

# **Open File Envelope**

## **No. 3474**

**EL 478**

**PETERBOROUGH**

**PROGRESS REPORTS FOR THE PERIOD 17/5/79 TO  
16/5/81**

Submitted by

Dampier Mining Co. Ltd  
1981

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**PRIMARY INDUSTRIES  
AND RESOURCES SA**

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TENEMENT HOLDER: DAMIPER MINING CO. LTD

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B.H.P. EXPLORATION DEPARTMENT 1981

Exploration Licence 478, Peterborough,  
South Australia. Report for the quarter  
ended 17th May 1981

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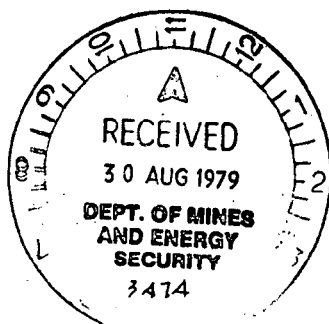
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EXPLORATION LICENCE 478

PETERBOROUGH, SOUTH AUSTRALIA

REPORT FOR THE QUARTER ENDED

17TH AUGUST, 1979



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EXPLORATION LICENCE 478PETERBOROUGH, SOUTH AUSTRALIA.REPORT FOR THE QUARTER ENDED 17TH AUGUST, 19791. GENERAL STATEMENT

E.L. 478 was taken up primarily to test the diamond potential of the area. Subsidiary interests are the potential for base metals and coal. Exploration commenced during the quarter with colour aerial photography, aeromagnetism and radiometrics. A title search has been completed and "Notices of Entry" served to all landholders in the northern half of the E.L.

2. TITLES

Exploration Licence 478 of 2,415 square kilometres was granted to Dampier Mining Company Limited on 17th May, 1979 for one year. Figure 1 shows its location.

3. FIELD INVESTIGATIONS3.1 Aerial Photography

A portion of the licence was flown with colour photography. The survey was carried out by Stereometric Surveys with photo scale of 1:25,000. The area flown is shown on Figure 1.

3.2 Geophysics

An aeromagnetic and radiometric survey over part of the exploration licence commenced on 7th August, 1979. The survey is being flown along east-west flight lines, 250 metres apart, at a mean terrain clearance of the detector of 80 metres. Figure 1 shows the location of the survey.

2.

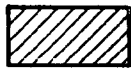
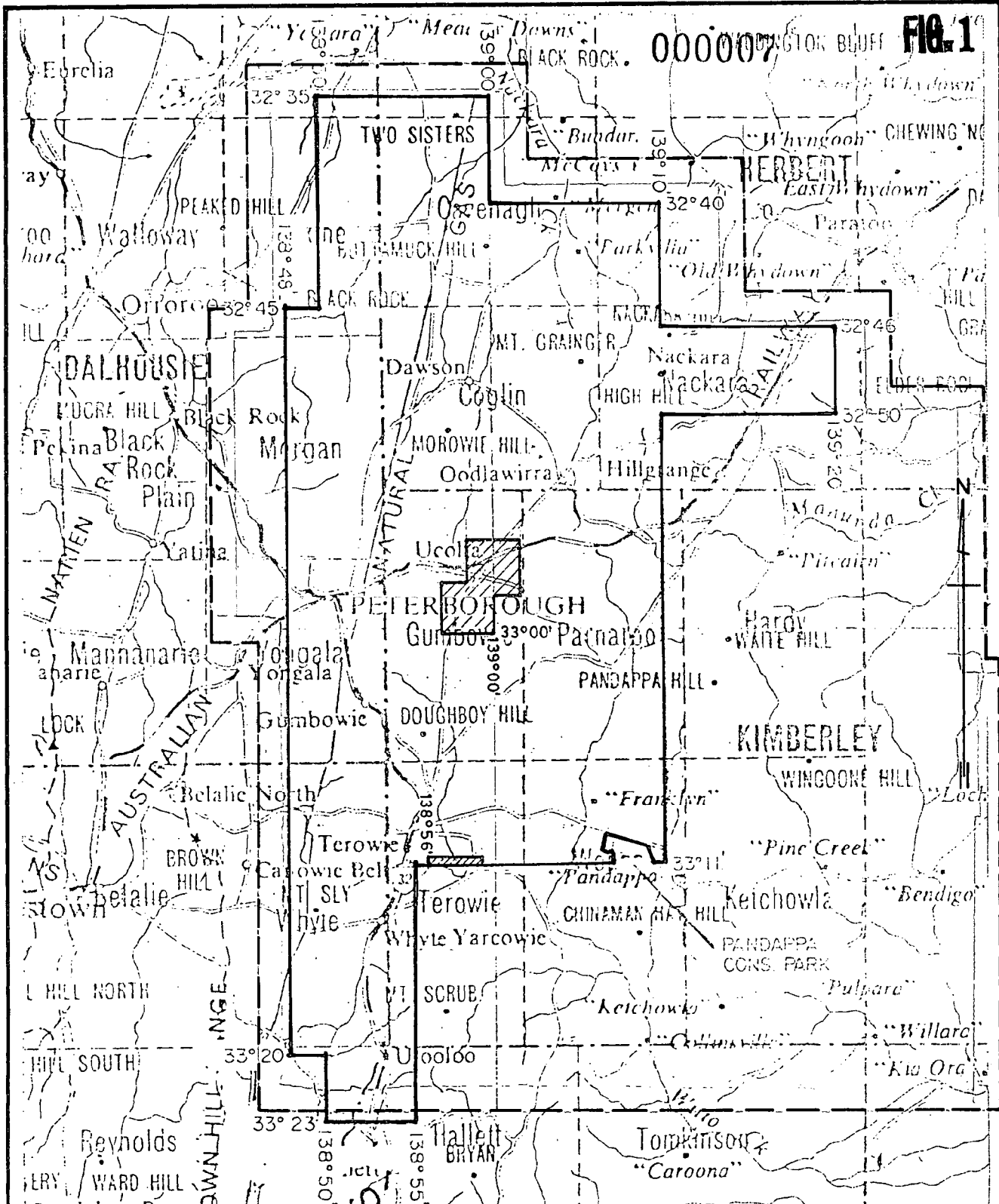
The results will not be available for about two months.

4. EXPENDITURE

Expenditure debited to E.L. 478 to 31st July, 1979 was:

Wages and Salaries	\$ 361
Surveying/Aerial Photography	\$6,415
Occupancy/Location Expenses	25
Tenement Fees, Licences etc.	<u>\$1,212</u>
	<u>\$8,013</u>

This report is submitted to the Mines  
Department as required by Condition 4  
of Exploration Licence 478.

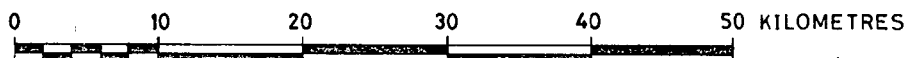


Location of Aeromagnetic Surveys



Area flown with colour photography

Scale 1:500,000



Centre:  
Adelaide  
Date:  
15-8-79

THE BROKEN HILL PROPRIETARY CO. LTD.  
E.L. 478 PETERBOROUGH S.A.  
LOCATION OF AIRBOURNE SURVEYS

Project N9:  
6-D220-1  
Drawing N9:  
A4-39



000008

EXPLORATION LICENCE 478

PETERBOROUGH, SOUTH AUSTRALIA

REPORT FOR THE QUARTER ENDED

17TH NOVEMBER, 1979



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1. GENERAL STATEMENT
2. TITLES
3. FIELD INVESTIGATIONS
  - 3.1 Geophysics
4. EXPENDITURE

EXPLORATION LICENCE 478PETERBOROUGH, SOUTH AUSTRALIAREPORT FOR THE QUARTER ENDED 17TH NOVEMBER, 1979.1. GENERAL STATEMENT

Exploration Licence 478 was taken up primarily to test the diamond potential of the area. To this end ground magnetic follow up of aeromagnetic anomalies is in progress.

2. TITLES

Exploration Licence 478 of 2,415 square kilometres, was granted to Dampier Mining Company Limited on 17th May, 1979 for one year. Figure 1 shows its location.

3. FIELD INVESTIGATIONS3.1 Geophysics

Ground magnetic follow up of aeromagnetic anomalies has been in progress during the last quarter.

Each aeromagnetic anomaly was covered with an average of 10.5 km on a N-S grid, with lines 250 metres apart and readings taken every 10 metres. Once the anomaly is accurately located, a drill site is pegged.

To date two drill sites have been pegged, work is still progressing on 3 anomalies and one has been abandoned (see Table 1).

An aeromagnetic and radiometric survey over part of the exploration licence commenced on 7th August, 1979. 250 line kilometres were flown, principally over the Hales Lagoon area. At present we are awaiting the results.

4. EXPENDITURE

Expenditure debited to E.L. 478 during August, September and October, 1979 was :

## 2.

Wages and Salaries	\$ 7,715
Messing and Accommodation	1,306
Fares and Mobilisation	44
Occupancy/Location Expenses	55
Transport	565
Surveying/Aerial Photographs	210
Geophysics	2,954
Sundries	260
	<hr/>
	\$13,109
	<hr/>

Total expenditure to 31st October, 1979 is \$21,212.

This report is submitted to the  
Department of Mines and Energy  
as required by Condition 4  
of Exploration Licence 478.

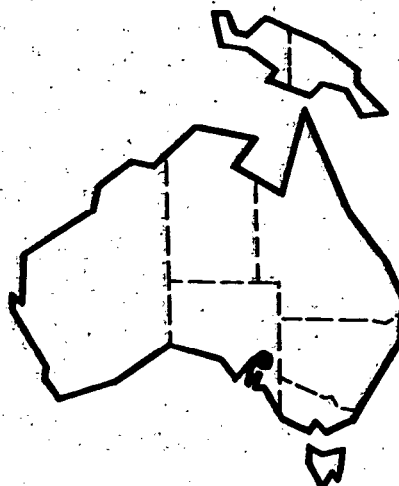
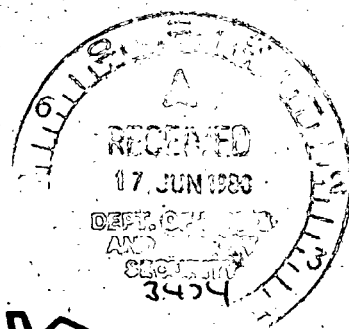
PETERBOROUGH E.L. 478

Anomaly No.	No. of lines plus orientation	Total length of lines	Remarks
1	4, N-S	9 km	No significant anomaly found, no further work planned.
2	7, N-S	16 km	Work still in progress Includes magnetics over photo-features.
3	5, N-S	11.25 km	One extra 2.5 km E-W line before decision on drill site.
4			Work has not yet commenced
5			Work has not yet commenced
6	4, N-S	9 km	Anomaly found and drill site pegged.
7	3, N-S 1, E-W	9.5 km	Anomaly found and drill site pegged.
8	4, N-S	9 km	Anomaly found but work still in progress to accurately locate anomaly.
9			Work has not yet commenced
10			Work has not yet commenced

# Exploration Department

EXPLORATION LICENCES 478, 479 AND 517  
PETERBOROUGH, CHINAMAN HAT HILL AND KIA-ORA  
SOUTH AUSTRALIA  
Report for the Quarter Ended 17th May, 1980

REFER ENV. 3591 FOR RPT  
EL. 517



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  - 3.3 Bulk Sampling
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EXPLORATION LICENCES 478, 479 AND 517PETERBOROUGH, CHINAMAN HAT HILL AND KIA-ORA, S.A.REPORT FOR THE QUARTER ENDED 17TH MAY, 19801. GENERAL STATEMENT

Exploration Licences 478, 479 and 517 were taken up primarily to test the diamond potential of the area. Subsidiary interests are the potential for base metals and coal. Exploration continued during the quarter with ground magnetic follow up of aeromagnetic anomalies, drilling and the bulk testing of the Anomaly 65 kimberlite.

2. TITLES

Exploration Licence 478 of 2,415 square kilometres and Exploration Licence 479 of 2,422 square kilometres were granted to Dampier Mining Company Limited on 17th May, 1979 for one year. Exploration Licence 517 of 413 square kilometres was granted on 21st August, 1979 for one year.

3. FIELD INVESTIGATIONS3.1 Geophysics

Ground magnetic surveys to delineate anomalies possibly due to kimberlite intrusions from the Company aeromagnetic survey, continued during the quarter. This work was generally carried out along north south grid lines 200 metres apart with readings every 10 metres.

3.2 Drilling

Drilling of the delineated aeromagnetic anomalies was completed during the quarter. The drilling was carried out by Whiteland Drilling Pty. Ltd. of Perth W.A. using a Bourne 1000 rig.

127 bores totalling 3593 metres were completed. The location of the bores are shown on Figures 4-9.

3.3 Bulk Sampling

Five bulk samples were collected from the Anomaly 65 kimberlite. Due to the thickness of cover over the kimberlite, these samples were obtained by drilling 9½" diameter holes to 30 metres using the Bourne 1000 rig. The samples were trucked to Ketchowla Station Homestead where they were tested for diamonds using our jig plant. Approximately 30 tonnes of sample were put through the plant and the concentrates sent to our Perth Laboratories for detailed examination. The location of the bulk sample sites are shown on Figure 2.



4. RESULTS OF INVESTIGATIONS4.1 Drilling

The attached table summarises the results of the drilling programme. Logs and analysis results are not yet available.

4.2 Bulk Sampling

No diamonds were detected in the concentrates from the bulk samples. Results from the detailed examination of the concentrate in our Perth Laboratory are not yet available.

5. EXPENDITURE

Expenditure debited to EL's 478, 479 and 517 during February, March and April, 1980, was :

	<u>EL 478</u>	<u>EL 479</u>	<u>EL 517</u>
Wages and Salaries	\$2,938	\$22,416	\$2,676
Messing and Accommodation	83	6,378	364
Fares and Mobilisation	363	1,190	-
Drilling	1,500	39,492	3,450
Transport	613	3,135	80
Surveying/Aerial Photographs	267	1,670	-
Sample Analysis	136	2,990	-
Geophysics	237	220	-
Tenement Fees, Licences etc.	-	10	-
Occupancy/Location Expenses	32	463	18
Plant Services	-	122	-
Capital Items	1,485	1,485	-
Other Items	-	594	-
	<u>\$7,654</u>	<u>\$80,165</u>	<u>\$6,588</u>
 Total to 30 April, 1980:	 \$39,203	 \$159,526	 \$20,862

This report is submitted to the Department of Mines and Energy as required by Condition 6 of Exploration Licences 478, 479 and 517.

SUMMARY OF DRILL HOLES

Anomaly	Hole No.	Depth	Result	Anomaly	Hole No.	Depth	Result
B44	B3 *	25.50	Mafic	B60	B60	30.00	Quartz. & Phyll.
	B4	26.00	"		B61	28.00	Quartzite
	B5	24.00	"				
B43	B6 *	32.00	Meta. Carbonate	B48	B62	22.00	"
					B63 *	16.50	Mafic
B55	B7	4.00	Phyllite		B64	22.00	"
	B8	24.00	"				
	B9	12.00	"	B63	B65	66.00	Quartzite
B53	B10	14.00	"	B66	B66	36.00	"
					B67	36.00	Quartzite ?
B54	B11	38.00	"		B68	18.00	Quartzite
					B69	20.00	"
B56	B12	30.00	"		B70	14.00	"
	B13	30.00	"				
	B14	28.00	"	B68	B71	14.00	"
					B72	12.00	"
B43	B15	24.00	Quartzite		B73	10.00	"
	B16	22.00	"		B74	24.00	"
					B75	9.00	"
B42	B17 *	47.50	Kimberlite *	B67	B76 *	38.50	Mafic
B44	B18 *	24.60	Mafic				
	B19	14.00	Quartzite	B65	B77	38.00	Quartzite
					B78 *	41.75	Kimberlite *
B57	B20	12.00	Phyllite		B79	30.00	"
	B21	18.00	"		B80	20.00	Quartzite
	B22	16.00	"		B81	20.00	"
	B23	18.00	"		B82	24.00	"
					B83	18.00	"
P7	P24	60.00	"		B84 *	39.60	? lamprophyre
					B85	20.00	Quartzite
P8	P25	4.00	"		B86 *	42.00	Kimberlite
	P26 *	28.50	"		B87 *	30.50	"
	P27	14.00	"		B88	20.00	"
					B89 *	16.00	"
P6	P28	26.00	"		B90 *	30.50	Phyllite
					B91	37.00	Kim base Phyll.
B10	B29	10.00	"		B92	20.00	Phyllite
					B93	20.00	Metasediments
B11	B30	22.00	"		B94 *	41.00	Kimberlite
					B95	30.00	"
B50	B31	52.00	Quartzite		B96 *	32.50	carb. rich rock
	B32	50.00	"		B97	14.00	Shale
					B98	30.00	Phyllite
B51	B33 *	30.50	Mafic		B99	30.00	Quartzite
	B34 *	38.50	Gabbro		B100	30.00	"
	B35	30.00	Quartzite		B101	30.00	"
	B36	30.00	Metasediment		B102	18.00	"
	B37	24.00	"		B103 *	39.00	Kimberlite
					B104	20.00	Quartzite
B50	B38	44.00	Mafic		B105	14.00	Kimberlite
	B39	50.00	Sediment		B106	16.00	Quartzite
	B40 *	44.10	Mafic		B107	16.00	? Kim. clay base quart.
					B108 *	34.00	Kimberlite
B62	B41	40.00	Mafic		B109	14.00	Quartzite
	B41A *	33.50	"		B110	10.00	Quartz base ? Kim.
	B42	20.00	"		B111	20.00	Phyllite
	B43	29.00	Metasediment		B112	24.00	Chloritic schist?
	B44	20.00	Mafic		B113	18.00	Kimberlite
	B45	20.00	"				
					B114	14.00	Quartzite
B61	B46	26.00	"		B115	7.00	"
	B46A *	15.50	"		B116	17.00	Limestone
	B47	20.00	"				
	B48	10.00	"	B40	B117	8.00	Sandstone
	B49	10.00	"		B118	10.00	Siltstone
					B119	6.00	Sediment
B52	B50	38.00	Quartzite		B120	10.00	Greenschist
	B51	44.00	"		B121	20.00	Quartzite
	B52	40.00	"		B122	10.00	Siltstone
	B53	28.00	"		B123	6.00	? Volcanic with rhombs after carbonate
					B124	10.00	Siltstone
B49	B54 *	10.50	Mafic		B125	6.00	Siltstone
	B55	24.00	"	B44	B126 *	13.00	Equals Hole B4
	B56	18.00	"				
	B57	6.00	Quartzite	B39	B127	18.00	Schists
					B128	6.00	Shale
B60	B58	40.00	" & Phyllite		B129	6.00	"
	B59	34.00	Quartzite		B130	6.00	Schistose shale

## SUMMARY OF DRILL HOLES

359/ 021

2

Anomaly	Hole No.	Depth	Result	Anomaly	Hole No.	Depth	Result
B39	B131 B132	6 6	Shales and quartzite Shales	B32	B189 B190 B191*	20 20 25	Weathered mafic Weathered dolerite Purple talc mica schis & dolerite
B41	B133* B134 B135	23.5 14 14	Greenschists Chloritic schists Clays & quartzite	B192	B192	10	Variable coloured talc mica schist
B63	B136 B137 B138* B139	20 30 14 10	Quartzite Micaceous quartzose metasediments " " " "	B193	B193	30	Yellow brown argillite
B67	B140 B141*	16 22	Mica-carbonate rocks Brecciated carbonate rock	B30	B194* B195 B196	21 20 16	Microgabbro " Weathered mafic with asbestos & purple mica talc
B68	B142* B143	26 14	Meta sediment Carb-qtzose meta sed.	B197*	B197*	10	Mafic with abundant asbestos talc & mica Microgabbro
B65	B144 B145 B146 B147 B148 B149 B150 B151 B152 B153* B154	20 10 10 20 20 20 10 20 20 30 20	Kimberlite " " Phyllite " " " Carbonate rich rock " " " Quartzite Kimberlite ?	B27	B199 B200 B201	38 34 20	Phyllite Argillite "
B58	B155 B156* B157 B158	20 18 16 10	Quartzite Mafics derived clays Quartzite "	B28	B202	6	Phyllite
B68	B159 B160 B161* B162* B163*	38 40 54 54 40	Quartzite " Breccia Argillites & arenites Carbonate rich rock	B26	B203	18	"
B35	B164 B165* B166* B167* B168 B169	25 18.5 34 32 20 32	Weathered mafics Light brown quartzite Carbonate sediments & clays Micaceous schist Weathered mafic Greenish white clays	B25	B204 B205	16 10	" "
B34	B170	26	Quartzite	B24	B206 B207 B208 B209 B210	14 14 20 8 10	" " " " "
B36	B171*	15	Green weathered mafics	B23	B211 B212	12 10	" "
B19	B172 B173	23 10	Shale & schist Schist grey green	B78	B213 B214 B215 B216	30 30 30 30	" " " "
P3	P174 P175 P176 P177 P178 P179 P180*	68 68 24 24 14 16 29	Yellow brown shale Orange brown clay " " " " " " Grey & orange brown clay Green clay after mafic Dark green mafics	B79	B217 B218 B219 B220	32 38 60 30	" " " Quartzite
B65	B181*	40	Kimberlite	B80	B221 B222 B223 B224 B225	30 30 30 30 30	Phyllite " " " "
B29	B182* B183 B184 B185 B186	20.5 30 12 20 20	Mafic intrusive possibly dolerite or lamprophyre Weathered dolerite Very weathered mafic Weathered dolerite Very weathered dolerite	K83	K226 K227	70 60	Olive green sandstone Quartzite
B33	B187* B188	10.5 24	Mafic fine grained Very weathered mafic schist quartzite base	K82	K228	51	Cleaved olive green arenite
				K81	K229 K230	32 20	Phyllite "
				K70	K231	132	Very weathered granite
				K69	K233 K234 K235 K236	5 4 4 10	Biotite hornblende granodiorite Granotoid " Hornblende biotite granotoid
				B47	B238 B239	19 38	Alluvium Grey white clay
				B46	B240 B241	45 24	Dolerite Dolerite
				B45	B242 B243	12 12	Phyllite "

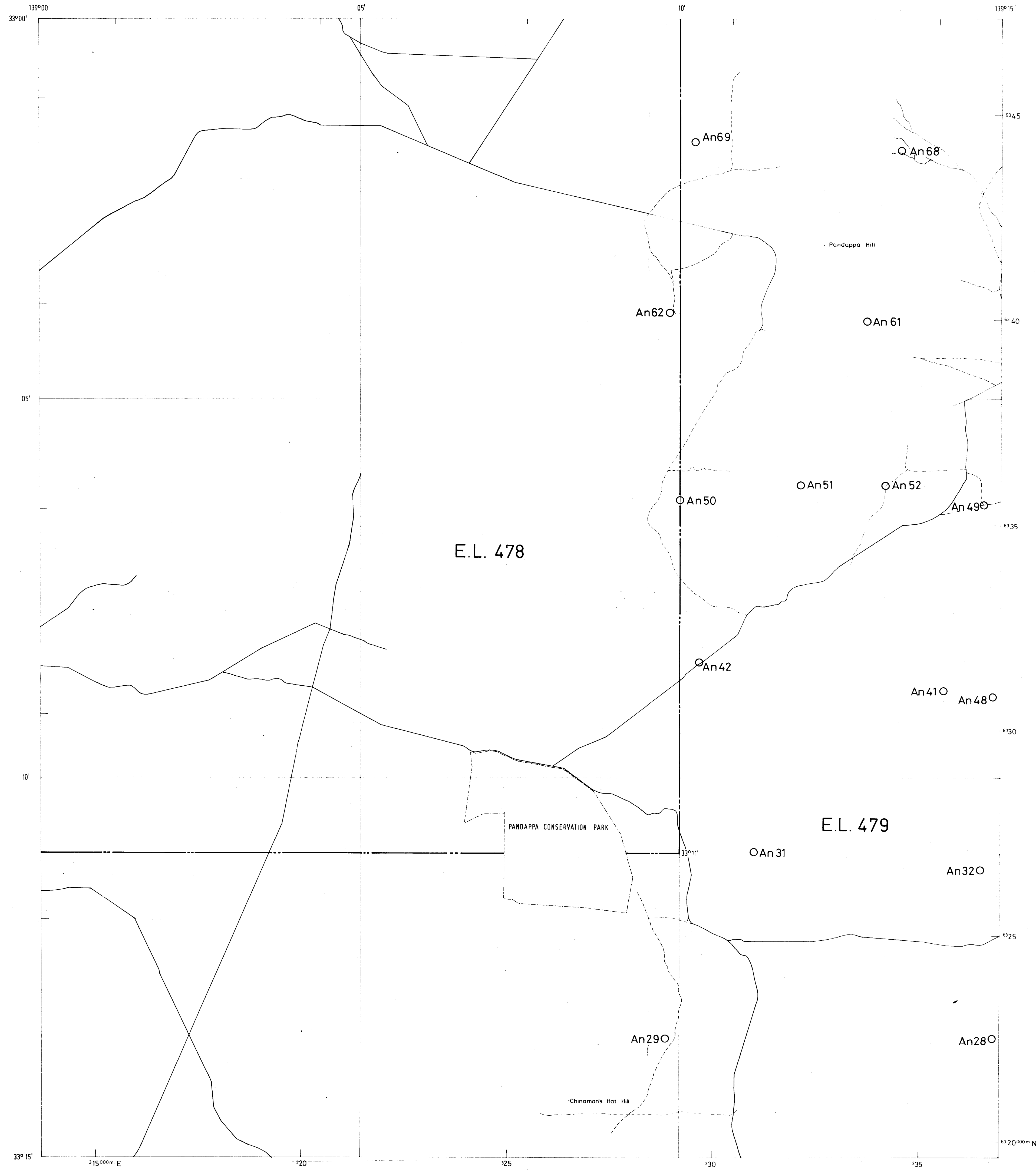
## SUMMARY OF DRILL HOLES

3591 - 022

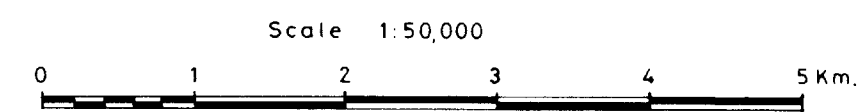
3.

Anomaly	Hole No.	Depth	Result	Anomaly	Hole No.	Depth	Result
K76	K244	44	Tertiary sands & clay				
	K245	20	Clay				
	K246	36	Clays				
	K247	28	Sandy clays				
	k248	60	Clay				
B74	B249	20	Phyllites				
	B250	10	Phyllite				
	B251	14	Alluvium				
	B252	18	Phyllite				
	B253	10	"				
	B254	6	"				
B75	B255	36	Argillite				
	B256	28	"				
	B257	20	"				
	b258	26	"				
	B259	20	"				
Q16	Q260*	28	Sand & clay				
	Q261	40	Argillite				
	Q262	20	Quartzite				
Q13	Q263	40	Sandy clays & gravels				
Q15	Q264	34	Micaceous arenite & quartzite				
	Q265*	17	Micaceous arenite				
	Q266	20	Grey quartzite				
	Q267*	22	Brecciated diapir				
Q14	Q268	16	Phyllite schist arenite & silicified dolomite				
	Q269*	21	Brecciated diapir				
	Q270	10	"				
	Q271	10	Arenite				





- LEGEND**
- An50 Anomaly
  - E.L. Boundary
  - - - Conservation Park Boundary
  - 2nd Class road
  - - - Bulldozed road
  - - - Vehicle track
  - ~ Creek



This map traced from FRANKLYN 6731-IV 1:50,000 Topo series

THE BROKEN HILL PROPRIETARY CO. LTD. EXPLORATION DEPARTMENT		
1:50,000 FRANKLYN, S.A. OVERLAY E.L. 478 PETERBOROUGH & E.L. 479 BURRA (CHINAMAN HAT HILL)		
ANOMALY LOCATIONS		
Drawn: _____	Date: 2-5-80	Centre Adelaide
Traced: _____	Project No: _____	
Checked: _____		Drawing No: A1-57

PETERBOROUGH, SOUTH AUSTRALIAREPORT FOR THE QUARTER ENDED 17th AUGUST, 19801. GENERAL STATEMENT

Exploration Licence 478 was taken up primarily to test the diamond potential of the area. Subsidiary interests are the potential for base metals and coal.

2. TITLES

Exploration Licence 478 of 2415 square kilometres, was granted to Dampier Mining Company Limited on 17th May, 1979 for one year. Following a partial reduction of the area to 961 square kilometres, the exploration licence was renewed for a further twelve months ending 16th May, 1981. Figure 1 shows its location.

3. FIELD INVESTIGATIONS

No field work was carried out during the quarter. An aeromagnetic and radiometric survey over part of the exploration licence is expected to be flown during the first weeks of September, 1980. Figure 2 shows the location of the airborne survey. This survey will be flown by Geoex Pty. Ltd. along lines 200 metres apart with detector at 80 metres above ground.

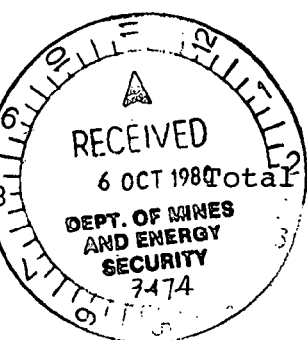
4. EXPENDITURE

Expenditure debited to E.L. 478 during May, June, July and August, 1980, was:

Wages and Salaries	\$ 2,285
Messing and Accommodation	67
Fares and Mobilisation	208
Transport	177
Surveying/Aerial Photography	714
Tenement Fees, Licences etc.	725
Geophysics	217
Sample Analysis	79
Occupancy/Location Expenses	57
Capital Items	1,074
	<u>\$ 5,603</u>

Total expenditure to 31st August, 1980 is \$44,803.

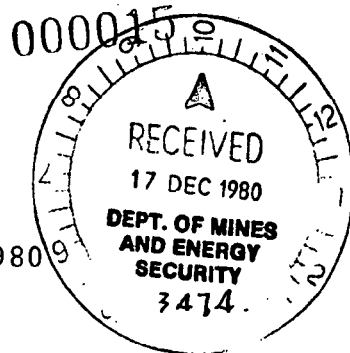
This report is submitted to the Department of Mines and Energy as required by Condition 6 of Exploration Licence 478.



EXPLORATION LICENCE 478

PETERBOROUGH, SOUTH AUSTRALIA

REPORT FOR THE QUARTER ENDED 17th NOVEMBER, 1980



1. GENERAL STATEMENT

Exploration Licence 478 was taken up primarily to test the diamond potential of the area. Subsidiary interests are the potential for base metals and coal.

2. TITLES

Exploration Licence 478 of 2,415 square kilometres, was granted to Dampier Mining Company Limited on 17th May, 1979 for one year. Following the completion of one year's exploration, Dampier Mining Company Limited applied for a twelve month's extension of a reduced area of 961 square kilometres as shown on the attached Figure 1.

3. FIELD INVESTIGATIONS

3.1 Geophysics

The results for the recent aeromagnetic survey were received and are currently being interpreted.

3.2 Proposed Work

During the next quarter it is planned to locate on the ground all aeromagnetic anomalies which could be due to kimberlites, and test the anomalies by drilling.

It is also planned to stream sample the northern portion of the Exploration Licence for diamond indicator minerals, using a helicopter for access.

4. EXPENDITURE

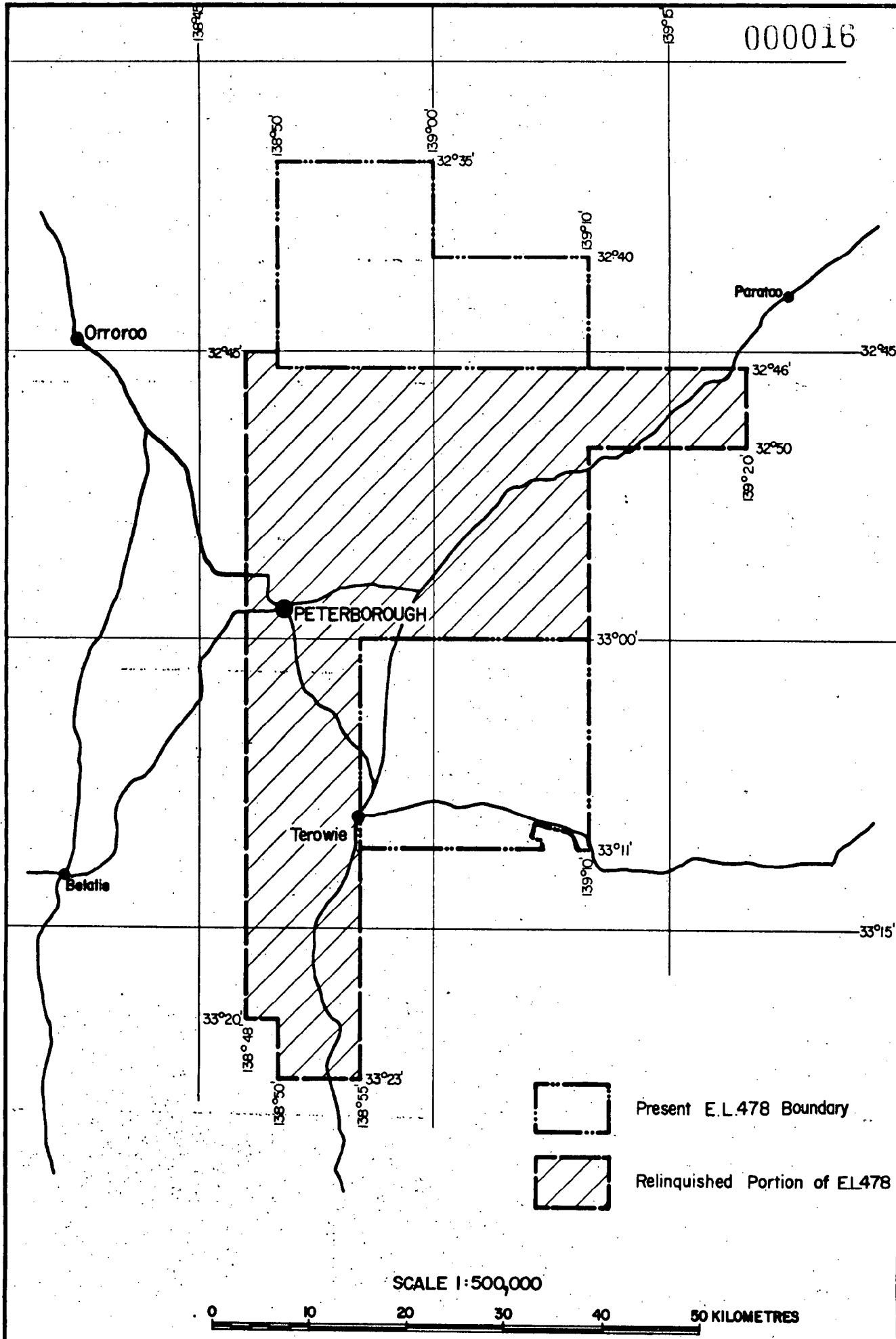
Expenditure debited to E.L. 478 during September and October, 1980, was:

Wages and Salaries	\$ 461
Messing and Accommodation	627
Transport	83
Surveying/Aerial Photographs	65
Geophysics/Geochemistry	222
Sample Analysis	113
	<u>\$1,574</u>

Total expenditure to 31st October, 1980 is \$46,377.

This report is submitted to the Department of Mines & Energy as required by Cond. 6 of Exploration Licence 478.





Centre:  
Adelaide...

Date:  
14-11-80

THE BROKEN HILL PROPRIETARY CO. LTD.

E.L.478 PETERBOROUGH, S.A.

LOCATION OF CURRENT & RELINQUISHED E.L. AREAS

Project N<sup>o</sup>:  
6-D220-8

Drawing N<sup>o</sup>:  
A4-92

000017

EXPLORATION LICENCE 478

PETERBOROUGH, SOUTH AUSTRALIA

REPORT FOR THE QUARTER ENDED 17th FEBRUARY, 1981

CONTENTS

1. General Statement
2. Titles
3. Field Investigations
  - 3.1 Geophysics
  - 3.2 Drilling
  - 3.3 Sampling
4. Results of Investigations
  - 4.1 Geophysics
  - 4.2 Drilling
  - 4.3 Sampling
5. Expenditure

Table 1 Summary of Drill HolesFIGURES

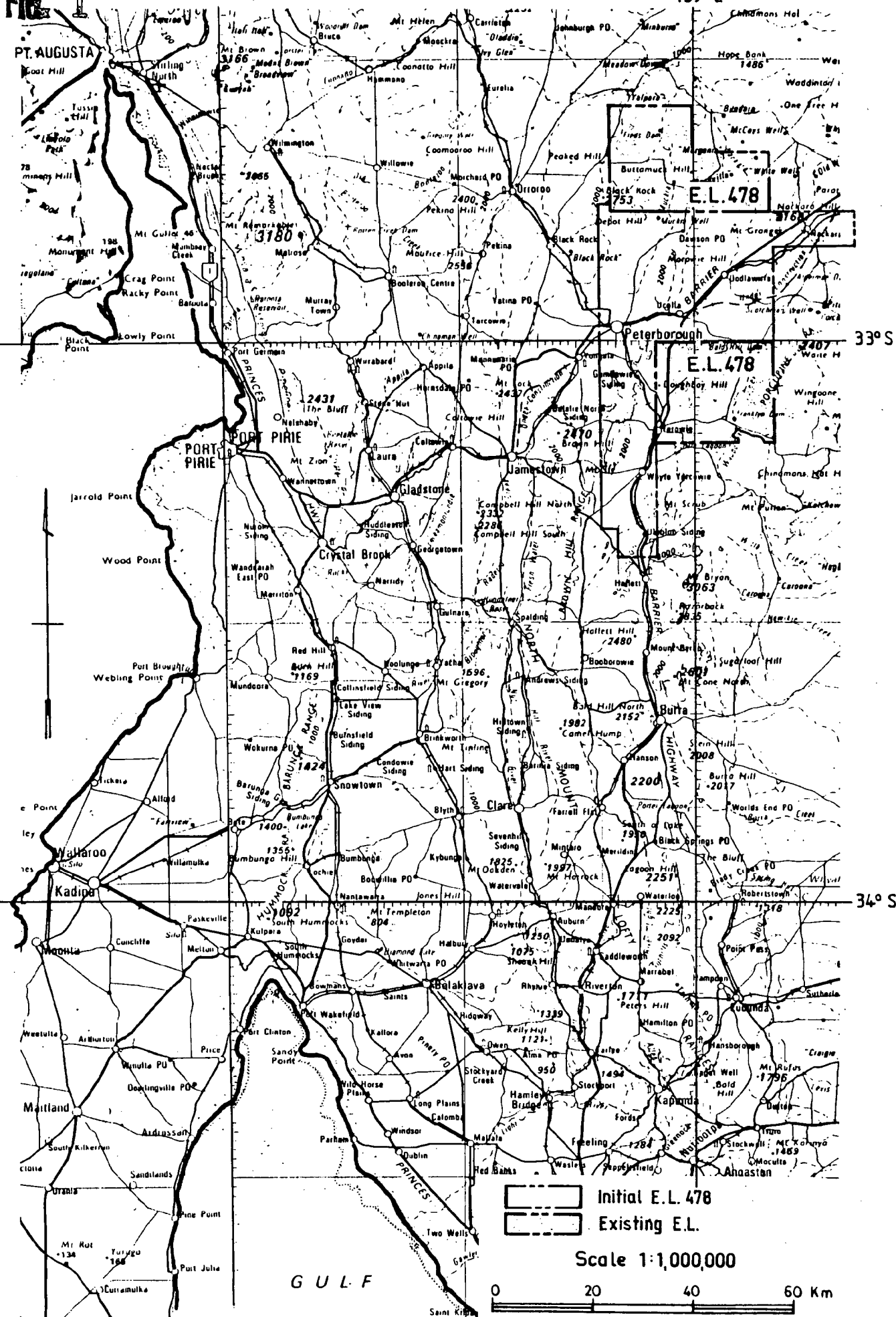
- |    |  |        |
|----|--|--------|
| 1. | EL 478 Peterborough S.A. Location Map            | A4-119 |
| 2. | Aeromagnetic Contours and Drillhole Locations    | A3-75  |
| 3. | Location of Sample Sites                         | A4-121 |
| 4. | Geochemical Stream Sample Results Cu, Zn, Ag, Pb | A4-122 |
| 5. | Geochemical Stream Sample Results Cr, Co, Ni     | A4-123 |
| 6. | Geochemical Stream Sample Results Nb, Sn, U, W   | A4-124 |

FIG. 1

138° E

139° E

000019



Centre  
Adelaide

Date:  
31-3-81

THE BROKEN HILL PROPRIETARY CO. LTD.  
E.L. 478, PETERBOROUGH, S.A.  
LOCATION MAP

Project No  
6-D220-12

Drawing No:  
A4-119

## EXPLORATION LICENCE 478

## PETERBOROUGH, SOUTH AUSTRALIA

REPORT FOR THE QUARTER ENDED 17th FEBRUARY, 1981

1. DRILLING

Exploration Licence 478 was taken up primarily to test the diamond potential of the area. Subsidiary interests are the potential for base metals and coal.

Exploration continued during the quarter with a stream gravel sampling programme, ground magnetic surveys and drilling.

2. TITLES

Exploration Licence 478 of 2,115 square kilometres was granted to Dampier Mining Company Limited on 17th May, 1979 for one year. Following the completion of one year's exploration, Dampier Mining Company Limited was granted a further twelve months extension of a reduced area of 961 square kilometres as shown on Figure 1.

3. FIELD INVESTIGATIONS3.1 Geophysics

Following interpretation of the recent aeromagnetic survey, two anomalies were selected as possibly due to kimberlites. These anomalies were located and delineated with ground magnetic surveys. The surveys were carried out along north-south grid lines 100 metres apart. Readings were taken at 10 metre intervals.

3.2 Drilling

Ten holes were drilled to test the aeromagnetic anomalies. These holes are listed in Table 1. The drilling was carried out by Transdrill Pty. Ltd. of Adelaide using a Warman Investigator rig. The holes were sampled at 2 metre intervals. To aid the identification of rock types, cores were taken at the bottom of several of these holes. Figure 2 shows the location of the drill holes.

3.3 Sampling

Seventeen stream gravel samples were collected from streams in the northern portion of the exploration licence. A helicopter supplied by Lloyd Helicopters was used to provide access to the stream sample sites. The samples were sent to our laboratory in Perth where the heavy minerals were separated and are currently being examined for kimberlite indicator minerals. Geochemical samples were collected at the same time as the gravel samples. Figure 3 shows the location of the sample sites.

#### 4. RESULTS OF INVESTIGATIONS

##### 4.1 Geophysics

Figure 2 shows the results of the aeromagnetic survey.

##### 4.2 Drilling

No kimberlites were intersected. Both anomalies were found to be due to mafic intrusions.

Logs and analyses results for this drilling programme are not yet available.

##### 4.3 Sampling

Results for the gravel sampling programme are not yet available. Analyses for samples collected at the same time as the gravel samples are shown on Figures 4, 5 and 6.

#### 5. EXPENDITURE

Expenditure debited to EL 478 during the months November, December, 1980 and January, 1981 was:

Wages and Salaries	\$3,501
Messing and Accommodation	848
Fares and Mobilisation	10
Transport	187
Surveying/Aerial Photographs	72
Occupancy/Location Expenses	321
	<hr/>
	\$4,939
	<hr/>

Total expenditure to 31st January, 1981, is \$51,316.

This report is submitted to the  
Department of Mines and Energy  
as required by Condition 4 of  
Exploration Licence 478.

TABLE 1

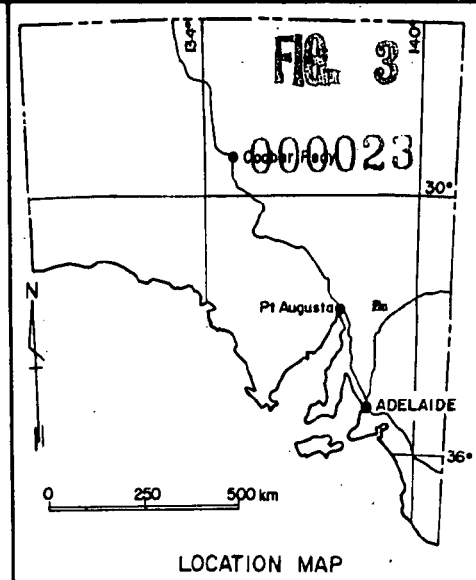
000022

SUMMARY OF DRILL HOLES

Anomaly	Hole No.	Depth (m)	Result
PW7	P337	30	Siltstone/clay
	P338	30	Quartzite
	P339	28	Quartzite
	P340	32	Quartzite
	P341	24	Clay
	P342	41	Siltstone
	P343	30	Sediments
	P344	30	Clays
PW8	P453	48	Siltstone
	P454	43	Siltstone

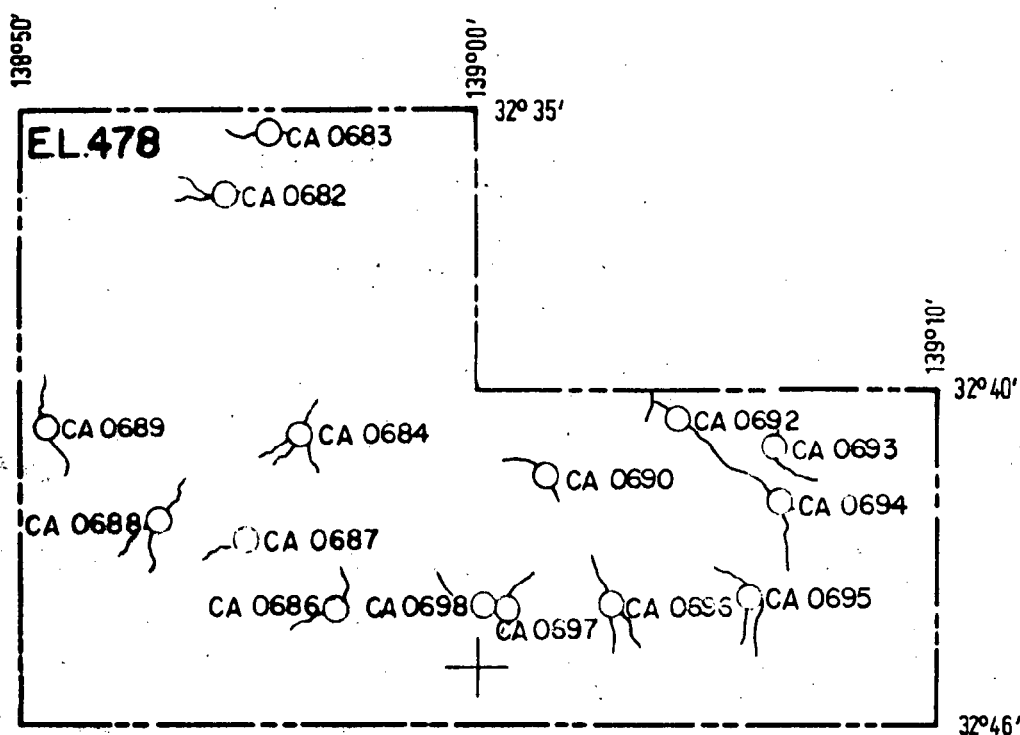
Nb?

] Nfe.



CA0684 ○ Stream sample

--- E.L. Boundary



Scale 1:250,000



Centre:  
ADELAIDE

Date:  
13-4-81

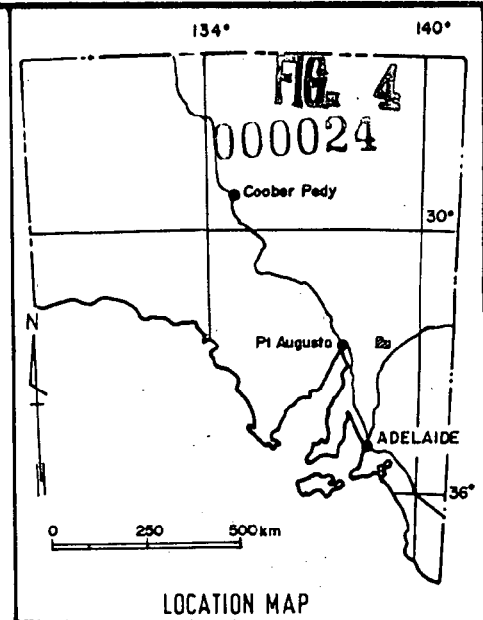
THE BROKEN HILL PROPRIETARY CO. LTD.

E.L. 478 PETERBOROUGH S.A.  
LOCATION OF STREAM SAMPLE SITES

Project N<sup>o</sup>:  
6 - 0220-15

Drawing N<sup>o</sup>:  
A4-121

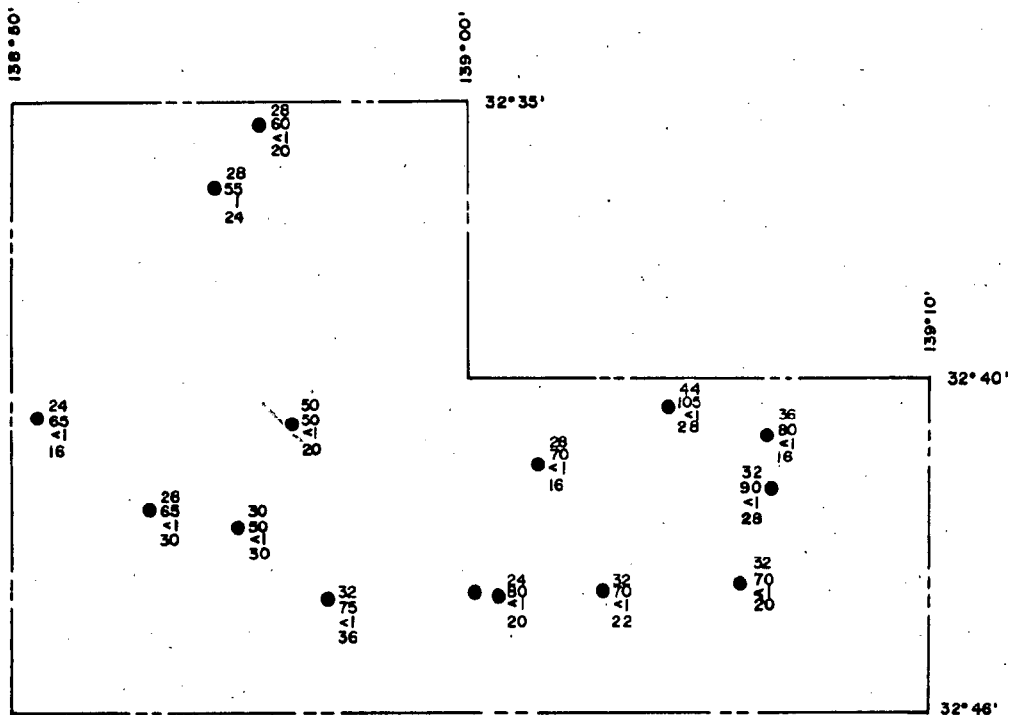




● 28  
70  
41  
16

Cu (ppm)  
Zn (ppm)  
Ag (ppm)  
Pb (ppm)

--- E.L. Boundary



Scale 1:250,000



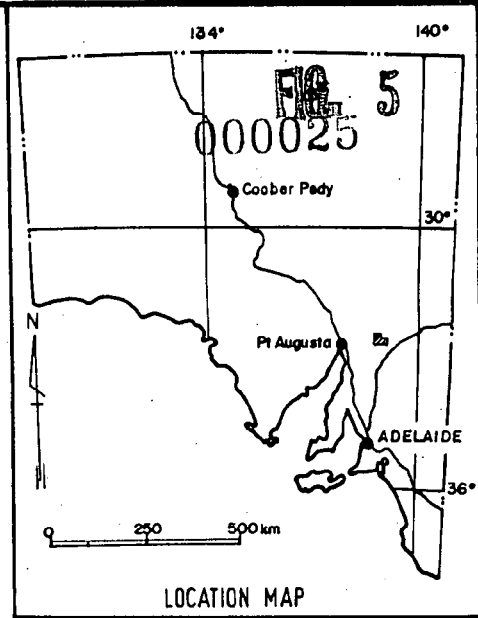
Centre  
**ADELAIDE**

Date  
14-4-81

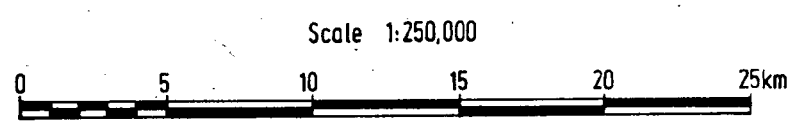
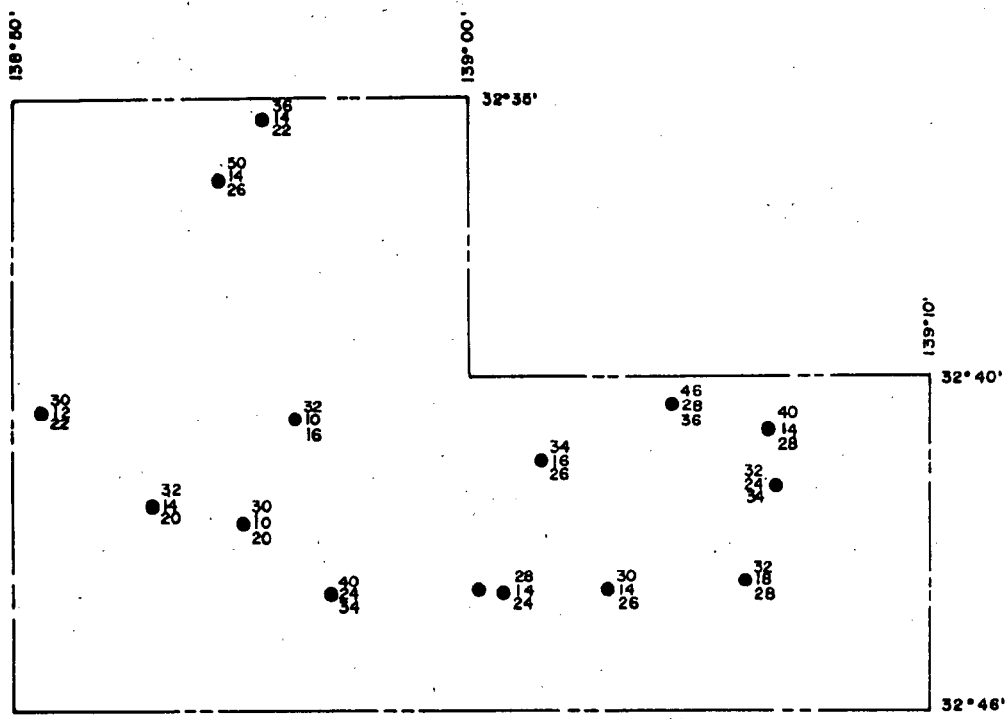
THE BROKEN HILL PROPRIETARY CO. LTD.  
E.L. 478 PETERBOROUGH S.A.  
GEOCHEMICAL STREAM SAMPLE RESULTS Cu, Zn, Ag, Pb

Project No.  
6-D220-16

Drawing No.  
A4-122



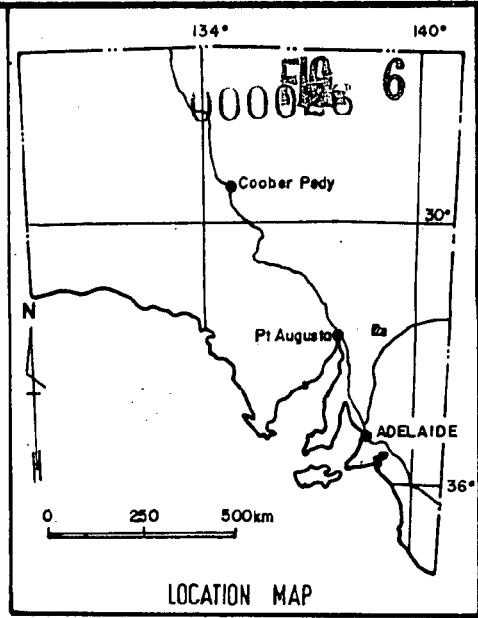
● 50  
 10  
 20  
 Cr (ppm)  
 Co (ppm)  
 Ni (ppm)  
 --- E.L. Boundary



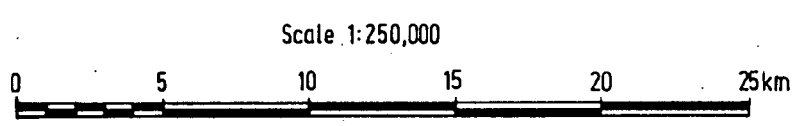
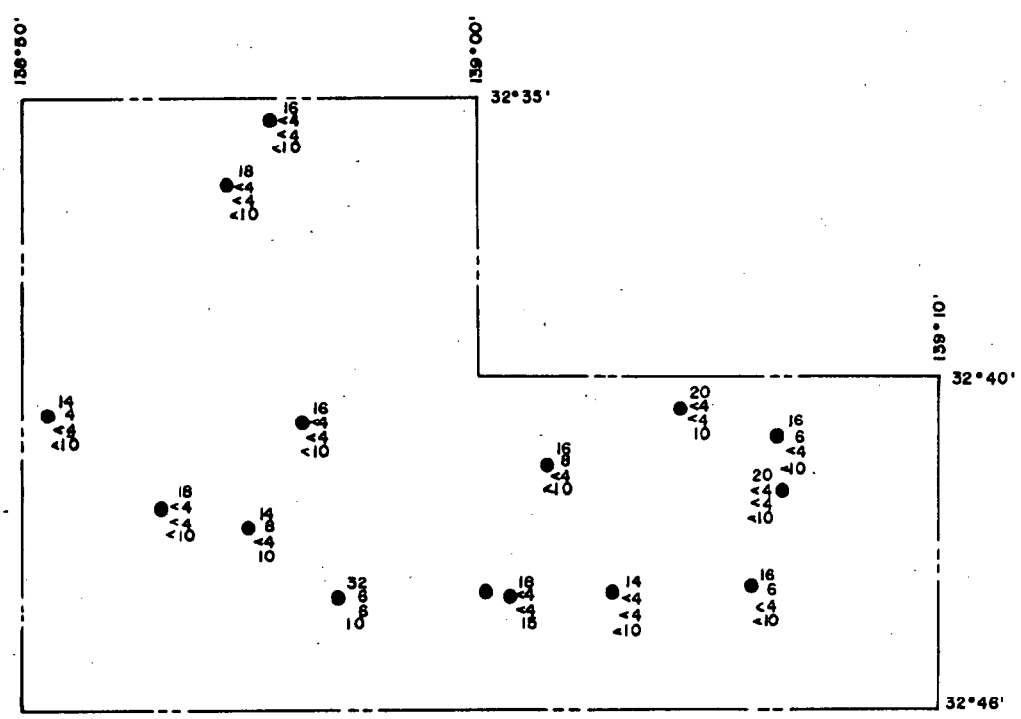
Centre  
 ADELAIDE  
 Date  
 14-4-81

THE BROKEN HILL PROPRIETARY CO. LTD.  
 E.L. 478 PETERBOROUGH S.A.  
 GEOCHEMICAL STREAM SAMPLE RESULTS Cr, Co, Ni

Project No.  
 6-0220-17  
 Drawing No.  
 A4 - 123



● 16  
 ▲ 4  
 △ 10  
 Nb (ppm)  
 Sn (ppm)  
 U (ppm)  
 W (ppm)  
 --- E.L. Boundary



Centre  
**ADELAIDE**  
 Date  
 14\_4\_81

THE BROKEN HILL PROPRIETARY CO. LTD.  
 E.L. 478 PETERBOROUGH S.A.  
 GEOCHEMICAL STREAM SAMPLE RESULTS Nb, Sn, U, W

Project No.  
 6\_0220\_18  
 Drawing No.  
 A4 - 124



OPEN FILE

3474

# Dampier Mining Company Limited

[Incorporated in WA]

"Wolfstep Building" 695 Burke Road  
Camberwell Victoria 3124

0274 028

20th August, 1981.

The Director-General,  
Department of Mines & Energy,  
P.O. Box 151,  
EASTWOOD, S.A. 5063.

Dear Sir,

We submit our report for the quarter ended 17th May, 1981,  
on Exploration Licence 478, Peterborough, South Australia.

Yours faithfully,  
for Dampier Mining Company  
Limited

*A. R. Hope*  
*hu tl*

A.R. HOPE

Encl.

Telephone 82 8251  
Telegrams  
'Hematite' Melbourne  
Telex 30 408

Postal Address  
P.O. Box 559  
Camberwell  
Victoria 3124

Your Ref:  
Our Ref: NC:LCW  
E.6/1-14

EXPLORATION LICENCE 478

PETERBOROUGH, SOUTH AUSTRALIA

REPORT FOR THE QUARTER ENDED 17th MAY,

1981.

\*C O N T E N T S\*

030

1. GENERAL STATEMENT
2. TITLES
3. RESULTS OF INVESTIGATIONS  
    3.1 SAMPLING
4. PROPOSED WORK
5. EXPENDITURE

\*F I G U R E S\*

1. E.L. 478 Peterborough, S.A. Location Map.
2. Location of Stream Sample Sites.

EXPLORATION LICENCE 478

PETERBOROUGH, SOUTH AUSTRALIA

REPORT FOR THE QUARTER ENDED 17TH MAY, 1981.

031

1. GENERAL STATEMENT

Exploration Licence 478 was taken up primarily to test the diamond potential of the area. Subsidiary interests were the potential for base metals and coal. During the quarter, the results for the stream sampling programme were received.

2. TITLES

Exploration Licence 478 of 2,115 square kilometres was granted to Dampier Mining Company Limited on 17th May, 1979 for one year. Following the completion of one year's exploration, Dampier Mining Company was granted a further twelve months extension over a reduced area of 961 square kilometres as shown on Figure 1.

The Exploration Licence expired on 17th May and has in part been replaced by a new exploration licence application (DM305/81).

3. RESULTS OF INVESTIGATIONS

3.1 Sampling

The results from the stream gravel samples collected during the previous quarter were received from our laboratories. Sample sites are shown on Figure 2. One sample, CA686 was found to contain a chrome diopside.

4. PROPOSED WORK

Once the new exploration licence covering approximately the same area as the northern section of E.L. 478 is granted, an aeromagnetic survey will be flown over the whole licence.

5. EXPENDITURE:

Expenditure debited to E.L. 478 during the four months  
February to May, 1981 was:-

032

Wages & Salaries	\$ 5,091
Messing & Accomodation	1,149
Fares & Mobilisation	130
Drilling	5,275
Transport	1,466
Sample Analysis	1,229
Aircraft Charter	2,405
Radio Communications	268
Surveying/Aerial Photographs	322
Plant Services	296
Geophysics/Geochemistry	300
Occupancy/Location Expenses	2,275
Other items	95
	<hr/>
	\$20,301
	<hr/>

Total expenditure to 31st May, 1981, is \$71,617

This report is submitted to the  
Department of Mines and Energy  
as required by Condition 4 of  
Exploration Licence 478.





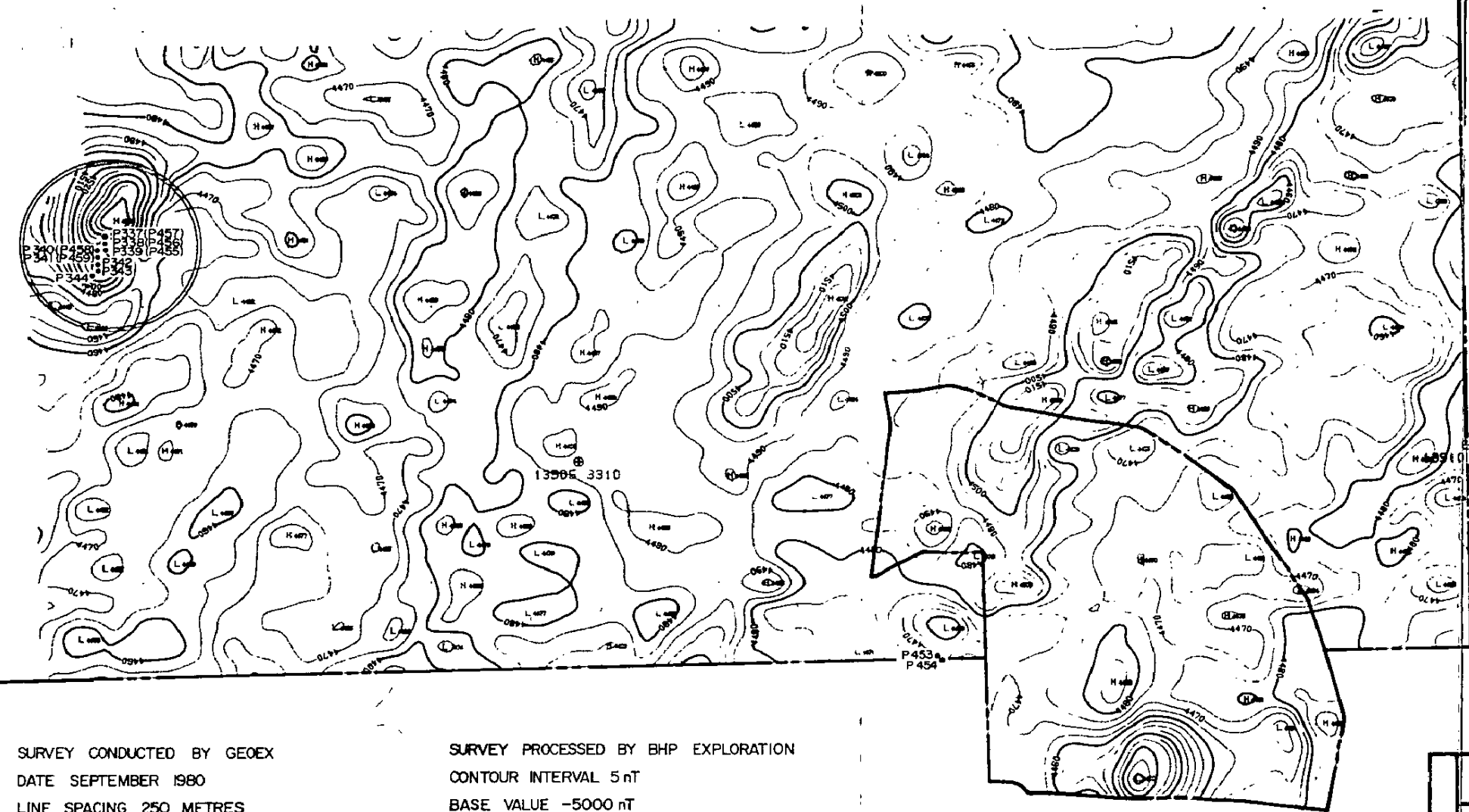
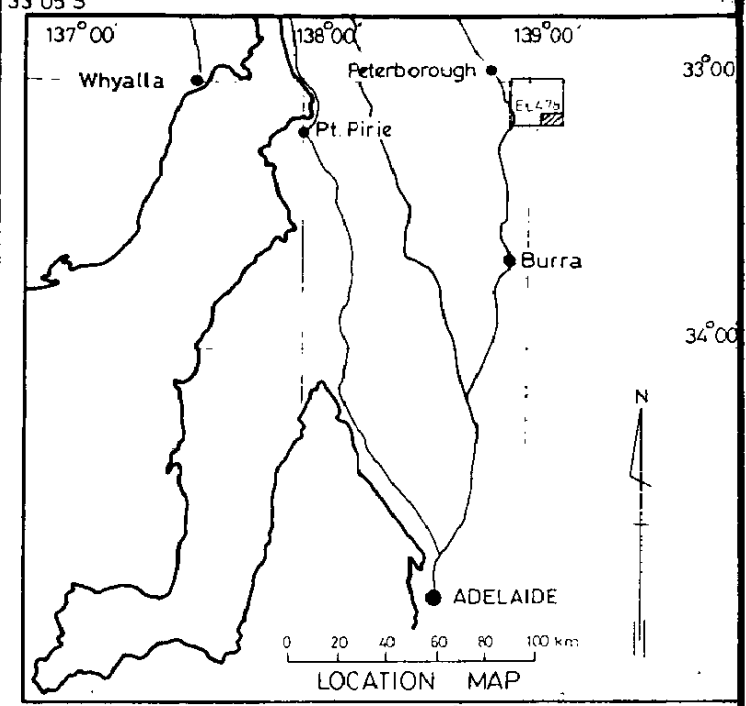
139°05'E 33°05'S

139°10'E 33°05'S

E.L. 478

335000 -

330000 -

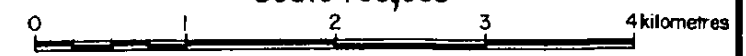


LEGEND

- P342 B.H.P. Rotary/Percussion drillholes
- E.L. Boundary

3474-2

Scale 1:50,000



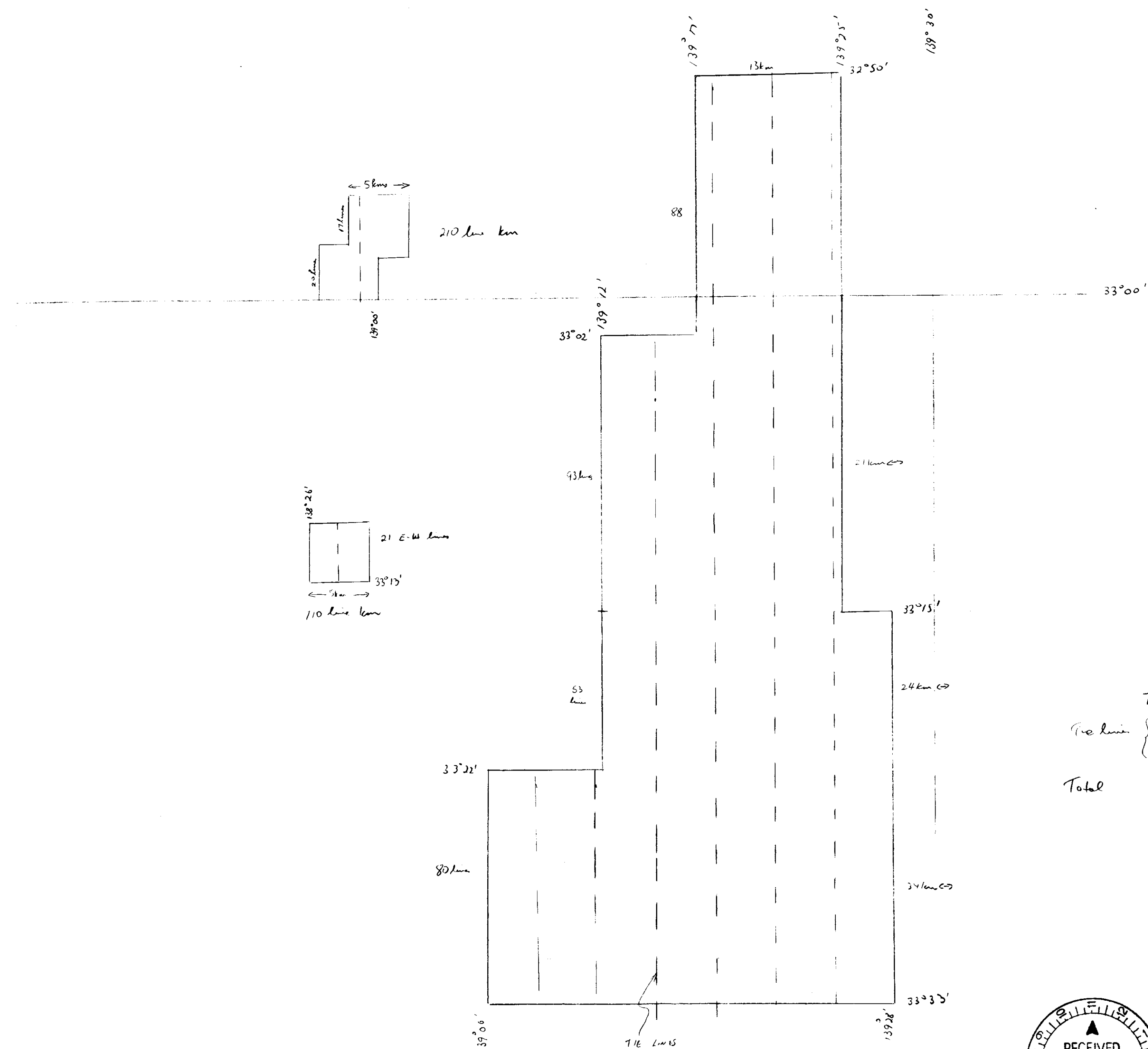
SURVEY CONDUCTED BY GEOEX  
DATE SEPTEMBER 1980  
LINE SPACING 250 METRES  
SURVEY HEIGHT 80 METRES M.T.C.  
MAGNETOMETER USED SONOTEK  
SAMPLING INTERVAL .8 SEC. APPROX. 60 METRES

SURVEY PROCESSED BY BHP EXPLORATION  
CONTOUR INTERVAL 5 nT  
BASE VALUE -5000 nT  
INTERPOLATED CONTOUR GRID 80 x 80 METRES  
IGRF REMOVED

THE BROKEN HILL PROPRIETARY CO. LTD.  
EXPLORATION DEPARTMENT

E.L. 478 PETERBOROUGH, SA.  
AEROMAGNETIC CONTOURS AND DRILLHOLE  
LOCATIONS

Revisions:	Prepared by: CDA	Centre: Adelaide
	Date: 13-4-81	Project No. 6-D220-14
	Drawn: A.R.V.	Drawing No. A3-75



7094 line km  
 Tie line { 260  
 46  
 40  
 Total 7420 line km

All lines (except tie) E-W  
 Spacing 250 metres  
 Altitude 80 metres

Total no of line km 7740

Scale 1:250,000

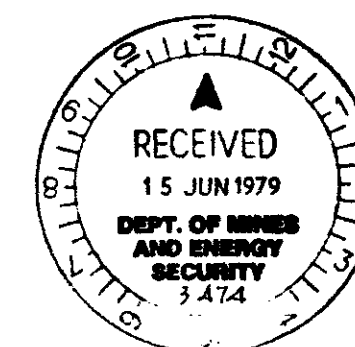


Fig. No. ....  
 To accompany .....  
 Dated .....

THE BROKEN HILL PROPRIETARY CO. LTD. EXPLORATION DEPARTMENT			
OVERLAY FOR BORRA and ORROBO 1:250,000 scale Aeromagnetic Survey			
Drawn:	Date:	Centre:	
Traced:	Project No:	Drawing No:	
Checked:		A1-	
O.I.C.:			

3474-3