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EXPLORATION LICENCE 3308

ANNUAL REPORT

FOR PERIOD

25TH JUNE 1983 TO 24TH JUNE 1984

DISTRIBUTION
GEPEKO - DARWIN
GORDON
URANERZ
PETROCARB
DEPT MINES AND ENERGY

NORTHERN TERRITORY
GEOLOGICAL SURVEY

DARWIN

JUNE 1984

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Halfway Dam Airborne Geophysical Survey

Dnieper - 1 (5952-1) 1:50,000
- Flight Path
- Total Magnetic Intensity
- Total Radio Element (ur)
- Equivalent Uranium (ppm)
- Potassium (per cent)
- Equivalent Thorium (ppm)

Dnieper - 11 (5952-11) 1:50,000
- Flight Path
- Total Magnetic Intensity
- Total Radio Element (ur)
- Equivalent Uranium (ppm)
- Potassium (per cent)
- Equivalent Thorium (ppm)

Jinka - 111 (6052-111) 1:50,000
- Flight Path
- Total Magnetic Intensity
- Total Radio Element (ur)
- Equivalent Uranium (ppm)
- Potassium (per cent)
- Equivalent Thorium (ppm)

Jinka - 1v (6052-1v) 1:50,000
- Flight Path
- Total Magnetic Intensity
- Total Radio Element (ur)
- Equivalent Uranium (ppm)
- Potassium (per cent)
- Equivalent Thorium (ppm)
1. INTRODUCTION

Exploration Licence 3308 was granted to Uranerz Australia Ltd on 25th June 1982. Uranerz carried out exploration on the area for uranium for the first year (see Annual report to 24th June 1983). In July 1983 the tenement was included a joint venture called the Halfway Dam Joint Venture which was associated with the Peko-Wallsend Operations Ltd. — Petrocarb Exploration N.L. joint venture for Molyhil type tungsten — molybdenite deposits.

Geopeko as operators of the Molyhil joint venture have managed EL 3308 exploration for the last year, and in that role submit this report covering activities carried out during the second year of tenure.

The Halfway Dam Joint Venture agreement terminated recently and Uranerz have again taken over management of the tenement.

2. SUMMARY

During the period under review the majority of the area of Exploration Licence 3308 was surveyed with low level detailed aeromagnetics and radiometrics.

The aeromagnetics has been compiled and reveals no major first order aeromagnetic anomalies that could indicate the presence of a Molyhil type magnetite skarn. The radiometric data has not yet been reduced.

Shortly after the compilation of this data Geopeko closed its major base of operations in the N.T. and the project was terminated. No field checking of anomalies was carried out.
3. **PHILOSOPHY**

Exploration Licence 3308 is situated over part of the Delny-Sainthill fault zone. It is this major tectonic structure which hosts the Molyhil scheelite-molybdenite deposit some 20km east of the tenement. This deposit is hosted by a magnetite rich skarn which shows on magnetic contours as a major anomaly. In flying aeromagnetics over the Delny-Sainthill fault zone the objective was to discover further shallow magnetic features that could be caused by a mineralized skarn.

4. **REGIONAL GEOLOGY**

The regional geology was described in some detail in the Annual report for the first year of tenure to 24th June 1983 as submitted by Uranerz. With respect to the current exploration approach the major feature of interest is the Delny-Sainthill fault zone.

This fault is a major W-N-W – E-S-E trending shear zone which extends for some hundred of kilometers. To the east of Molyhil it forms a discreet narrow zone (1-2m wide) which becomes obscured to the south of Jervois by a major fault extending E-N-E along the northern boundary of the Hartz Ranges and also by lack of outcrop.

To the west of Molyhil the fault zone widens until in EL 3308 it is a shear zone up to 8 km wide. The Jinka Granite has intruded this fault system and in some places hydrothermal activity associated with this intrusion has given rise to major quartz veins, fluorite veins, and skarns related to the presence of calc silicate rocks. The granite and associated gneisses often contain magnetite.
5. EXPLORATION COMPLETED

During the period under review Geopeko took over the exploration of EL 3308 following the formation of a joint venture between Urnaerz Australia and the Molyhil Joint Venture partners. Whilst Uranerz was searching for uranium the Molyhil JV's main objective was skarn hosted sheelite molybdenite mineralization.

To this end a major low level detailed aeromagnetic survey was flown over the majority of the Exploration Licence. Parameters for this survey are listed on the plans and the extent of the survey is shown on fig.

Data has been compiled as contour plans at a scale of 1:50,000 and a full set of these are included in this report.

The data was reviewed by company geophysicists and it was determined that no magnetic anomalies of the type that would indicate the presence of a shallow magnetite skarn that was of sufficient size and depth to host a mineralized body similar to the Molyhil orebody was present. Consequently no field followup was undertaken as a matter of urgency.

Subsequently the operations of Geopeko in the Northern Territory were curtailed and the Joint Venture with Uranerz restructured with Uranerz as managers and operators.

6. CONCLUSIONS

The results of the geological and geophysical review indicated that a target of the type required did not exist in the area of the Exploration Licence 3308.
7. EXPENDITURE

Expenditure on exploration within EL 3308 during the tenure year under review totalled $69,478. This was made up of approximately as follows:-

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<tr>
<th>Description</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Salaries and Wages</td>
<td>2811</td>
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<td>Travel and Accomodation</td>
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<td><strong>Total</strong></td>
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