

FINAL REPORT ON AREA

RELINQUISHED

Exploration Licence 2238

7th May, 1980

to

5th March, 1981

Submitted to: Department of Mines & Energy,  
Minerals House,  
Darwin.

**OPEN FILE**

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April, 1981.

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### PLANS

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                             Sample Locations - E.L. 2238
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### APPENDICES

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## SUMMARY

A regional gravel sampling program was undertaken within the area relinquished in E.L. 2238 at a density of one sample per 35.50 square kilometres. A total of 4 gravel samples were collected and the heavy mineral fractions examined for kimberlitic indicator minerals.

Three of the samples contained possible kimberlite indicator minerals. However, on further detailed examination, these proved to be of non-kimberlitic origin.

## INTRODUCTION

Exploration Licence 2238, covering an area of 1291.79 square kilometres in the Waterloo 1:250,000 sheet was granted to Aberfoyle Exploration Pty. Ltd. on 7th May, 1980, for a period of twelve months.

The target of exploration was diamonds and the principal exploration technique employed was regional gravel sampling.

Following the first phase of exploration, an area of 142 square kilometres was relinquished. Plan 1 shows the boundaries of this area with respect to the original licence boundaries. This report summarizes the result of the regional gravel sampling program in the area relinquished.

A statement of expenditure is presented in Appendix 2.

### EXPLORATION PROGRAM

Prior to the commencement of field work, gravel sample locations were plotted in the office on the Newry 1:100,000 sheet so that sample sites were approximately seven kilometres apart and distributed uniformly over the 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 sample 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 the relinquished portion of E.L. 2238, a total of 4 samples were collected corresponding to sample density of one sample per 35.50 square kilometres. Sample locations are given in Plan 1.

The samples 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 comprehensive grain by grain examination carried out on the minus 1.0 mm plus 0.425 mm fractions.

Of the 4 samples collected within the area, 1 contained no detectable kimberlite indicator minerals. Chromite grains were identified in the remainder. On further detailed examination these proved to be of non-kimberlitic origin.

#### CONCLUSIONS

Laboratory testing failed to give any kimberlite-derived minerals in the samples. As the sampling program was considered to have tested the area adequately, it was concluded that the likelihood of finding kimberlites was remote and, subsequently, the area was surrendered with effect from 6th March, 1981.

APPENDIX 1

RESULTS OF LABORATORY EXAMINATIONS:

The following fractions of each sample were studied:

-1.00mm	+0.8mm:	denoted by	+0.8
-0.8 mm	+0.5mm:	" "	+0.5
-0.5 mm	+0.425mm:	" "	+0.425

Sample No.	Results	Comments
WAT 341	Nil	
WAT 372	1 +0.5 Chromite 12 +0.425 Chromite	Very Fresh-Fresh euhedral-subhedral, matte pitted or smooth surfaces, vitreous cores. Two grains intergrown with rock fragments.
WAT 374	Many +0.5 Abundant +0.425 Chromite	Fresh, euhedral-rounded, fine or coarsely pitted surfaces, some smooth matte, some truncated octahedra, convex vitreous cores.
WAT 376	2 +0.5 Chromite 19 +0.425 Chromite	Fresh, euhedral-anhedral, rounded. Smooth to pitted matte to subvitreous surfaces.

APPENDIX 2



A.D.E. JOINT VENTURE

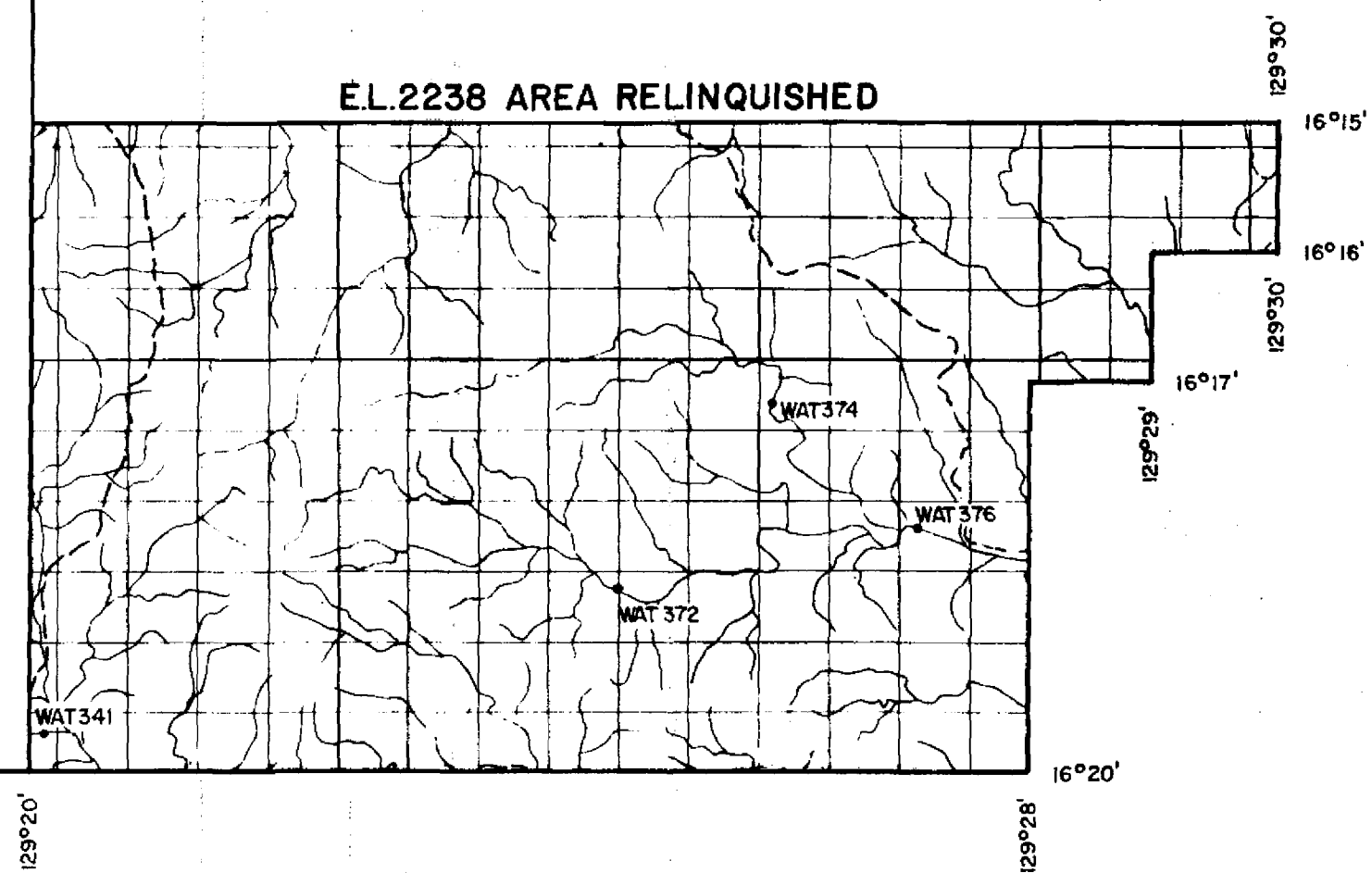
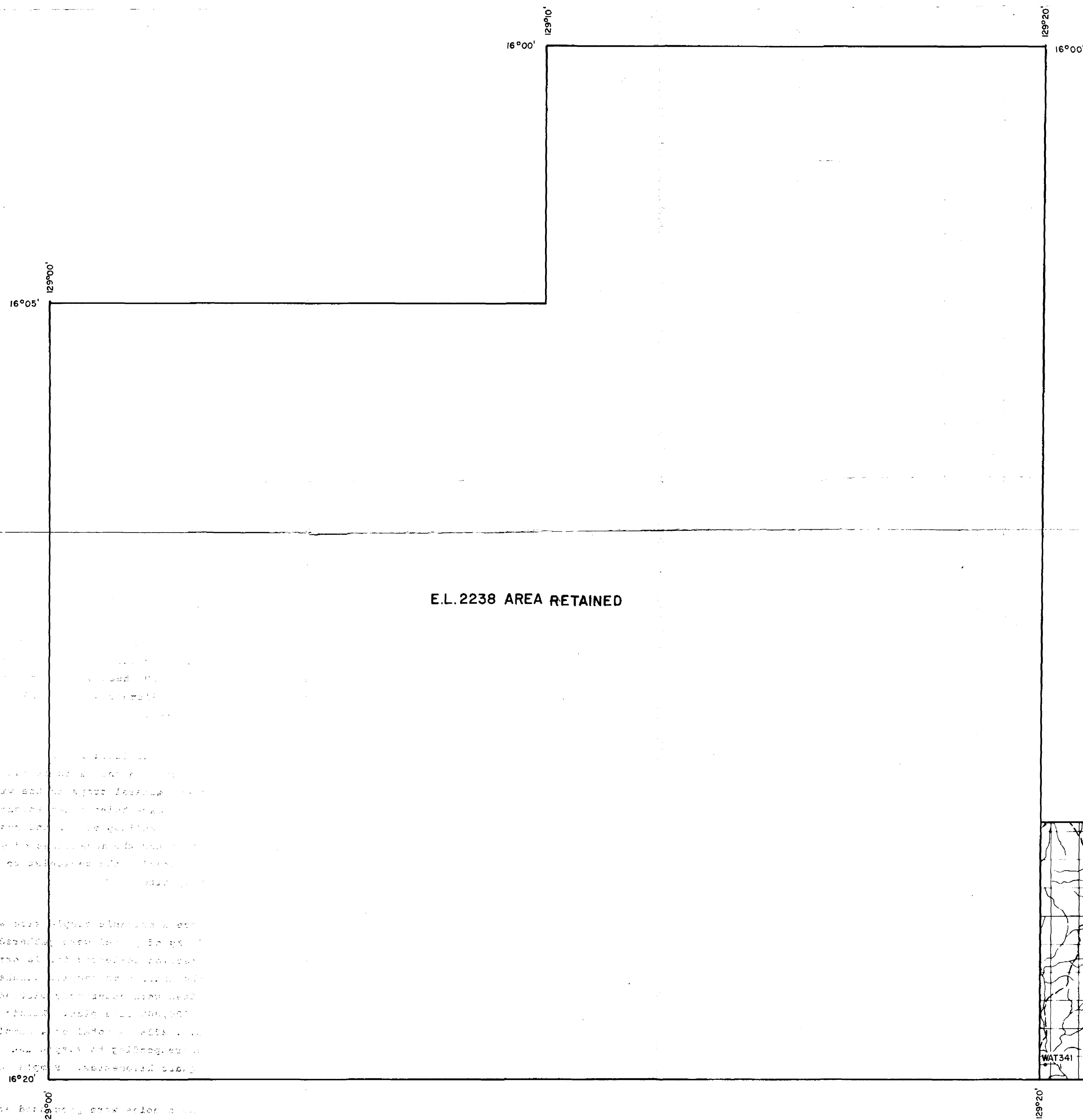
EXPLORATION LICENCE NO. 2238

EXPENDITURE for the period of Tenure 7.5.80 to 5.3.81(Relinquished Area)

	\$
Salaries	436
Field & Laboratory Expenses	1,601
Miscellaneous	364
Expenditure for quarter ended	<u>2,401</u>

Date Licence Granted: 7.5.80

D.W.B. 10.4.81



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ABERFOYLE EXPLORATION PTY. LTD.

REGIONAL GRAVEL SAMPLING

E.L. 2238

AREA RELINQUISHED  
AND SAMPLE LOCATIONS

PLAN 1

0 1 2 3 4 5 km.

SCALE 1:100 000

Date MARCH, 1981