

# MAR 19760013: JOHNSON LAKE

Received date: Dec 31, 1976

Public release date: Jan 01, 1978

## **DISCLAIMER**

By accessing and using the Alberta Energy website to download or otherwise obtain a scanned mineral assessment report, you ("User") agree to be bound by the following terms and conditions:

- a) Each scanned mineral assessment report that is downloaded or otherwise obtained from Alberta Energy is provided "AS IS", with no warranties or representations of any kind whatsoever from Her Majesty the Queen in Right of Alberta, as represented by the Minister of Energy ("Minister"), expressed or implied, including, but not limited to, no warranties or other representations from the Minister, regarding the content, accuracy, reliability, use or results from the use of or the integrity, completeness, quality or legibility of each such scanned mineral assessment report;
- b) To the fullest extent permitted by applicable laws, the Minister hereby expressly disclaims, and is released from, liability and responsibility for all warranties and conditions, expressed or implied, in relation to each scanned mineral assessment report shown or displayed on the Alberta Energy website including but not limited to warranties as to the satisfactory quality of or the fitness of the scanned mineral assessment report for a particular purpose and warranties as to the non-infringement or other non-violation of the proprietary rights held by any third party in respect of the scanned mineral assessment report;
- c) To the fullest extent permitted by applicable law, the Minister, and the Minister's employees and agents, exclude and disclaim liability to the User for losses and damages of whatsoever nature and howsoever arising including, without limitation, any direct, indirect, special, consequential, punitive or incidental damages, loss of use, loss of data, loss caused by a virus, loss of income or profit, claims of third parties, even if Alberta Energy have been advised of the possibility of such damages or losses, arising out of or in connection with the use of the Alberta Energy website, including the accessing or downloading of the scanned mineral assessment report and the use for any purpose of the scanned mineral assessment report so downloaded or retrieved.
- d) User agrees to indemnify and hold harmless the Minister, and the Minister's employees and agents against and from any and all third party claims, losses, liabilities, demands, actions or proceedings related to the downloading, distribution, transmissions, storage, redistribution, reproduction or exploitation of each scanned mineral assessment report obtained by the User from Alberta Energy.

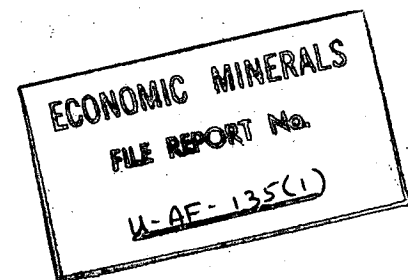
19760013

PROPOSAL FOR  
GEOLOGICAL EVALUATION

ON

JOHNSON LAKE AREA, ALBERTA, CANADA

FEBRUARY, 1976



BY: WOLLEX EXPLORATION LTD.  
Geological Consultants  
CALGARY, ALBERTA, CANADA

TABLE OF CONTENTS

	<u>PAGE</u>
SUMMARY	
RECOMMENDATIONS	
INTRODUCTION	
LOCATION AND ACCESS	
PHYSIOGRAPHY	
HISTORY OF EXPLORATION	
GEOLOGICAL SETTING	
ECONOMIC GEOLOGY	

MAPS

MAP 1	LOCATION MAP
MAP 2	LOCATION MAP
MAP 3	GEOLOGICAL MAP

C E R T I F I C A T E

I, the undersigned, R. K. NETOLITZKY, of the City of Calgary, in the Province of Alberta, do hereby certify:

1. that I am a Professional Geologist with an office mailing address at #1512, 727 Sixth Avenue S.W.
2. that I graduated from the University of Alberta, Edmonton with a Bachelor of Science degree in 1964; and from the University of Calgary, with a Master of Science degree in 1967.
3. that I am a registered Professional Geologist with the Association of Professional Engineers of Alberta.
4. that I have been practicing my profession as a geologist for nine years.

DATED AT CALGARY, ALBERTA, this 19 day of February, 1976.



*R. K. Netolitzky*  
R. K. Netolitzky, M.Sc., P.Geol.

## JOHNSON LAKE PROPERTY

### SUMMARY

The Johnson Lake Property is located on and immediately south of the Precambrian Shield-Phanerozoic contact.

The most recent deposits underlying the property are of Pleistocene age. These surficial deposits are underlain by a Devonian carbonate sequence at the base of which there may be a Pre-Devonian sand and conglomerate that overlies the weathered basement. South of the Devonian outcrops a lower Cretaceous section of relatively unconsolidated sands and clays with minor interlayered coal horizons is present.

The Precambrian basement rocks consist essentially of granitic and mylonitic rocks. Reconnaissance mapping by L. P. Tremblay (1960) and aeromagnetic maps suggest a metasedimentary sequence of arkosic to pelitic rocks may be present.

A number of potential targets that are favorable to host economic concentrations of uranium may be postulated for the property. These include epigenetic or replacement-type deposits associated with:

- (a) Precambrian lithologically favorable basement structural traps.
- (b) The weathered Precambrian-Proterozoic interface.
- (c) The Devonian-Cretaceous interface.
- (d) Cretaceous sandy and bitumen-rich horizons.

The potential uranium targets are such that they are not directly detectable, therefore, a remote sensing-type exploration program is required to thoroughly evaluate the property's uranium potential. To date the most reliable technique is the "Track Etch" method of monitoring Radon 222 which is a daughter decay product of the uranium decay series.

## RECOMMENDATIONS

It is recommended that an exploration program be conducted on the property commencing in June, 1976, and that the program should consist of:

### PHASE I

#### 1. Prefield Preparation

Acquisition and compilation of field data collected by governmental agencies. Acquisition of air photographs and interpretation with regard to surficial deposits, outcrop distribution and lineament analysis.

#### 2. Field Program (Part A)

Lake and pond water and sediment geochemistry to be helicopter supported with sample density to be, if possible, at one sample per square mile. Samples to be analysed for U, Pb, and Zn.

#### 2. Field Program (Part B)

Contingent upon results obtained in Part A, a radon test program is to be conducted on geochemical anomalous areas and over major lineaments.

The survey is to check the applicability of Track Etch survey versus solid state measuring devices and emnometer surveys for collecting Radon 222 data.

#### 2. Field Program (Part C)

The least expensive of the radon methods that returns adequate results will be then selected for a grid survey at sample spacing at 1,000 foot centers. To establish horizontal control for this portion of the program enlarged air photographs and a cut base line will be required.

Anomalous results will be detailed by 200 to 300 foot center sample density.

### 3. Postfield Program

Interpretation of all field data and compilation of final maps and report.

#### PHASE II

Contingent upon results of Phase I, a drill program would be necessary to evaluate the anomalous areas.

The estimated expenditures required to conduct this program are as follows:

#### PHASE I

##### 1. Prefield Preparation

Air photographs and enlargements	\$ 500.00
Acquisition and research of all technical information	1,000.00
Cutting of base line to 3 foot width; Base line: 10 Miles @ \$200/mile	2,000.00

##### 2. Field Program (Part A)

Collection and analysis of samples; estimate of 90 samples @ \$35/sample	3,150.00
--	----------

##### 2. Field Program (Part B)

Orientation survey - comparison of radon methods	5,000.00
--	----------

##### 2. Field Program (Part C)

Placement and collection of samples, data acquisitions for 1,500 sample sites:	
i.e. Terradex Track Etch cups	20,000.00
6 men for 3 months	32,000.00
Supervision	6,000.00

Geochemical analysis	\$ 3,500.00
Equipment, food and accommodation @ \$15/man/day	8,100.00
Mobilization and demobilization	3,000.00
Service flights and camp moves	3,000.00

3. Postfield Program

Office evaluation of results and final report	1,500.00
--	----------

---

\$88,750.00

Contingencies @ 10%	8,875.00
---------------------	----------

---

\$97,625.00

---

PHASE II

Drill program, rotary and/or diamond drill, say	\$100,000.00
--	--------------

---

\$100,000.00

---



## INTRODUCTION

As part of a continuing research program, Wollex Exploration and Taiga Consultants Ltd. examined the southern margin of the Canadian Shield of Alberta and Saskatchewan for its potential to host uranium deposits. At a preliminary stage of investigation, it was felt that the Johnson Lake area (Maps 1 and 2) had a number of co-existing parameters favorable enough to justify property acquisition and an exploration program.

As a result of this evaluation, one maximum size permit has been applied for.

The schedule of application and date are tabulated below:

SCHEDULE

APPLICATION FOR A QUARTZ MINERALS EXPLORATION PERMIT FILED BY  
TAIGA CONSULTANTS LIMITED

In Township 99, Range 3,  
West of the 4th Meridian

Sec's. 6, 7 & 8           All  
Sec's. 15 to 36 incl.       All

In Township 100, Range 3,  
West of the 4th Meridian

Sec's. 1 to 12 incl.       All  
Sec's. 16 to 19 incl.       All

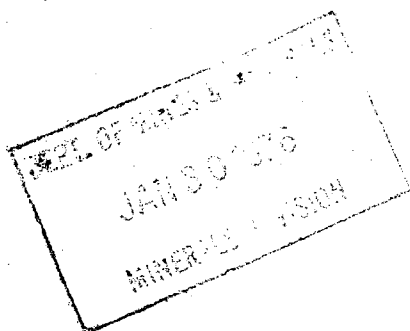
In Township 99, Range 4,  
West of the 4th Meridian

Sec's. 1 to 4 incl.       All  
Sec's. 9 to 16 incl.       All  
Sec's. 21 to 28 incl.       All  
Sec's. 33 to 36 incl.       All

In Township 100, Range 4,  
West of the 4th Meridian

Sec's. 1 to 4 incl.       All  
Sec's. 9 to 15 incl.       All  
Sec's. 23 & 24           All

78 Sections



## LOCATION AND ACCESS

Maps No. 1 and 2 give the geographic locations and settings for the applied for permit. The prospect is within the northeastern portion of Alberta as defined in the schedule of application.

A forestry look-out and occasionally maintained airstrip is located on the eastern margin of the permit area. The nearest all-weather road is at Fort MacKay, Alberta, 55 miles to the southwest. Seismic trails extend to within 15 miles of the prospect.

19760013

Map 2

102

101

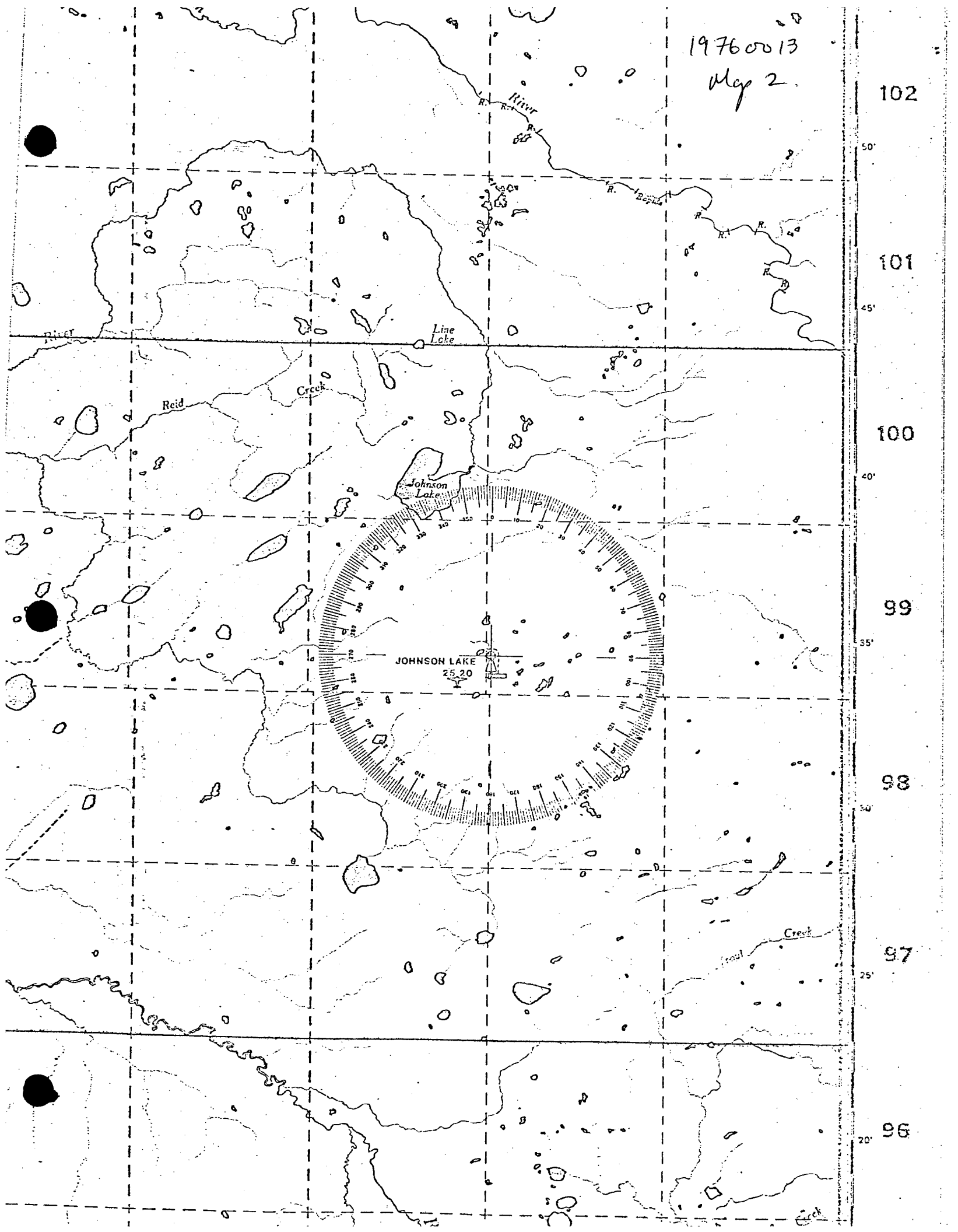
100

99

98

97

96

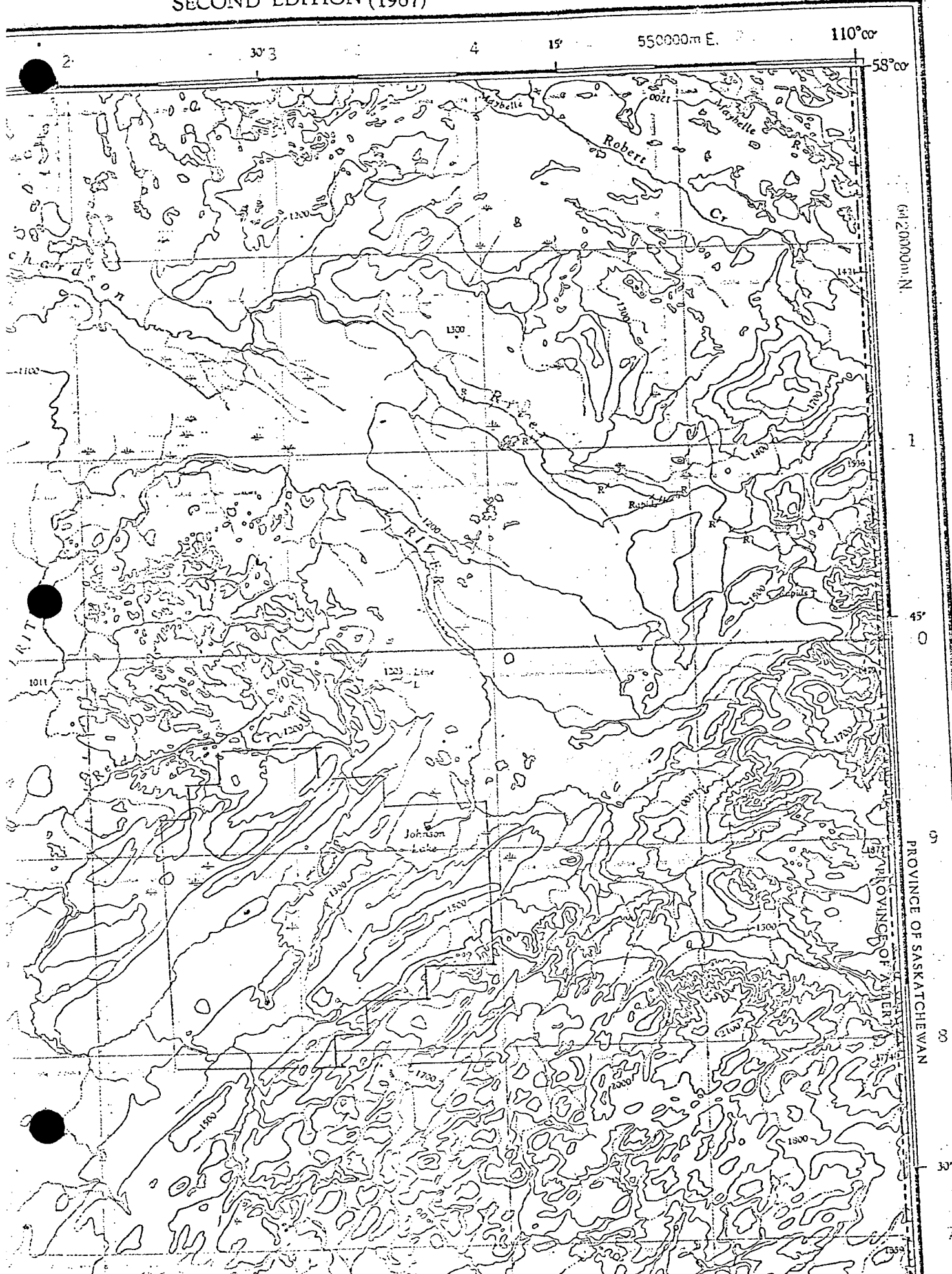


19760013 Map 1

SHEET 74 E

SECOND EDITION (1967)

Refer  
this map



550000m N

PROVINCE OF SASKATCHEWAN  
PROVINCE OF ALBERTA

100m surface, dry weather  
contour lines

19760013 Map 5.



# RESEARCH COUNCIL OF ALBERTA THE MARGUERITE RIVER DISTRICT,

## LEGEND

- Schistosity, gneissosity, foliation (defined, dip known, dip vertical, assumed) ...
- Schistosity, gneissosity, foliation trend° ...
- Lineation (combined with schistosity, etc.) ...
- Fault (defined, dip known, assumed) ...
- Shear ...
- Breccia ...
- Joint (dip known, vertical, unknown) ...
- Gossan ...
- Rock alteration ...
- Gneissic phase of rock units ...
- Anomalous radioactivity (over 2x background) ...
- Yellow stain ...
- Yellow stain with anomalous radioactivity ...
- Carbonate bedrock limit and/or relief trend\* ...
- Drumlin, drumlinoid feature° ...
- Glacial fluting, giant groove° ...
- Glacial striae ...
- Crag and tail° ...
- Esker (direction of water flow unknown) or crevasse filling° ...
- Muskeg ...
- Dune (wind direction shown)° ...
- Wind-cut grooves (wind direction shown) ...
- Drainage (permanent, intermittent) ...
- Township boundary ...
- Outcrop boundary† ...

† Boundary of bedrock area designated by patterned symbols; color wash limits define other outcrop areas.

°aerial photographic interpretation

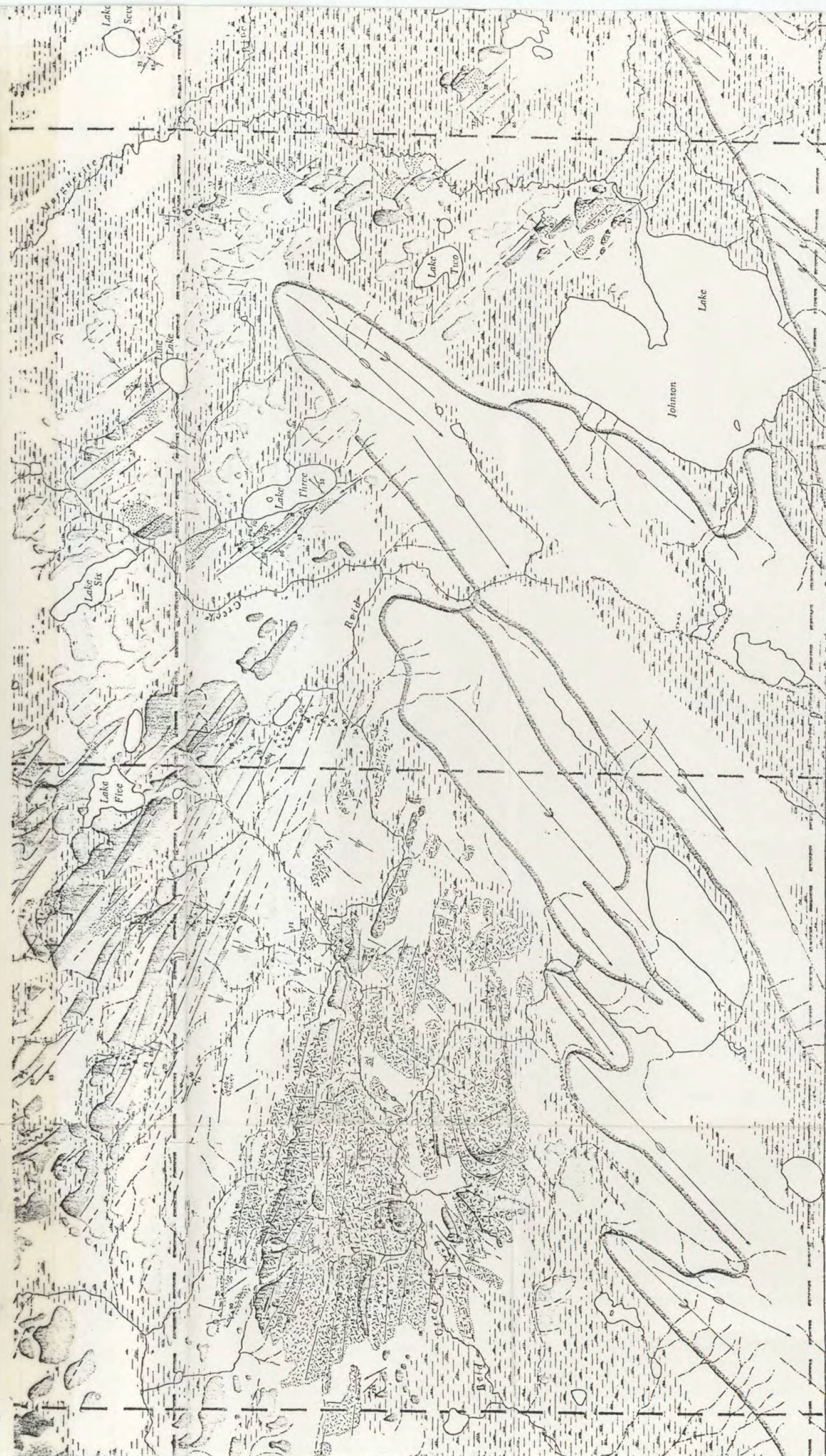
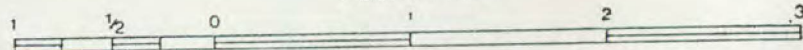
Geology by J. D. Godfrey, 1969

Map drawn by F. L. Copeland

Cartographic editing by J. E. Gould

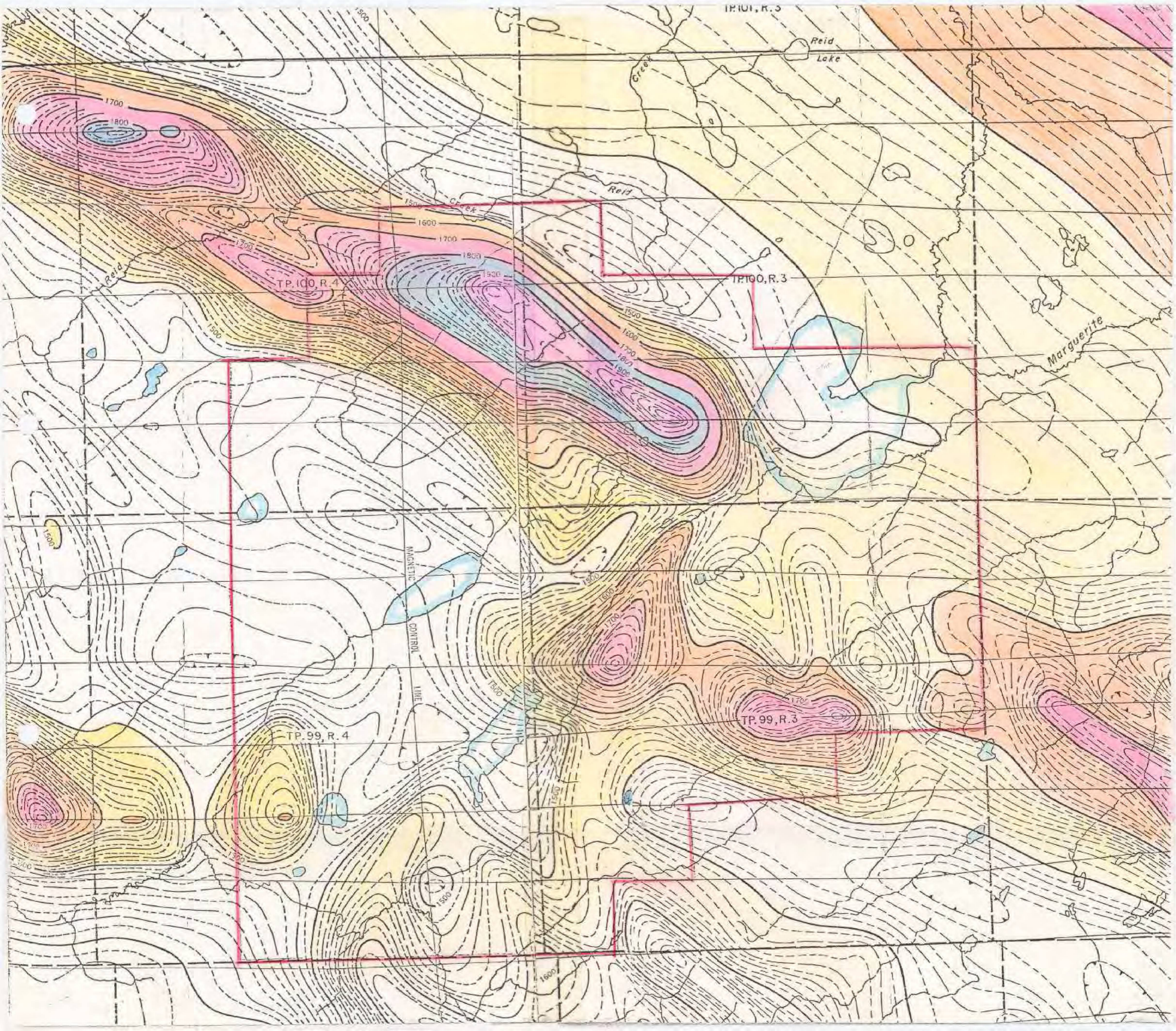
Air photographs covering this area are obtainable from the Technical Division, Alberta Department of Lands and Forests, Edmonton and the National Air Photographic Library, Ottawa.

SCALE - 1: to 63,360  
1 Inch to 1 Mile



R 3

R 4



19760013 Map 3

PRELIMINARY SERIES

LEGEND

PALAEOZOIC	DEVONIAN (mainly) MIDDLE DEVONIAN (mainly)	5	METHY FORMATION: dolomite
PROTEROZOIC		4	Athabasca sandstone
		3	Basalt dykes and sills (may be younger than 4)
ARCHAEAN		2	Garnetiferous red and white granite and pegmatite; 2a, in part fine- to medium-grained garnetiferous quartz-feldspar-biotite gneiss; 2b, graphic; 2c, gneissic and impure; some pegmatite and remnants of gneiss; 2d, porphyroblastic; 2e, in part fine-grained bedded quartzitic rock
		1	Regularly to irregularly interbanded, highly granitoid, garnetiferous quartz-feldspar-biotite gneiss and biotite-rich porphyroblastic (microcline-perthite) gneiss; 1a, includes small areas of granite and pegmatite

Outcrop visited	x
Low-level observation flights	~
Outcrop seen from the air but not visited	x
Loose slabs, probably from near-by unexposed bedrock	⊗
Geological boundary (assumed)	- - - - -
Bedding (dip known, top of bed unknown)	/
Foliation, banding (inclined, vertical, dip unknown)	///
Crossbed (strike and dip indicated)	x/
Syncline	~
Glacial striae	—
Moraines (recessional and annual)	⊞
Drumlin (direction of ice-movement known)	~
Fossil locality	⊙

Geology by L. P. Tremblay, 1960

Provincial boundary	- - - - -
Township boundary (surveyed)	= = = = =
Township or range boundary (unsurveyed)	- - - - -
Boundary monument	⊙
Intermittent lake and stream	~
Marsh or swamp	~
Rapids	Rap
Height in feet above mean sea-level	1733+

Cartography by the Geological Survey of Canada, 1961

Approximate magnetic declination, 26° 10' East

Geographical names subject to revision

Air photographs covering this area may be obtained through the National Air Photographic Library, Topographical Survey, Ottawa

