

**ANNUAL REPORT**  
**EXPLORATION LICENCE 8162**  
***"Mountain Creek"***

12th October, 1995 to 11th October, 1996

*Licensee:* Ashton Mining Limited

*Operator:* Ashton Mining Limited

*Sheet Reference:* 1:250,000 Hodgson Downs (SD53-14)

*Submitted to:* Department of Mines and Energy, Darwin

*Copies to:* Ashton Mining Limited - Perth Office  
Ashton Mining Library

**Author:**

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

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Report Number. 51484

C296/844.

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Figure 1. Tenement Location Map

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Plan 1. Sample Location Map

## **SUMMARY**

*During the period 12th October, 1995 to 11th October, 1996, Ashton Mining Limited, on behalf of the Australian Diamond Exploration Joint Venture (ADE JV), carried out an exploration programme over Exploration Licence 8162. This report provides details of work undertaken on the licence during the reporting period.*

*A reconnaissance gravel and loam sampling programme was undertaken in the third year of the licence. Five gravel and 17 loam samples were collected and sent for diamond and indicator analysis at Ashton's Perth laboratory. Four gravel and four loam samples returned a positive result. All other samples are negative.*

*Sample results from the last reporting period became available and four samples returned positive results. All four contained chromite and one sample also contained a microdiamond. The remaining 13 samples are negative.*

*Exploration expenditure for the reporting period amounted to \$40,660 against a covenant of \$40,500.*

## **KEYWORDS:**

*Diamond exploration; Gravel sampling; Loam sampling; Indicator minerals; Chromite; Microdiamond*

## **LOCATION:**

*Hodgson Downs (SD53-14); St Vidgeon (5867*

## **1.0 INTRODUCTION**

This report details exploration activities carried out by Ashton Mining Limited over Exploration Licence 8162 for the period 12th October, 1995 to 11th October, 1996. Ashton Mining Limited is manager of the licence on behalf of the Australian Diamond Exploration Joint Venture (ADE JV). Participants of the ADE Joint Venture also include Aberfoyle Resources Limited and Australian Diamond Exploration NL (ADEX).

Exploration Licence 8162 was granted to Ashton Mining Limited on 12th October, 1993, for a period of six years. The licence originally covered an area of 476 blocks but in September, 1995, in accordance with Section 26 of the Northern Territory Mining Act, a reduction of 238 blocks was made. This report covers work undertaken during the current reporting period on the remaining area of 238 blocks (763.98 km<sup>2</sup>). The tenement is located on the Hodgson Downs (SD53-14) 1:250,000 map sheet and a location map is shown in Figure 1. The target for exploration within this licence is diamond bearing kimberlitic intrusives.

A statement of expenditure is included in this report.

## **2.0 EXPLORATION PROGRAMME**

### **2.1 Gravel Sampling**

During the third year of the licence, Ashton implemented a gravel sampling programme. A total of five gravel samples were collected and forwarded to Ashton's Perth laboratory for diamond and indicator analysis. Four samples are positive. Three contain chromite

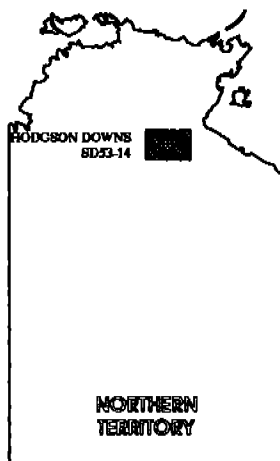
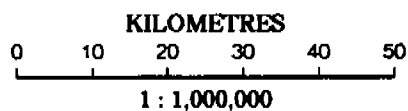
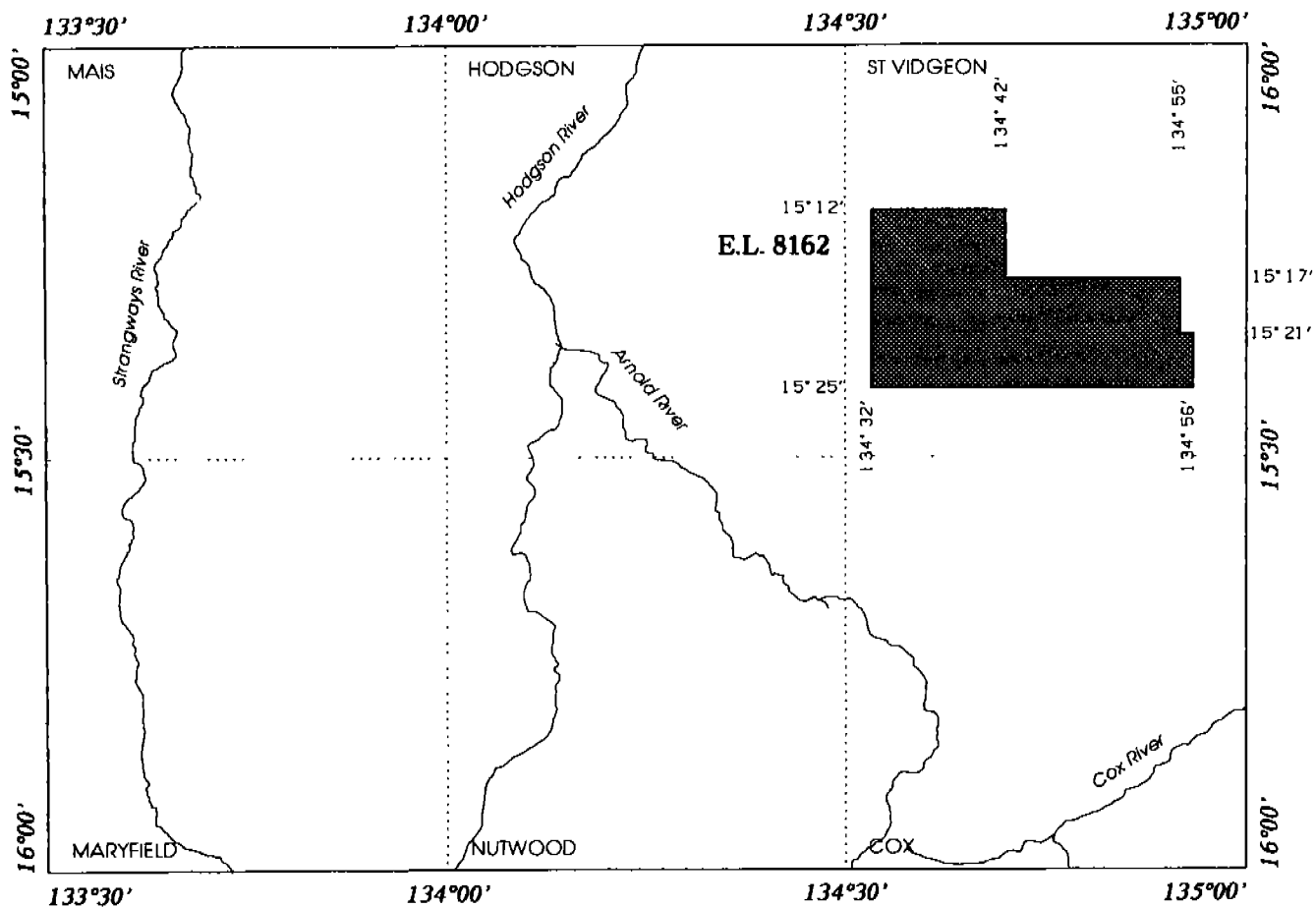
and one contains a single microdiamond. The remaining sample is negative.

Outstanding results from the previous reporting period became available (HOD01216-HOD01233). Four gravel samples have positive results. All four contain chromite and one sample also contains a single microdiamond. The remaining 13 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 appears in Appendix 1, and sample locations for the 1996 sampling are shown in Plan 1. Sample locations for the 1995 samples are shown in Plan 1 of the 1995 report (Ashton Mining Limited. Report No.51177).



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

**EXPLORATION LICENCE 8162  
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FIGURE 1  
LOCATION MAP**

NOVEMBER, 1996

## **2.2 Loam Sampling**

Seventeen loam samples were also collected in the current reporting period. These samples were sent to Ashton's Perth laboratory for diamond and indicator analysis. Four samples reported chromite and the remaining 13 are negative.

A sample listing appears in Appendix 1, and sample locations are shown in Plan 1.

## **2.3 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.

## **2.4 Geophysics**

After a number of delays the airborne geophysical survey scheduled for this reporting period has been postponed until 1997. A payment towards the survey has already been made.

### **3.0 EXPLORATION EXPENDITURE**

Exploration expenditure for the period 12th October, 1995 to 11th October, 1996 amounted to \$40,660. A detailed breakdown of expenditure is given in Appendix 2.

### **4.0 CONCLUSIONS AND RECOMMENDATIONS**

Continued follow-up of unresolved chromite and microdiamond occurrences to ascertain their source is warranted. It is recommended this be done by a combination of geophysics and further sampling, followed by drilling if necessary.

### **5.0 PROPOSED PROGRAMME AND BUDGET**

The proposed programme and budget for the period 12th October, 1996 to 11th October, 1997 is as follows:

1. Bulk sample to be collected from major indicator bearing drainage
2. Follow-up sampling, both loam and gravel
3. Aeromagnetic and ground magnetic surveys over predicted source area
4. RAB drilling of any defined targets

Geoscientist/Professional Staff	4,000
Field Support/Office Staff	2,500
Travel/Accommodation/Meals	1,500
Field Supplies	1,000
Equipment	10,000
Vehicles	1,000
Freight/Storage	500
Helicopter Charter	4,000
Drilling	5,000
Geophysics	8,000
Laboratory	7,000
Drafting/Computing	500
	<hr/>
	\$45,000
	<hr/>



## **6.0 REFERENCES**

- Reddicliffe, T H (Nov-1994) Annual report, Exploration Licence 8162, 12th October, 1993 to 11th October, 1994. Ashton Mining Limited. Report No.51080
- Ong, N (Nov-1995) Annual report, Exploration Licence 8162, 12th October, 1994 to 11th October, 1995. Ashton Mining Limited. Report No.51177
- Ong, N (Dec-1995) Relinquishment report, Exploration Licence 8162, 12th October, 1993 to 11th October, 1995. Ashton Mining Limited. Report No.51188

## **APPENDIX 1**

### **Sample Results**

Sample	Type	Result	Diamond Macro	Micro	Chromite	Other
HOD01216	G	neg	-	-	-	-
HOD01217	G	neg	-	-	-	-
HOD01218	G	neg	-	-	-	-
HOD01219	G	neg	-	-	-	-
HOD01220	G	neg	-	-	-	-
HOD01221	G	neg	-	-	-	-
HOD01222	G	neg	-	-	-	-
HOD01223	G	neg	-	-	-	-
HOD01224	G	neg	-	-	-	-
HOD01225	G	neg	-	-	-	-
HOD01226	G	POS	-	1	1	-
HOD01227	G	POS	-	-	29	-
HOD01228	G	POS	-	-	2	-
HOD01229	G	POS	-	-	32	-
HOD01230	G	neg	-	-	-	-
HOD01231	G	neg	-	-	-	-
HOD01232	G	neg	-	-	-	-
HOD01233	G	neg	-	-	-	-
96031-001	L	neg	-	-	-	-
96031-002	L	neg	-	-	-	-
96031-003	L	POS	-	-	2	-
96031-004	L	POS	-	-	3	-
96031-005	L	neg	-	-	-	-
96031-006	L	neg	-	-	-	-
96031-007	L	neg	-	-	-	-
96031-008	L	neg	-	-	-	-
96031-009	L	neg	-	-	-	-
96031-010	L	neg	-	-	-	-
96031-011	L	neg	-	-	-	-
96031-012	L	POS	-	-	4	-
96031-013	G	POS	-	-	2	-
96031-014	G	neg	-	-	-	-
96031-015	L	neg	-	-	-	-
96031-016	G	POS	-	1	-	-
96031-017	G	POS	-	-	16	-
96031-018	L	neg	-	-	-	-
96031-019	G	POS	-	-	9	-
96031-020	L	POS	-	-	1	-
96031-021	L	neg	-	-	-	-
96031-022	L	neg	-	-	-	-

NOTE: G = Gravel sample; L = Loam sample; npro = not processed

## **APPENDIX 2**

### **Statement of Expenditure**

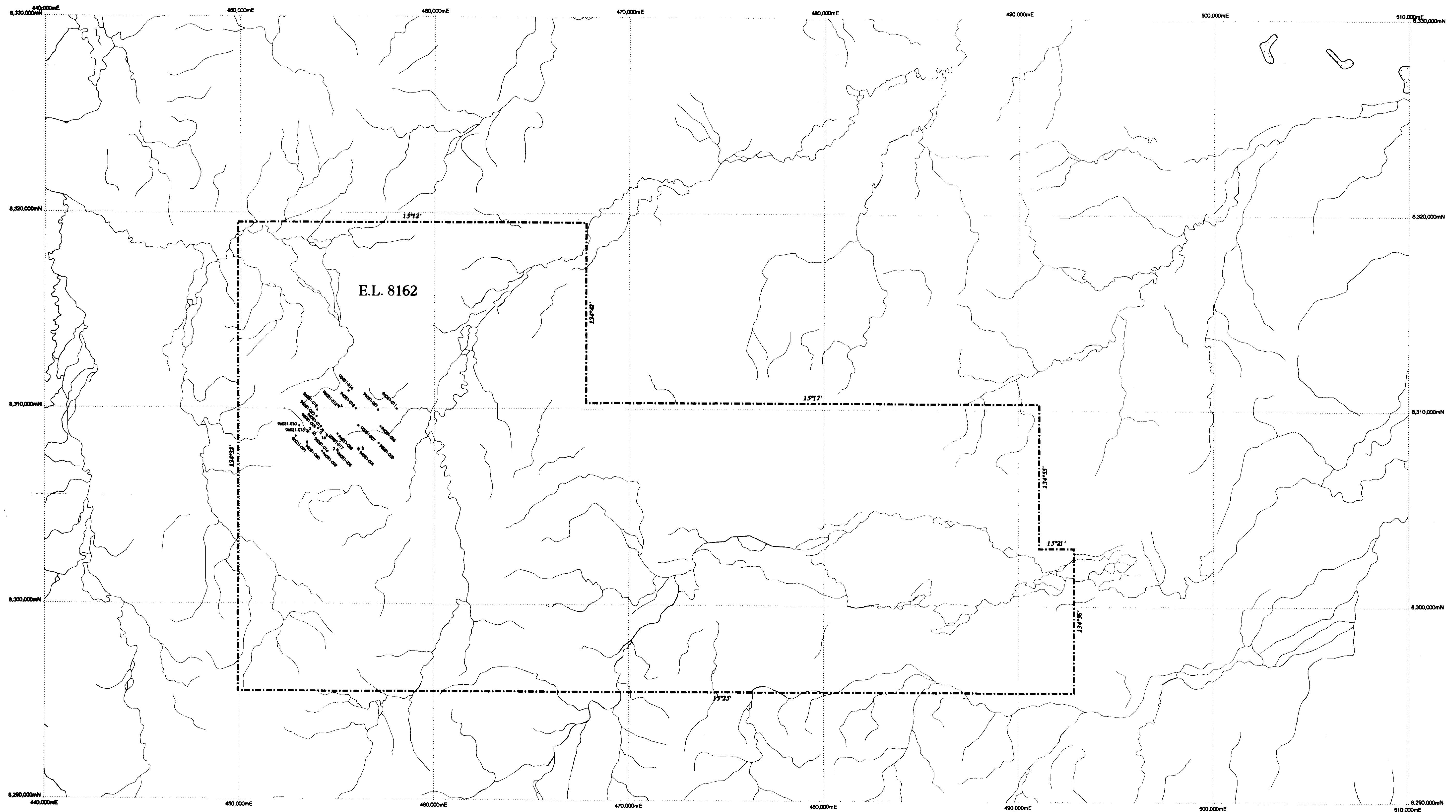
# STATEMENT OF EXPENDITURE

## EXPLORATION LICENCE 8162

Annual Report

For the period  
12th October, 1995 to 11th October, 1996

Geoscientist/Professional Staff	1,573
Field Support/Office Staff	4,431
Other Contractors	292
Travel/Accommodation/Meals	2,089
Field Supplies	879
Equipment	4,260
Vehicles	2,700
Freight/Storage	1,396
Helicopter Charter	4,438
Geophysics	1,000
Laboratory	12,632
Drafting/Computing	1,274
Sub-Total	<hr/> 36,964
Overheads	3,696
<b>Total:</b>	<hr/> <b>\$ 40,660</b> <hr/>



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- Sample - not yet processed
- Sample - negative
- Sample - chromite positive
- Sample - diamond positive
- Sample - other indicators
- Drill hole location
- Geochemical sample location

KILOMETRES  
0 1 2 3 4 5 6 7 8 9 10  
1 : 100,000

ASHTON MINING LIMITED		
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ANNUAL REPORT		
SAMPLE LOCATIONS		
PLAN 1		
Geologist :	Date : NOVEMBER 1996	Report No : 5144
Drawn : M.P. Aslett	Revised :	Drawing No :