

FINAL REPORT E.L. 4332

26th February, 1985
to
28th November, 1985

Licensee: Ashton Mining Limited
Operator: Ashton Mining Limited
Sheet
Reference: Alroy (SE 53-15) 1:250,000
Submitted to: Department of Mines & Energy

**NORTHERN TERRITORY
GEOLOGICAL SURVEY**

ASHTON MINING LIMITED
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CR 86 / 084A
February, 1986

ABSTRACT

During the period 26th February, 1985 to 28th November, 1985, Ashton Mining Limited on behalf of the A.D.E. Joint Venture undertook a loam sampling program within E.L. 4332. The licence formed part of a larger area which was tested for the presence of diamonds in regional gravel or loam samples.

Although five small diamonds were recovered from the sampling, the licence area was not regarded as holding as much potential for kimberlites as ground held elsewhere in the Territory by the Joint Venture.

It was therefore decided that E.L. 4332 should be surrendered:

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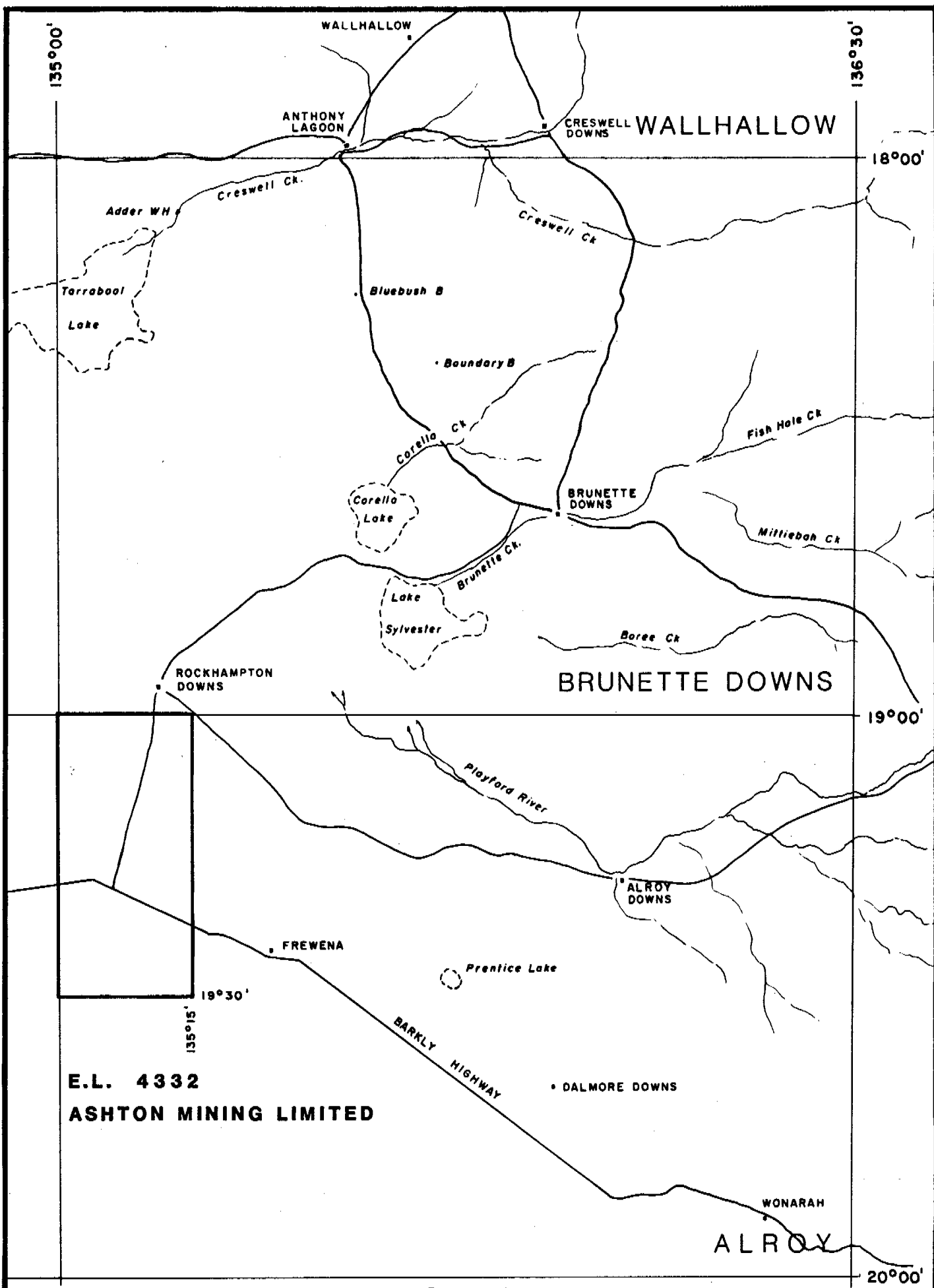
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L I S T O F P L A N S

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E.L. 4332
ASHTON MINING LIMITED

FIGURE 1
LOCATION MAP

3.00 CONCLUSIONS

Despite the fact that a number of loam samples were found to contain microdiamonds, the exploration program failed to provide encouragement in locating the presence of a kimberlite pipe within E.L. 4332. This fact together with disappointing results in areas adjoining the licence led the A.D.E. Joint Venture to conclude that exploration efforts should be concentrated in more promising ground held elsewhere in the Territory. Consequently E.L. 4332 was surrendered with effect from 29th November, 1985.

1.00 INTRODUCTION

Exploration Licence 4332 covered an area of 1,449 square kilometres (450 blocks) on the Alroy 1:250,000 sheet (refer to Figure 1).

The licence, which was granted to Ashton Mining Limited on 26th February, 1985, was held on behalf of the A.D.E. Joint Venture comprising Ashton Mining Limited, A.O.G. Minerals Limited, Aberfoyle Exploration Pty. Limited and Australian Diamond Exploration N.L. Ashton Mining Limited is the Manager of the Joint Venture.

The exploration target was diamonds with the licence forming part of a larger area which was subject to loam and gravel sampling.

This report gives a summary of the work carried out in E.L. 4332 during the period 26th February, 1985 to 28th November, 1985.

A statement of expenditure covering this period is included in the report.

2.00 REGIONAL SAMPLING PROGRAM

2.10 Field Phase

A loam sampling program involving the collection of sixty-five samples was undertaken in E.L. 4332 as part of a larger regional program in the Alroy area.

As the licence was devoid of drainages, the normal practice of systematic gravel sampling could not be exercised and consequently exploration for diamonds was restricted to the collection of loam samples.

The sampling program was undertaken with fifty-five loams collected from Cainozoic sediments located within close proximity of the Barkly Highway in the southern portion of the licence. An additional ten loam samples were collected from outcropping black and grey clayey soils, north of the Highway, thought to represent the margin of a possible ancient lake. Helicopter was the most practical mode of transport in the collection of these latter samples.

Prior to the commencement of the loam sampling work, 1:50,000 scale enlargements of the available photography were secured both for navigation and to allow a photogeological scan of the area. No kimberlite or lamproite type intrusive features were discernable from

the air photos.

All sample locations are given on Plan 1.

2.20 Laboratory Phase

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 1.0mm plus 0.4 mm fractions.

Of the 65 samples collected within the licence, 61 contained no detectable kimberlite indicator minerals. Five microdiamonds were recovered from the four remaining samples.

A complete listing of laboratory results for all the samples is given in Appendix 1.

APPENDIX 1.

RESULTS OF LABORATORY EXAMINATIONS

REGIONAL LOAM SAMPLES EL 4332

The following fractions of each sample were studied:

-1.0 mm +0.8 mm; denoted by +0.8
-0.8 mm +0.5 mm; denoted by +0.5
-0.5 mm +0.425 mm; denoted by +0.4

Sample No	Results	Comments
ALR 321	Nil	
ALR 322	Nil	
ALR 323	Nil	
ALR 324	Nil	
ALR 325	1 -0.4 DIAMOND	1 +0.2 mm STONE white, clear, all faces are fracture faces.
ALR 326	Nil	
ALR 327	Nil	
ALR 328	Nil	
ALR 329	Nil	
ALR 330	Nil	
ALR 331	Nil	
ALR 332	Nil	

Sample No	Results	Comments
ALR 333	Nil	
ALR 334	Nil	
ALR 335	Nil	
ALR 336	Nil	
ALR 337	Nil	
ALR 338	Nil	
ALR 339	Nil	
ALR 340	Nil	
ALR 341	Nil	
ALR 342	Nil	
ALR 343	Nil	
ALR 344	Nil	
ALR 345	Nil	
ALR 346	Nil	
ALR 347	Nil	
ALR 348	Nil	
ALR 349	1 -0.4 DIAMOND	1 +0.1 mm STONE fragment, turbid, cream-white, appears to be a corner and one side of a cube.

Sample No	Results	Comments
ALR 350	1 -0.4 DIAMOND	1 +0.2 mm STONE translucent, cube shaped, some dark-brown areas, remainder amber. Cavity eroded in one face; one fracture face.
ALR 351	Nil	
ALR 352	Nil	
ALR 353	Nil	
ALR 354	Nil	
ALR 355	Nil	
ALR 356	Nil	
ALR 357	Nil	
ALR 358	Nil	
ALR 359	Nil	
ALR 360	Nil	
ALR 361	Nil	
ALR 362	Nil	
ALR 363	Nil	
ALR 364	Nil	
ALR 365	Nil	
ALR 366	Nil	
ALR 367	Nil	

Sample No	Results	Comments
ALR 368	Nil	
ALR 369	Nil	
ALR 370	2 -0.4 DIAMOND	1 +0.2 mm STONE turbid, pink-cream cube with some twinning. 1 +0.2 mm STONE cube with some irregularities on edges and faces, translucent, almost clear.
ALR 371	Nil	
ALR 372	Nil	
ALR 373	Nil	
ALR 374	Nil	
ALR 375	Nil	
ALR 376	Nil	
ALR 377	Nil	
ALR 378	Nil	
ALR 379	Nil	
ALR 380	Nil	
ALR 381	Nil	
ALR 382	Nil	
ALR 383	Nil	
ALR 384	Nil	

Sample No

Results

Comments

ALR 385

Nil

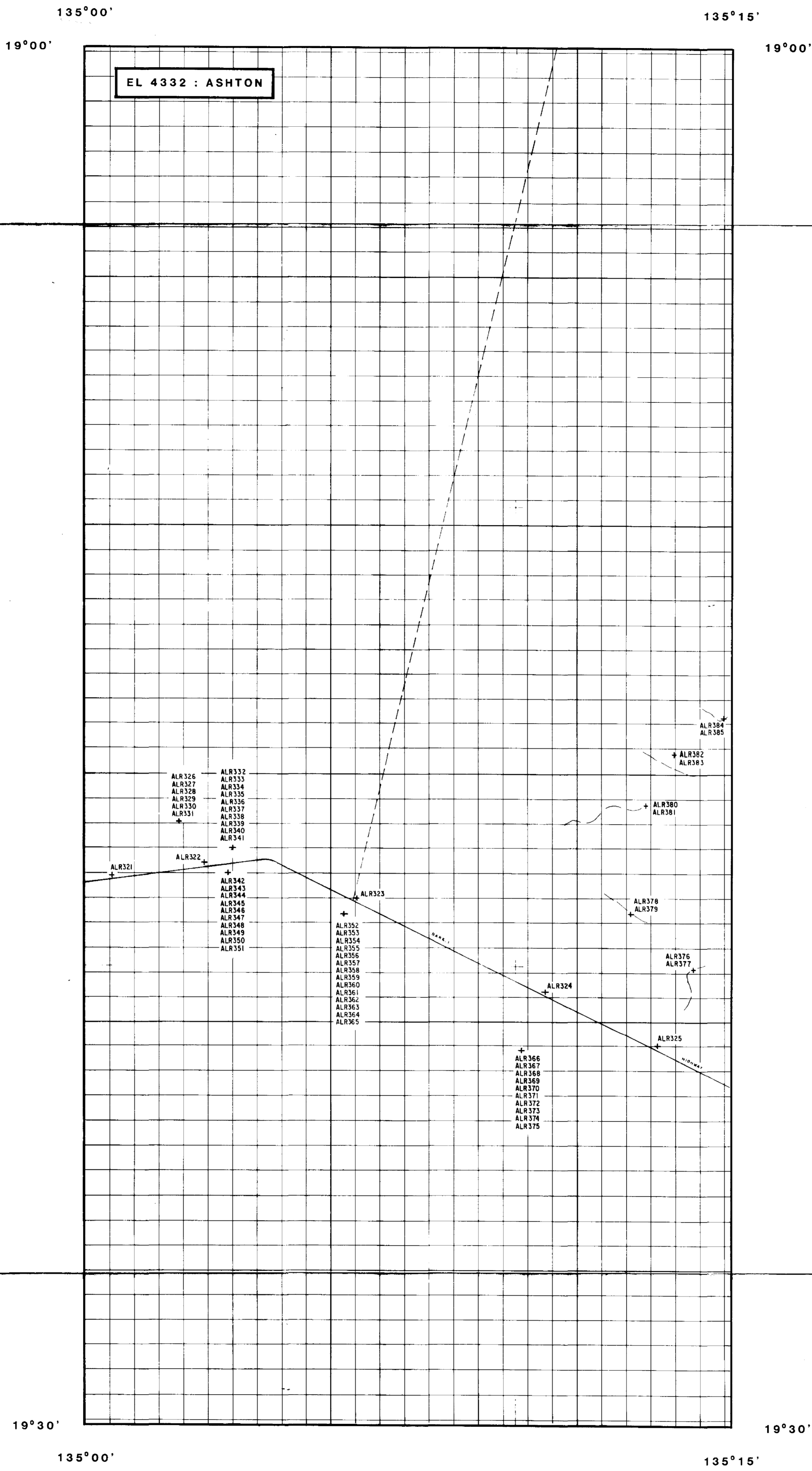
APPENDIX 2.

A.D.E. JOINT VENTURE

EXPLORATION LICENCE NO. 4332

FINAL EXPENDITURE FOR THE PERIOD 26/2/85 - 28/11/85

	\$
Salaries	12,456
Field and Laboratory Expenses	34,514
Miscellaneous	9,383
	<hr/>
Expenditure:	\$56,353
	<hr/>



SAMPLE SYMBOLS

- GRAVEL SAMPLE
- + LOAM SAMPLE
- * ROCK SAMPLE

ALR321 Sample taken during period 26.2.85 - 28.11.85

NORTHERN TERRITORY
GEOLOGICAL SURVEY
CR86/084A

ASHTON MINING LIMITED
A.D.E. JOINT VENTURE
E.L. 4332
SAMPLE LOCATIONS
PLAN 1
0 1 2 3 4 5 KM
Scale 1:100 000
ASHTON MINING LIMITED FEBRUARY, 1986