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EXPLORATION LICENCE 3556

LANDER RIVER, NORTHERN TERRITORY

FINAL REPORT

AND

REPORT FOR THE YEAR ENDED 2nd JUNE, 1983

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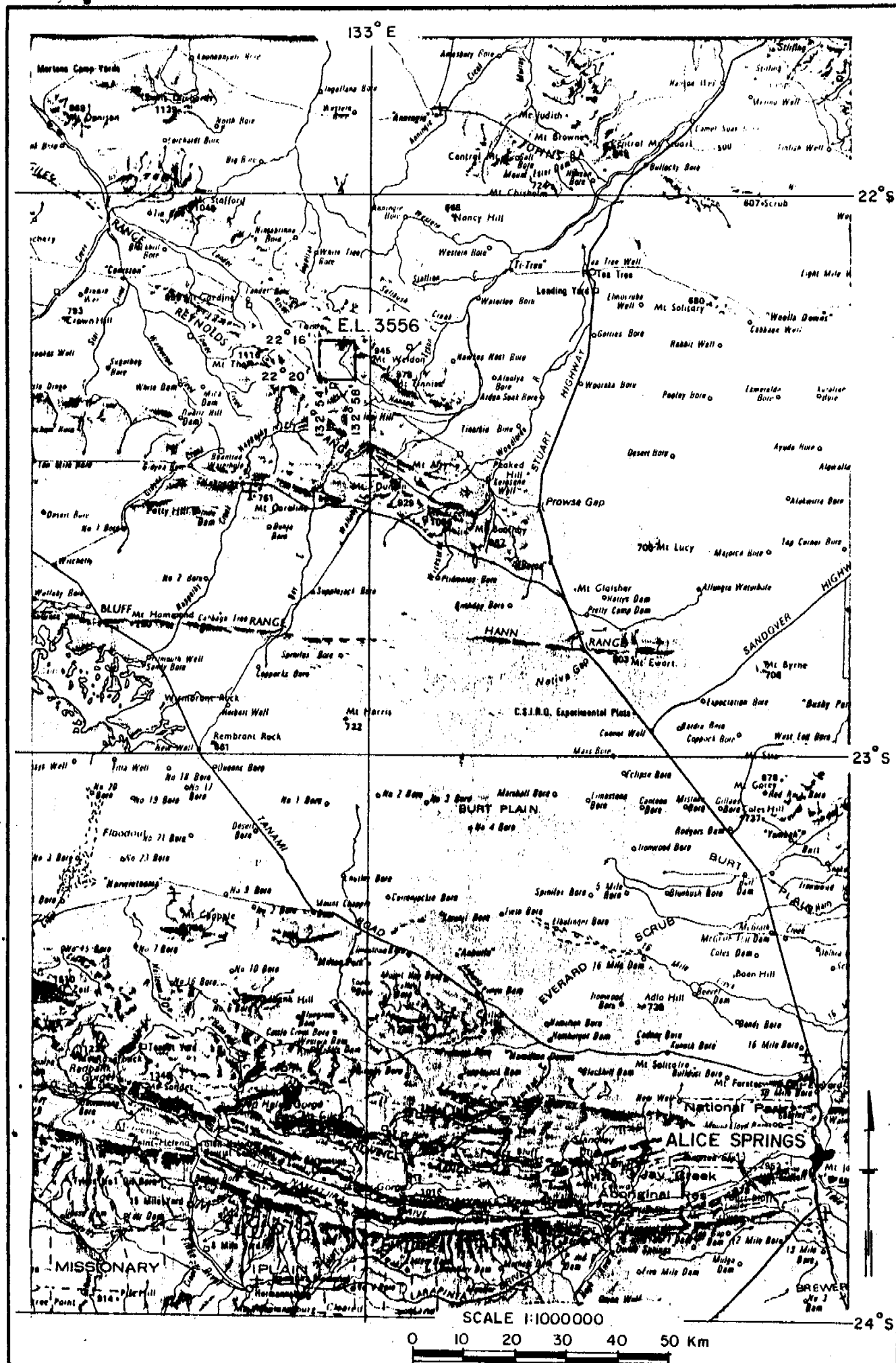
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Centre

Melbourne

Date

12-7-83

THE BROKEN HILL PROPRIETARY CO. LTD.

E.L.3556, LANDER RIVER, N.T.

LOCATION MAP

Project No.

E 200

Drawing No.

A4- 2294/B

EXPLORATION LICENCE 3556

LANDER RIVER, NORTHERN TERRITORY

FINAL REPORT and

REPORT FOR THE YEAR ENDED 2nd JUNE, 1983

1. GENERAL STATEMENT

Exploration Licence 3556 was taken up primarily to test the diamond potential of the area. A subsidiary interest is the potential for base metal mineralisation. This very small licence area has been explored in conjunction with the surrounding E.L's 2942, 3075, 3084 and 3088.

Field work was carried out in June 1982 in this licence area, when reconnaissance stream sediment samples were collected. These samples have now been processed and no kimberlitic indicators were found. Therefore no further work is warranted and the licence was relinquished.

2. TITLES

Exploration Licence 3556 of 19.58 square miles was granted to BHP Minerals Limited on 3rd June, 1982 for six years. Its location is shown on Figure 1. The licence was surrendered on 29th June, 1983.

3. FIELD INVESTIGATIONS

3.1 Survey for Aboriginal Sacred Sites

Discussions took place between BHP Minerals Limited and the Central Land Council concerning sacred sites in the six Reynolds Range Exploration Licences and Exploration Licence Applications in early 1982. As a result of these discussions, it was decided to show the traditional owners, together with an anthropologist of the Central Land Council, the specific sample sites. This was carried out by helicopter immediately prior to the sampling programme in June, 1982. No sacred sites are

cont./...

associated with sample locations in this exploration licence.

3.2 Reconnaissance Stream Sampling

This licence area was sampled in conjunction with the surrounding licences E.L's 2942, 3075, 3084 and 3088 in June, 1982 using a helicopter. At each site a 20 kilogram sediment sample was collected together with a geochemical sample. This sampling was supervised by an experienced geologist and the most favourable trap site was selected where the heavy mineral content of the stream sediment was at a maximum for the drainage channel. A total of 2 stream samples were collected but some of the samples collected in adjacent E.L's 2942, 3075 and 3084 drain from within this E.L. and therefore form part of exploration within E.L. 3556. The average sample density was 25.36 square kilometres per sample. Their locations are shown on Figure 2.

3.3 B.M.R. Aeromagnetic Survey

The published B.M.R. aeromagnetic data (Edition F53/B1-156) were examined for possible kimberlitic type anomalies. None were found that warranted any ground follow-up work.

4. RESULTS OF FIELD INVESTIGATIONS

4.1 Stream Sampling

The stream sediment samples collected were despatched to our laboratory in Perth where they were processed to produce a heavy mineral concentrate. This heavy mineral concentrate was then observed for kimberlitic indicator minerals. Both samples from E.L. 3556, RT0800 and RT0987, are negative.

cont./..

4.2 Geochemical Sampling

The geochemical stream silt samples collected were analysed for 12 elements by The Australian Mineral Development Laboratories, P.O. Box 114, Eastwood, S.A. 5063. The twelve elements were arsenic, cerium, lanthanum, barium, niobium, zirconium, copper, lead, zinc, cobalt, nickel and chromium and the results are shown below in Table 1.

TABLE 1

GEOCHEMICAL RESULTS

Sample No.	As	Ce	La	Ba	Nb	Zr	Cu	Pb	Zn	Co	Ni	Cr
RT0800	36	140	60	660	14	310	10	15	26	5	5	10
RT0987	1	70	40	280	22	640	8	10	18	<5	<5	10
Detection limits ppm	(1)	(20)	(20)	(20)	(4)	(4)	(?)	(5)	(2)	(5)	(5)	(10)

Amdel Report AC442/83 dated 30.7.82 used analysis methods:

As	Method 4
Ce, La, Ba	Analysis Code B1/1
Cu, Pb, Zn, Co, Ni, Cr	Analysis Code C1
Nb, Zr	Analysis Code B1/2

5. CONCLUSION

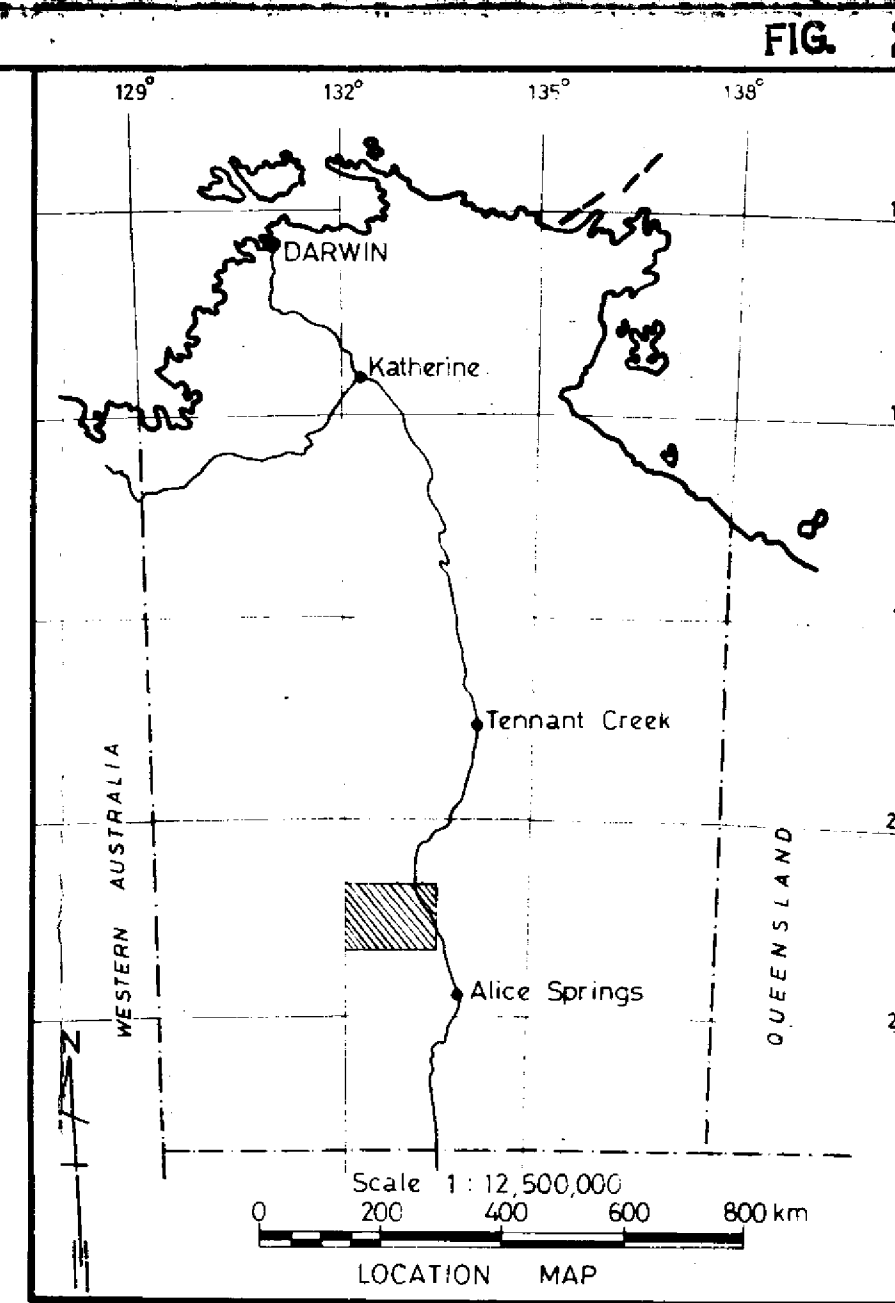
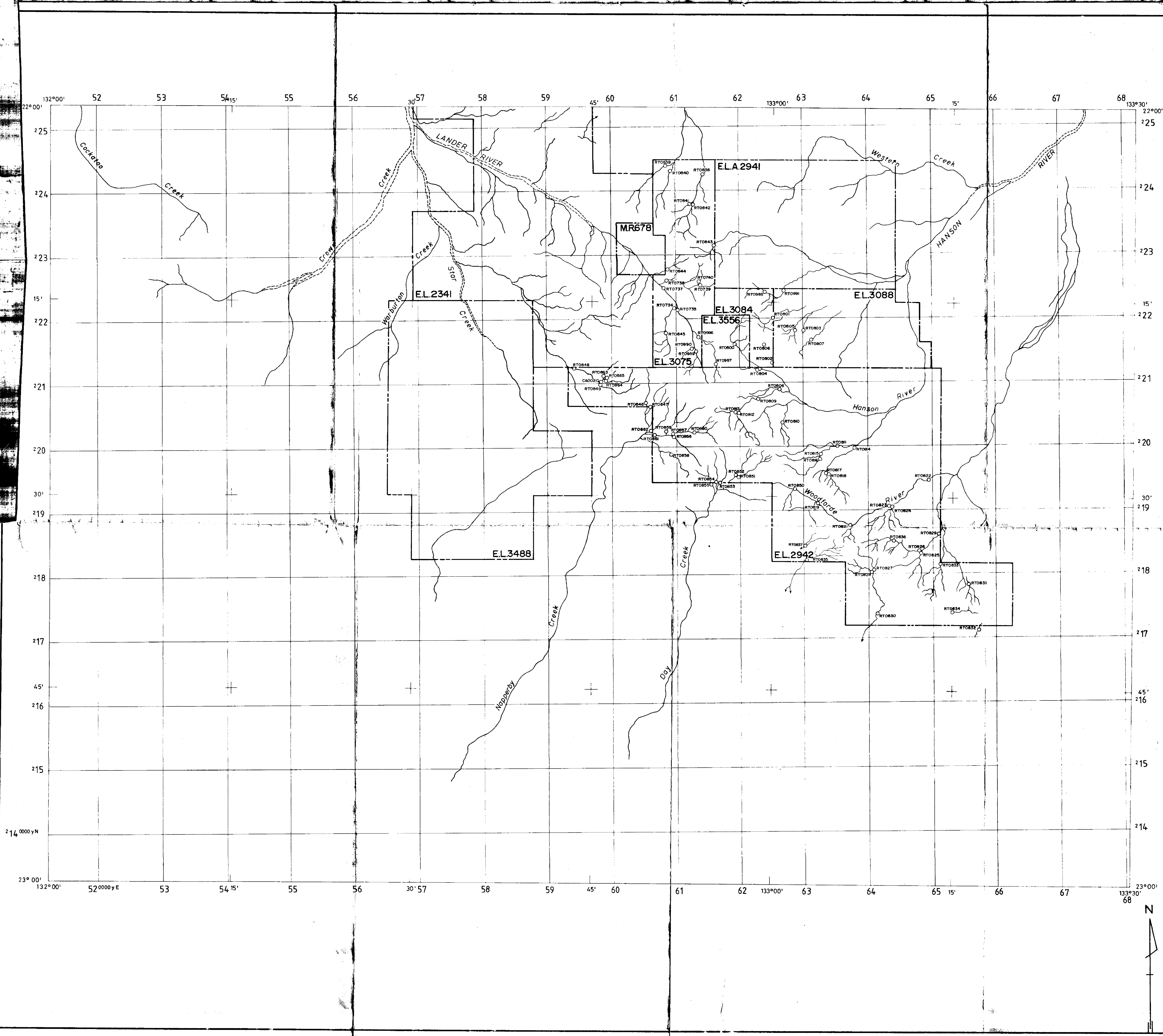
The samples collected within this exploration licence are negative. Further samples from adjacent areas which drain from this area are also negative. The drainage of the area is active and any exposed kimberlites would be subject to active erosion. As no kimberlitic indicators have been found, no further kimberlite exploration is warranted. Therefore the exploration licence was relinquished on 29th June, 1983.

6. EXPENDITURE

The total expenditure incurred on E.L. 3556 was:

Wages and Salaries	\$3,367
Fares and Mobilisation	9
Messing and Accommodation	98
Aircraft Charter	785
Transport	1,208
Consultants	65
Sample Analysis	224
Tenement Fees, Licences etc.	78
Occupancy and Location Expenses	3
Administration and Overheads	584
	<hr/>
	\$6,421
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This report is submitted to the
Department of Mines and Energy
as required by Condition 7 of
Exploration Licence 3556.

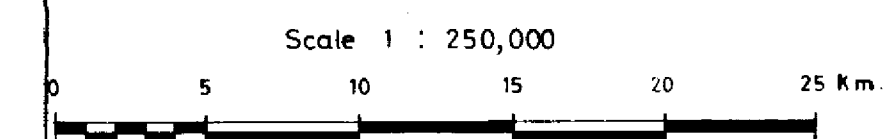


MOUNT THEO SF 52 - 4	MOUNT PEAKE SF 53 - 5	BARROW CREEK SF 53 - 6
MOUNT DOREEN SF 52 - 12	NAPPERBY SF 53 - 9	ALCOOTA SF 53 - 10
MOUNT LIEBIG SF 52 - 16	HERMANSBURG SF 53 - 13	ALICE SPRINGS SF 53 - 14

DIAGRAM SHOWING ADJOINING MAPS

LEGEND

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



This map traced from NAPPERBY SF 53-9 Topo series

THE BROKEN HILL PROPRIETARY CO. LTD. EXPLORATION DEPARTMENT		
NAPPERBY AREA LOCATION OF STREAM SEDIMENT SAMPLES		
Drawn: A.C.E.	Date: AUG 1980	Printed: ADELAIDE
Traced: S. Messing	Scale: 1:250,000	Sheet: 8-E 200-1 A1 79A
Checked:		