

RELINQUISHMENT REPORT

EXPLORATION LICENCE 8133

"William Creek"

24th September, 1993 to 23rd September, 1996

Licensee: Ashton Mining Limited

Operator: Ashton Mining Limited
BHP Minerals Pty Ltd

Sheet Reference: 1:250,000 Bauhinia Downs (SE53-03)

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Ashton Mining Library

Author:

T. C. Rogers
ASHTON MINING LIMITED
21 Wynyard Street
BELMONT WA 6104

T. Nunn
BHP MINERALS PTY LTD
Level 3, 3 Plain Street
EAST PERTH WA 6004

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Report Number: 51529

0296/925

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SUMMARY

During the period 24th September, 1993 to 23rd September, 1996, Ashton Mining Limited, on behalf of the Australian Diamond Exploration Joint Venture (ADE JV), and BHP Minerals, through the McArthur River (Metals) Joint Venture, carried out an exploration programme over Exploration Licence 8133. In September, 1996 the exploration licence was reduced from 54 to 27 blocks. In November, 1996 there was a further voluntary reduction from 27 to 4 blocks. This report provides details of all work undertaken on the relinquished portions of the licence.

Gravel sampling programmes were undertaken by Ashton Mining in the first, second and third years of the licence. A total of 19 gravel samples were collected in the relinquished area. One sample returned a positive result and the remaining samples are negative.

An airborne GEOTEM survey was flown for BHP Minerals in May 1996. The interpretation was completed in August. Due to the lack of notable conductors a voluntary reduction of 93% was recommended.

Exploration expenditure for the life of the relinquished portion of the licence amounted to \$36,210.

KEYWORDS

*Diamond exploration; Base metal exploration; Gravel sampling; Indicator minerals; Microdiamonds;
Geophysical surveys; Aerial EM surveys*

LOCATION

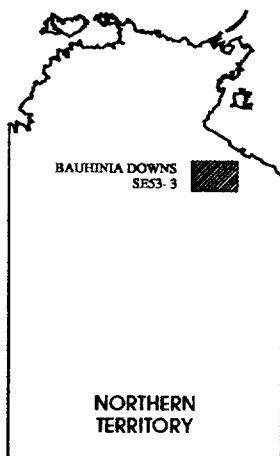
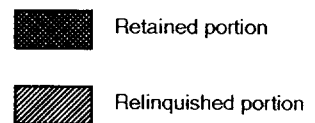
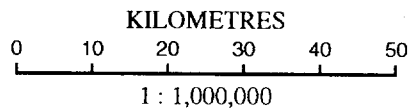
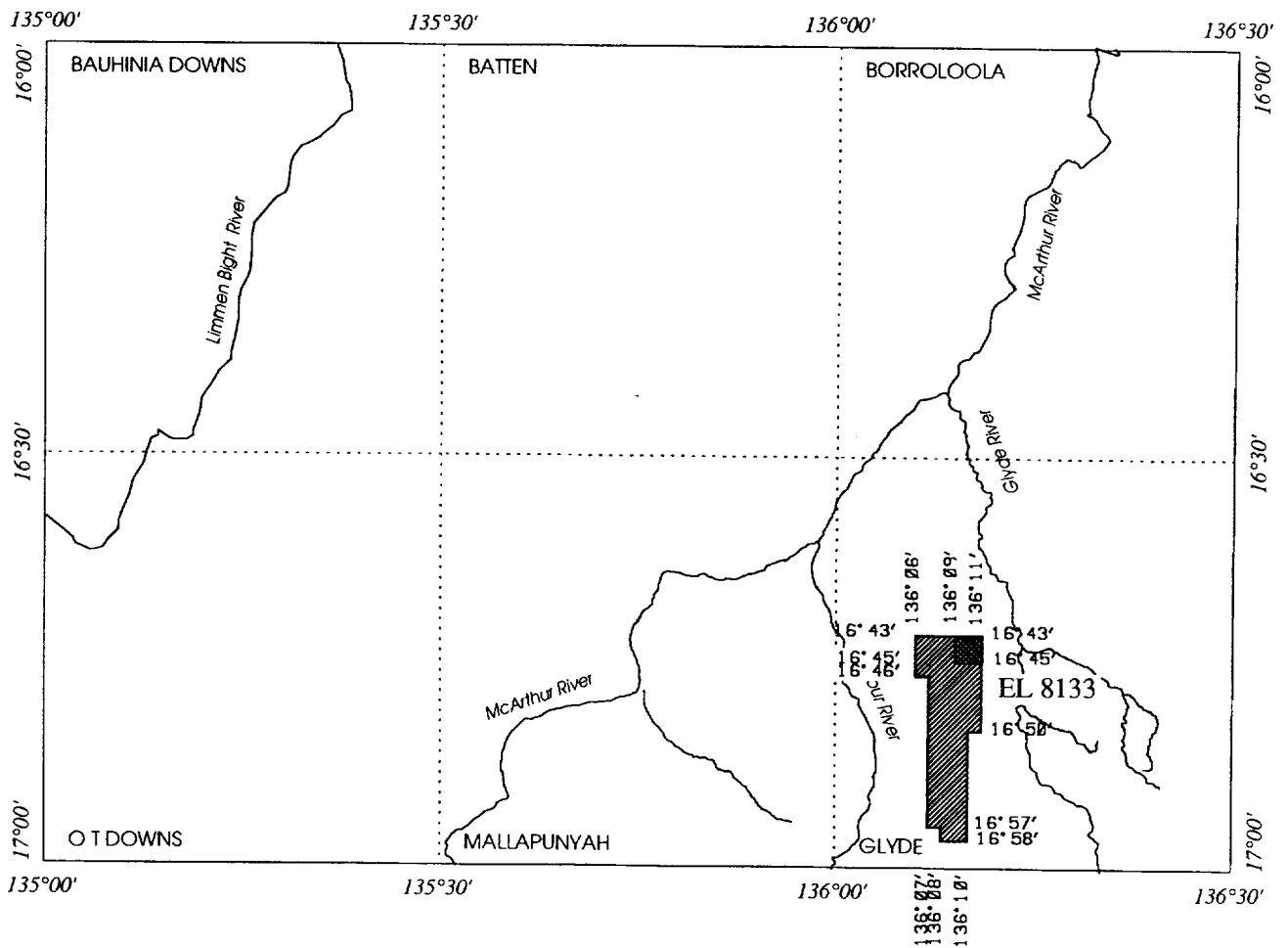
Bauhinia Downs (SE5303); Glyde (6164)

1.0 INTRODUCTION

This report details exploration activities carried out by the ADE Joint Venture over Exploration Licence 8133 for the period 24th September, 1995 to 23rd September, 1996. Ashton Mining Limited is manager of the licence on behalf of the Australian Diamond Exploration Joint Venture (ADEJV). Participants of the ADE Joint Venture also include Aberfoyle Resources Ltd and Australian Diamond Exploration Pty Ltd (ADEX).

Exploration Licence 8133 was granted to Ashton Mining Ltd on the 24th September, 1993 for a period of 6 years. The original area of the licence was 108 blocks but after the first statutory relinquishment on the 12th January, 1996, the area was reduced to 54 blocks. The relinquishment was delayed due to a request for a full waiver of reduction requirements in 1995, which was subsequently refused by the Department of Mines and Energy. In September, 1996 the licence was further reduced by 27 blocks, and then again by a voluntary reduction of 19 blocks in November, 1996. The remaining area of 4 blocks totals 12.84 km². The tenement is located on the Bauhinia Downs 1:250,000 map sheet (Figure 1).

The target for exploration by the ADE JV within the licences is diamond bearing kimberlitic intrusives and the principal exploration technique employed has been regional stream gravel sampling.



**ASHTON MINING LIMITED
A.D.E. JOINT VENTURE**

**EXPLORATION LICENCE 8133
PARTIAL RELINQUISHMENT
FIGURE 1
LOCATION MAP**

JANUARY, 1997

As this area is situated in what is a recognised base metal province, a joint venture was negotiated with BHP Minerals Pty Ltd on the 24th January, 1992 which allowed them to earn up to 80% of the base metal rights to designated licences. This joint venture was known as the McArthur River Joint Venture. This agreement was renegotiated and all existing joint venture tenements became subject to the McArthur River (Metals) Joint Venture on the 1st July, 1995. EL 8133 became part of the McArthur River (Metals) Joint Venture on 1st July, 1995.

A statement of expenditure for the relinquished portion of the licence is included in this report.

2.0 REGIONAL GEOLOGY

The ground is entirely covered by Cambrian Bukalara Sandstone. This unit overlies mid-Proterozoic sedimentary rocks. Major SE and N trending faults crosscut the Bukalara Sandstone and basement rocks.

3.0 DIAMOND EXPLORATION PROGRAMME

3.1 Data Review

Prior to commencing field work, a comprehensive data review of results and previous exploration in the tenement area was undertaken. Proposed sample locations were then selected and plotted in the office on the Glyde 1:100,000 map sheet.

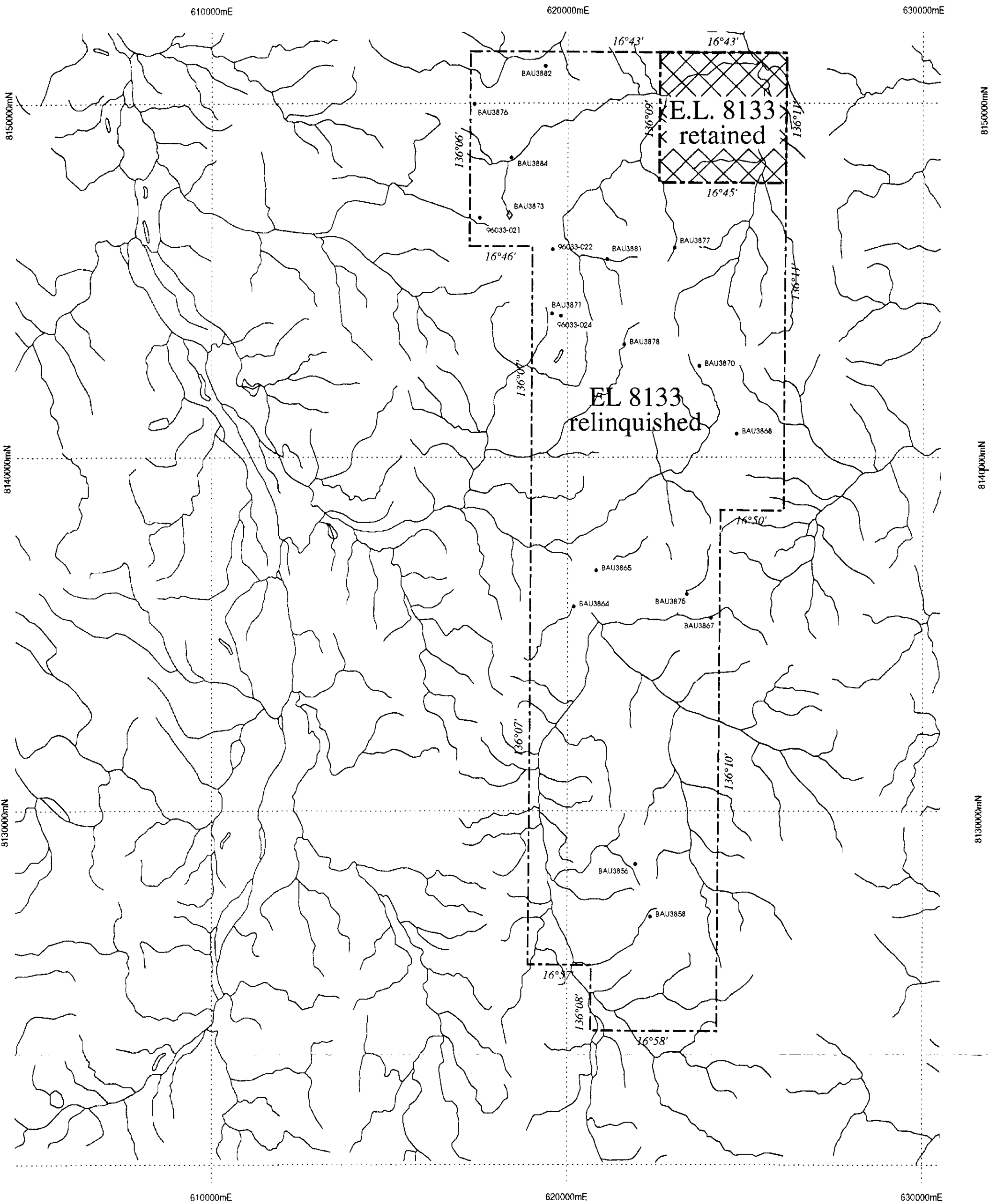
3.2 Gravel Sampling

Gravel sampling programmes were undertaken during the first, second and third years of tenure. Twelve samples from the first year, four from the second year and three from third year, making a total of 19 samples, were collected and sent to Ashton's Perth laboratory for diamond and indicator analysis. One sample, BAU03873, contained a microdiamond but all the other samples are negative.

Sampling was completed using helicopters as they are the most practical mode of transport with the advantage of ease of access and navigation. They also enable the geologist to scan the area for prospective trap sites. The best quality heavy mineral trap in the vicinity of the pre-selected site is chosen for sampling.

Once a suitable site is located, approximately 40kg of gravel is gathered, sieved and the minus 4mm fraction collected in calico bags for laboratory examination. This fraction generally weighs between 25 and 30kg and is usually contained within two bags. The bags are sent to Ashton's Perth laboratory for diamond and indicator analysis.

A sample listing is available in Appendix 1 and sample locations are shown on Figure 2.



- Sample - not yet processed
- Sample - negative
- ◆ Sample - chromite positive
- ◇ Sample - diamond positive
- Sample - other indicators

KILOMETRES
0 1 2 3 4 5
1:100,000

ASHTON MINING LIMITED		
A.D.E. JOINT VENTURE		
EXPLORATION LICENCE 8133 PARTIAL RELINQUISHMENT SAMPLE LOCATIONS		
FIGURE 2		
Geologist :	Date : JANUARY, 1997	Report No : 51529
Drafted : M.F.Ariotti	Revised :	Drawing No :

3.3 Laboratory Procedure

The samples are processed by the Ashton Mining Limited Laboratory in Perth, where they are concentrated by Wilfley Table and heavy liquid separation techniques.

The heavy liquid used is tetrabromethane with a specific gravity of 2.96. The concentrates are then screened into various size fractions, further concentrated by magnetic and electrostatic separation techniques and a comprehensive grain by grain examination carried out on the minus 1.0mm plus 0.425mm fractions.

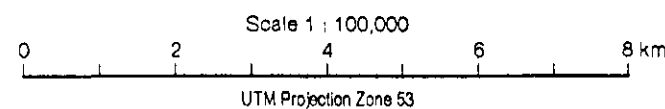
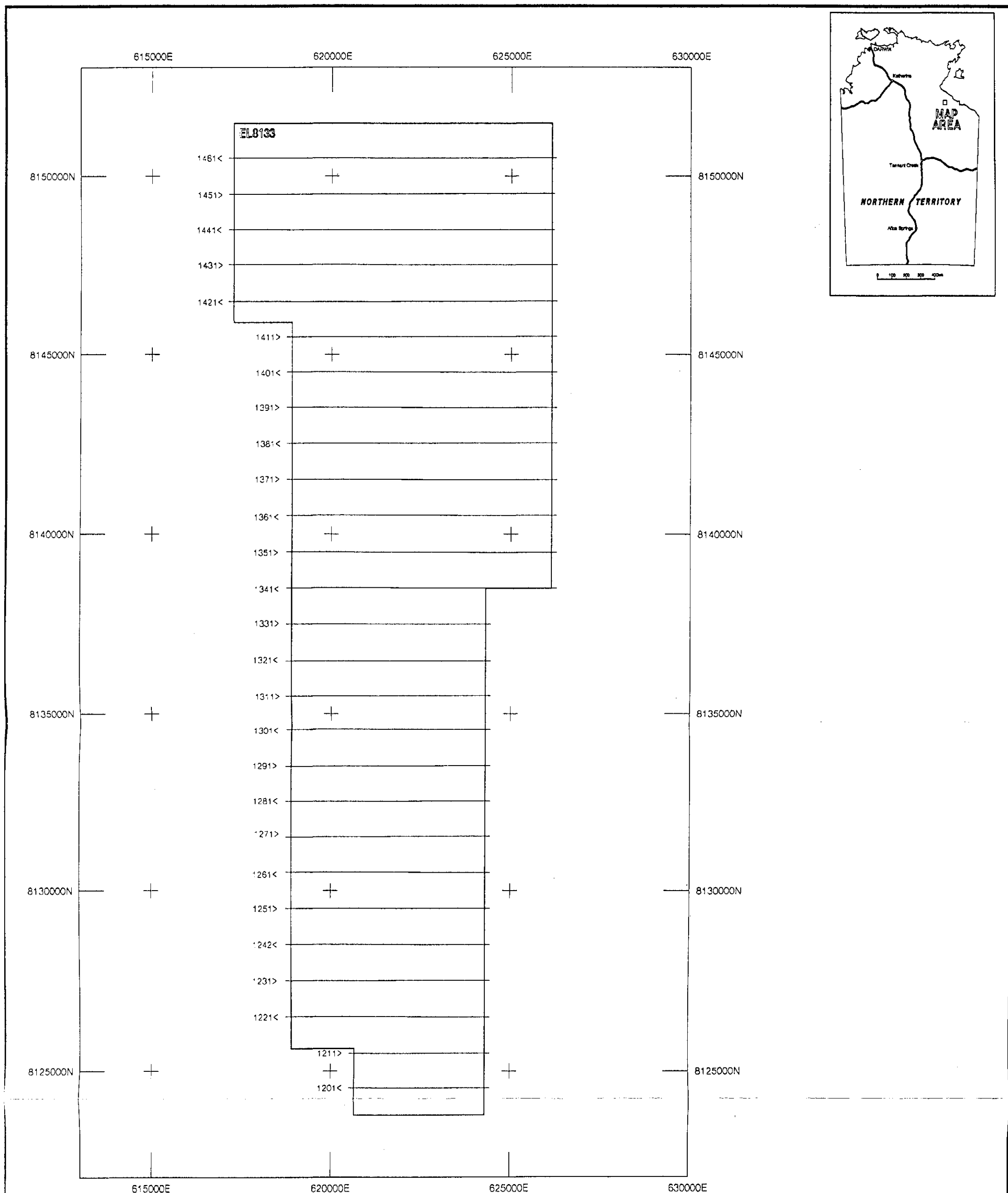
4.0 BASE METAL EXPLORATION

4.1 Geophysics


GEOTEM Survey

An airborne GEOTEM survey (Boomerang Creek survey) was flown by Geoterrex Pty Ltd in May 1996 over EL8133. Approximately 320 line km were flown with lines oriented E-W and spaced 1,000 m apart (Figure 3).

Airborne EM profiles were released in a separate report submitted to the NTGS in October, 1996 (BHP CR8783). Release of the profiles from the entire EM survey will occur concurrently with the final reports of the Exploration Licences still held within its limits. Survey specifications are presented in Appendix 2.



AIRBORNE SURVEY SPECIFICATIONS
 Contractor Geoterrax
 Magnetometer Cesium Vapour
 Magnetometer Sample Interval 1 second (approx 65 metres)
 Flight Path Recovery Doppler and GPS
 Flight Line Direction 90 degrees
 Flight Line Spacing 1000 metres
 Flying Height 105 metres
 Total line kms of survey 3234 km
 Survey flown May 1995


BHP

Exploration - BHP Minerals
BHP Minerals Pty. Ltd., A.C.N. 008 694 782

McARTHUR RIVER JV
EL8133 WILLIAMS CREEK WEST, N.T.

BOOMERANG GEOTEM SURVEY FLIGHT LINES

Prepared : T.Nunn

Date : 28-11-96

Drawn : A.R.Veale

Revised:

Centre : Perth

Drg. No.: A3-4056

FIGURE 3

The survey was flown in an effort to detect conductive targets associated with SEDEX Pb-Zn and stratiform sediment-hosted Cu-Co mineralisation. No conductors were found within the licence and hence no follow-up work was completed.

5.0 REHABILITATION

No work of a ground disturbing nature was undertaken by either Ashton Mining or BHP Minerals and therefore no rehabilitation is necessary.

6.0 EXPLORATION EXPENDITURE

Exploration expenditure for the period 24th September, 1993 to 23rd September, 1996 over the relinquished area amounted to \$36,210. A detailed breakdown of expenditure is given in Appendix 3.

7.0 CONCLUSIONS AND RECOMMENDATIONS

7.1 Diamond Exploration

Results are discouraging and no further work is warranted in this area. Partial relinquishment of EL 8133 was recommended.

7.2 Base Metal Exploration

Exploration by BHP was dependant upon the outcomes of a GEOTEM survey flown in May this year. The results were not encouraging and consequently the ground was dropped.

8.0 REFERENCES

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1995 to 23rd September, 1996. Ashton Mining Limited. Report No.51475

APPENDIX 1

Sample Results

EL 8133 RESULTS

1996 RELINQUISHMENT REPORT

Sample	Type	Result	Diamond Macro	Micro	Chromite	Other
BAU03856	G	neg	-	-	-	-
BAU03858	G	neg	-	-	-	-
BAU03864	G	neg	-	-	-	-
BAU38065	G	neg	-	-	-	-
BAU03867	G	neg	-	-	-	-
BAU03868	G	neg	-	-	-	-
BAU03870	G	neg	-	-	-	-
BAU03871	G	neg	-	-	-	-
BAU03873	G	POS	-	1	-	-
BAU03875	G	neg	-	-	-	-
BAU03876	G	neg	-	-	-	-
BAU03877	G	neg	-	-	-	-
BAU03878	G	neg	-	-	-	-
BAU03881	G	neg	-	-	-	-
BAU03882	G	neg	-	-	-	-
BAU03884	G	neg	-	-	-	-
96033-021	G	neg	-	-	-	-
96033-022	G	neg	-	-	-	-
96033-024	G	neg	-	-	-	-

NOTE: G = Gravel sample

APPENDIX 2

GEOTEM Survey Specifications

GEOTEM SPECIFICATIONS

Aircraft	-	CASA C212-200 Turbo Prop
Magnetometer	-	Scintrex Cesium Vapour Optical Absorption
Resolution	-	0.01 Nt
Cycle Rate	-	1.0 second
Sample Interval	-	60 metres
Electromagnetic System	-	GEOTEM III Time Domain EM
Transmitter Base Frequency	-	25 Hz
Receiver	-	x and z, dual axis receiver coil in towed bird
Cycle Rate	-	4 msec
Sample Interval	-	9 metres
Window mean times (msec)	-	
em1	0.4609	em2 0.4766 em3 0.4922 em4 0.5156 em5 0.5469
em6	0.5859	em7 0.6328 em8 0.6875 em9 0.7578 em10 0.8438
em11	0.9453	em12 1.0625 em13 1.2031 em14 1.3750 em15 1.5938
em16	1.8594	em17 0.0469 em18 0.0781 em19 0.1094 em20 0.1406
Data Acquisition	-	RMS GR33 Thermal Dot Matrix Recorder
	-	GEODAS Digital Acquisition System
Flight Line Direction	-	090 - 270 degrees
Flight Line Spacing	-	1,000 metres
Mean Terrain Clearance	-	105 metres
Navigation	-	GPS satellite positioning / Doppler

APPENDIX 3

Statement of Expenditure

STATEMENT OF EXPENDITURE

EXPLORATION LICENCE 8133

Relinquishment Report

For the period
24th September, 1993 to 23rd September, 1996

Geoscientist/Professional Staff	3,137
Field Support/Office Staff	5,566
Other Contractors	137
Travel/Accommodation/Meals	1,668
Field Supplies	3,123
Operating Costs	1,634
Equipment	1,333
Vehicles	1,995
Freight/Storage	1,636
Helicopter Charter	8,839
Laboratory	3,518
Drafting/Computing	333
Sub-Total	32,919
Overheads	3,291
Total:	\$ 36,210