FINAL REPORT E.L. 2299

7th May, 1980

to

26th February, 1981

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

Ashton Mining Limited,
83-89 Eagle Street,
Brisbane. 4000

April, 1981

C O N T E N T S

PLANS

APPENDICES

SUMMARY

A regional gravel sampling program was undertaken in E.L. 2299 at a density of one sample per 40.23 square kilometres. A total of 32 gravel samples were collected and the heavy mineral fractions examined for kimberlitic indicator minerals.

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

INTRODUCTION

Exploration Licence 2299 was granted to Ashton Mining Limited on 7th May, 1980, for a period of twelve months. It covers an area of 1287.50 square kilometres and is on the Limbunya 1:250,000 sheet.

The target of exploration was diamonds and the principal exploration technique employed was regional gravel sampling. This report summarizes the results of the regional gravel sampling program undertaken during the period 7th May, 1980 to 26th February, 1981, which is the date of surrender of the licence.

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 Inverway 1:100,000 sheet so that sample sites tested the available drainage at intervals of approximately six kilometres. Drainage is poorly developed in 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 advantage 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 E.L. 2299, a total of 32 samples were collected corresponding to a sample density of one sample per 40.23 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 a comprehensive grain by grain examination carried out on the minus 1.0 mm plus 0.425 mm fractions.

Of the 32 samples collected within the licence, 30 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 licence adequately, it was concluded that the likelihood of finding kimberlites in E.L. 2299 was remote and that no further exploration for diamonds should be undertaken. The licence was subsequently surrendered with effect from 27th January, 1981.

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	+0.425 mm;	" " +0.425

Sample No.	Results	Comments
LIM 364	Nil	
LIM 374	Nil	
LIM 375	Nil	
LIM 376	Nil	
LIM 378	Nil	
LIM 384	Nil	
LIM 385	Nil	
LIM 386	Nil	
LIM 387	Nil	
LIM 388	Nil	
LIM 389	2 +0.5 chromite 1 +0.425 "	Fresh-Fresh/Worn, euhedral and anhedral, dull matte or subvitreous irregular surfaces. One is intergrowth of grains. Soft brown streak, vitreous fracture.
LIM 390	Nil	
LIM 396	Nil	
LIM 397	Nil	
LIM 403	Nil	
LIM 404	Nil	
LIM 405	Nil	
LIM 406	Nil	
LIM 407	Nil	

Sample No.	Results	Comments
LIM 408	Nil	
LIM 409	Nil	
LIM 410	Nil	
LIM 411	Nil	
LIM 412	Nil	
LIM 413	Nil	
LIM 414	Nil	
LIM 415	1 +0.5 chromite	Fresh/Worn, subhedral, ragged matte surface some holes, vitreous fracture.
LIM 416	Nil	
LIM 425	Nil	
LIM 427	Nil	
LIM 428	Nil	
LIM 430	Nil	

APPENDIX 2

A.D.E. JOINT VENTURE

EXPLORATION LICENCE NO. 2299

EXPENDITURE for the Period of Tenure 7.5.80 to 26.2.81

	$
Salaries	2,058
Field & Laboratory Expenses	6,432
Miscellaneous	1,437
Expenditure for quarter ended	9,927

Date Licence Granted: 7.5.80

D.W.B: 10.4.81

E.L.2299

17°36'
129°35'
129°50'
17°40'
129°30'
17°45'
129°50'
17°50'
129°47'
18°00'
129°30'
18°00'
129°45'

LIM425
LIM396
LIM397
LIM364
LIM416
LIM374
LIM375
SWAN CREEK
LIM427
LIM430
LIM415
LIM428
LIM403
LIM404
LIM405
LIM389
LIM388
LIM406
LIM376
BUCHANAN HIGHWAY
"RIVERWAY"
Aerodrome
LIM387
LIM378
LAURA CREEK
LIM407
LIM385
LIM386
LIM384
LIM408
LIM414
LIM412
LIM413
CREEK
LIM390
LIM409
LIM411
STUART
LIM410

ASHTON MINING LIMITED

REGIONAL GRAVEL SAMPLING

E.L. 2299
SAMPLE LOCATIONS
PLAN 1

0 1 2 3 4 5 km.

SCALE 1:100 000

Date:- MARCH, 1981