
SCALE 1:90,000



— LOCATION MAP —
SCALE 1:250,000

— GEOLOGY KEY —

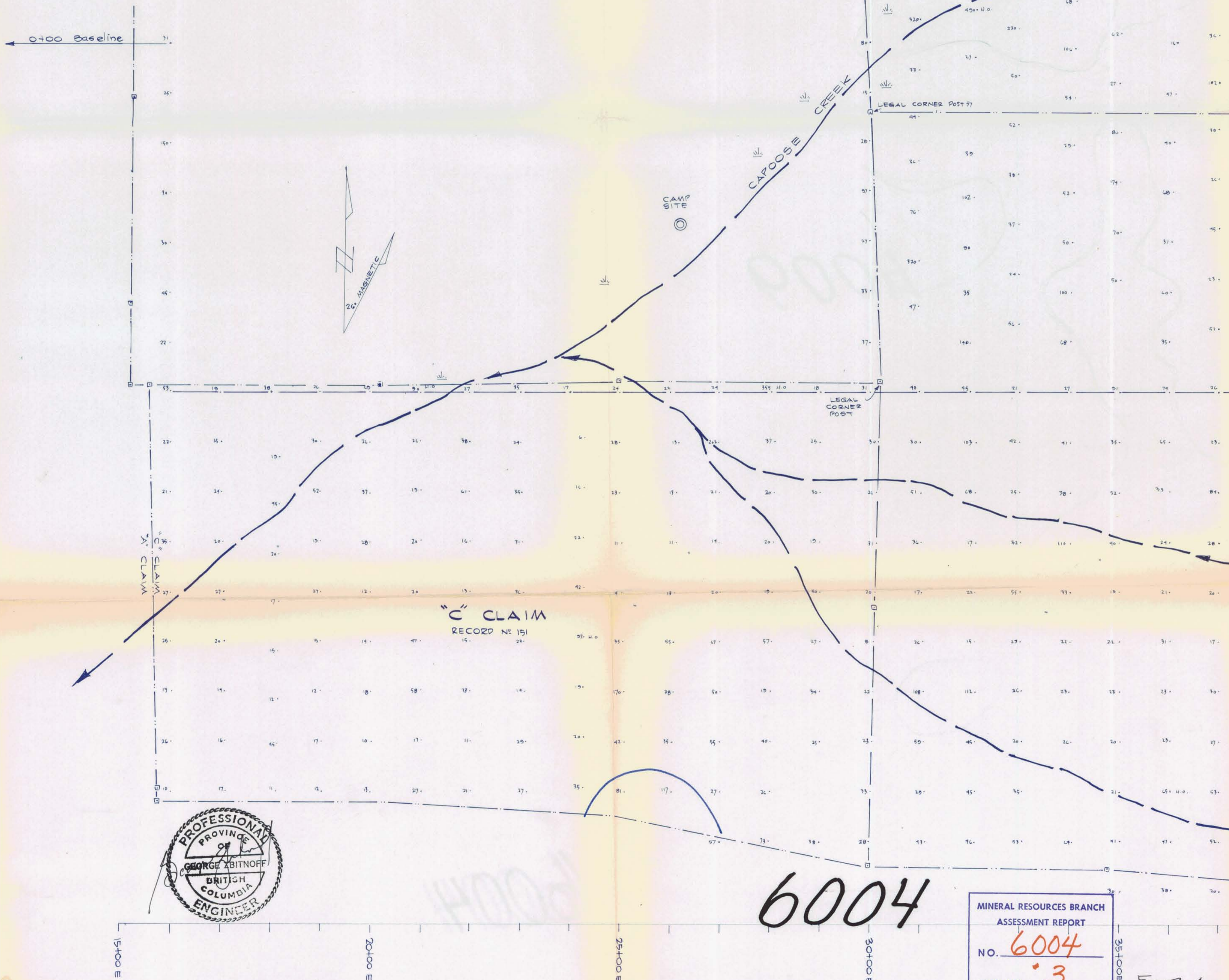
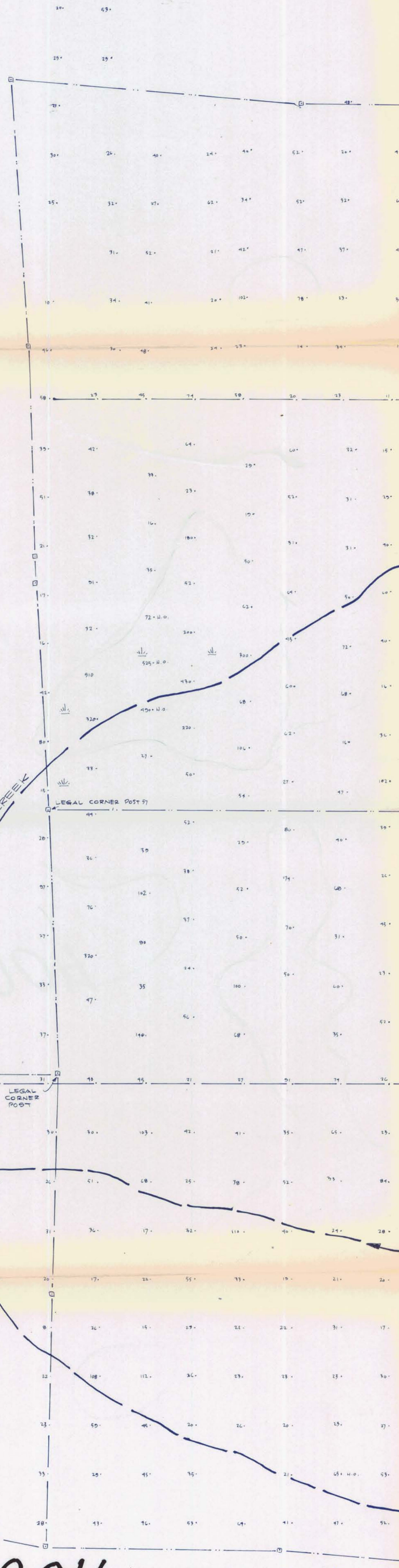
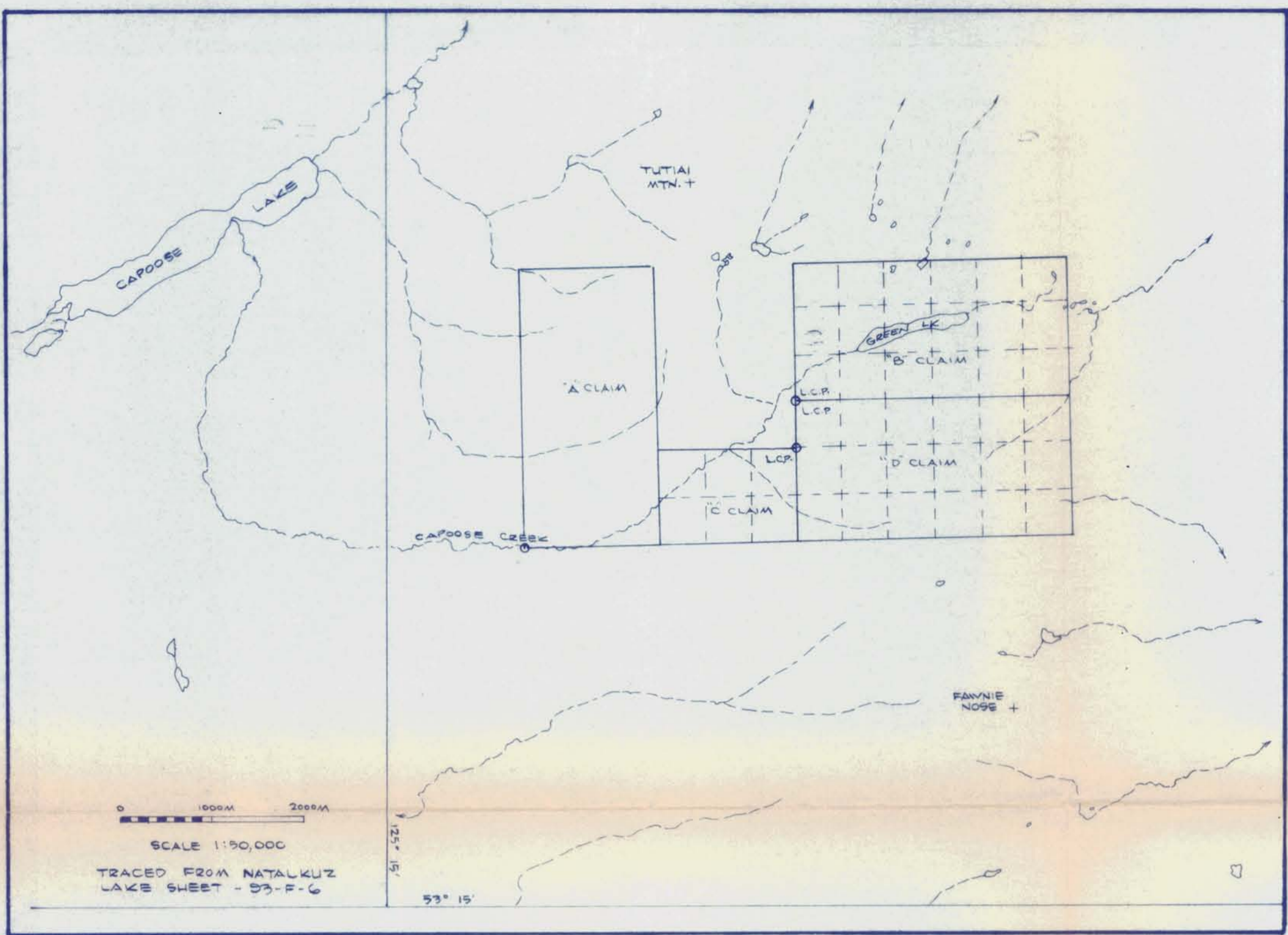
- OUTCROP
- X FLOAT
- CONTACT
- 2 ANDESITE (USUALLY WITH LOTS OF PYRITE)
- 3 WHITE SILICEOUS ROCK (ALMOST EVERYWHERE HIGHLY PYRITIC)
- 4 FINE GRAINED BIOTITE QUARTZ DIORITE (RARELY MAGNETIC)
- 5 CAPOOSE BATHOLITH GRANODIORITE (RARELY MAGNETIC)
- 6 REBECCA GRANITE GNEISS WITH LIMONITE TO 10% LIMONITE
- 7 WHITE PHYLLITE

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NO. **6004**
MAP NO. **2**

6004

PROFESSIONAL
PROVINCE OF
BRITISH COLUMBIA
ENGINEER

100m	200m	300m	500m
LOCATED CLAIM POST	CLAIM BOUNDARY LINE	DRAWN BY: M.P.	DATE: JULY 1976



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MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6004
MAP NO. 3

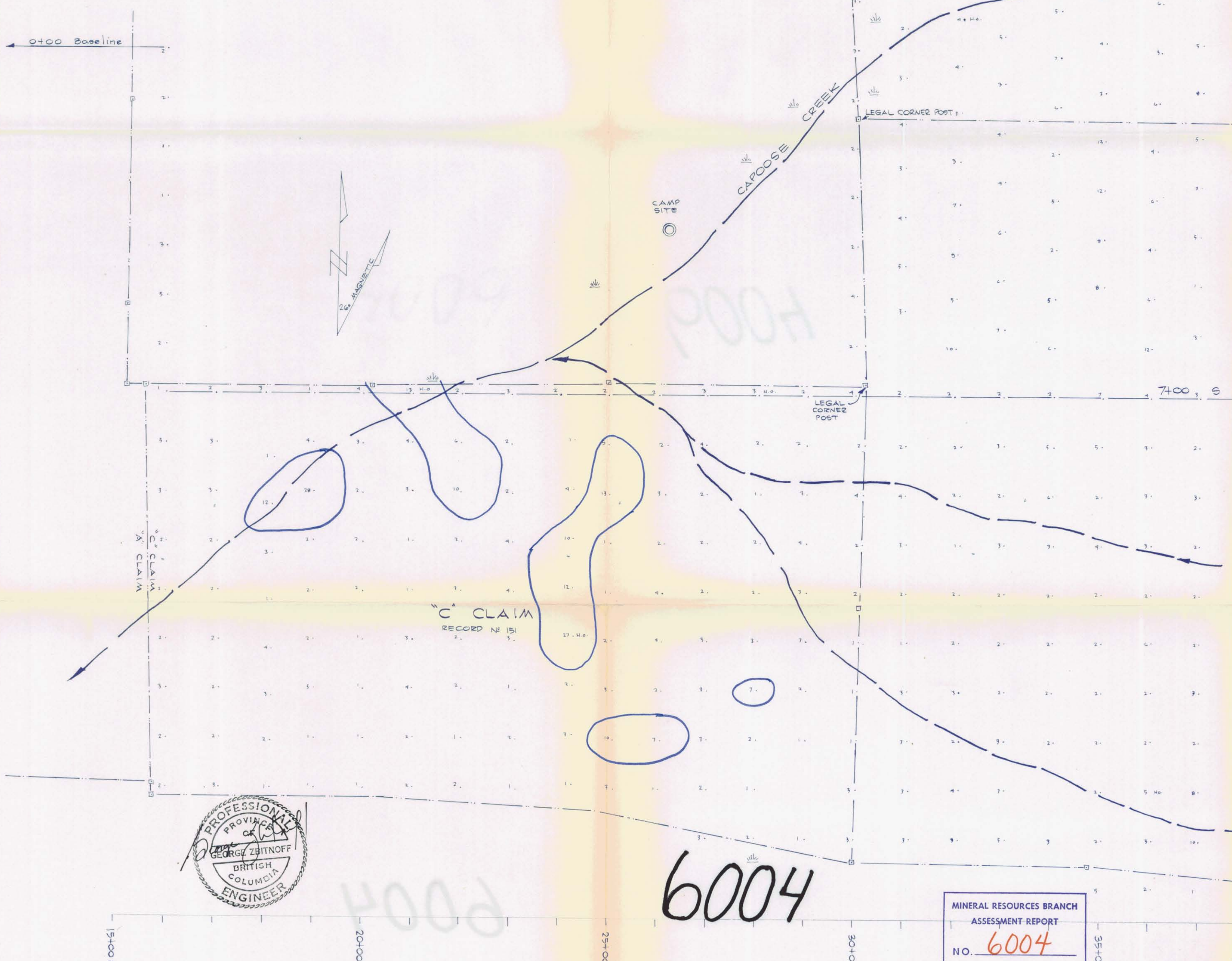
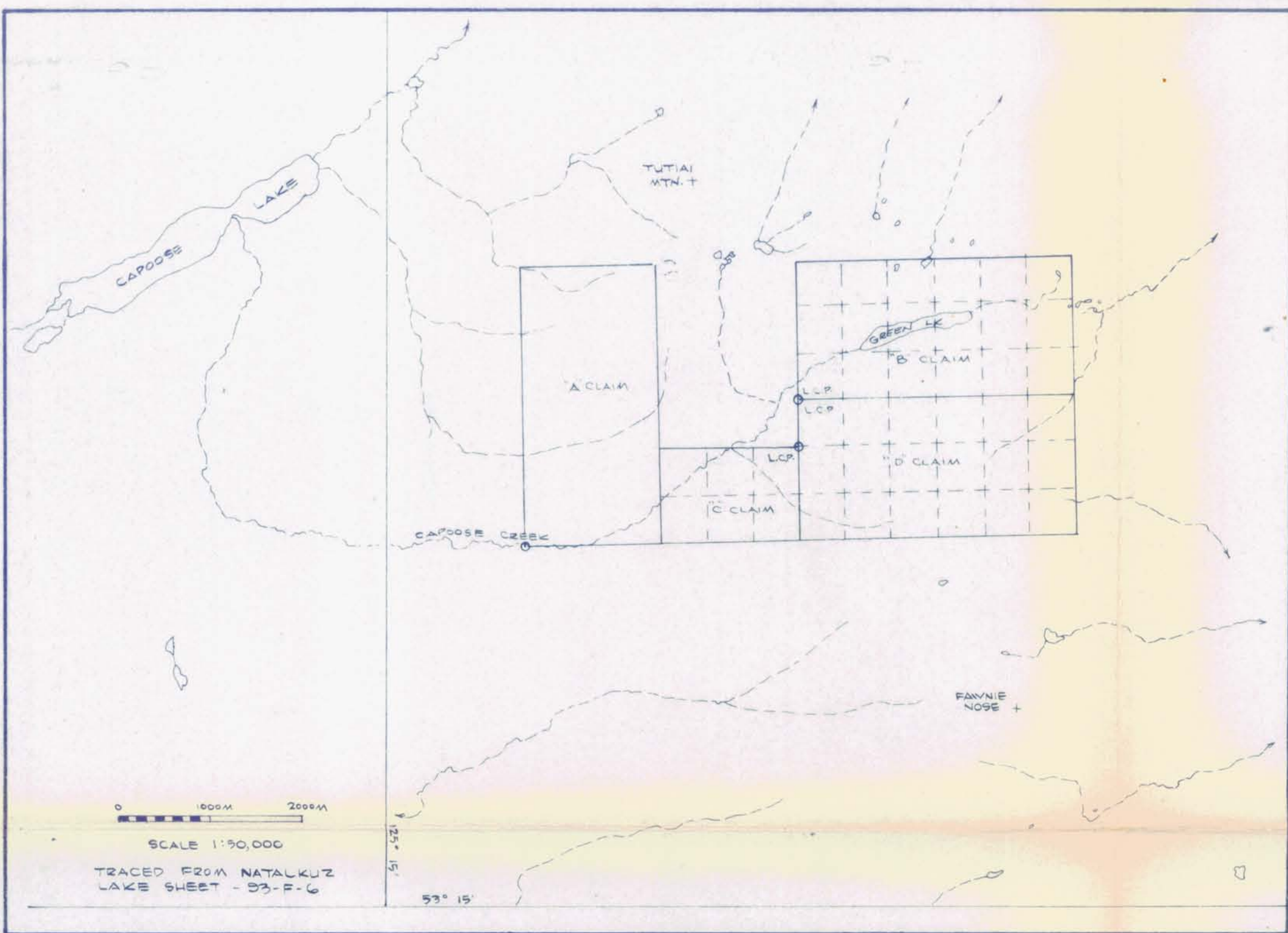
Figure 4

100M 50M 0 100M 200M 300M
 DRAWN BY: M.P.
 DATE: SEPT 1976
 C.U. IN P.P.M. → 100 → SAMPLE LOCATION

GRANGES EXPLORATION AB
CANADIAN DIVISION
VANCOUVER OFFICE

SOIL GEOCHEMICAL SURVEY FOR
COPPER ON
CLAIM C (51)
CAIPOOSE JOINT VENTURE
CAIPOOSE LAKE AREA, B.C.

SCALE: 1:5000
 PROJECT No: 70113
 N.T.S. No: D3-F-6



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MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. **6004**
MAP NO. **4**

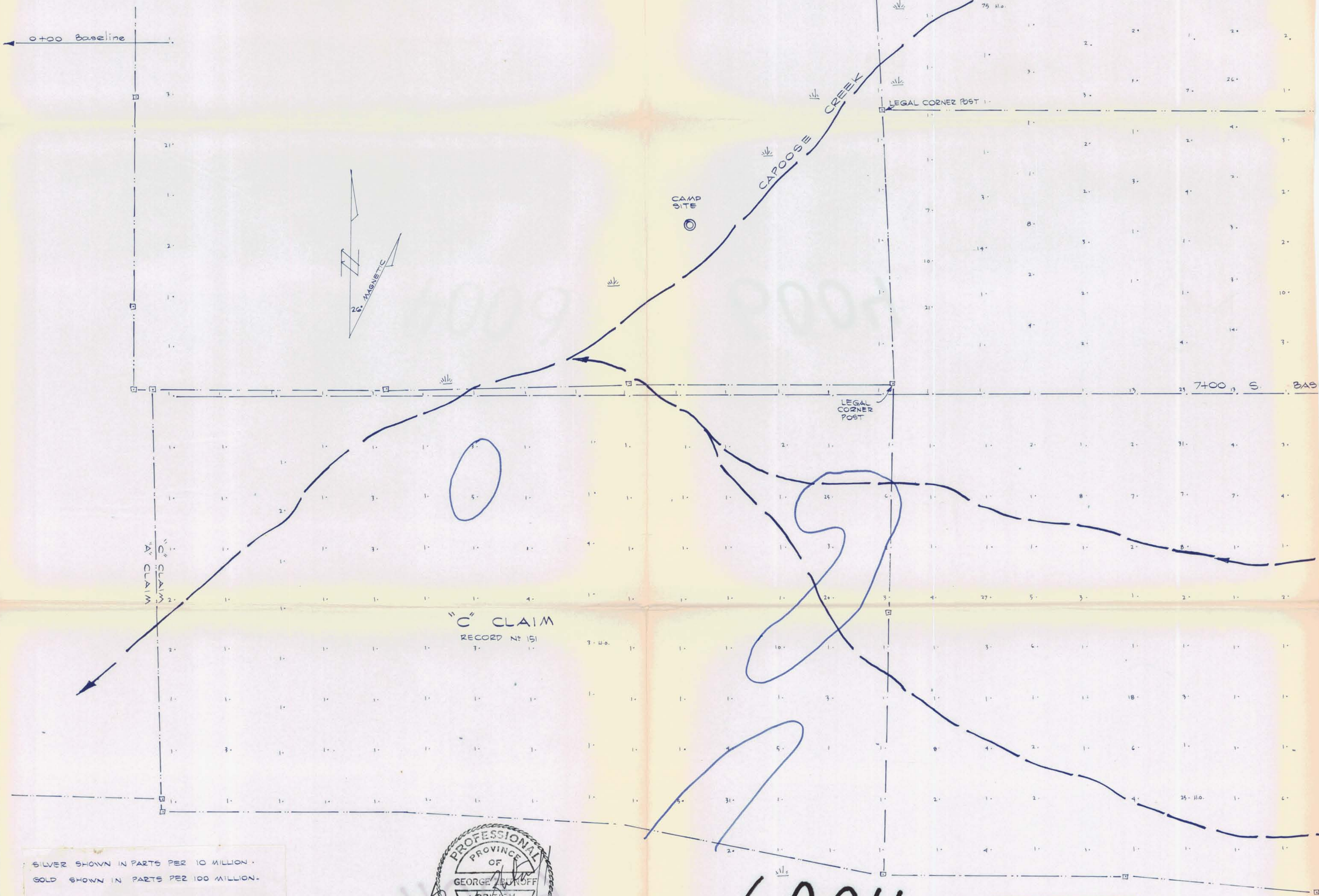
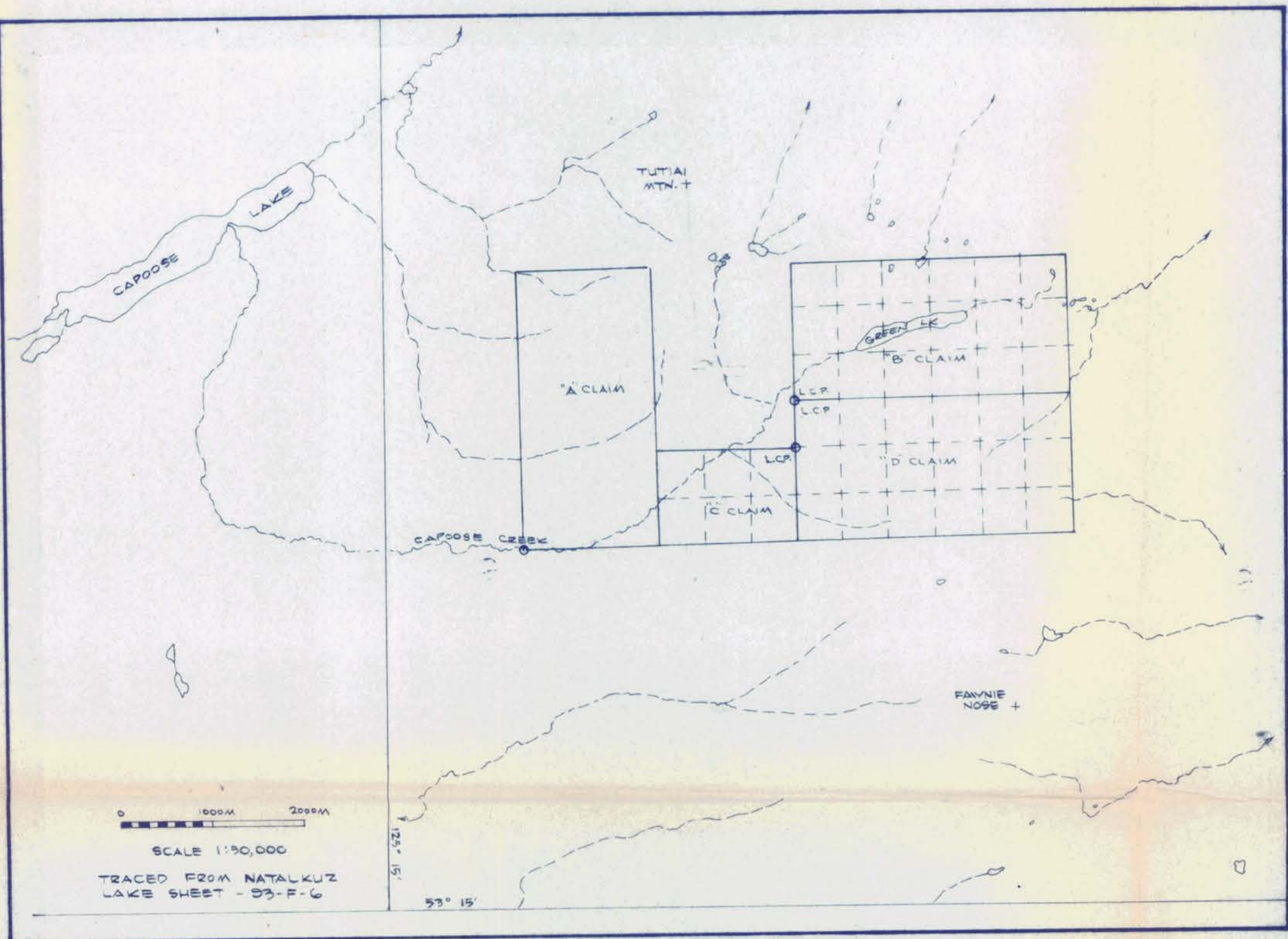
FIG 5

100M 0 100M 200M 300M
DRAWN BY: M.P.
DATE: SEPT 1976
Mo IN P.P.M. 5 SAMPLE LOCATION

GRANGES EXPLORATION AB
CANADIAN DIVISION
VANCOUVER OFFICE

SOIL GEOCHEMICAL SURVEY FOR
MOLYBDENUM ON
CLAIM "C" (151)
CAPOOSE JOINT VENTURE
CAPOOSE LAKE AREA, B.C.

SCALE: 1:5000
PROJECT No.: 70113
N.T.S. No.: D3 F-6



SILVER SHOWN IN PARTS PER 10 MILLION.
GOLD SHOWN IN PARTS PER 100 MILLION.



MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
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MAP NO. **#5**

15+00 E 20+00 E 25+00 E 30+00 E

100M 50M 0 100M 200M 300M

LOCATED CLAIM POST
CLAIM BOUNDARY LINE
OUTLINE OF ANOMALOUS AREA

Ag. in pp 10 m. → 2" = 10' Au in pp 100m. → 1" = 100'

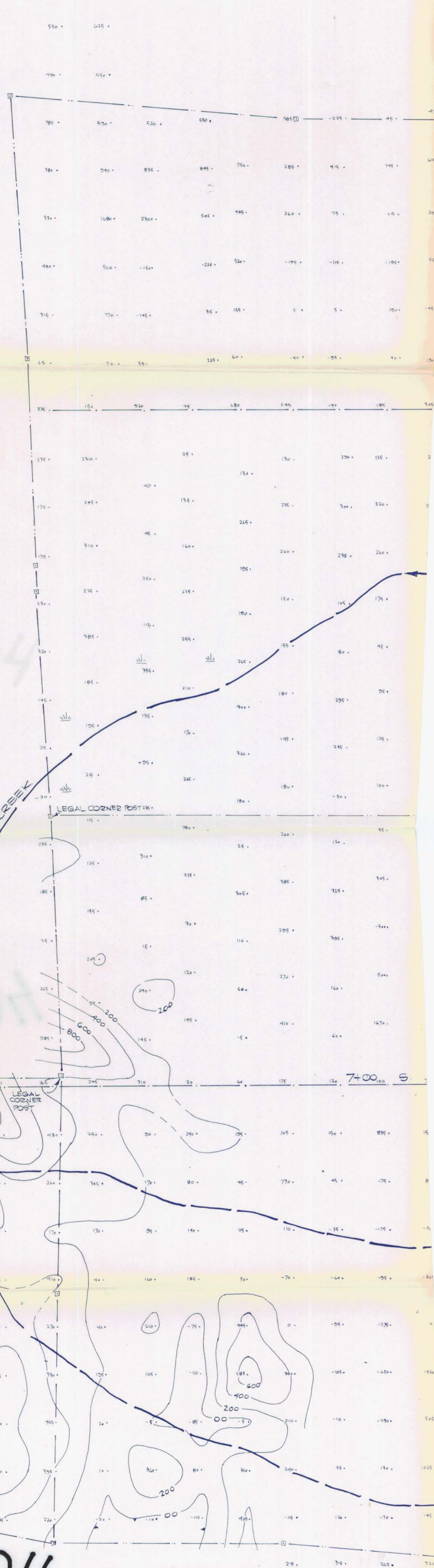
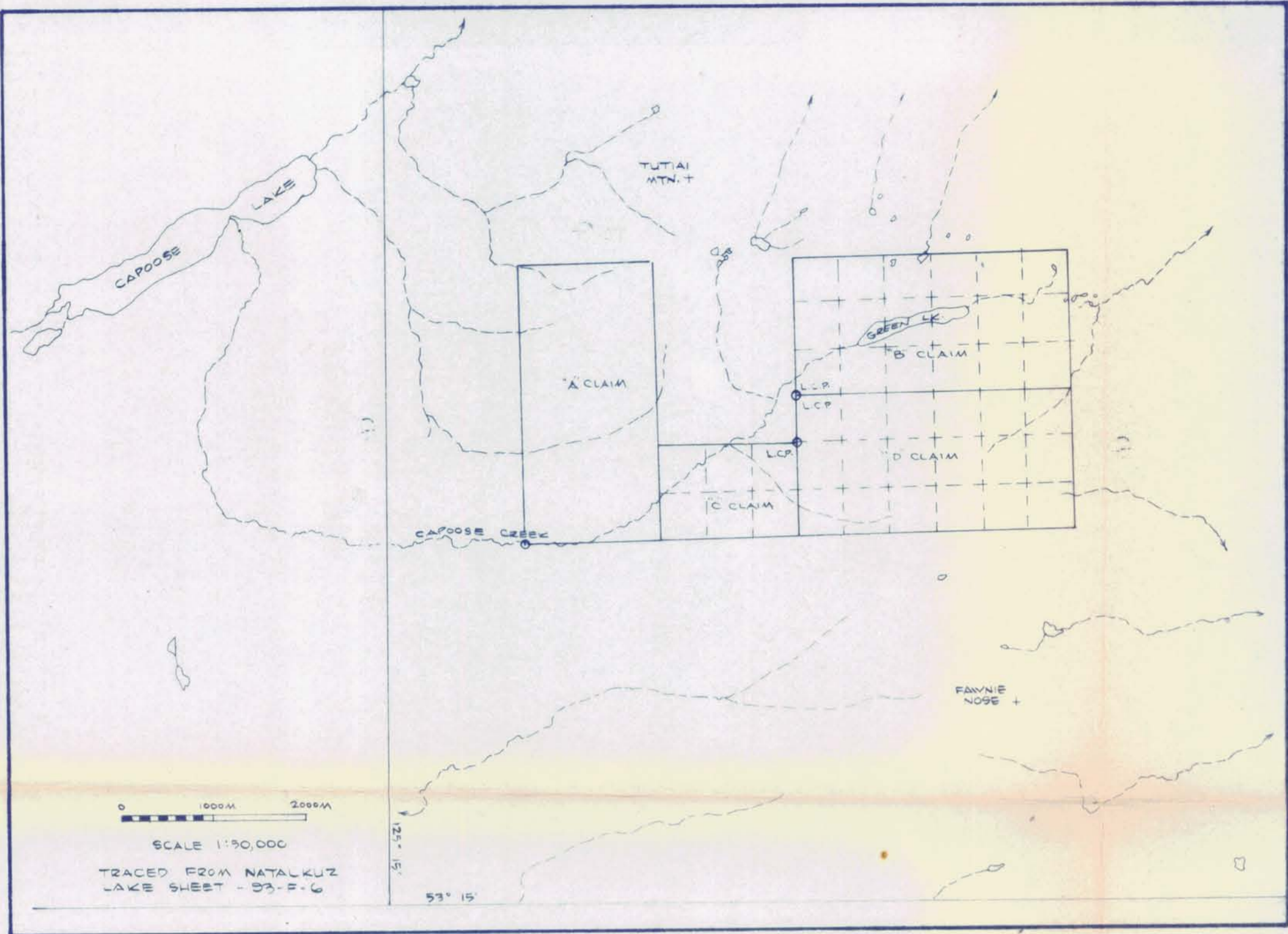
GRANGES EXPLORATION AB
CANADIAN DIVISION
VANCOUVER OFFICE

DRAWN BY: M.P.
DATE: SEPT 1976

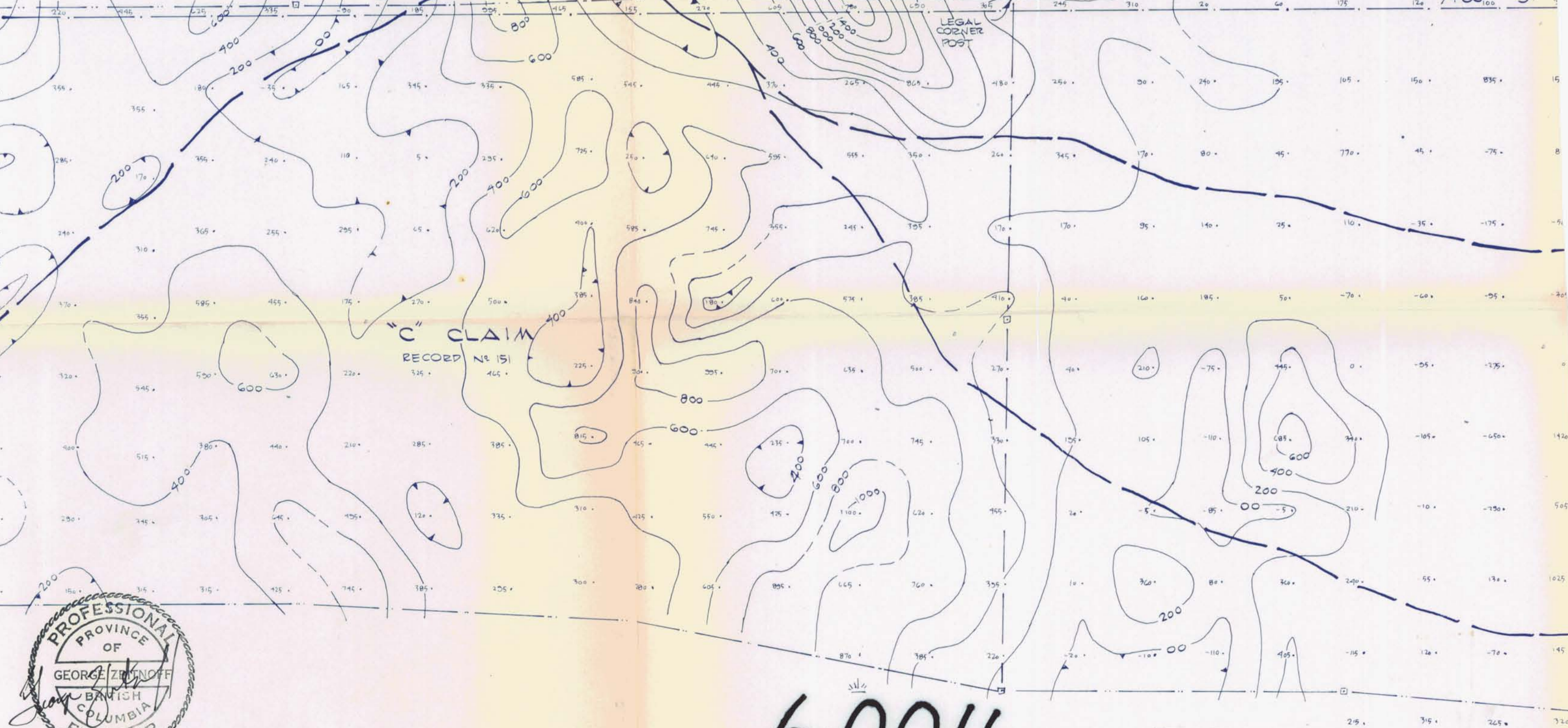
SOIL GEOCHEMICAL SURVEY FOR
GOLD & SILVER ON
CLAIM
CAPOOSE LAKE AREA, B.C.

SCALE: 1:5000
PROJECT No.: 70113
N.T.S. No.: D3 F-6

FIG 6



0+00 Baseline



MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. **6004**
MAP NO. **6** FIG. 7

1500 M 2000 M 2500 M 3000 M 3500 M
LOCATED CLAIM POST
CLAIM BOUNDARY LINE
SHOWING VERTICAL MAGNETIC FIELD
CONTOURED AT INTERVALS OF 200 GAMMAS.

DRAWN BY: M.P.
DATE: SEPT 1976
INST: SCINTREX MF-2

GRANGES EXPLORATION AB
CANADIAN DIVISION
VANCOUVER OFFICE

MAGNETOMETER SURVEY ON
CLAIM **C (151)**
CAPOOSE JOINT VENTURE
CAPOOSE LAKE AREA, B.C.

SCALE: 1:5000
PROJECT No.: 70113
N.T.S. No.: 93 F-6