

# MAR 19690039: MARGUERITE RIVER

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19690039

ECONOMIC MINERALS

FILE REPORT No.

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RADEX MINERALS LTD.

PROPOSED EXPLORATION - 1969

QUARTZ MINERAL PERMIT NOS. 117 & 118

MARGUERITE RIVER AREA, ALBERTA

Trigg, Woollett & Associates Ltd.

February, 1969.

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INDEXING DOCUMENT NOS. 700129

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PROPOSED EXPLORATION - 1969

QUARTZ MINERAL PERMIT NOS. 117 & 118

MARGUERITE RIVER AREA, ALBERTA

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RADEX MINERALS LTD.

PROPOSED EXPLORATION - 1969

QUARTZ MINERAL PERMIT NOS. 117 & 118

MARGUERITE RIVER AREA, ALBERTA

SUMMARY

A complex of Archean metasedimentary and igneous rocks underlie Radex Minerals Ltd. Permit Nos. 117 and 118. Poor outcrop has, to date, prevented the observation of faults and other strong structural deformation features except for folding in the metasediments. Due to the similarity of the geology, however, to that of other uranium-mineralized areas, an exploration program consisting of an airborne scintillometer survey, a geochemical survey and ground scintillometer surveys has been proposed. An expenditure of \$42,000.00 is estimated for a one month program.

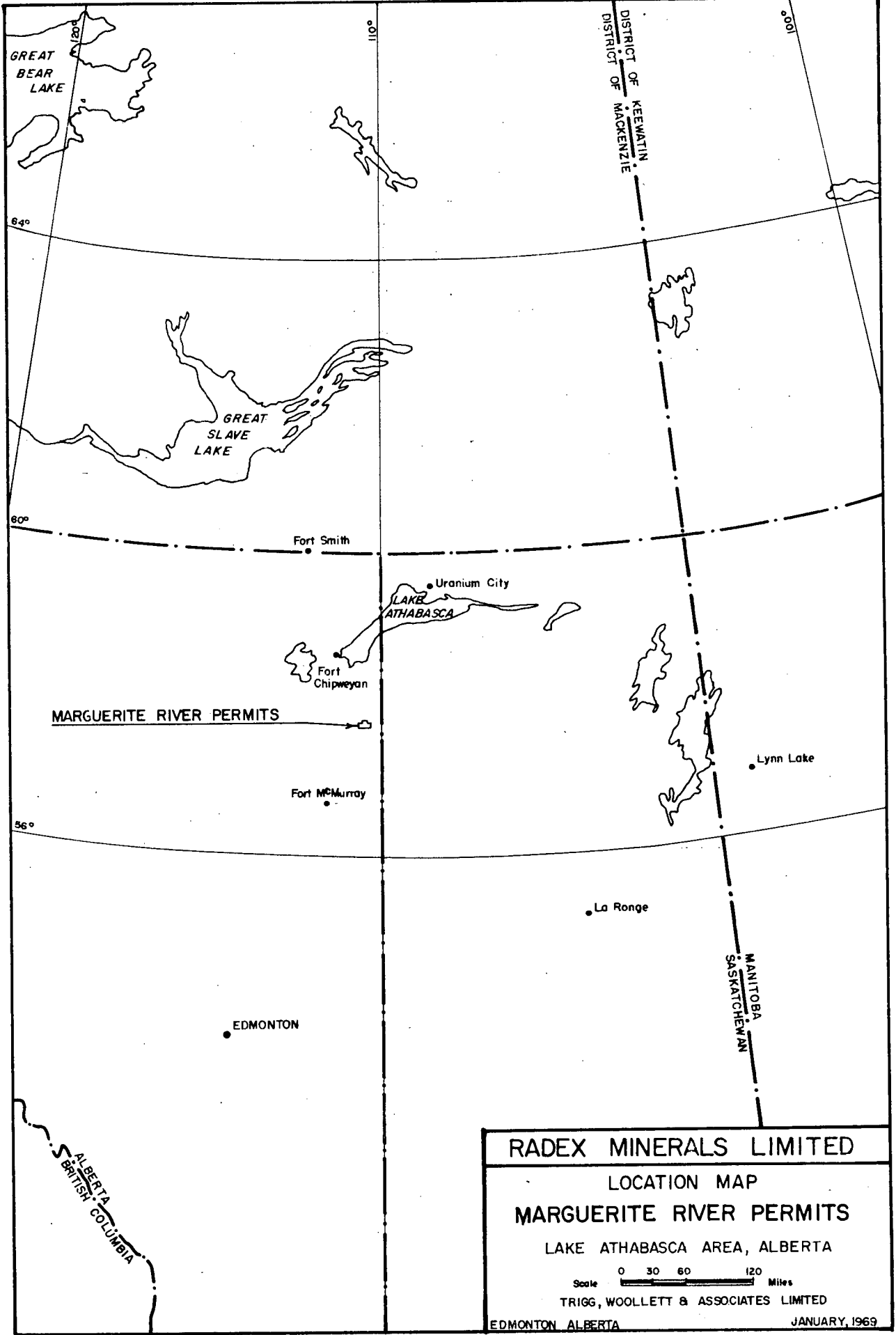
INTRODUCTION

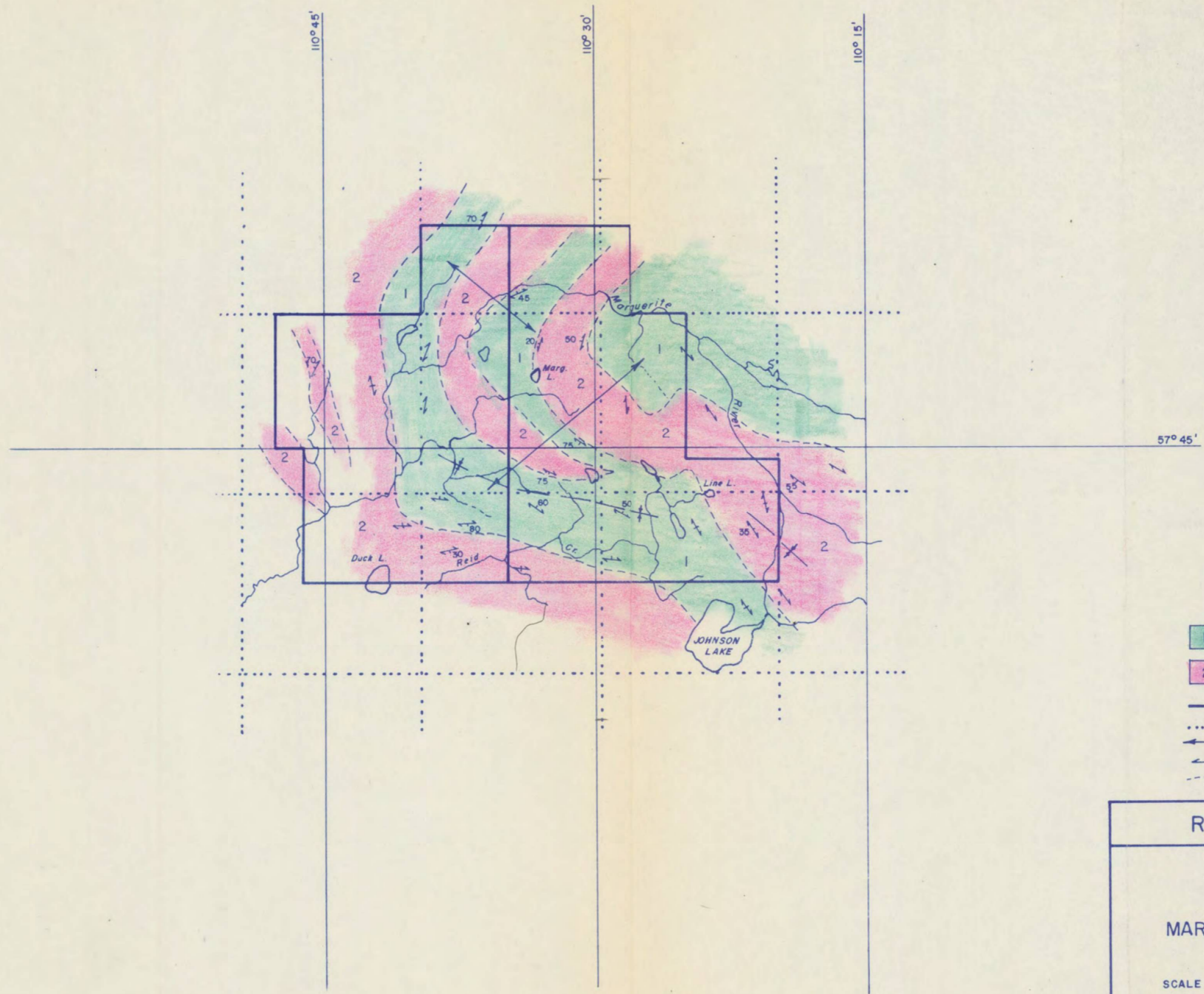
Radex Minerals Ltd. Permit Nos. 117 and 118, Alberta are centered at approximately latitude 57°45', longitude 110°35' and are accessible by float or ski-equipped aircraft (Dwg. R9M-1). The region is 135 miles southwest of Uranium City, Saskatchewan and 80 miles north-east of Fort McMurray, Alberta. The permits encompass a total area of approximately 150 square miles.

GENERAL GEOLOGY

Radex Permit Nos. 117 and 118 are underlain by a complex of metasedimentary and igneous rocks which are presumably Archean in age (Dwg. R9M-2). The metasediments are composed of interbanded quartz-feldspar-biotite gneiss, biotite-rich porphyroclastic gneiss with small lenses of granite and pegmatite. These rocks generally occupy synclinal troughs which are enclosed by younger igneous rocks including granite, granite gneiss and pegmatite.

The lack of outcrop in the area has prevented any strong structural deformational features to be reported other than folding in the metasediments. Devonian limestone overlies the Proterozoic rocks south of the Marguerite River while heavy glacial drift occurs to the north. No mineral occurrences have been reported in the immediate area.





- LEGEND**
- 1 METASEDIMENTARY COMPLEX
  - 2 IGNEOUS ROCKS
  - PERMIT BOUNDARY
  - ..... TOWNSHIP BOUNDARY
  - PROPOSED FLIGHT LINE DIRECTIONS
  - ↔ FOLIATION
  - - - CONTACT

**RADEX MINERALS LIMITED**

**GEOLOGY**

MARGUERITE RIVER AREA, ALBERTA

SCALE 0 2 4 8 MILES

TRIGG, WOOLLETT & ASSOCIATES LTD.

EDMONTON, ALBERTA                      JANUARY, 1969

## AREAS OF MAJOR INTEREST

The presence of rock types similar to those found in the Beaverlodge area of Saskatchewan indicates that favourable geological conditions for uranium concentrations may exist on Radex Permit Nos. 117 and 118. The zones of major interest are contacts between metasedimentary and igneous rocks and along the northeast trending regional fold axis which may represent the latest structural deformation in the area.

## PROPOSED EXPLORATION

A helicopter-supported exploration program as proposed would require a seven-man crew consisting of a geologist, prospector, two assistants, cook, pilot and engineer for a period of one month. A five-tent camp and four scintillometers comprise the major required equipment.

### Airborne Scintillometer Survey

An airborne scintillometer survey with flight lines oriented perpendicular to the structural trend (Dwg. R9M-2) and flown on line spacings of one-quarter mile should be conducted over the entire area covered by the permits. Recheck and fill-in flying should be carried out over radioactive responses to more completely delineate zones of interest. Approximately 700 line miles of surveys would be required and the complete results should be made available before a crew is placed in the field.

### Geochemical Survey

A helicopter-supported geochemical survey for radon and uranium in lake and stream waters should be conducted. Samples should be collected at intervals of one mile along lines spaced one mile apart. Radon analyses should be performed in the field; the uranium content should be analyzed in a laboratory.

### Ground Scintillometer Surveys

Ground scintillometer surveys should be conducted in the areas of interest and also in zones of airborne radiometric responses and geochemical anomalies. A two-man prospecting crew equipped with scintillometers would be required for approximately one month.

### Geological Evaluations

Occurrences of radioactivity should be evaluated by a geologist in order to determine whether further work is warranted. More detailed work should include geological mapping and radiometric surveys which usually would be preceded by overburden stripping. On completion of the detailed work, a decision could be made on whether the occurrence warranted trenching or diamond drilling.

ESTIMATED EXPENDITURES

1.	Airborne Scintillometer Survey 700 line miles @ \$15.00/line mile	\$10,500.00
2.	Geochemical Survey 150 square miles @ \$25.00/sq. mile	3,750.00
3.	Salaries	5,550.00
	Helicopter, pilot, engineer, gas	10,000.00
	Equipment - field gear, scintillometers, etc.	2,300.00
	Crew and camp movement	900.00
	Food, supplies	1,900.00
	Office overhead, expediting, crew assembly	1,300.00
	Supervision	800.00
	Mosaics, photos, telephone, drafting, reporting	1,200.00
	Contingencies	<u>3,800.00</u>
		<u>\$42,000.00</u>

  
C. M. Trigg, Ph.D., P.Eng.

February 11, 1969.



REFERENCES

Tremblay, L. P. (1960)

Geology, Firebag River area,  
Alberta and Saskatchewan. Geol.  
Surv. Canada, Map 16-1961.

CERTIFICATION

I, C. M. TRIGG, OF [REDACTED] EDMONTON, ALBERTA, CERTIFY AND DECLARE THAT I AM A GRADUATE OF THE UNIVERSITY OF BRITISH COLUMBIA WITH A B.A.SC. DEGREE IN GEOLOGICAL ENGINEERING AND A GRADUATE OF MCGILL UNIVERSITY WITH A PH.D. DEGREE IN GEOLOGY. I AM REGISTERED AS A PROFESSIONAL GEOLOGIST AND A PROFESSIONAL ENGINEER WITH THE ASSOCIATION OF PROFESSIONAL ENGINEERS OF ALBERTA, AND I AM LICENSED TO PRACTICE AS A PROFESSIONAL ENGINEER WITH THE ASSOCIATION OF PROFESSIONAL ENGINEERS OF SASKATCHEWAN.

MY EXPERIENCE INCLUDES SERVICE AS MINE GEOLOGIST, ELDORADO MINE, GREAT BEAR LAKE, N.W.T.; CHIEF MINE GEOLOGIST AND CHIEF GEOLOGIST IN CHARGE OF EXPLORATION, ELDORADO NUCLEAR LTD., BEAVERLODGE, SASKATCHEWAN; MANAGER, EXPLORATION, IRWIN ENGINEERING, EDMONTON, ALBERTA.

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MY REPORT ON QUARTZ MINERAL PERMIT NOS. 117 AND 118 IS BASED ON AN EXAMINATION OF AVAILABLE RECORDS AND UPON MY KNOWLEDGE OF THE GEOLOGY ON THE LAKE ATHABASCA REGION.

[REDACTED]  
C. M. TRIGG, ~~PH.D.~~, P.ENG.

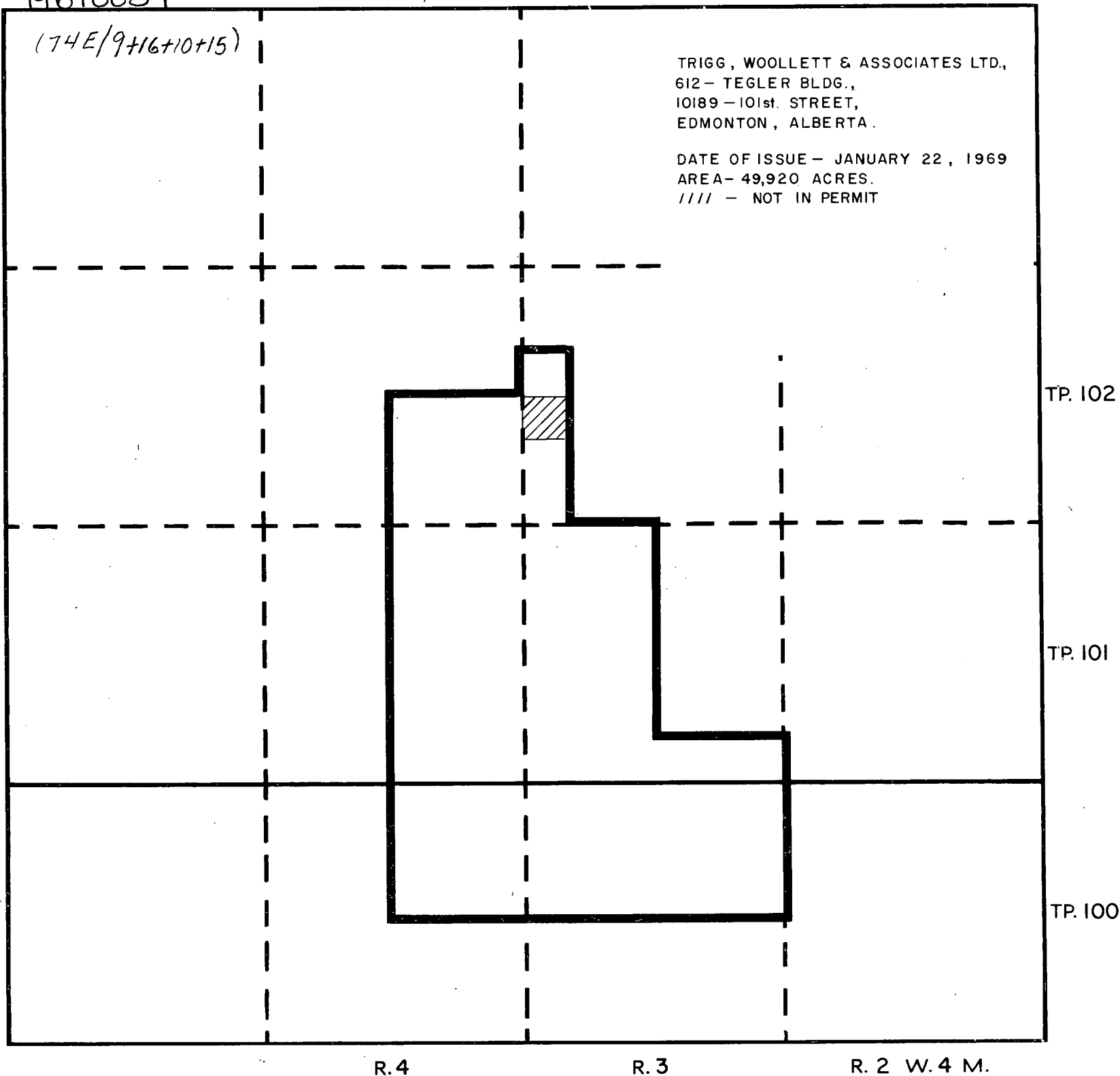
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19690039

(74E/9+16+10+15)

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AREA - 49,920 ACRES.  
//// - NOT IN PERMIT



TP. 102

TP. 101

TP. 100

R. 4

R. 3

R. 2 W. 4 M.

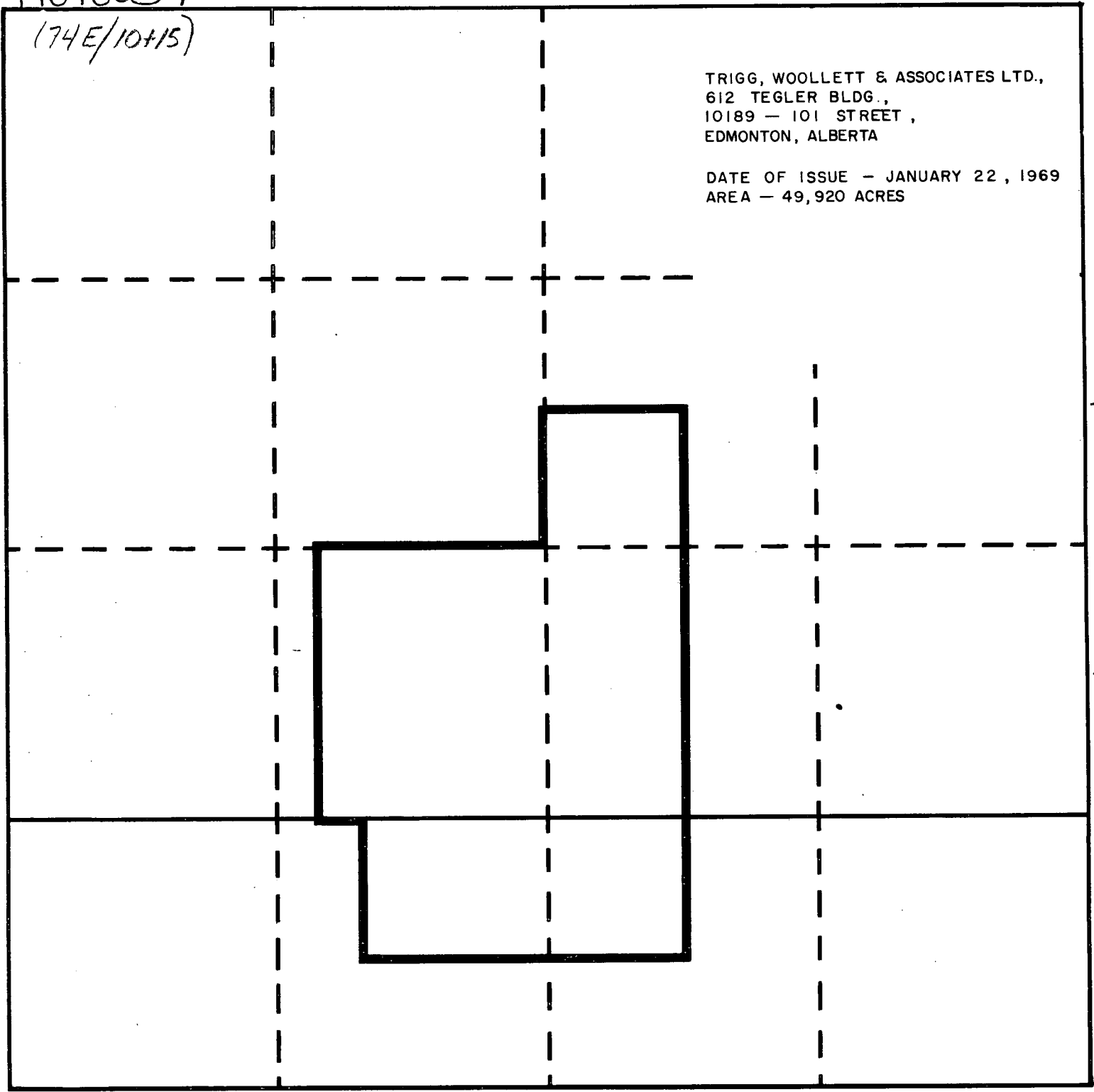
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TP. 101

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R. 5

R. 4

R. 3 W. 4 M.