

EXPLORATION LICENCE 4449, DRY RIVER NORTH

NORTHERN TERRITORY

ANNUAL REPORT TO JANUARY, 1985

NORTHERN TERRITORY
GEOLOGICAL SURVEY

GR 85 / 084

CONTENTS

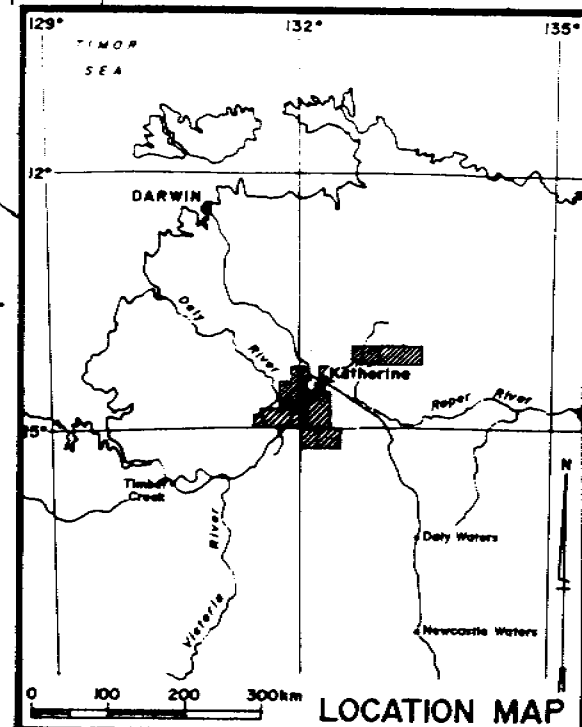
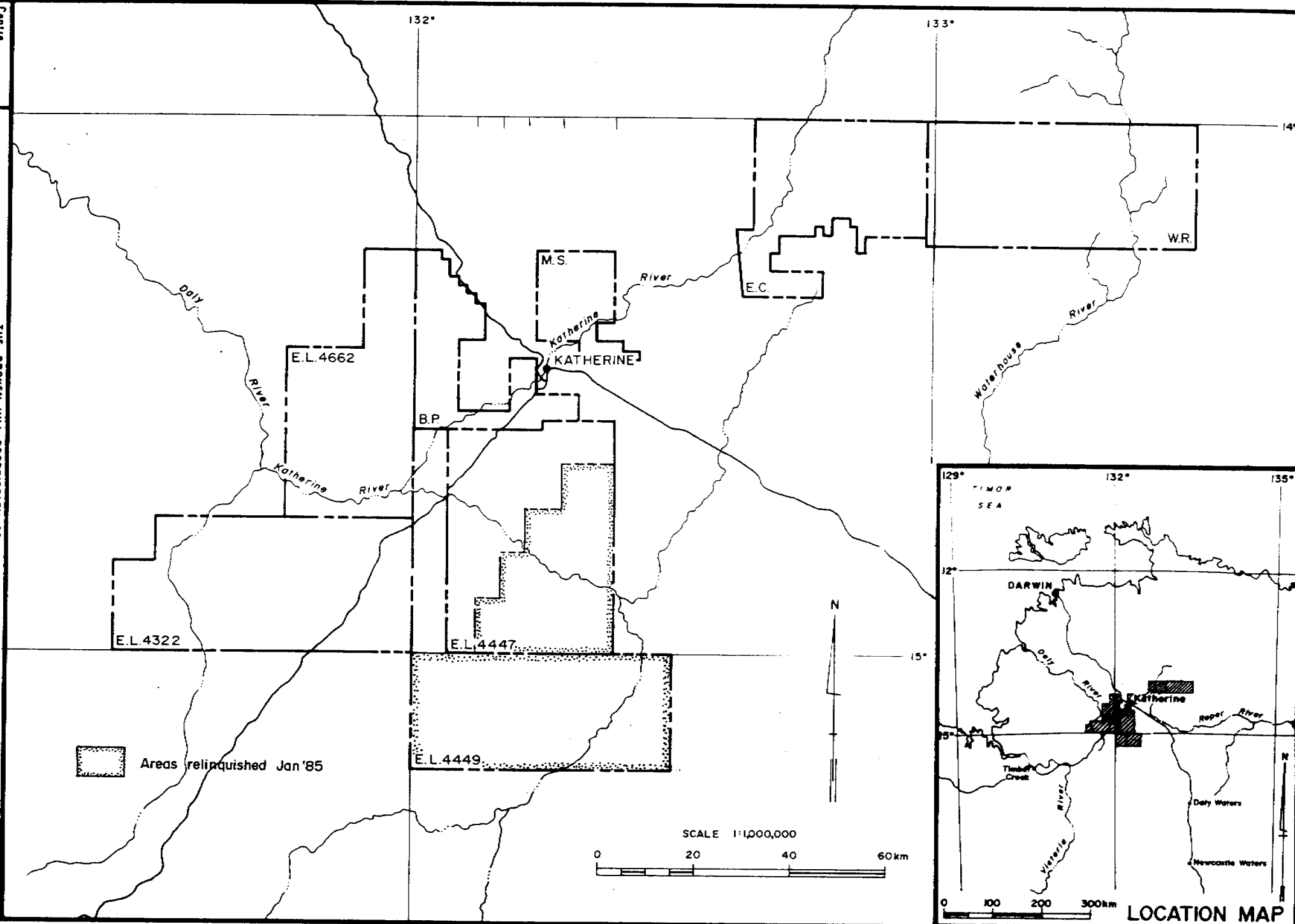
1. GENERAL STATEMENT
2. TITLES
3. FIELD INVESTIGATIONS
 - 3.1 Aboriginal Sacred Sites
 - 3.2 Reconnaissance Stream Sampling
 - 3.3 Results of Reconnaissance Sampling
 - 3.4 Follow-up Stream Sampling
 - 3.5 Geochemical Sampling
4. FUTURE PROGRAMME
5. EXPENDITURE

	<u>Drawing No.</u>
FIGURE 1: EL 4322, 4449, 4447, 4662 ELA's Katherine Area, N.T. Location Map Scale 1:1,000,000	A4-82
FIGURE 2: Location of Stream Sample Sites Overlay for Manbulloo 1:100,000	A1-252
FIGURE 3: Location of Stream Sample Sites Overlay for Dry River 1:100,000	A1-253
TABLE 1: Geochemical Results	

Centre
ADELAIDE
Date
23-11-84

THE BROKEN HILL PROPRIETARY CO. LTD.
EL4322, 4449, 4447, 4662, E.L.A'S KATHERINE AREA, N.T.
LOCATION MAP

Project No
B-052, 65-3
Drawing No
A4-82



EXPLORATION LICENCE 4449, DRY RIVER NORTH

NORTHERN TERRITORY

ANNUAL REPORT TO JANUARY, 1985

1. GENERAL STATEMENT

Exploration Licence 4449 was taken up primarily to test the diamond potential of the area. It forms part of a block of tenements including 4322, 4447 and 4662.

During the first year of tenure the exploration programme consisted of stream sediment sampling to test for kimberlitic indicator minerals. Indicator minerals were found during reconnaissance sampling (20 chromites and 2 kimberlitic zircons), however the results of follow-up sampling have not been received.

2. TITLES

Exploration Licence 4449 of 490 blocks was granted to BHP Minerals Limited on the 20th January, 1984 for a period of six years. In December 1984 the area was reduced to 100 blocks. These areas are shown on Figure 1.

3. FIELD INVESTIGATIONS

3.1 Aboriginal Sacred Sites

The Aboriginal Sacred Sites Authority advised BHP Minerals Limited that there were no registered sacred sites within Exploration Licence 4449.

3.2 Reconnaissance Stream Sampling

A total of 20 samples have been taken from EL 4449 during the reconnaissance phase. At each site a 20 kilogram stream sediment sample of minus 4mm was collected along with a geochemical sample. The sampling was supervised by an experienced geologist, and the most favourable trap site for heavy mineral concentration for the drainage was selected. The locations of these samples are shown on Figure 2 and 3.

3.3 Results of Reconnaissance Sampling

The 20 samples were despatched to BHP's Mineralogical Laboratory in Belmont, Western Australia, where they were processed and the minus 0.8mm plus 0.4mm heavy mineral concentrate observed.

Kimberlitic indicator minerals have been found in the following three samples -

RT 1511	-	1 kimberlitic zircon
RT 1517	-	2 chromites
RT 1590	-	18 chromites
		1 kimberlitic zircon

3.4 Follow-up Stream Sampling

Nine follow-up samples (CA1555-1560, 1652, 1563, 1565) have been taken from tributaries upstream of RT 1590. The samples were despatched to Belmont where they are being processed. No results are available as yet.

3.5 Geochemical Sampling

Geochemical silt samples were taken at each stream sample site. These were sent to Comlabs Pty. Ltd. in Adelaide where they were analysed for -

Cu, Pb, Zn, Co, Ni	by AAS1
Cr	by AAS2
Nb, Zr, La, Ce, As, Ba	by XRF1

The results for the 20 reconnaissance and the 9 follow-up samples appear on Table 1.

4. FUTURE PROGRAMME

Stage 1

The results of the follow-up sampling will be assessed once they become available.

Stage 2

New information, including aeromagnetic data has recently become available. This is being processed and will be studied closely.

Stage 3

A follow-up programme of further exploration will be undertaken if it is warranted by Stages 1 and 2.

Proposed expenditure for the next year will be approximately \$10,000.

5. EXPENDITURE

Wages and Salaries	\$ 5,521
Field Support	1,248
Vehicles	1,062
Equipment	14
Air Charter	3,107
Geochemistry	57
Geophysics	57
Surveys	53
Tenement Fees	650
Sundries	36
Administration and Inhouse Services	<u>5,690</u>
	<u>\$17,495</u>

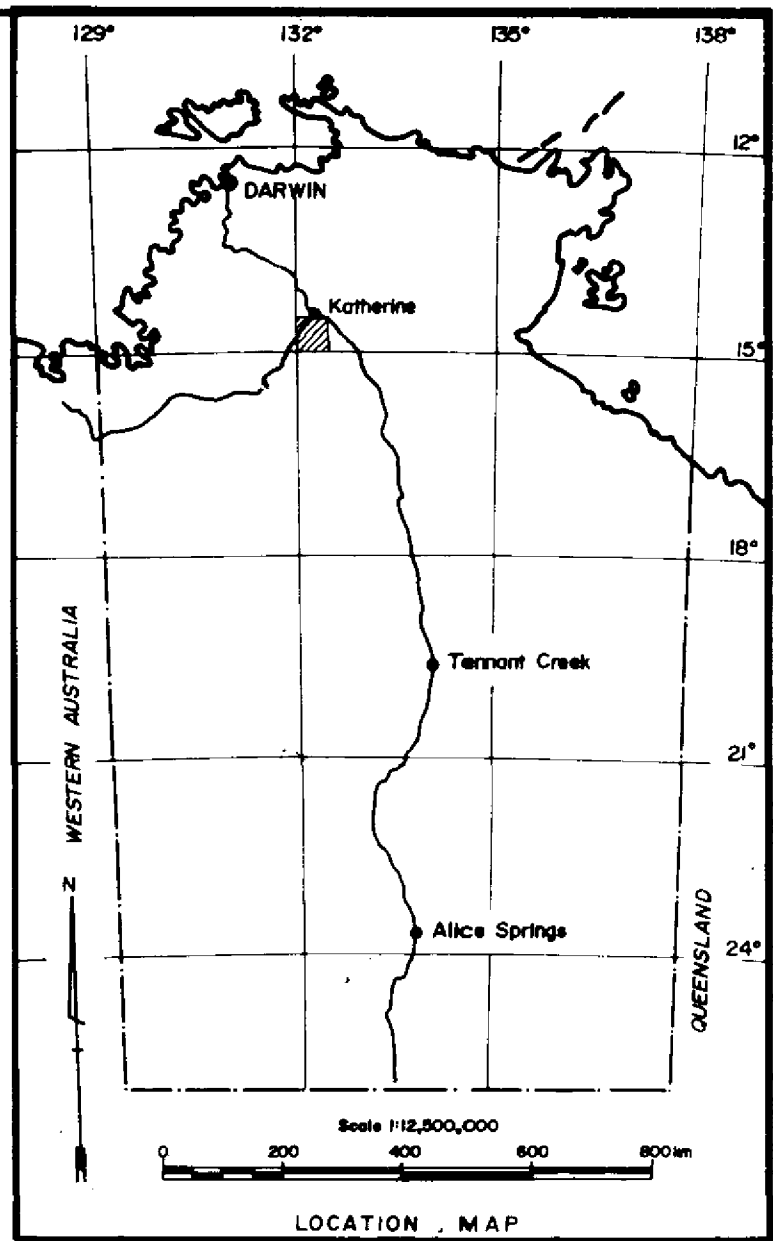
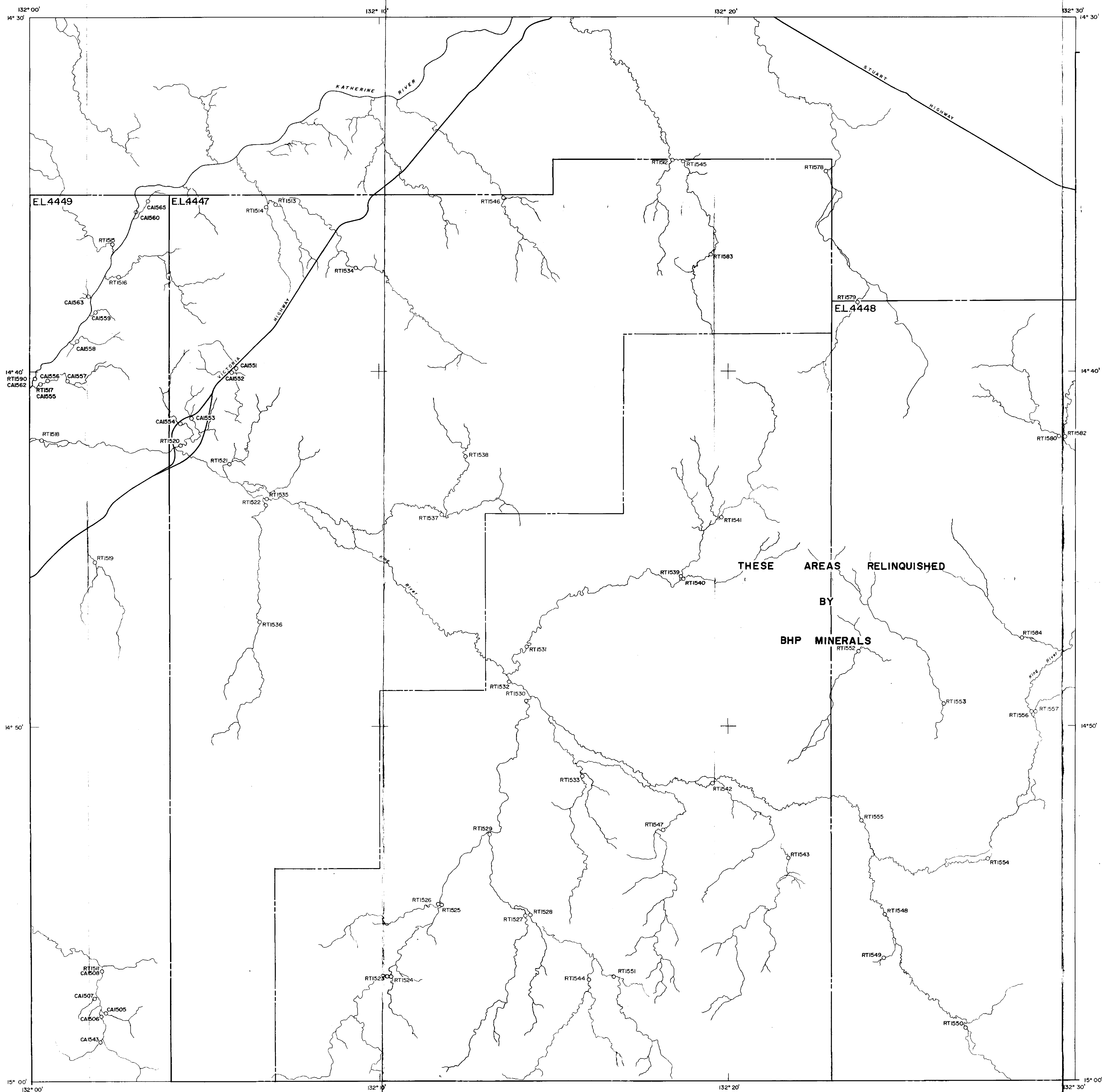
EL 4449 DRY RIVER NORTH - GEOCHEMICAL RESULTS

SAMPLE	Cu	Pb	Zn	Ni	Co	Cr	Nb	La	Ce	Zr	Ba	As
RT 1511	8	8	6	12	6	8	9	< 20	30	510	80	3
RT 1515	12	10	20	18	< 4	10	14	20	60	550	140	< 2
RT 1516	12	10	14	16	4	8	16	30	60	470	250	3
RT 1517	18	14	22	22	10	20	20	40	90	420	310	3
RT 1518	10	8	16	16	4	12	9	< 20	40	380	100	2
RT 1519	28	24	26	38	16	16	14	30	80	420	125	7
RT 1590	8	6	12	8	4	4	14	20	40	540	165	3
CA 1501	8	20	14	10	8	40	9	20	50	760	100	5
CA 1502	16	22	24	18	20	38	12	40	50	290	240	8
CA 1503	26	22	24	24	16	18	14	40	50	390	190	10
CA 1504	10	18	10	8	10	26	7	< 20	40	165	80	5
CA 1505	8	14	10	6	6	55	4	< 20	< 20	120	40	6
CA 1506	8	12	4	8	6	44	7	20	20	250	65	7
CA 1507	16	14	6	12	6	16	9	< 20	50	410	95	6
CA 1508	10	16	8	8	< 4	70	5	< 20	< 20	130	40	14
CA 1543	12	16	8	8	< 4	60	10	40	30	340	85	9
CA 1546	14	20	16	12	8	24	16	50	40	420	65	4
CA 1547	28	28	38	26	26	30	18	50	80	400	220	20
CA 1548	8	8	8	6	8	28	9	< 20	40	370	70	4
CA 1549	18	10	14	14	14	30	16	40	50	360	155	9
CA 1555	14	12	22	8	10	34	7	20	30	125	85	14
CA 1556	10	10	16	8	12	16	14	30	50	390	160	8
CA 1557	10	12	14	6	10	20	14	40	70	380	135	7
CA 1558	8	4	12	6	8	22	10	< 20	30	360	100	8
CA 1559	8	8	12	8	8	12	14	30	50	300	195	4
CA 1560	10	6	22	10	14	26	10	20	30	410	185	12
CA 1562	6	< 4	10	< 4	4	38	8	< 20	30	175	80	4
CA 1563	10	< 4	20	10	8	28	12	20	40	320	170	10
CA 1565	10	< 4	16	6	6	14	14	20	40	280	230	8

All results in ppm

Method of Analysis: Cu, Pb, Zn, Ni, Co by AAS1
 Cr by AAS2
 Nb, La, Ce, Zr, Ba, As by XRF1

Comlabs Report Nos. COM 832305, 841016, 841869

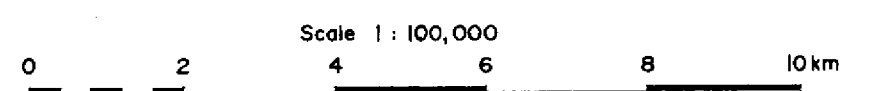


FERGUSSON RIVER 5269	KATHERINE 5369	EVA VALLEY 5469
BOWMAN 5268	MANBULLOO 5368	MARANBOY 5468
WILLEROO 5267	DRY RIVER 5367	ELSEY 5467

DIAGRAM SHOWING ADJOINING MAPS

LEGEND

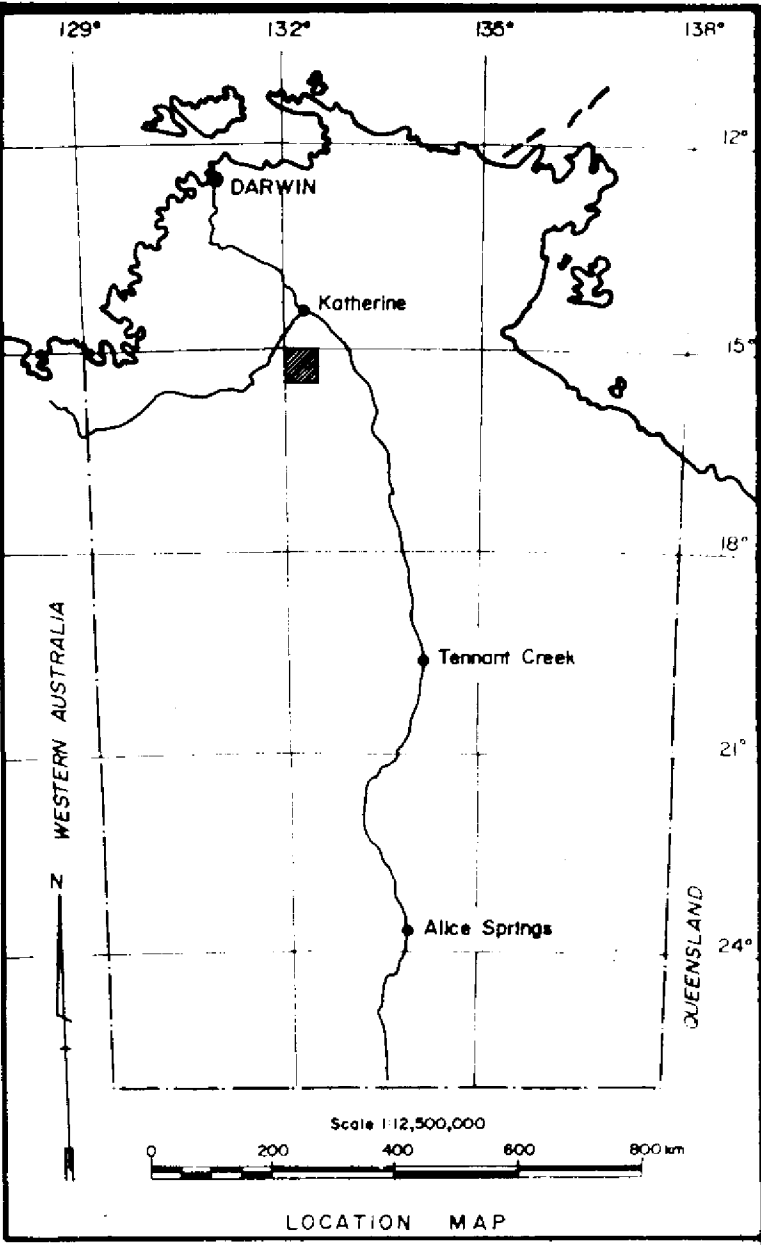
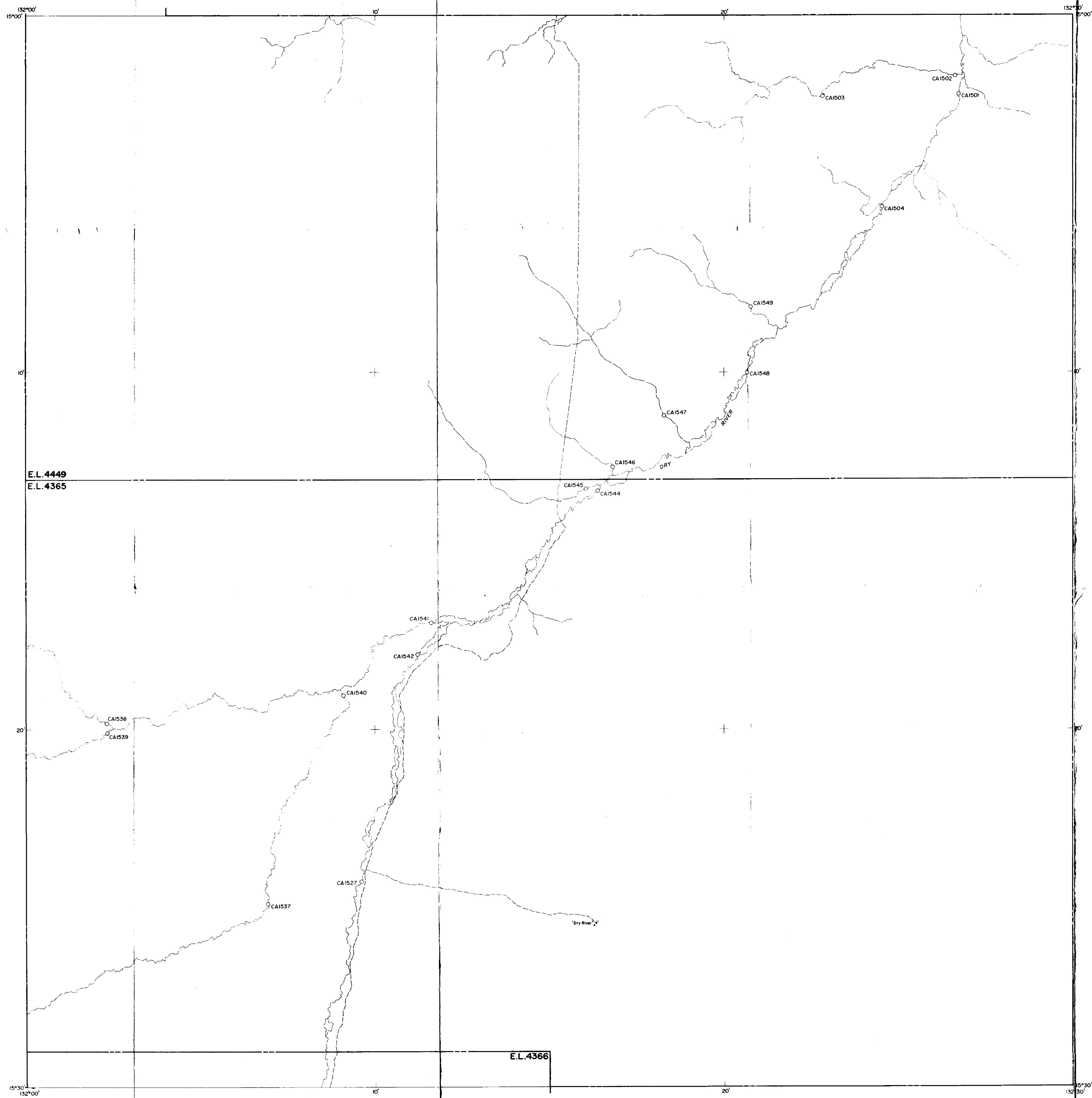
- Sample site
- Garnet possible pyrope
- Pyrope garnet
- Possible picrolimnephite
- Picrolimnephite
- Chrome diopside
- Chromite
- Kimberlitic chromite
- Diamond
- Loam sample
- Bulk sample site
- Kimberlite
- Kimberlite dyke
- Carbonatite
- E.L. boundary
- River or creek



NORTHERN TERRITORY
GEOLOGICAL SURVEY

CR85/084

THE BROKEN HILL PROPRIETARY CO LTD EXPLORATION DEPARTMENT		
OVERLAY FOR MANBULLOO LOCATION OF STREAM SAMPLE SITES		
Drawn: R.J. Taylor	Date: 13 - 6 - 84	Centre: Adelaide
Traced: A.R. Veale	Project No:	Drawing No:
Checked:	8 - E20 - 307	A1 - 252

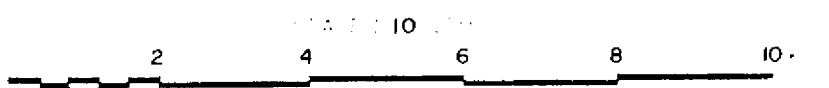


BOWMAN 5268	MANBULLOO 5368	MARANBOY 5468
WILLEROO 5267	DRY RIVER 5367	ELSEY 5467
DELAMERE 5266	BIRIMBA 5366	WESTERN CREEK 5466

GRAPHIC SHEET NO. 100,000 MAP OF
THE 1:100,000 TOPOGRAPHIC SERIES

LEGEND

- Sample site
- Garnet, possible pyroxide
- Pyroxide garnet
- Possible pyroxide
- Pyroxide
- Pyroxide diopside
- Chromite
- Kimberlite, kimberlite
- Diamond
- Loam sample
- Bulk sample site
- Kimberlite
- Kimberlite dyke
- Carbonatite
- E.L. boundary
- River or creek



NORTHERN TERRITORY
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CR85/084

THE BROKEN HILL PROPRIETARY CO. LTD.

OVERLAY FOR DRY RIVER
LOCATION OF STREAM SAMPLE SITES

R J Taylor	28-5-84	Approved
A R Veale	8-E20-304	A1 253