MAR 19750006: ATHABASCA

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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 $58^045'$ and $59^020'$ and longitudes $109^015'$ and $110^00'$ 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.
- No. 190 Loc. Rge. 1 Twp. 119 W. 4 Mer.
- No. 191 Rges. 1 + 2 Twps. 117 + 118 W. 4 Mer.
- No. 192 Rges. 2 + 3 Twps. 117 + 118 W. 4 Mer.
- No. 193 Rges. 3 + 4 Twps. 116 + 117 W. 4 Mer.
- No. 194 Rge. 5 Twp. 113 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 ½ km intervals from photomosaic 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.
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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has not as yet received any reports for it.

U-AF-124(1)

see report permit

¶ 189
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