

ANNUAL REPORT E.L. 2307

7th May, 1980

to

6th May, 1981

Submitted to:

Department of Mines and Energy,
Minerals House, Darwin.

On Behalf of:

A.O.G. Minerals Pty. Ltd.

E & R noted.

Ashton Mining Limited,
83-89 Eagle Street,
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July, 1981.

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ABSTRACT

During the period 7th May, 1980 to 6th May, 1981, Ashton Mining Limited undertook a program of regional gravel sampling in Exploration Licence 2307. A total of seventy gravel samples were collected and forwarded to the Company's laboratory in Perth.

The gravel samples were then processed and examined by the laboratory for kimberlite indicator minerals. Chromite grains were identified in three samples.

During the coming year, a comprehensive exploration program involving airborne geophysics, photogeology and geochemistry will be undertaken.

INTRODUCTION

Exploration Licence 2307 covers an area of 493.16 square miles (1277.25 square kilometres) and is located on the Waterloo and Limbunya 1:250,000 geological sheets.

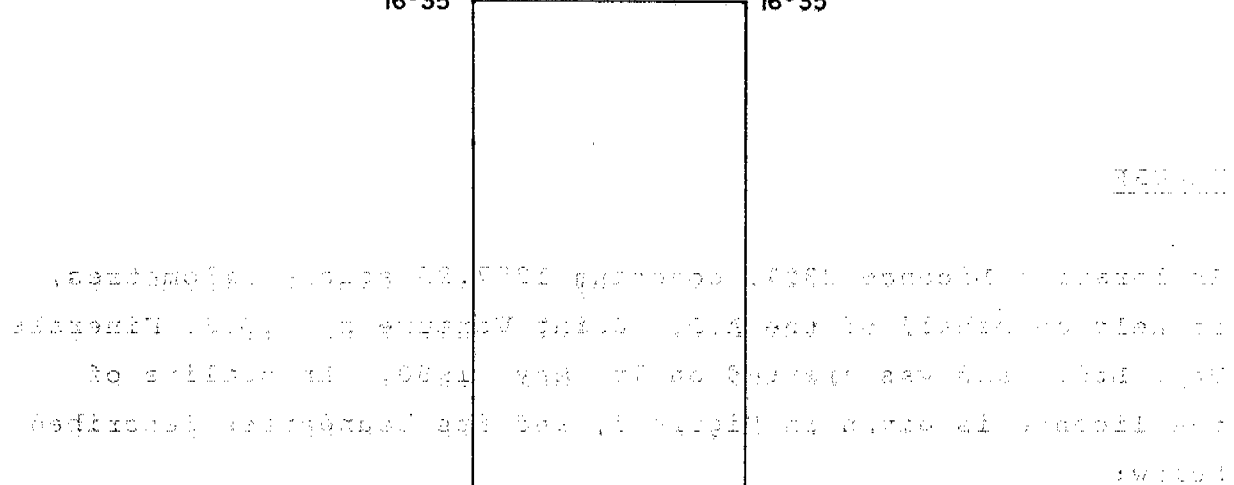
The licence was granted to A.O.G. Minerals Pty. Ltd., on 7th May, 1980 for a period of twelve months. An application for renewal for a further period of twelve months has been lodged with the Department of Mines and Energy.

Exploration Licence 2307 is subject of the A.D.E. Joint Venture Agreement between Ashton Mining Ltd., A.O.G. Minerals Pty. Ltd., and Aberfoyle Exploration Pty. Ltd., concluded on 9th September, 1980. Ashton Mining Limited is the Manager of the Joint Venture.

E.L. 2307
A.O.G. MINERALS PTY. LTD.

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FIGURE 1

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Exploration procedures instigated within the licence were aimed at locating possible kimberlite bodies. The principal exploration technique employed was regional gravel sampling.

This report gives a summary of the work carried out in E.L. 2307 during the period 7th May, 1980 to 6th May, 1981. A statement of expenditure covering this period is included in the report.

TENURE

Exploration Licence 2307, covering 1277.25 square kilometres, is held on behalf of the A.D.E Joint Venture by A.O.G. Minerals Pty. Ltd., and was granted on 7th May, 1980. An outline of the licence is given in Figure 1, and its boundaries described below:

Commencing at the intersection of latitude 16 degrees 35 minutes with longitude 130 degrees 05 minutes thence proceeding to the intersection of latitude 16 degrees 35 minutes with longitude 130 degrees 15 minutes thence proceeding to the intersection of latitude 17 degrees 00 minutes with longitude 130 degrees 15 minutes thence proceeding to the intersection of latitude 17 degrees 00 minutes with longitude 130 degrees 17 minutes thence proceeding to the intersection of latitude 17 degrees 05 minutes with longitude 130 degrees 17 minutes thence proceeding to the intersection of latitude 17 degrees 05 minutes with longitude 130 degrees 21 minutes thence proceeding to the intersection of latitude 17 degrees 10 minutes with longitude 130 degrees 21 minutes thence proceeding to the intersection of latitude 17 degrees 10 minutes with longitude 130 degrees 05 minutes thence proceeding to the intersection of latitude 16 degrees 35 minutes with longitude 130 degrees 05 minutes, subject to all applications for mining tenements and excluding therefrom all mining tenements granted or registered and all reserves included within the definition of "reserve" in section 7 of the *Mining Act*.

An application for renewal for a further twelve months has been lodged with the Department of Mines and Energy.

LOCATION AND ACCESS

Exploration Licence 2307 is located approximately sixty-five kilometres north west of Wave Hill. The licence occurs in the west and northwest of the Wickham River and Gregorys Depot 1:100,000 topographic sheets respectively, and on the Waterloo and Limbunya 1:250,000 geological sheets.

Vehicle access within the licence is restricted to cross country driving, there being no established tracks in the area. The nearest track in the vicinity of E.L. 2307 lies sixteen kilometres to the south of the licence.

FIELD INVESTIGATIONS

During the period under review, a field program involving the collection of seventy regional gravel samples was undertaken.

Gravel sampling was considered the most effective exploration method for the location of kimberlites within the licence as there is a well developed drainage pattern over most of the area, with the degree of relief and outcrop conditions providing potential for suitable heavy mineral trapsites within the drainage system.

Prior to the commencement of field work, gravel sample locations were plotted in the office on the Wickham River and Gregorys Depot 1:100,000 sheets so that sample sites were approximately six kilometres apart and distributed uniformly over the licence area.

During the field program, individual sample sites were selected on the basis of the quality of the available heavy mineral traps in the vicinity of the preselected site, care being taken to sample the most suitable trap site. Helicopter was the most practical mode of transport as it had the advantages of ease of access and navigation and enabled the geologist to scan the area for suitable trap sites.

Once a suitable trap site was located, approximately 40 kg of gravel were gathered, sieved and the minus 4 mm fraction collected for laboratory examination. Generally the minus 4 mm samples weighed 25 - 30 kg. The sample sites were accurately plotted in the field on a prepared 1:100,000 base plan. Within E.L. 2307, a total of 70 samples were collected corresponding to a sample density of one sample per 18.25 square kilometres. Sample locations are given in Plan 1.

LABORATORY PROCESSING

The samples collected within E.L. 2307 were processed at the Ashton Mining Limited laboratory in Perth, where they were concentrated by Wilfley Table and heavy liquid separation techniques.

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

Of the seventy samples processed, sixty-seven contained no detectable kimberlite indicator minerals. Chromite grains were identified in the remainder.

A complete listing of results of the laboratory examinations is shown in Appendix 1.

CONCLUSIONS

Routine laboratory testing showed that three of the samples found within E.L. 2307 contained possible kimberlite indicator minerals.

A comprehensive program involving airborne geophysics, photogeology and geochemistry has been planned for the coming term.

APPENDIX 1

RESULTS OF LABORATORY EXAMINATIONS

The following fractions of each sample were studied:

-1.0 mm +0.8 mm; denoted by +0.8
-0.8 mm +0.5 mm; " " +0.5
-0.5 mm +0.425mm; " " +0.425

Sample No.	Results	Comments
WAT 1065	Nil	
WAT 1105	Nil	
WAT 1106	Nil	
WAT 1107	Nil	
WAT 1108	Nil	
WAT 1116	Nil	
WAT 1117	Nil	
WAT 1118	Nil	
WAT 1119	Nil	
WAT 1120	Nil	
WAT 1121	Nil	
WAT 1122	Nil	
WAT 1123	Nil	
WAT 1124	Nil	
WAT 1125	Nil	
WAT 1126	Nil	
WAT 1127	Nil	
WAT 1128	1 +0.425 chromite	Worn, anhedral irregular fractured grain, vitreous core.
WAT 1129	Nil	
WAT 1130	Nil	
WAT 1131	Nil	
WAT 1132	Nil	
WAT 1133	Nil	
WAT 1140	Nil	
WAT 1141	Nil	
WAT 1184	Nil	
WAT 1185	1 +0.425 chromite	Worn, rounded anhedral, dull matte smooth surfaces, hole in one side.

Sample No.	Results	Comments
WAT 1186	1 +0.425 chromite	Worn, anhedral, dull smooth surface, vitreous fracture, hole in centre, brittle streak.
WAT 1187	Nil	
WAT 1188	Nil	
WAT 1189	Nil	
WAT 1190	Nil	
WAT 1191	Nil	
WAT 1192	Nil	
WAT 1193	Nil	
WAT 1194	Nil	
WAT 1196	Nil	
WAT 1197	Nil	
WAT 1199	Nil	
WAT 1200	Nil	
WAT 1221	Nil	
WAT 1222	Nil	
WAT 1223	Nil	
WAT 1224	Nil	
WAT 1226	Nil	
WAT 1237	Nil	
WAT 1238	Nil	
WAT 1239	Nil	
LIM 001	Nil	
LIM 002	Nil	
LIM 003	Nil	
LIM 004	Nil	
LIM 020	Nil	
LIM 021	Nil	
LIM 022	Nil	
LIM 023	Nil	
LIM 026	Nil	
LIM 027	Nil	
LIM 028	Nil	
LIM 029	Nil	
LIM 030	Nil	
LIM 031	Nil	
LIM 032	Nil	

Sample No.	Results	Comments
LIM 033	Nil	
LIM 034	Nil	
LIM 036	Nil	
LIM 037	Nil	
LIM 038	Nil	
LIM 047	Nil	
LIM 048	Nil	

APPENDIX 2

A.D.E. JOINT VENTURE

EXPLORATION LICENCE NO. 2307

EXPENDITURE for the year ended 6th May 1981

	\$
Salaries	2,768
Field & Laboratory Expenses	10,035
Miscellaneous	2,314
Expenditure for year	<u>15,117</u>

Date Licence Granted: 7.5.80

