

# MAR 19750006: ATHABASCA

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19750006

ECONOMIC MINERALS
EUE REPORT No
U-AF-118(5)
U-AF-119(5)
U-AF-120(8)

U-AF-121(5)  
U-AF-122(5)  
U-AF-123(1)  
U-AF-124(1)

URANERZ EXPLORATION & MINING LTD.

GEOPHYSICAL ASSESSMENT REPORT

DISCUSSION OF AIRBORNE MAGNETIC

SURVEY RESULTS

N. W. ATHABASCA AREA, NORTHERN ALBERTA

PROJECT # 71 - 41

E. R. ROCKEL

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1. INTRODUCTION

The survey area is located approximately between latitudes  $58^{\circ}45'$  and  $59^{\circ}20'$  and longitudes  $109^{\circ}15'$  and  $110^{\circ}0'$  in a 15 km band (approx.) along the north shore of Lake Athabasca.

The dispositions surveyed are:

No. 189	Loc. Rge. 1	Twp. 118 W. 4 Mer.
	Loc. Rge. 1	Twp. 119 W. 4 Mer.
No. 190	Rges. 1 + 2	Twps. 117 + 118 W. 4 Mer.
No. 191	Rges. 2 + 3	Twps. 117 + 118 W. 4 Mer.
No. 192	Rges. 3 + 4	Twps. 116 + 117 W. 4 Mer.
No. 193	Rges. 4 + 5	Twps. 114 + 115 W. 4 Mer.
No. 194	Rge. 5	Twp. 113 W. 4 Mer.
	Rge. 5	Twp. 114 W. 4 Mer.
	Rge. 6	Twp. 113 W. 4 Mer.
	Rge. 6	Twp. 114 W. 4 Mer.
No. 195	Rges. 2,3,+4	Twps. 117 + 118 W. 4 Mer.

The disposition holders are:

Uranerz Exploration & Mining Ltd.	: 33 1/3%
Inexco Mining Company	: 33 1/3%
Saskatchewan Mining & Development Corp.	: 33 1/3%.

The Survey took place in the period from September 7 to September 16, 1975 and was carried out by:

Jim Campbell	- Pilot
Brain McFarlane	- Aircraft Engineer
Ed Lalande	- Geophysicist-Operator
Ed Rockel	- Senior Geophysicist-Navigator and Supervisor.

Equipment used in the survey was:

Cessna 337 fixed-wing aircraft carrying

- 1 Gam-2 spectrometer
- 1 GSA-64 NaI sensor
- 1 RCM-8 recorder
- 2 PC-16 inverters
- 1 G-803 airborne magnetometer system
- 1 HP-7130 - A recorder
- 1 45-F direction finder and
- 1 AA-200 radar altimeter.

Sensitivity of the magnetometer was set at 1 gamma with a repetition rate of 0.5 seconds.

The survey was conducted at a mean terrain clearance of 60 meters with survey lines flown at  $\frac{1}{2}$  km intervals from photo-mosaic maps.

2. DISCUSSION OF RESULTS

The most apparent magnetic phenomenon is a major change in magnetic intensity, on sheets number 1 and 2, signifying a change in magnetic susceptibility from one zone of intensity to the other. The susceptibility change is outlined by lines " A - A ". Lines " F - F " indicate discontinuities in the magnetic contours which may have structural implications.

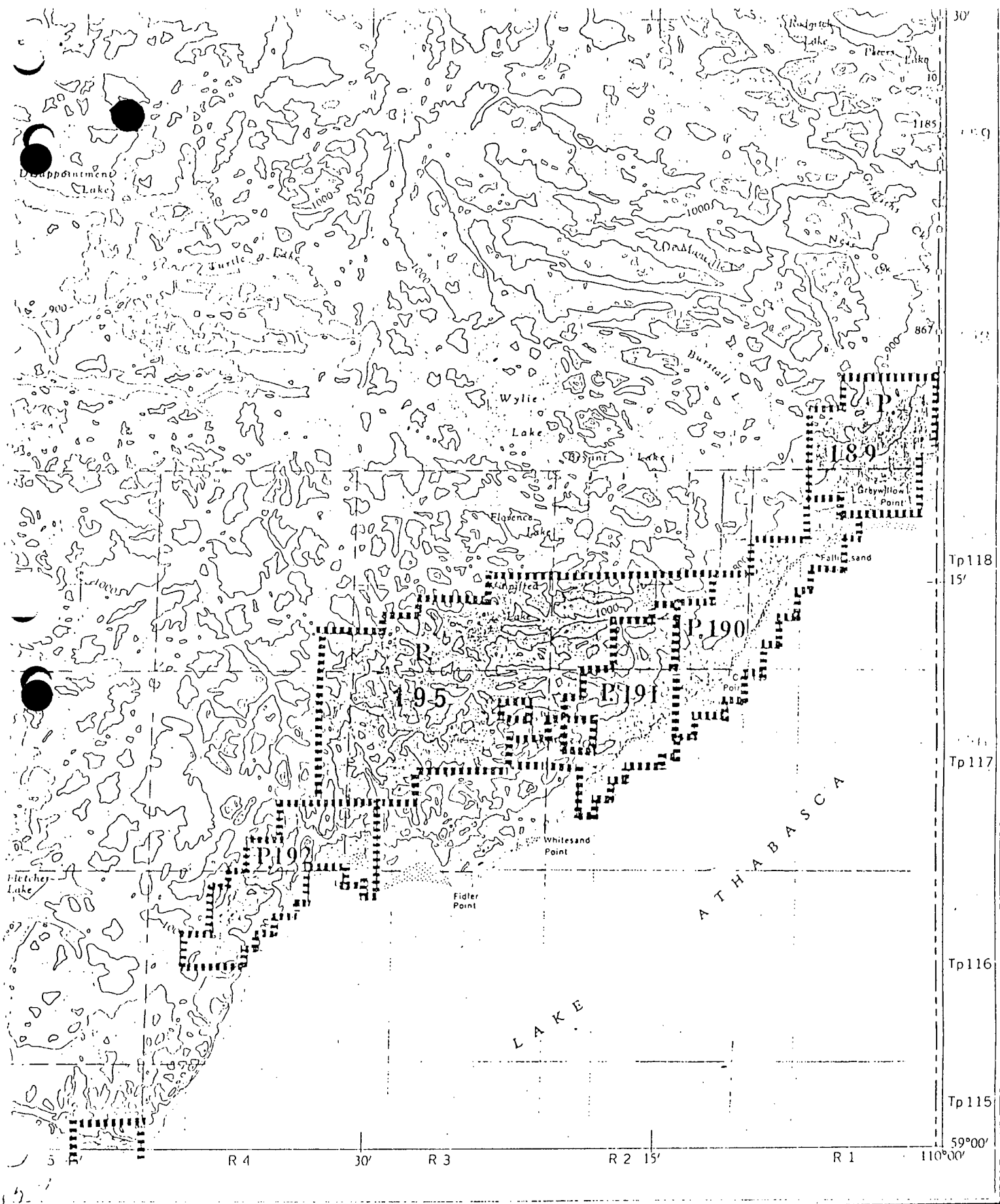
3. CONCLUSIONS AND RECOMMENDATIONS

The major magnetic susceptibility change " A - A " is interpreted as a contact between non-magnetic sedimentary rock and more magnetically active gneissic or granitic basement rock.

The structural features " F - F " are believed to be faults or fracture zones which appear to have displaced the rock change interface along its length. The feature F - F on Map # 4 is interpreted as a questionable fault zone. The contours here indicate a wide area of disturbance.

Re - assessment of the radiometric results with particular reference to the interpreted faults at the rock contact should provide additional basis for determining priorities for ground follow-up.

Attention should be given to any anomalies near the questionable fault on Map # 4.



Projection transversale de Mercator  
 Réseau géodésique nord-américain unifié (1927)  
 Équidistance des courbes: 100 pieds  
 Élévation en pieds au dessus du niveau moyen de la mer  
 Déclinaison magnétique au centre de la feuille en 1963: 27°34' Est  
 Variation annuelle: 10' par an

Établi et imprimé par la DIRECTION DES LEVÉS ET DE  
 LA CARTOGRAPHIE, MINISTÈRE DES MINES ET DES  
 RELEVÉS TECHNIQUES en 1963, d'après les photographies  
 aériennes prises en 1955. Travaux exécutés sur le terrain et  
 vérification des ouvrages en 1957.

Ces cartes sont en vente au bureau de distribution des cartes

Figure # 1

3.../

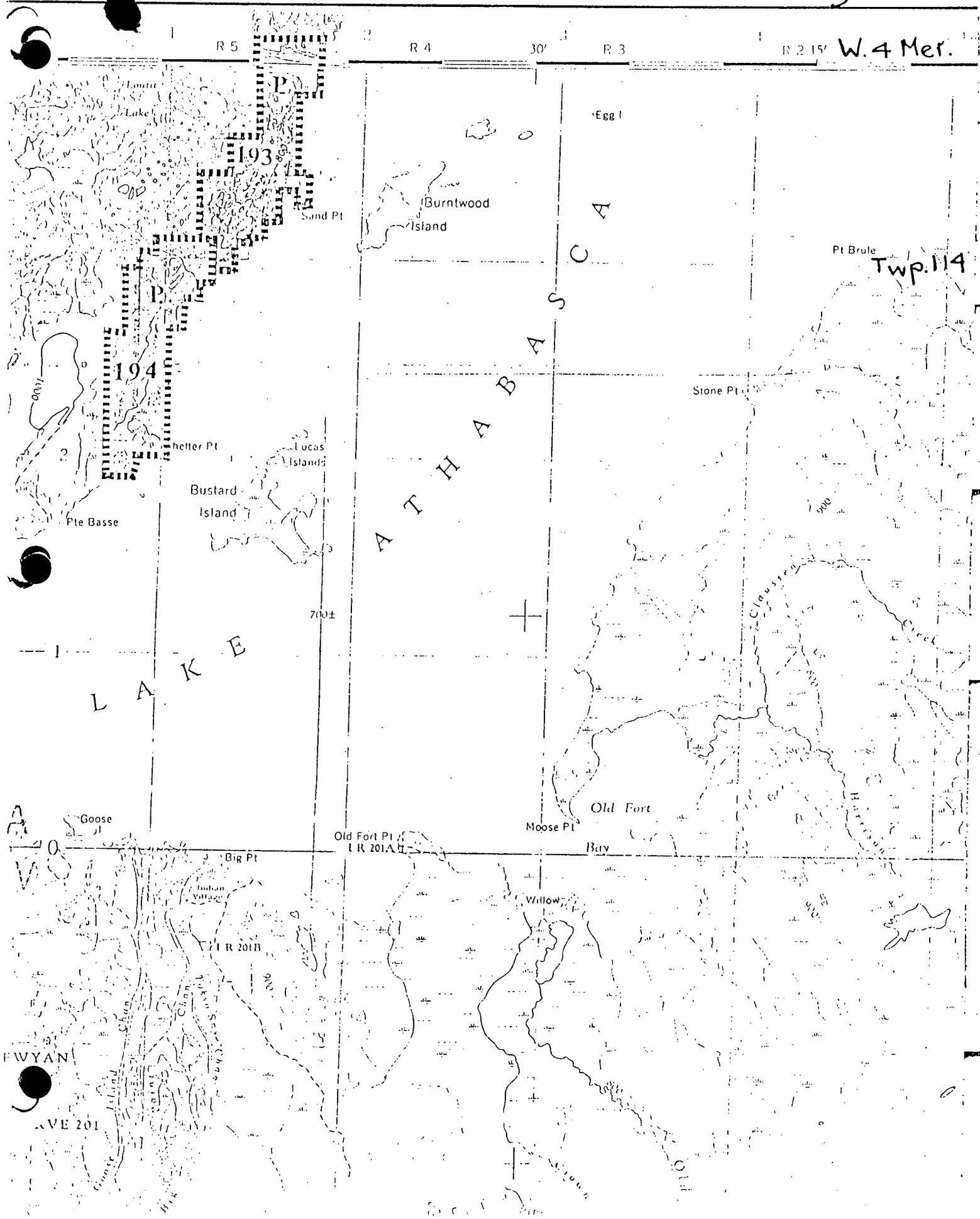
19750006

IDA

ALBERTA

EDITION 34

1 - 250,000



QUARTZ MINERAL EXPLORATION PERMIT NO.

192

~~This permit was cancelled and the Research Council~~

~~has not as yet received any reports for it.~~

see report  
permit

189



QUARTZ MINERAL EXPLORATION PERMIT NO. 195

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U-AF-124(1)

see report permit

#189

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DATE OF ISSUE - APRIL 14, 1975  
AREA - 9,920 ACRES  
//// - NOT IN PERMIT

TP. 117

TP. 116

R. 4

R. 3 W. 4 M.

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//// - NOT IN PERMIT

NO LEASES SELECTED

TP. 117

TP. 116

R. 4

R. 3 W. 4 M.

# QUARTZ MINERAL EXPLORATION PERMIT NO. 195

CANCELLED

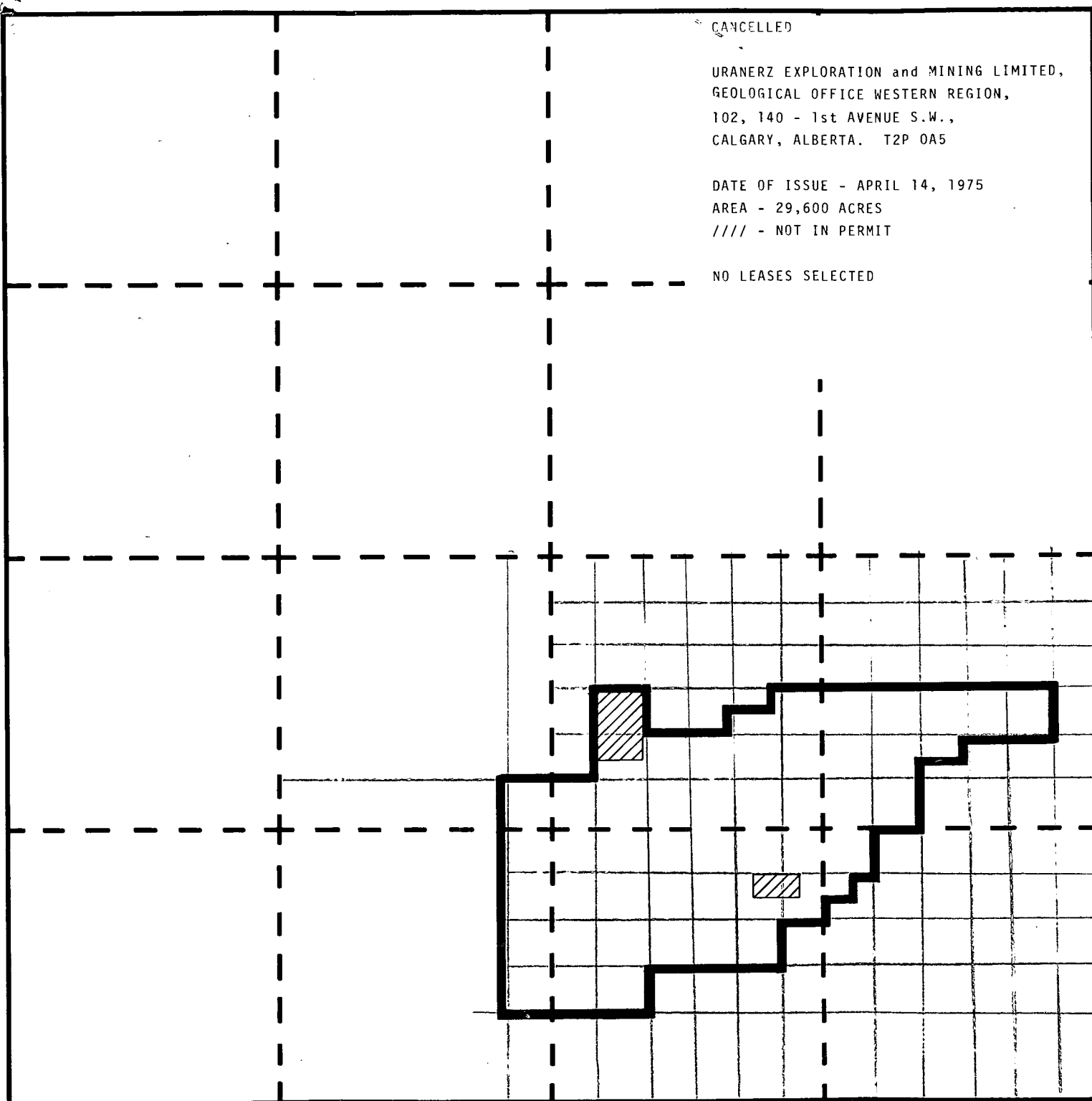
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CALGARY, ALBERTA. T2P 0A5

DATE OF ISSUE - APRIL 14, 1975

AREA - 29,600 ACRES

//// - NOT IN PERMIT

NO LEASES SELECTED



R.4

R.3

R. 2 W. 4 M.

TP.118

TP.117

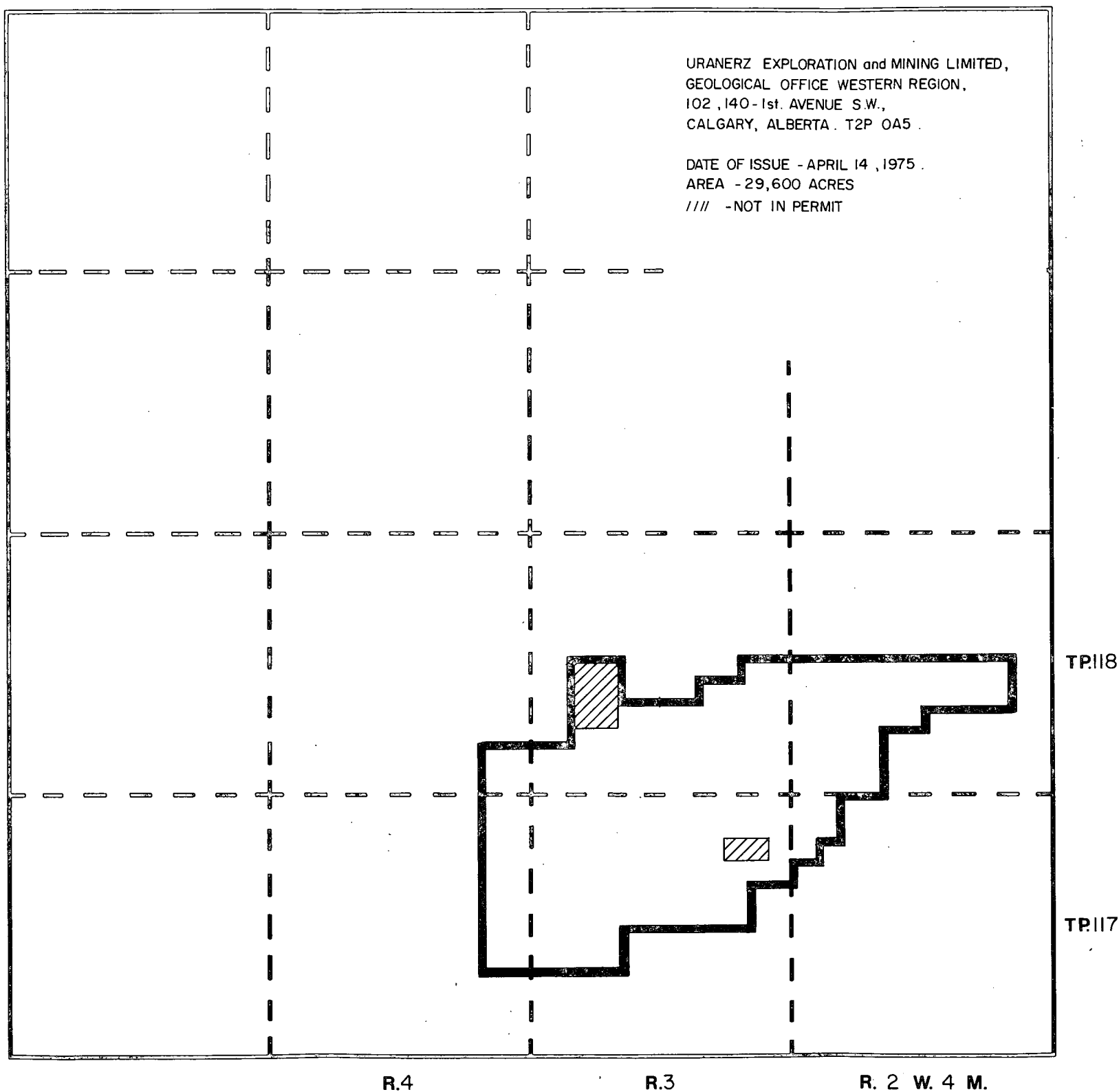
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AREA - 29,600 ACRES

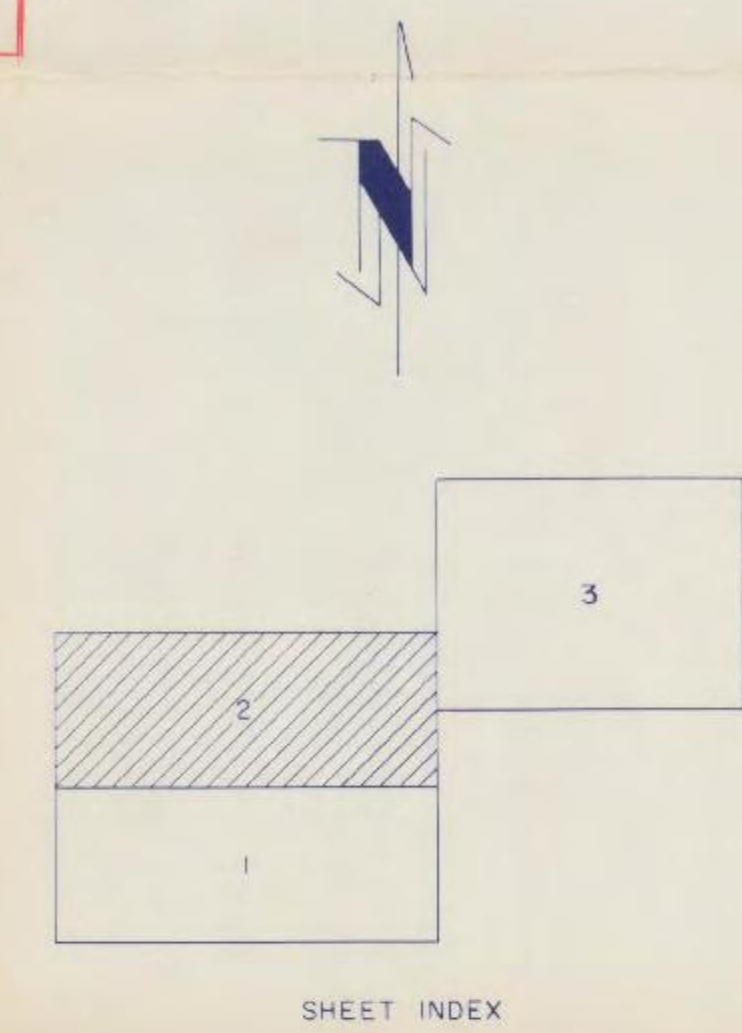
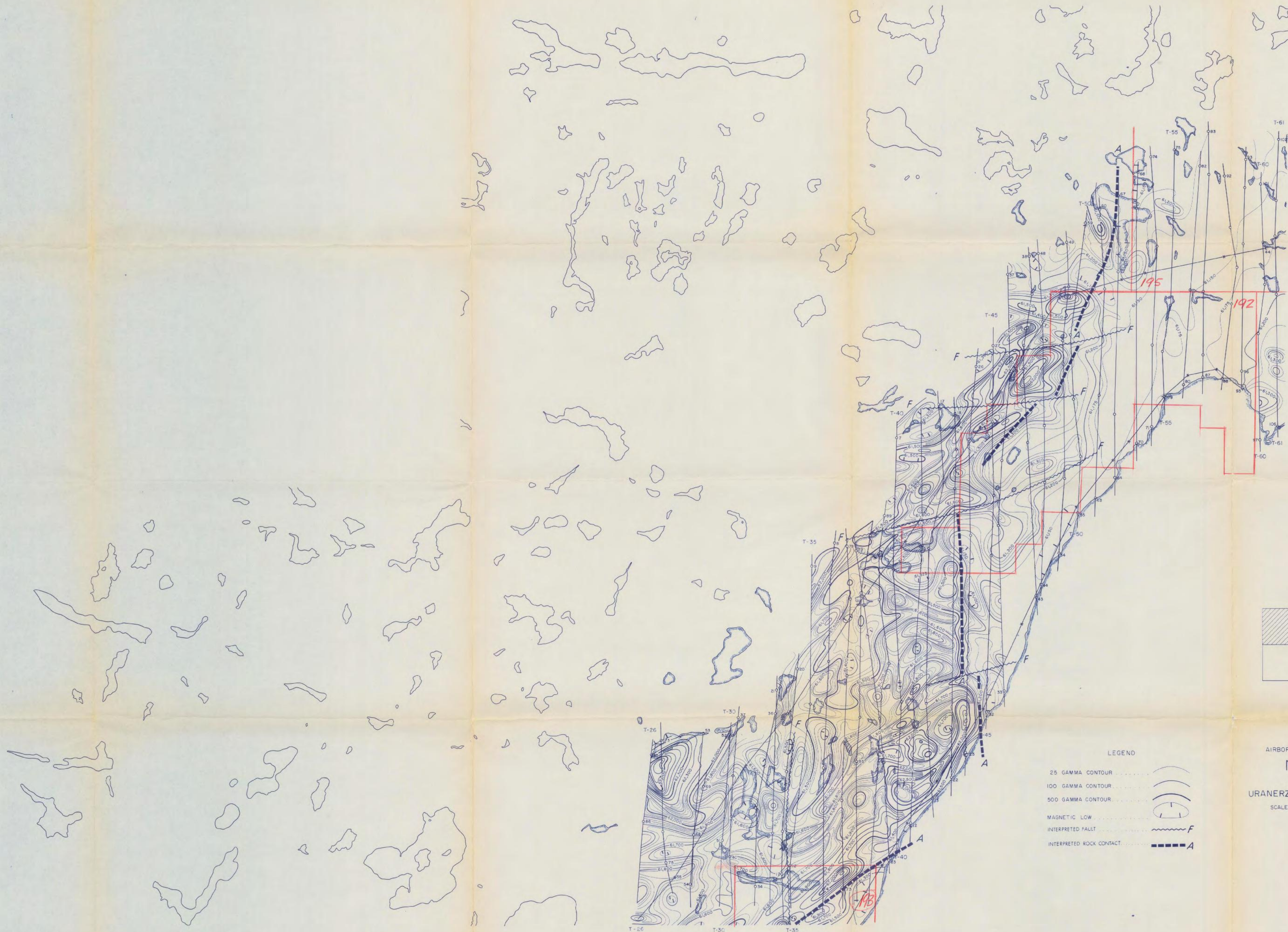
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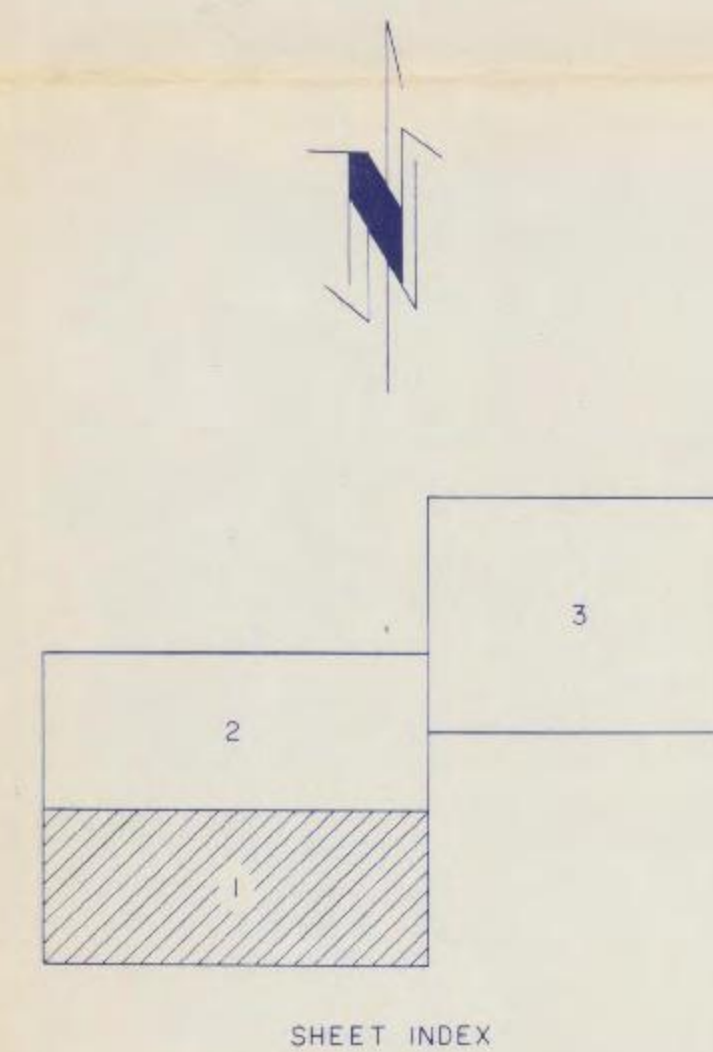
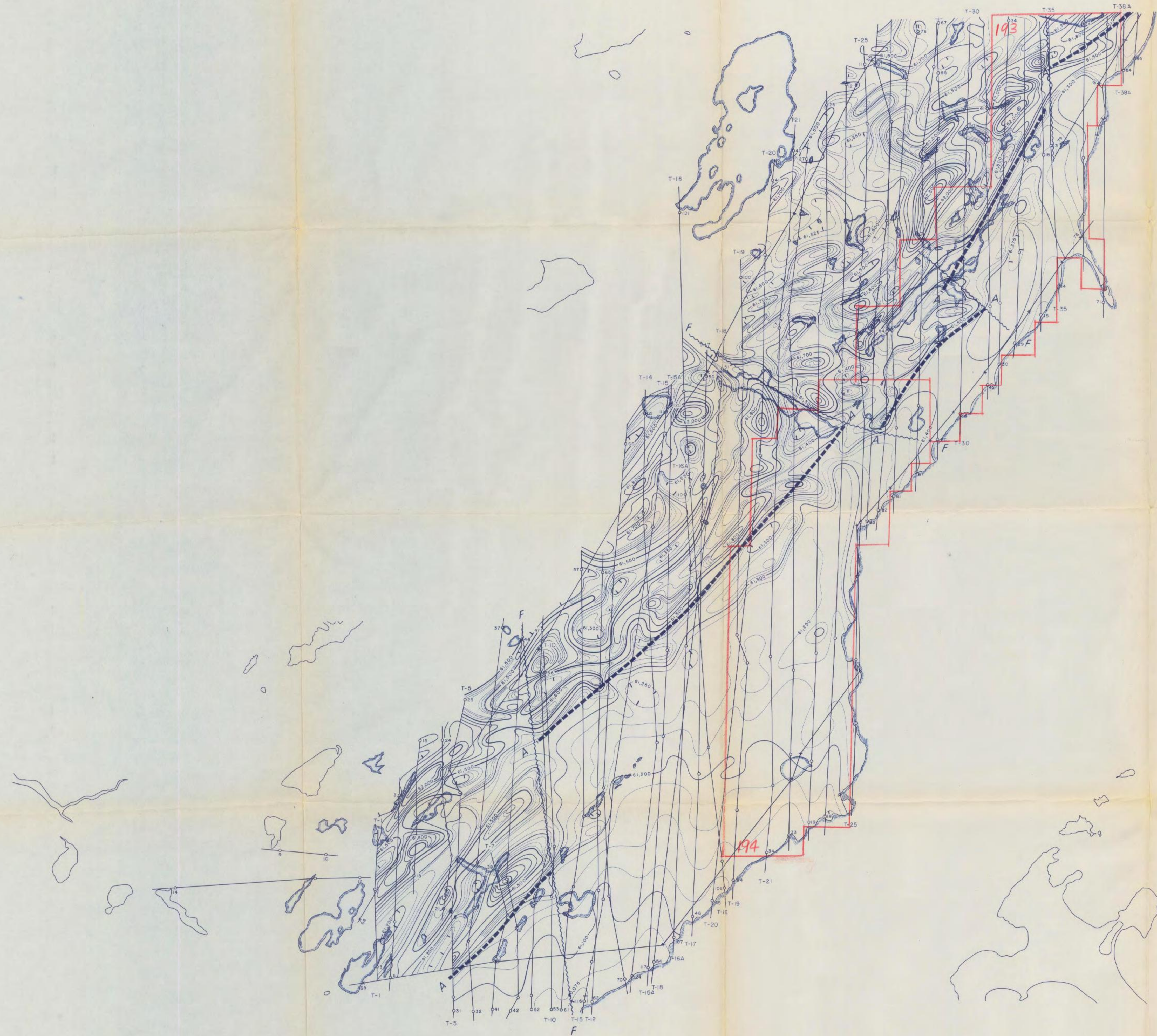




- LEGEND
- 25 GAMMA CONTOUR
  - 100 GAMMA CONTOUR
  - 500 GAMMA CONTOUR
  - MAGNETIC LOW
  - INTERPRETED FAULT
  - INTERPRETED ROCK CONTACT

AIRBORNE MAGNETOMETER SURVEY  
N.W. ATHABASCA  
NORTHWEST TERRITORIES  
URANERZ EXPLORATION & MINING LTD.  
SCALE 1 INCH TO 1 MILE (APPROXIMATELY)  
KENTING EARTH SCIENCES LIMITED  
OTTAWA, ONTARIO





LEGEND

25 GAMMA CONTOUR . . . . .

100 GAMMA CONTOUR . . . . .

500 GAMMA CONTOUR . . . . .

MAGNETIC LOW . . . . .

INTERPRETED FAULT . . . . . F ~~~~~ F

INTERPRETED ROCK CONTACT . . . . . A - - - - - A

AIRBORNE MAGNETOMETER SURVEY

N.W. ATHABASCA

NORTHWEST TERRITORIES

URANERZ EXPLORATION & MINING LTD.

SCALE 31 INCH TO 1 MILE (APPROXIMATELY)

KENTING EARTH SCIENCES LIMITED

OTTAWA, ONTARIO



T.122

T.121

T.120

T.119

T.118

R.2

R.1 W.4 M.

ALBERTA  
SASKATCHEWAN

ATHABASCA

ATHABASCA

LAKE

LAKE

**LEGEND**

- 100 GAMMA CONTOURS
- 20 GAMMA CONTOURS
- ALBERTA TOWNSHIP & RANGE BOUNDARY
- PERMIT BOUNDARY
- MAGNETIC LOW
- FAULT

SCALE 1:50,000

71-41

**URANERZ EXPLORATION & MINING LTD.**

SASKATCHEWAN  
NORTHWEST ATHABASCA  
AIRBORNE MAGNETIC CONTOUR MAP

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T.C. TO BORN:			