URANERZ AUSTRALIA PTY. LTD.

KST:YTS 28 February, 1980.

ANNUAL REPORT

ON

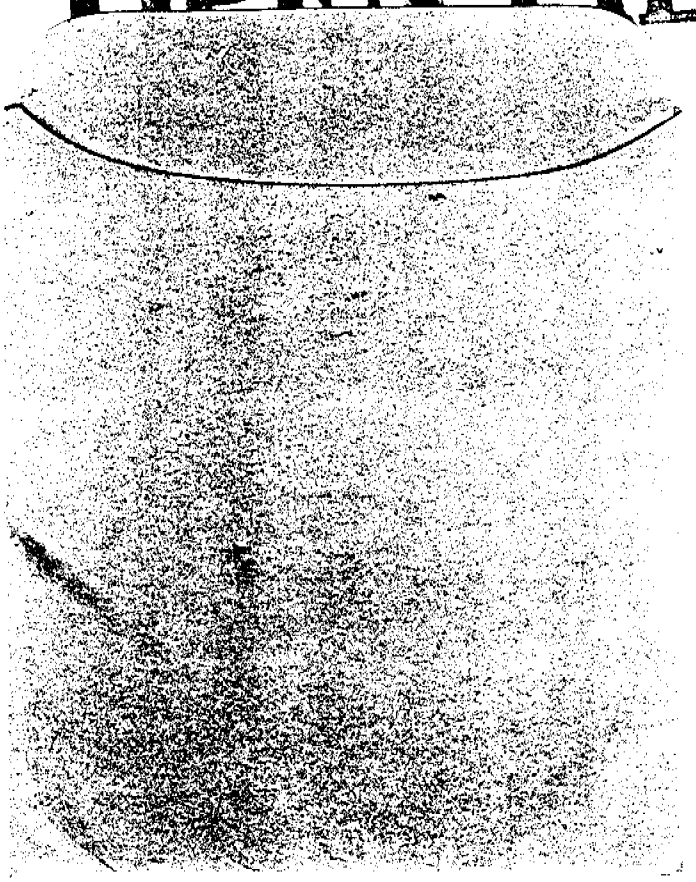
EXPLORATION LICENCE NO. 1857,

RUM JUNGLE AREA, NORTHERN TERRITORY.

NORTHERN TERRITORY GEOLOGICAL SURVEY

Covering the Period

28 November, 1978 to 27 November 1979.



compiled by
K.S. Taylor.

PERTH

FEBRUARY, 1980

SUMMARY:

Exploration on EL 1857 during the first year of tenure consisted of geological mapping and reconnaissance footborne scintillometry. No anomalous values were recorded but more intensive work is planned for next season.

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LIST OF MAPS:

1. INTRODUCTION:

EL 1857 was granted to Uranerz Australia Pty. Limited (UAL) on 28 November, 1978 for a twelve month period and has been renewed for a further year, expiring on 27 November, 1980.

The area covered by the licence is 0.8 km^2 (0.3 square miles).

This report covers exploration undertaken during the first year of tenure.

Work on this tenement was carried out in conjunction with other UAL tenements in the Rum Jungle area.

2. LOCATION:

EL 1857 is located 12 km south of the township of Batchelor on the PINE CREEK 1:250,000 Sheet SD 52-8.

3. GEOLOGY:

The project area is situated along the eastern margin of the Waterhouse basement culmination. The target part of the Lower Proterozoic cover overlying the basement is the Golden Dyke Formation which is the host for the Rum Jungle uranium deposit. Its lithological composition was identified as metamorphosed black shale, siltstone, hematitic shale, chloritic shale, dolomite, amphibolite and silicic meta-volcanics. The overlying flyschoid Burrell Creek Formation contains minor uranium and thorium occurrences.

Upper Proterozoic/Carpentarian rocks overlying the older rocks with pronounced unconformity are developed in the characteristic form of hematitic-quartz breccias. The breccias contain interbeds of red sandstones and, in some places, phosphatic layers which occur in the basal zones.

The exploration target is probable veinlike-type orebodies of the Rum Jungle/Alligator River-type in the Golden Dyke Formation.

4. INVESTIGATIONS AND RESULTS:

4.1. Geological Mapping:

Colour aerial photography was enlarged to a scale of 1:10,000 and used as a base for geological mapping. Ground mapping was carried out in and around the tenement by means of several traverses through creek systems. A considerable area outside the tenement required mapping.

The western quarter of the licence is marked by a veneer of Tertiary laterite while the northern quarter is covered by Quaternary alluvium and colluvium. In addition to this, 25% of the area is covered by Upper Proterozoic hematite-quartz breccia and sandstone of the Depot Creek Formation.

Amongst these cover lithologies are small inliers of north-trending, east-dipping Gerowie Tuff and Kapalga Formation metasediments of Lower Proterozoic age. The Gerowie Tuff outcrops as a very fine-grained chert with a distinctive white weathering coating and the Kapalga Formation is represented by shales, siltstones, cherts and quartzites. Interbeds of Mt. Minza Breccia can be recognized within the Gerowie Tuff. This hematitic quartz breccia is a facies of the tuff unit and is developed more extensively further north in EL 1858. It was difficult to distinguish between the ferruginous brecciated cherts of the Mt. Minza Breccia and those of the hematitic quartz breccia where it has developed over the Gerowie Tuff. It was possible to vaguely distinguish between them by the difference in their radiometric backgrounds.

A narrow lens of hornblende/actinolite amphibolite intrudes the central portion of the tenement in a northwesterly direction and is obviously not related to stratigraphy.

There are no known exposures of Koolpin Formation within the tenement.

4.2 Footborne Scintillometry:

No attempt was made to systematically cover the licence with footborne scintillometry. A SRAT SPP.2 scintillometer was carried during mapping to monitor background radioactivity. No anomalous readings were encountered. Special attention was paid to the base of the HQB where concentrations of uranium within phosphatic horizons are known to occur in many places throughout the Rum Jungle area. One high of 150 cps (2 x bg) was found just south of the tenement but this was associated with massive lateritic limonite development.

5. STATEMENT OF EXPENDITURE:

Exploration Licence No. 1857.

Salaries and wages	2,655.68
Drilling Contractor	nil
Field operating costs including consumables, rents, vehicle operating and repairs, airfares, freight, etc.	2,464.65
Depreciation of vehicles and geophysical instruments, consultants fees, management and distribution of Head Office costs.	665.64
	$5,785.97

6. OTHER DETAILS:

6.1 Personnel:

Exploration Manager ---------- Dr. D.O. Zimmerman
Chief Geologist ---------- Dr. P. Adamek
Assistant Chief Geologist ------ Mr. J. Borshoff
Project Geologist ---------- Mr. J.A. Earthrowl
Field Geologist ---------- Mr. J. Jordan
Field Assistant ---------- Mr. G. Gilby

6.2 Instruments:

1 SRAT SPP.2 scintillometer.

6.3 Vehicles and Equipment:

1 Toyota long-wheel-base.
1 Austin truck.


131°01'
131°03'
N
EL1857
EL1859
131·016°E
−13·16°N
131·05°E
−13·16°N
13°10'
131°01'
131°03'
131·016°E
−13·183°N
13°11'
131·05°E
−13·183°N
× Sargeants
RECENT
TERTIARY
CARPENTARIAN?
ADELAIDEAN
L. PROTEROZOIC
Tolmer Gp.
Depot Creek Fm.
Finnis R. Gp.
Burrell Creek Fm.
South Allig. Gp.
Gerowie Tuff
Koolpin Fm
Alluvium
Laterite
Terrestrial Rocks
Sst pink cross folded ripple marked
Qtz. hematite breccia
Flyschoid Sed. Association
Greywacke
Argillic siltstone interbeds
Sandstone interbeds
Pelitic Sed. Association
Argillic Siltstones
Shales
Acid Volcanic Association
Chert - white to light grey
Pelitic Sediment With Interbedded Volcanogenic Rocks
Argillic siltstones
Shales
Intrusives
Qtz. vein
Brecciated through shear zone
Unconformity
Geological boundary
Costean
Strike and dip
Scintillometric background
EL boundary
Railway line
Gravel road
House
River
100 0 100 200 300 400 500 600 700 800 900 1000 m
1:10 000

URANERZ AUSTRALIA PTY. LTD.

PROJECT PINE CREEK 2

EL1857, EL1859

FACT GEOLOGY

CR 80/049

COMPILED: JJ, JB	DATE: JAN 80	TENEMENT:	MAP Nº: 1
DRAWN: RH	DATE: JAN 80	PLAN Nº: 202 - 612	REPORT Nº:
LAST REVISION:		SCALE: 1:10 000	PROJECT Nº: 8202
T.C. TO BONN:		REF: D 52 - 8	