URANERZ AUSTRALIA PTY. LTD.

OPEN FILE

ANNUAL REPORT

ON

EXPLORATION OVER

EXPLORATION LICENCE NO. 1345

ALICE SPRINGS AREA

NORTHERN TERRITORY

COVERING THE PERIOD

16 MARCH 1977 TO 15 MARCH 1978

PERTH

MARCH 1978

SUMMARY

E.L. 1345 is situated 60km southeast of Alice Springs and covers an area of 1164.6km^2. The exploration licence is one of several held by UAL. This report covers the first year of tenure.

Exploration is focussed on sandstone-type uranium deposits in the Upper Devonian Undandita Member sandstone of the Amedeus Basin.

Exploration techniques used are pattern drilling, downhole gamma logging, geochemical sampling and radon surveys. These techniques are being used to locate redox boundaries in the sub-surface sandstone where uranium mineralization may occur.

In the second year of tenure more detailed work has been recommended.

TABLE OF CONTENTS

LIST OF MAPS

1. INTRODUCTION

E.L. 1345 was granted to Uranerz Australia Pty. Ltd. (UAL) on 16 March 1977. The area held is 449.84 square miles (1164.63 km^2). This is the first annual report for all operations carried out by UAL complying with section 38 O (3) of the Northern Territory Mining Ordinance. A renewal for the second year of tenure has been submitted.

The tenement is one of many contiguous exploration licences being worked in a 50:50 joint venture with Carpentaria Exploration Pty. Ltd. UAL is the operator.

2. LOCATION

The area is situated about 60km southeast of Alice Springs on the Rodinga 1:250,000 Sheet between latitudes $24^{o}05'-24^{o}22'S$ and longitudes $133^{o}45'-134^{o}15'E$. (Map 1).

3. GEOLOGY

E.L. 1345 covers an area of the Orange Creek Syncline which is a large scale structural feature in the northeastern part of the Amadeus Basin. The basin sediments range in age from Precambrian to Palaeozoic and Tertiary. The Devonian sequence is principally composed of clastic rocks. These are mainly coarse to medium-grained sandstones with occasional pebbly conglomeratic beds, siltstone and mudstone lenses. These form the Pertnjara Group of which the Undandita Member and Brewer Conglomerate are formations.

The Undandita Member sandstone is the host rock for all the known uranium mineralization. It was deposited in a fluviatile, braided channel environment. Exposures throughout the area are lacking, but the sequence is estimated to attain a maximum thickness of 1,000m.

Exploration in the Missionary Syncline has outlined upper and lower margins or colour changes between a zone of grey-col-

oured reduced sandstone within red-coloured oxidized sandstone of the Undandita Member. Mapping and exploratory drilling has traced the reduced zone over a distance of approximately 70km. Three significant uranium occurrences have been located on the margins of the reduced zone.

4. INVESTIGATIONS AND RESULTS

4.1. Airborne Spectrometric Survey

E.L. 1345 was flown during the course of a detailed regional airborne spectrometric survey. A Cessna 206, chartered from Skycharter Aviation of Perth was used in conjunction with a Scintrex Gam-2 spectrometer connected to four Scintrex GDSA-64 temperature stabilized detectors with a volume of 7420cm^3.

Flight line spacing was 500m, altitude 100m and survey speed 185km/hr. (Map 2). A total of 89 north-south flight lines were flown. This involved 14 hrs 18 mins of flying covering a total of 1,914 line-km. Seven days were spent surveying the area.

No significant anomalies were found.

4.2. Grading

A total of 22km was graded along a baseline by P.M.T. Partners of Alice Springs.

4.3. Gridding

An east-west baseline was surveyed and offset north-south lines established every 5,000m. These offset lines were pegged at 1,000m intervals. A total of 180 line-km was surveyed.

4.4. Vacuum Drilling

A total of 166 vacuum drillholes for a total of 1,962.5m were completed by Vacuum Drilling Specialists Pty. Ltd. of Perth. (Map 3).

Hole spacing was 1,000m on north-south lines and 5,000m on east-west lines. The purpose of the drilling was to outline redox boundaries in the Undandita Member sandstone. If still in Tertiary at a depth of 15m, the holes were stopped. If reduced sandstone was encountered the hole spacing was narrowed to 250m.

SRAT readings were made on all dust samples taken over one metre intervals.

4.5. Downhole Logging

All the vacuum drillholes were logged with a McPhar TV-5 downhole logger. No significant anomalies were located.

4.6. Sampling

From the bottom of each hole and SRAT anomalous intervals 154 dust samples were collected for uranium analysis. (Table 1). The assays ranged from 1.1 - 8.2 ppm. The assays were made by the Australian Atomic Energy Commission in Sydney using the neutron activation method.

4.7. Track-Etch Survey

Track-Etch cups were placed in all the vacuum drillholes at a standard depth of 5m. These were exposed for 30 days before shipment to Terradex Corporation, California, U.S.A.

No results are available as yet.

5. FUTURE PROGRAMME

The following work is scheduled for E.L. 1345 during the second year of tenure. The estimated minimum expenditure is $15,000.00.

5.1. Grading

About 25km of grading is required for upgrading access into the area.

5.2. Trenching

About three trenches will be excavated for a total of $60m^3$.

5.3. Percussion/Diamond Drilling

One percussion/diamond hole will be drilled to assess the highest anomaly located.

5.4. Downhole Logging

All holes will be logged with a McPhar TV-5 downhole logger.

5.5. Sampling

Samples will be collected from any anomalous radioactive intersections.

5.6. Track-Etch

Track-Etch cups will be lodged in all holes.

6. OTHER DETAILS

6.1. Personnel

Exploration Manager ..... Dr. D.O. Zimmerman
Chief Geologist ..... Dr. K.W. Vogel
Project Geologist ..... Dr. G. Ott
Consultant Geologist ..... W.N. Thomas
Senior Geologist ..... R. Clare
Field Geologist ..... T. Piper
Field Assistants ..... J. Wilkie
..... A. Payne

6.2. Instruments

1 Scintrex Gam-2 spectrometer
4 SRAT SPP2 scintillometers
1 McPhar TV-5 downhole logger
1 Nikon stereoscope

6.3. Vehicles

2 Toyota long-wheel-base
1 Toyota short-wheel-base
1 Suzuki four-wheel-base

7. STATEMENT OF EXPENDITURE

TABLE 1: VACUUM DRILLHOLE SAMPLES - E.L. 1345

DRILLHOLE NUMBER	CO-ORDINATE	LITHOLOGY	U_3O_8
VB 01	46000N, 70000E	Hermannsburg sst.	2.9
VB 02	47000N, 70000E	Hermannsburg sst.	2.2
VB 03	48000N, 70000E	moderately oxidised	2.9
VB 04	49000N, 70000E	moderately oxidised	2.4
VB 05	50000N, 70000E	moderately oxidised	2.4
VB 06	51000N, 70000E	moderately oxidised	2.3
VB 07	52000N, 70000E	moderately oxidised	1.9
VB 08	53000N, 70000E	moderately oxidised	2.7
VB 09	54000N, 70000E	moderately oxidised	2.8
VB 10	55000N, 70000E	moderately oxidised	2.6
VB 11	56000N, 70000E	moderately oxidised	2.7
VB 12	57000N, 70000E	moderately oxidised	2.3
VB 13	58000N, 70000E	moderately oxidised	2.9
VB 14	59000N, 70000E	moderately oxidised	2.5
VB 15	60050N, 70000E	moderately oxidised	3.0
VB 16	61000N, 70000E	moderately oxidised	2.6
VB 17	62000N, 70000E	reduced	3.9
VB 18	61750N, 70000E	reduced	3.0
VB 19	61500N, 70000E	reduced	2.9
VB 20	61250N, 70000E	moderately oxidised	2.2
VB 21	63000N, 70000E	very weakly oxidised	2.8
VB 22	63000N, 75000E	reduced	3.3
VB 23	63250N, 75000E	reduced	4.6
VB 24	63500N, 75000E	reduced	4.8
VB 25	63750N, 75000E	reduced	4.8
VB 26	62000N, 75000E	reduced	3.0
VB 27	61000N, 75000E	weakly oxidised	4.0
VB 28	60000N, 75000E	very weakly oxidised	3.4
VB 29	59000N, 75000E	weakly oxidised	2.4
VB 30	58000N, 75000E	very weakly oxidised	2.6

TABLE 1: (Cont'd)

DRILLHOLE NUMBER	CO-ORDINATE	LITHOLOGY	U_3O_8
VB 31	57000N, 75000E	moderately oxidised	2.6
VB 32	56000N, 75000E	moderately oxidised	2.4
VB 33	55000N, 75000E	moderately oxidised	2.8
VB 34	54000N, 75000E	moderately oxidised	2.2
VB 35	53000N, 75000E	moderately oxidised	2.8
VB 36	52000N, 75000E	moderately oxidised	8.2
VB 37	51000N, 75000E	moderately oxidised	3.2
VB 38	50000N, 75000E	moderately oxidised	2.1
VB 39	49000N, 75000E	moderately oxidised	2.1
VB 40	48000N, 75000E	moderately oxidised/ Hermannsburg sst.	2.5
VB 41	47000N, 80000E	Hermannsburg sst.	1.7
VB 42	48000N, 80000E	Hermannsburg sst.	2.9
VB 43	49000N, 80000E	Hermannsburg sst.	2.0
VB 44	50000N, 80000E	moderately oxidised	2.8
VB 45	51000N, 80000E	weakly oxidised	3.8
VB 46	52000N, 80000E	reduced	1.9
VB 47	52300N, 80000E	reduced	2.4
VB 48	53000N, 80000E	reduced	2.1
VB 49	54000N, 80000E	reduced	2.9
VB 50	54300N, 80000E	weakly oxidised	2.5
VB 51	55000N, 80000E	reduced	2.6
VB 52	56000N, 80000E	reduced	2.4
VB 53	57000N, 80000E	weakly oxidised	2.4
VB 54	58000N, 80000E	weakly oxidised	3.0
VB 55	56500N, 80000E	reduced	2.0
VB 56	56750N, 80000E	weakly oxidised	3.8
VB 57	59000N, 80000E	weakly oxidised	2.4
VB 58	60000N, 80000E	weakly oxidised	2.6
VB 59	61000N, 80000E	weakly oxidised	3.9
VB 60	61300N, 80000E	very weakly oxidised	-

TABLE 1: (Cont'd)

DRILLHOLE NUMBER	CO-ORDINATE	LITHOLOGY	U_3O_8
VB 61	62000N, 80000E	moderately oxidised	-
VB 62	63000N, 80000E	moderately oxidised	-
VB 63	71000N, 85000E	Hermannsburg sst.	-
VB 64	70000N, 85000E	Hermannsburg sst.	-
VB 65	69000N, 85000E	Hermannsburg sst.	-
VB 66	68000N, 85000E	Hermannsburg sst.	-
VB 67	67000N, 85000E	Hermannsburg sst.	-
VB 68	66000N, 85000E	reduced	-
VB 69	65000N, 85000E	Tertiary	-
VB 70	64000N, 85000E	Tertiary	-
VB 71	62880N, 85000E	reduced	-
VB 72	62000N, 85000E	moderately oxidised	-
VB 73	61000N, 85000E	moderately oxidised	-
VB 74	60000N, 85000E	weakly oxidised	-
VB 75	59000N, 85000E	reduced	-
VB 76	58000N, 85000E	reduced	-
VB 77	59500N, 85000E	alluvium	-
VB 78	59750N, 85000E	reduced	-
VB 79	57000N, 85000E	reduced	-
VB 80	56000N, 85000E	reduced	-
VB 81	55000N, 85000E	reduced	-
VB 82	54000N, 85000E	weakly oxidised	-
VB 83	54250N, 85000E	reduced/weakly oxidised	-
VB 84	54500N, 85000E	reduced	-
VB 85	53000N, 85000E	moderately oxidised	-
VB 86	52000N, 85000E	moderately oxidised	-
VB 87	51000N, 85000E	moderately oxidised	-
VB 88	50000N, 85000E	weakly oxidised	-
VB 89	49000N, 85000E	weakly oxidised	-
VB 90	48000N, 85000E	Hermannsburg sst.	-

TABLE 1: (Cont'd)

DRILLHOLE NUMBER	CO-ORDINATE	LITHOLOGY	U_3O_8
VB 91	50000N, 90000E	moderately oxidised	-
VB 92	49000N, 90000E	reduced	-
VB 93	48000N, 90000E	Hermannsburg sst.	-
VB 94	48750N, 90000E	Hermannsburg sst.	-
VB 95	49250N, 90000E	reduced	-
VB 96	49500N, 90000E	weakly oxidised	-
VB 97	51000N, 90000E	moderately oxidised	-
VB 98	52000N, 90000E	moderately oxidised	-
VB 99	53000N, 90000E	weakly oxidised	-
VB100	54000N, 90000E	reduced	-
VB101	53750N, 90000E	reduced	-
VB102	53500N, 90000E	very weakly oxidised	-
VB103	54950N, 90000E	weakly oxidised	-
VB104	56000N, 90000E	weakly oxidised	-
VB105	54500N, 90000E	reduced	-
VB106	54750N, 90000E	reduced/weakly oxidised	-
VB107	57000N, 90000E	reduced	-
VB108	56750N, 90000E	weakly oxidised	-
VB109	58000N, 90000E	Tertiary	-
VB110	58300N, 90000E	Tertiary	-
VB111	58300N, 90450E	Tertiary	-
VB112	59000N, 90000E	weakly oxidised	-
VB113	60000N, 90000E	moderately oxidised	-
VB114	61000N, 90000E	Tertiary	-
VB115	61300N, 90000E	Tertiary	-
VB116	61300N, 89500E	reduced	-
VB117	62000N, 90000E	reduced	-
VB118	63000N, 90000E	weakly oxidised	-
VB119	64000N, 90000E	weakly oxidised	-
VB120	65000N, 90000E	moderately oxidised	-

TABLE 1: (Cont'd)

DRILLHOLE NUMBER	CO-ORDINATE	LITHOLOGY	U_3O_8
VB121	66000N, 90000E	moderately oxidised	-
VB122	67000N, 90000E	Hermannsburg sst.	-
VB123	67000N, 95000E	Hermannsburg sst.	-
VB124	66000N, 95000E	Hermannsburg sst.	-
VB125	65000N, 95000E	Hermannsburg sst.	-
VB126	64000N, 95000E	Tertiary	-
VB127	63000N, 95000E	reduced	-
VB128	63500N, 95000E	surface sand	-
VB129	63650N, 95000E	weakly oxidised	-
VB130	62050N, 95000E	weakly oxidised	-
VB131	61000N, 95000E	weakly oxidised	-
VB132	60750N, 95000E	Tertiary	-
VB133	60000N, 95000E	Tertiary	-
VB134	59960N, 94000E	Tertiary	-
VB135	59000N, 95000E	Tertiary	-
VB136	58000N, 95000E	Tertiary	-
VB137	57000N, 95000E	Tertiary	-
VB138	56000N, 95000E	weakly oxidised	-
VB139	55000N, 95000E	weakly oxidised	-
VB140	54000N, 95000E	moderately oxidised	-
VB141	53000N, 95000E	moderately oxidised	-
VB142	52000N, 95000E	weakly oxidised	-
VB143	51000N, 95000E	weakly oxidised	-
VB144	50000N, 95000E	Hermannsburg sst.	-
VB145	52000N, 100000E	weakly oxidised	-
VB146	53000N, 100000E	weakly oxidised	-
VB147	54000N, 100000E	weakly oxidised	-
VB148	55000N, 100000E	weakly oxidised	-
VB149	56000N, 100000E	moderately oxidised	-
VB150	57000N, 100000E	Tertiary	

TABLE 1: (Cont'd)

DRILLHOLE NUMBER	CO-ORDINATE	LITHOLOGY	U_3O_8
VB151	58000N, 100000E	Tertiary	-
VB152	59000N, 99960E	Tertiary	-
VB153	59850N, 100000E	Tertiary	-
VB154	61000N, 100000E	Tertiary	-
VB155	62000N, 100000E	Tertiary	-
VB156	63040N, 100000E	Tertiary	-
VB157	64000N, 100000E	Tertiary	-
VB158	65060N, 100000E	Tertiary	-
VB159	60000N, 105000E	Tertiary	-
VB160	59000N, 105000E	Tertiary	-
VB161	58000N, 105000E	Tertiary	-
VB162	61000N, 105000E	Tertiary	-
VB163	62000N, 105000E	Tertiary	-

ALICE SPRINGS

EL 1985

EL 1569

A

MOTHER DAM

MULGA DAM

MOYLE DAM

1001

979

1062

HERMANNSBURG | ALICE SPRINGS

HENBURY | RODINGA

1465 A

996

EL 845

ML's 1-25

ML's 26-45

1176

1175

1416

1346

1421

1345

ADELAIDE - ALICE SPRINGS HIGHWAY

TODD RIVER

HENBURY

HERMANNSBURG

WAPPYDALE

23°45'

23°30'

24°

24°15'

24°30'

24°45'

132°30'

132°45'

133°

133°15'

133°30'

133°45'

134°

134°15'

134°30'

24°10'

24°20'

5 0 10km

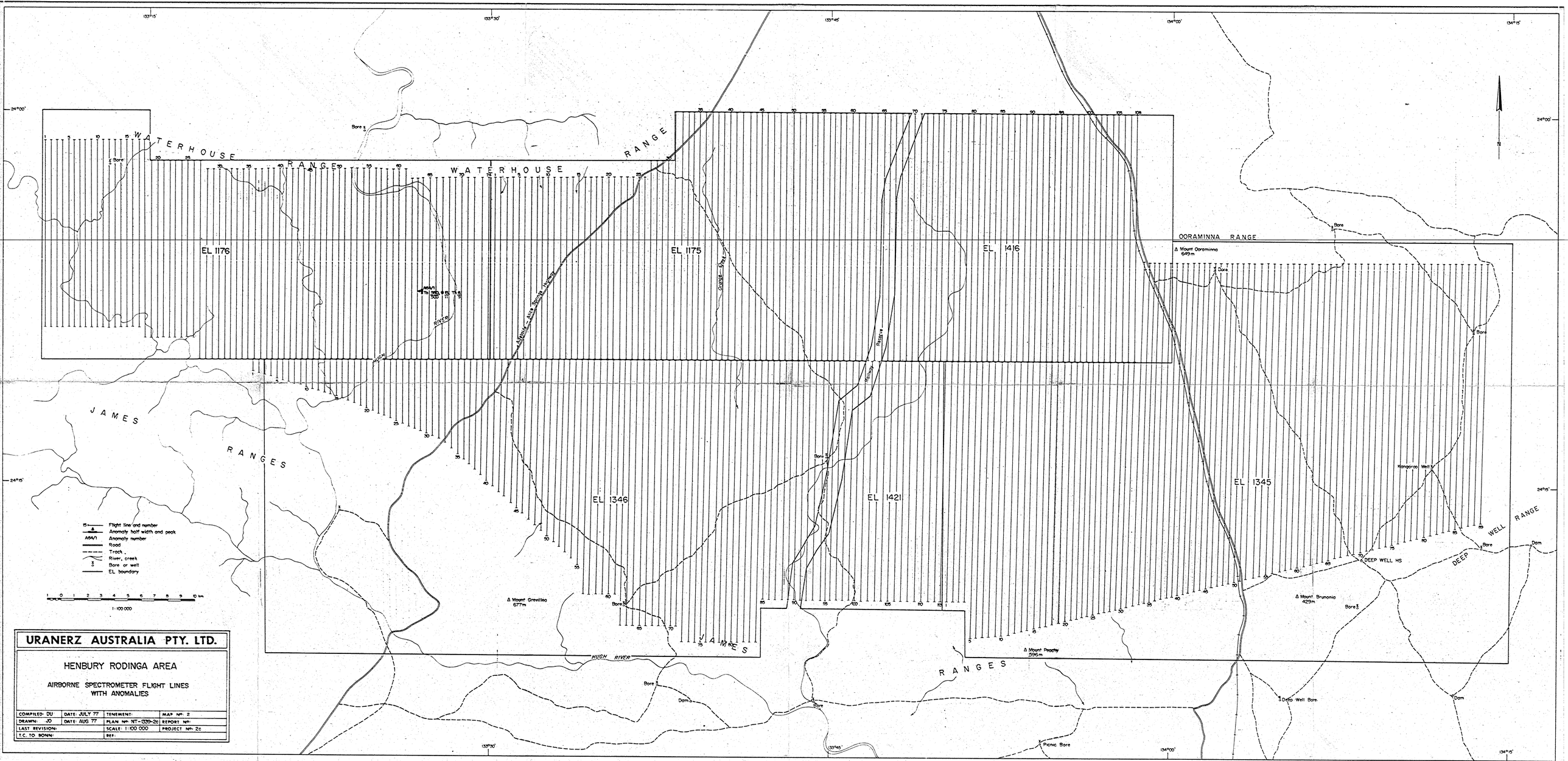
1: 250 000

URANERZ AUSTRALIA PTY. LTD.

ALICE SPRINGS AREA

CURRENT UAL EXPLORATION LICENCES

COMPILED: EA	DATE: AUG 78	TENEMENT:	MAP No: 1
DRAWN: "	DATE: " "	PLANS No: NT-3078-2c	REPORT No: MINES
LAST REVISION: MAY 77		SCALE: 1: 250000	PROJECT No: 2c
T.C. TO SOUTH		REF:	


133°15'
133°30'
133°45'
134°00'
134°15'
24°00'
24°15'
WATERHOUSE RANGE
EL 1176
EL 1175
EL 1416
EL 1346
EL 1421
EL 1345
OORAMINNA RANGE
Δ Mount Ooraminna 649m
JAMES RANGES
Δ Mount Grevillea 677m
Δ Mount Peachy 596m
Δ Mount Brunonia 429m
HUGH RIVER
DEEP WELL RANGE
DEEP WELL HS
Kangaroo Well
Bore
Dam
Picnic Bore
Flight line and number
Anomaly half width and peak
Anomaly number
Road
Track
River, creek
Bore or well
EL boundary
1:100 000
URANERZ AUSTRALIA PTY. LTD.
HENBURY RODINGA AREA
AIRBORNE SPECTROMETER FLIGHT LINES WITH ANOMALIES
COMPILED: DU
DATE: JULY 77
TENEMENT:
MAP No: 2
DRAWN: JO
DATE: AUG 77
PLAN No: NT-0339-2c
REPORT No:
LAST REVISION:
SCALE: 1:100 000
PROJECT No: 2c
T.C. TO BONN:
REF:

HUGH RIVER 1

EWANINGA 1

EWANINGA 2

EAST EWANINGA

N

23°53'S

23°55'S

23°57'S

23°59'S

133°40'E

133°50'E

134°00'E

Strike and dip of beds
Oxidised sandstone
Reduced sandstone
Conglomerate beds
Red / Ox boundary
Proposed drill hole

1 0 1·25 2·5km
1: 50000

URANERZ AUSTRALIA PTY. LTD.

ALICE SPRINGS AREA

DRILLING PROGRESS

COMPILED: OT	DATE: OCT 76	TENEMENT:	MAP No: 3
DRAWN: EA	DATE: NOV 76	PLAN No: NT-4220-2c	REPORT No:
LAST REVISION:		SCALE: 1: 50000	PROJECT No: 2c
T.C. TO BONN:		REF:	