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No. 5464

EL 1211

WATTLE HILL

PROGRESS REPORTS AND FINAL REPORT TO LICENCE EXPIRY/SURRENDER, FOR THE PERIOD 5/1/1984 TO 4/1/1985

Submitted by
Adelaide Brighton Cement Ltd
1985

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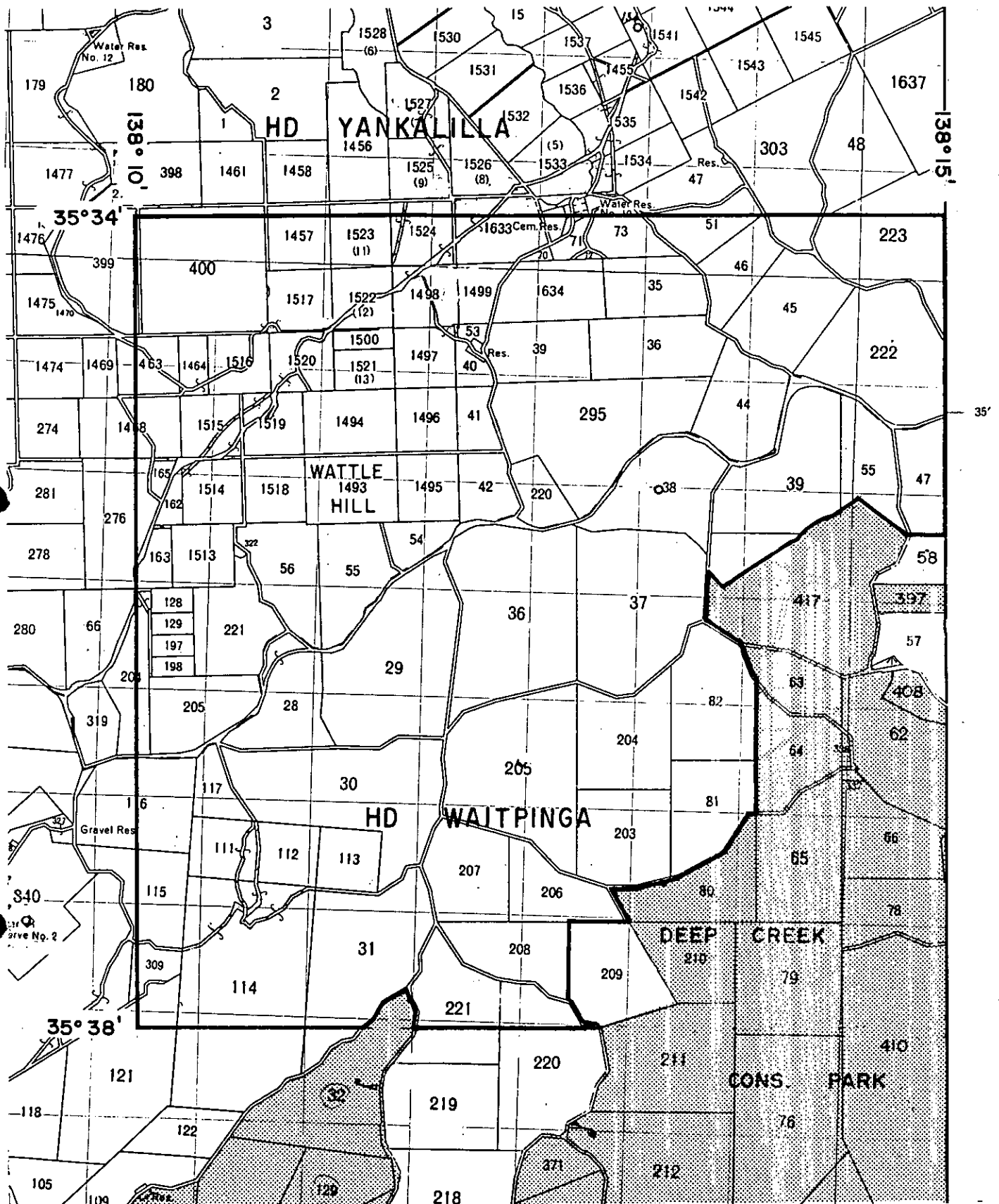
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Government of South Australia
Department of State Development



SCALE 1:50 000

METRES 1000 0 1 2 3 4 5 KILOMETRES

APPLICANT: ADELAIDE BRIGHTON CEMENT LTD.

DM: 257/83

AREA: 48

square kilometres (approx.)

1:250 000 PLANS: BARKER

LOCALITY: WATTLE HILL AREA - FLEURIEU PENINSULA

DATE GRANTED: 5-1 -84

DATE EXPIRED: 4-1 -85

EL No: 1211

EXPIRED

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TENEMENT HOLDER: Adelaide Brighton Cement Ltd.

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Adelaide Brighton Cement Ltd.

0003

INCORPORATED IN SOUTH AUSTRALIA
CHARLES STREET, BIRKENHEAD, SOUTH AUSTRALIA – TELEPHONE (08) 490400

MIM:RMC:SAJ

15 May 1984

The Director-General
Department of Mines & Energy
PO Box 151
EASTWOOD SA 5063

Attention:- Mr Ian Grant

Dear Sir,

Exploration Licence 1211 - Delamere/Waitpinga Shale

Quarterly Report

Since the granting of this Licence, negotiations were commenced with the Department of Woods and Forests to waive the exemption held on Section 295 in the Hundred of Waitpinga. The Department's ultimate refusal to grant the waiver was disappointing in view of our Geologist's favourable report on the probable quality of the deposit of shale within this area.

However, we subsequently and successfully negotiated waivers with Mr J.N. Chirgwin, for Section 220, Hundred of Yankalilla, Mrs M.W. Anderson, for Sections 37 and 38, Hundred of Waitpinga and with Mr. P.A. Krichauff for Section 36 within the same Hundred.

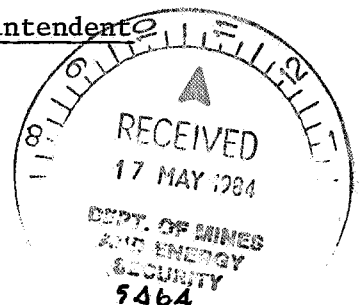
A drilling programme for fifteen (15) holes was arranged, agreed with a drilling contractor and the perpetual lease-holders and then undertaken during the week commencing 30 April.

Preparation of the recovered samples for analysis is now in progress and the results of the analyses, expected to be available at the end of this month, will be recorded in the next quarterly report.

Yours faithfully,



M.I. MOORE
Group Technical Superintendent



Adelaide Brighton Cement Ltd.

0004

INCORPORATED IN SOUTH AUSTRALIA
CHARLES STREET, BIRKENHEAD, SOUTH AUSTRALIA – TELEPHONE (08) 49 0400

CLN:BG

23 August 1984

The Director-General,
Department of Mines and Energy,
P.O. Box 151,
EASTWOOD S.A. 5063

Attention: Mr. Ian Grant

Dear Sir,
EXPLORATION LICENCE 1211-DELAMERE/WAITPINGA SHALE
QUARTERLY REPORT

Since our last quarterly report, 15 holes totalling 348.4 m have been drilled on Sections 36, 37 and 38 Hundred of Waitpinga and Section 220 Hundred of Yankalilla. The location of these holes is shown on the attached portion of Lands Department Map, Sheet No. 6526-8. The drill logs and the core analysis pertaining to each hole are also attached.

We have concluded that the shale located on Section 36 is unsuitable for our purposes due to high alkali levels. While the shales located on Sections 37 and 38 are generally suitable, the water table located at depths of 20 - 35 metres would make development of a workable quarrying method unlikely. The shales located on Section 220 Hundred of Yankalilla are suitable for our purposes and this area appears attractive for a prospective quarry.

We are currently negotiating with the lessee of Section 220 and examining the economics of extracting shale in this Section.

Expenditure incurred since our last report is as follows:

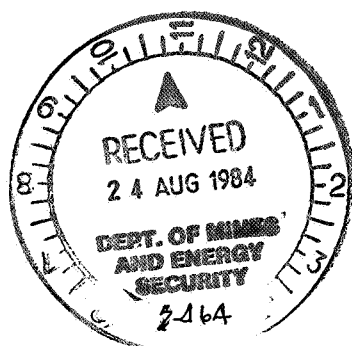
Drilling Contractor	\$5574.40
Supervision & Logging	\$2000.00
Analysis	\$2100.00
Administration	<u>\$1000.00</u>
	<u>\$10674.40</u>

Yours faithfully,



M.I. MOORE

Group Technical Superintendent

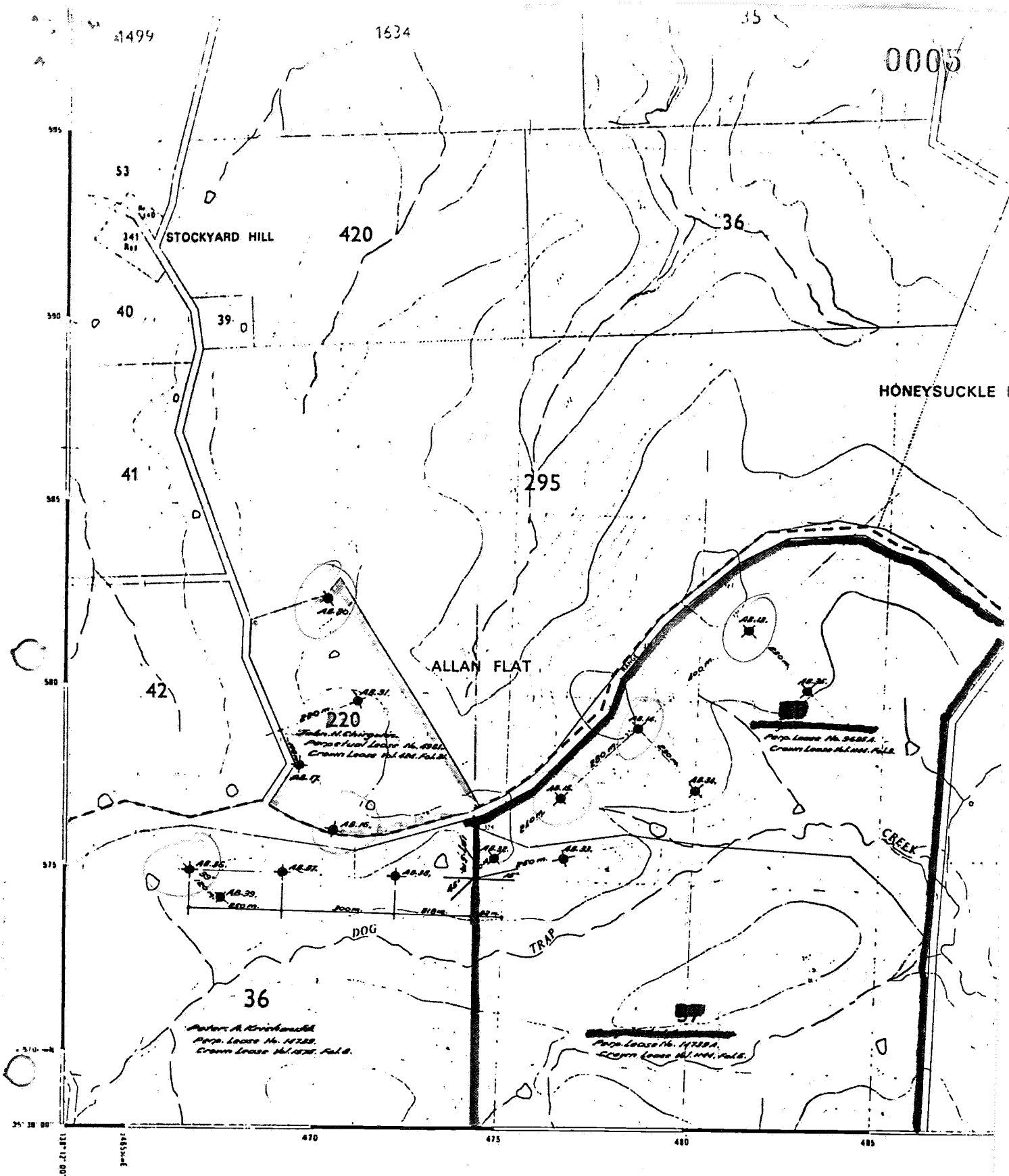


1499

1634

35

0005



SOUTH AUSTRALIA
1:10000 SERIES

Although cadastral boundaries on this map have been carefully positioned using existing available information, there may be discrepancies in their location.



SHEET No
6526-K

Section, Allotment boundary	-----
Major horizontal control point	△
Section number	503
Deposited Plan	DP4657
GRO Plan	GP20/1855
Enrolled Plan	EP11/24
Field Plan	FP17
Suburb boundary	-----

Hundred boundary	-----
Post Office, Church, Police Station	PO C P
Railway or Tramway Station	-----
Power transmission line	-----
Bridge	-----
Mangroves	-----
Jetty, Wharf	-----
Land subject to inundation	-----

PROJECT Delamere/Waitpinga Shale BORE NO. AB-13 Page of
SAMPLE INTERVALS ~~RM~~ 6 feet (1.83 metres) Planned Depth 25 m. Drilled Depth 20 m.
COLLAR R.L. 325.3 metres

DIRECTION - ANGLE Vertical	Drill Contractor Drillminex Pty Ltd
DATE HOLE COMMENCED 2.5.84	Driller Brenton Baker
DATE HOLE COMPLETED 2.5.84	Driller's Assistant Ashley Modra
HOLE LOGGED BY R.M. Catt	Drill Rig Investigator Mk.V.
DATE HOLE LOGGED 2.5.84	Method Auger Drill
OBJECT Aluminous Clay Search	Bit Size 6" diam.
RESULTS	Casing Run ----
	Casing Withdrawn ----

Depths in Metres		Geological Log and Remarks
From	To	
Zero	1.83	150 mm loamy topsoil then light rust-red marl with numerous iron-stone chips.
1.83	3.66	Pink thru to rust-red weathered ironstone, dry.
3.66	5.49	Light fawn weathered shale, very slightly moist.
5.49	7.32	Light rust-brown shale, finely divided and slightly moist.
7.32	9.14	Light rust-brown shale, finely divided and slightly moist.
9.14	10.98	Light rust-brown shale, finely divided and slightly moist.
10.98	12.80	Mid-fawn clay, finely divided and slightly moist.
12.80	14.63	Mid-fawn clay, finely divided and slightly moist.
14.63	16.46	Deep fawn clay, moist and with some build-up on flights.
16.46	18.28	Deep fawn clay, very moist, nodular and some build-up.
18.28	20.12	Deep fawn clay, semi-fluid. Withdrew augers.
Moved rig to hole No. AB-35.		

DRILL SHEET

0007

PROJECT Delamere/Waitpinga Shale BORE NO. AB-14 Page of
SAMPLE INTERVALS 2M 6 feet (1.83 metres) Planned Depth 50 m. Drilled Depth 33 m.
COLLAR R.L. 326 metres

DIRECTION - ANGLE Vertical

DATE HOLE COMMENCED 1.5.84

DATE HOLE COMPLETED 2.5.84

HOLE LOGGED BY R.M. Catt

DATE HOLE LOGGED 1.5.84 & 2.5.84

OBJECT Aluminous Clay Search

RESULTS

Drill Contractor Drillminex Pty Ltd

Driller Brenton Baker

Driller's Assistant Ashley Modra

Drill Rig Investigator Mk.V.

Method Auger Drill

Bit Size 6" diam.

Casing Run -----

Casing Withdrawn -----

Depths in Metres

Geological Log and Remarks

From	To	
Zero	1.83	150 mm. loamy topsoil then creamy-orange slightly moist marl.
1.83	3.66	Rust-orange marl, very slightly moist.
3.66	5.49	Creamy-orange soft marl, very slightly moist.
5.49	7.32	Creamy-brown soft marl, very slightly moist.
7.32	9.14	Orange to rust-red soft marl, very slightly moist.
9.14	10.98	Orange to rust-red soft marl, very slightly moist.
10.98	12.80	Orange to rust-red soft marl, very slightly moist.
12.80	14.63	Mid rust-brown clay, slightly moist.
14.63	16.46	Mid rust-brown clay, slightly moist with light build-up.
16.46	18.28	Mid rust-brown clay, slightly moist with light build-up.
18.28	20.12	Mid rust-brown clay, slightly moist, lumpy and some build-up.
20.12	21.94	Light rust-brown clay, moist, lumpy and some build-up.
21.94	23.77	Mid-fawn changing to light rust brown clay, slightly moist.
23.77	25.60	Light rust brown clay, moist and slightly nodular.
25.60	27.43	Mid-fawn clay, moist and mildly nodular.
27.43	29.26	Mid-fawn clay, very moist and heavy build-up on flights.
29.26	31.09	Slow and small recovery and sample quite wet.
31.09	32.92	Drilled deeper at very slow rate - very wet material recovered and into water.

Moved rig to hole No. AB-13.

PROJECT Delamere/Waitpinga Shale BORE NO. AB-15 Page of
SAMPLE INTERVALS ~~XXX~~ 6 feet (1.83 metres) Planned Depth 25 m. Drilled Depth 20 m.
COLLAR R.L. 315 metres
DIRECTION - ANGLE Vertical Drill Contractor Drillminex Pty Ltd
DATE HOLE COMMENCED 1.5.84 Driller Brenton Baker
DATE HOLE COMPLETED 1.5.84 Driller's Assistant Ashley Modra
HOLE LOGGED BY R.M. Catt Drill Rig Investigator Mk.V.
DATE HOLE LOGGED 1.5.84 Method Auger Drill
OBJECT Aluminous Clay Search Bit Size 6" diam.
RESULTS Casing Run -----
Casing Withdrawn -----

Depths in Metres		Geological Log and Remarks
From	To	
Zero	1.83	150 mm. loamy topsoil then bright orange moist marl.
1.83	3.66	Bright orange soft marl, slightly moist.
3.66	5.49	Bright orange soft marl to 4m. thru. to mid fawn very slightly moist clay.
5.49	7.32	Mid-fawn clay, slightly moist with some build-up.
7.32	9.14	Mid to dark fawn clay with some build-up, slightly moist.
9.14	10.98	Mid-fawn clay, slightly moist with mild build-up on flights.
10.98	12.80	Mid-fawn clay, moist with mild build-up on flights.
12.80	14.63	Mid-fawn clay, moist with mild build-up on flights.
14.63	16.46	Mid-fawn clay, moist with mild build-up on flights.
16.46	18.28	Mid-fawn clay, last 0.5 metres very moist.
18.28	20.12	Mid-fawn clay, heavy flight build-up, 0.5 metres very wet and then into water.
		Moved rig to hole No. AB-14.

PROJECT Delamere/Waitpinga Shale	BORE NO. AB-16	Page of
SAMPLE INTERVALS 2m 6 feet (1.83 metre)	Planned Depth 25 m.	Drilled Depth 25 m.
COLLAR R.L. 334.5 metres		
DIRECTION - ANGLE Vertical	Drill Contractor	Drillminex Pty Ltd
DATE HOLE COMMENCED 3.5.84	Driller	Brenton Baker
DATE HOLE COMPLETED 3.5.84	Driller's Assistant	Ashley Modra
HOLE LOGGED BY R.M. Catt	Drill Rig	Investigator Mk.V.
DATE HOLE LOGGED 3.5.84	Method	Auger Drill
OBJECT Aluminous Clay Search	Bit Size	6" diam.
RESULTS	Casing Run	-----
	Casing Withdrawn	-----

Depths in Metres		Geological Log and Remarks
From	To	
Zero	1.83	150 mm. loamy topsoil then orange weathered shale, slightly moist.
1.83	3.66	Light-mauve weathered shale, slightly moist.
3.66	5.49	Light-mauve weathered shale, slightly moist.
5.49	7.32	Light-mauve weathered shale, slightly moist.
7.32	9.14	Mauve-brown thru. to dark-fawn and moist.
9.14	10.98	Dark-fawn to light-fawn and back to mid-fawn - moist.
10.98	12.80	Mid-fawn and slightly moist.
12.80	14.63	Mid-fawn and slightly moist.
14.63	16.46	Mid-fawn - moist with minor build-up on flights.
16.46	18.28	Mid-fawn - very moist with considerable build-up.
18.28	20.12	Mid-fawn - moist with medium build-up.
20.12	21.95	Mid-fawn - moist with minor build-up and some nodules.
21.95	23.77	Mid to deep fawn - moist and nodular - minor build-up.
23.77	25.60	Deep-fawn - moist and nodular - minor build-up.
Moved rig to hole No. AB-20.		

PROJECT Delamere/Waitpinga Shale BORE NO. AB-17 Page of
 SAMPLE INTERVALS ~~2x~~ 6 feet (1.83 metre) Planned Depth 25 m. Drilled Depth 25 m.
 COLLAR R.L. 335 metres
 DIRECTION - ANGLE Vertical Drill Contractor Drillminex Pty Ltd
 DATE HOLE COMMENCED 3.5.84 Driller Brenton Baker
 DATE HOLE COMPLETED 3.5.84 Driller's Assistant Ashley Modra
 HOLE LOGGED BY R.M. Catt Drill Rig Investigator Mk.V..
 DATE HOLE LOGGED 3.5.84 Method Auger Drill
 OBJECT Aluminous Clay Search Bit Size 6" diam.
 RESULTS Casing Run -----
 Casing Withdrawn -----

Depths in Metres		Geological Log and Remarks
From	To	
Zero	1.83	150 mm. loamy topsoil then deep-fawn weathered shale - moist.
1.83	3.66	Deep-fawn thru. to deep-rust-red marl with some ironstone chips - moist.
3.66	5.49	Light cream thru. to light fawn with rock chips at lower level - slightly moist.
5.49	7.32	Light creamy-fawn with a few rock chips - moist.
7.32	9.14	Pinkish-rust and moist - no rock chips.
9.14	10.98	Fawnish-brown weathered shale - moist.
10.98	12.80	Fawnish-brown and moist - few lumps from flight build-up.
12.80	14.63	Fawnish-brown and moist - more lumps from flight build-up.
14.63	16.46	Fawnish-brown and moist - nodules and lumps.
16.46	18.28	Recovery limited - very damp nodules.
18.28	20.12	Deep fawnish-brown - very damp nodules and flight build-up.
20.12	21.95	Deep fawnish-brown - very damp nodules and greater build-up.
21.95	23.77	Deep fawnish-brown - very damp nodules and similar build-up.
23.77	25.60	Deep fawnish-brown - very damp nodules and similar build-up.
Moved rig to hole No. AB-31.		

PROJECT Delamere/Waitpinga Shale	BORE NO. AB-20	Page of
SAMPLE INTERVALS 2M 6 feet (1.83 metre)	Planned Depth 25 m.	Drilled Depth 25 m.
COLLAR R.L. 330 metres		
DIRECTION -	ANGLE Vertical	Drill Contractor Drillminex Pty Ltd
DATE HOLE COMMENCED	3.5.84	Driller Brenton Baker
DATE HOLE COMPLETED	3.5.84	Driller's Assistant Ashley Modra
HOLE LOGGED BY	R.M. Catt	Drill Rig Investigator Mk.V.
DATE HOLE LOGGED	3.5.84	Method Auger Drill
OBJECT	Aluminous Clay Search	Bit Size 6" diam.
RESULTS		Casing Run -----
		Casing Withdrawn -----

Depths in Metres		Geological Log and Remarks
From	To	
Zero	1.83	150 mm. loamy topsoil then slightly moist light-orange thru to fawn weathered shale.
1.83	3.66	Fawn thru. to dark rust-brown and back to light rust-brown shale - slightly moist.
3.66	5.49	Light pinkish-rust brown thru. to mid-fawn - slightly moist.
5.49	7.32	Mid-fawn to creamy-pink to clear light-cream deeply weathered shale - moist.
7.32	9.14	Mid-fawn thru. to deep fawn - moist.
9.14	10.98	Mid-rust-brown - moist.
10.98	12.80	Deep rust-brown - moist.
12.80	14.63	Deep rust-brown - damp with medium build-up on flights.
14.63	16.46	Mid-rust-brown - damp with heavy build-up.
16.46	18.28	Deep-fawn - damp with medium build-up.
18.28	20.12	Deep-fawn - damp with medium build-up.
20.12	21.95	Deep fawn thru to fawny-pink - moist with slight build-up.
21.95	23.77	Fawny pink back to deep fawn - damp with slight build-up.
23.77	25.60	Deep fawn - damp with some build-up.
		Moved rig to hole No. AB-36.

PROJECT Delamere/Waitpinga Shale	BORE NO. AB-31	Page of
SAMPLE INTERVALS 2x 6 feet (1.83 metre) Planned Depth 25 m. Drilled Depth 25 m.		
COLLAR R.L. 328 metres		
DIRECTION - ANGLE Vertical	Drill Contractor Drillminex Pty Ltd	
DATE HOLE COMMENCED 3.5.84	Driller Brenton Baker	
DATE HOLE COMPLETED 3.5.84	Driller's Assistant Ashley Modra	
HOLE LOGGED BY R.M. Catt	Drill Rig Investigator Mk.V.	
DATE HOLE LOGGED 3.5.84	Method Auger Drill	
OBJECT Aluminous Clay Search	Bit Size 6" diam.	
RESULTS	Casing Run -----	
	Casing Withdrawn -----	

Depths in Metres		Geological Log and Remarks
From	To	
Zero	1.83	150 mm. loamy topsoil then dry fawnish-brown shale with some stone chips.
1.83	3.66	Fawnish-brown to rust-brown weathered shale - slightly moist.
3.66	5.49	Orange-brown shale - slightly moist.
5.49	7.32	Light-fawn to orange-brown to mid-orange - slightly moist.
7.32	9.14	Mid-orange - slightly moist.
9.14	10.98	Mid-fawn - slightly moist.
10.98	12.80	Mid-fawn grading to deep fawn - slightly moist.
12.80	14.63	Mid-fawn thru. to dull mauve - slightly moist.
14.63	16.46	Dull-mauve - moist.
16.46	18.28	Dull-mauve - moist.
18.28	20.12	Dull-mauve thru to light fawn -moist with slight build-up.
20.12	21.95	Dark-fawn and moist.
21.95	23.77	Dark-fawn and moist.
23.77	25.60	Dark-fawn and moist.
Moved rig to hole No. AB-16.		

PROJECT Delamere/Waitpinga Shale BORE NO. AB-32 Page of
SAMPLE INTERVALS ~~2x~~ 6 feet (1.83 metres) Planned Depth 50 m. Drilled Depth 34.75 m.
COLLAR R.L. 325.5 metres

DIRECTION	-	ANGLE Vertical	Drill Contractor	Drillminex Pty Ltd
DATE HOLE COMMENCED	30.4.84		Driller	Brenton Baker
DATE HOLE COMPLETED	1.5.84		Driller's Assistant	Ashley Modra
HOLE LOGGED BY	R.M. Catt		Drill Rig	Investigator Mk.V.
DATE HOLE LOGGED	30.4.84 & 1.5.84		Method	Auger Drill
OBJECT	Aluminous Clay Search		Bit Size	5.50" dia. for 12.8 metres and 6"
RESULTS			Casing Run	dia. there-after. -----
			Casing Withdrawn	-----

Depths in Metres		Geological Log and Remarks
From	To	
Zero	1.83	Loamy topsoil to 150 mm. then moist red-brown marl.
1.83	3.66	Red-brown marl thru. to fawn - moist.
3.66	5.49	Fawn thru. to deep rust-red clay - slightly moist.
5.49	7.32	Deep rust-red clay - very slightly moist.
7.32	9.14	Light rust-red thru. to mid-brown clay - very slightly moist.
9.14	10.98	Deep fawn clay with slightly moist nodules.
10.98	12.80	Deep fawn clay with slightly moist nodules.
		12.45 pm - flights withdrawn to change drill bit.
12.80	14.63	Deep fawn clay, very slightly moist but no nodules.
		1.40 pm - increased hydraulic oil pressure and removed filter.
14.63	16.46	Deep fawn clay, slightly moist with small nodules.
16.46	18.28	Deep fawn clay, slightly moist with small nodules.
18.28	20.12	Deep fawn clay, slightly moist with small nodules.
20.12	21.94	Deep fawn clay, slightly moist with build-up on flights.
		3.25 pm - rig out of action - faulty hydraulics.
21.94	23.77	Deep fawn clay, slightly moist and lightly nodulised.
23.77	25.60	Deep fawn thru to light olive green clay, slightly moist.
25.60	27.43	Fawn clay, slightly moist.
27.43	29.26	Deep fawn clay, very moist and minor flight build-up.
29.26	31.09	Deep fawn clay, very wet and medium flight build-up.
31.09	32.92	Fawn clay, moist to damp with slight build-up.
32.92	34.75	Deep fawn clay, very damp with heavy build-up.
34.75	-	Deep fawn clay, flights clogged and into water.
		Moved rig to hole No. AB-33.

DRILL SHEET

0014

PROJECT Delamere/Waitpinga Shale BORE NO. AB-33 Page of
SAMPLE INTERVALS ~~21~~ 6 feet (1.83 metres)Planned Depth 25 m. Drilled Depth 25 m.
COLLAR R.L. 317.5 metres

DIRECTION - ANGLE Vertical Drill Contractor Drillminex Pty Ltd
DATE HOLE COMMENCED 1.5.84 Driller Brenton Baker
DATE HOLE COMPLETED 1.5.84 Driller's Assistant Ashley Modra
HOLE LOGGED BY R.M. Catt Drill Rig Investigator Mk.V.
DATE HOLE LOGGED 1.5.84 Method Auger Drill
OBJECT Aluminous Clay Search Bit Size 6" diam.
RESULTS Casing Run -
Casing Withdrawn -

Depths in Metres		Geological Log and Remarks
From	To	
Zero	1.83	Loamy topsoil to 150 mm. then slightly moist orange marl.
1.83	3.66	Bright orange soft clay, slightly moist with nodules.
3.66	5.49	Bright orange soft clay, slightly moist with a few yellow nodules.
5.49	7.32	Bright orange to mid-fawn clay, slightly moist.
7.32	9.14	Mid-fawn clay, slightly moist and slight build-up.
9.14	10.98	Mid-fawn clay, slightly moist but no flight build-up.
10.98	12.80	Mid-fawn then to light fawn clay, very slightly moist.
12.80	14.63	Light fawn clay - very slightly moist - no build-up.
14.63	16.46	Light fawn clay - very slightly moist - no build-up.
16.46	18.28	Light to mid-fawn clay, very slightly moist - no build-up.
18.28	20.12	Light to mid-fawn clay, very slightly moist - no build-up.
20.12	21.94	Light to mid-fawn clay, very slightly moist, few nodules below 21 m.
21.94	23.77	Light to mid-fawn clay, very slightly moist.
23.77	25.60	Light to mid-fawn clay, very moist with heavy build-up on flights and last 0.5 metres very wet.
		Moved rig to hole No. AB-15

DRILL SHEET

0015

PROJECT Delamere/Waitpinga Shale BORE NO. AB-34 Page of
SAMPLE INTERVALS ~~24~~ 6 feet (1.83 metre) Planned Depth 25 m. Drilled Depth 16.5 m.
COLLAR R.L. 312.5 metres
DIRECTION - ANGLE Vertical Drill Contractor Drillminex Pty Ltd
DATE HOLE COMMENCED 2.5.84 Driller Brenton Baker
DATE HOLE COMPLETED 3.5.84 Driller's Assistant Ashley Modra
HOLE LOGGED BY R.M. Catt Drill Rig Investigator Mk.V.
DATE HOLE LOGGED 2.5.84 & 3.5.84 Method Auger Drill
OBJECT Aluminous Clay Search Bit Size 6" diam.
RESULTS Casing Run -----
Casing Withdrawn -----

Depths in Metres		Geological Log and Remarks
From	To	
Zero	1.83	150 mm. loamy topsoil then bright orange weathered shale, slightly moist.
1.83	3.66	Dull orange then to brown then to orange-brown weathered shale, slightly moist.
3.66	5.49	Orange-brown thru. to fawn shale - moist.
5.49	7.32	Fawn shale, moist.
7.32	9.14	Fawn shale, moist.
9.14	10.98	Fawn shale, moist.
10.98	12.80	Fawn shale, moist.
12.80	14.63	Fawn shale, wet with heavy build-up.
14.63	16.46	Fawn shale, very wet and into water.
Moved rig to hole No. AB-17.		

PROJECT Delamere/Waitpinga Shale	BORE NO. AB-35	Page of
SAMPLE INTERVALS 2M 6 feet (1.83 metres)	Planned Depth 25 m.	Drilled Depth 18 m.
COLLAR R.L. 309 metres		
DIRECTION - ANGLE Vertical	Drill Contractor Drillminex Pty Ltd	
DATE HOLE COMMENCED 2.5.84	Driller Brenton Baker	
DATE HOLE COMPLETED 2.5.84	Driller's Assistant Ashley Modra	
HOLE LOGGED BY R.M. Catt	Drill Rig Investigator Mk.V.	
DATE HOLE LOGGED 2.5.84	Method Auger Drill	
OBJECT Aluminous Clay Search	Bit Size 6" diam.	
RESULTS	Casing Run -----	
	Casing Withdrawn -----	

Depths in Metres		Geological Log and Remarks
From	To	
Zero	1.83	150 mm. loamy topsoil then dull orange weathered shale, slightly moist.
1.83	3.66	Light fawn weathered shale, slightly moist.
3.66	5.49	Fawn weathered shale, slightly moist.
5.49	7.32	Fawn weathered shale, slightly moist.
7.32	9.14	Fawn weathered shale, slightly moist.
9.14	10.98	Fawn weathered shale, slightly moist.
10.98	12.80	Fawn weathered shale, slightly moist.
12.80	14.63	Fawn weathered shale, quite moist.
14.63	16.46	Fawn weathered shale, wet with flight build-up..
16.46	18.28	Fawn weathered shale, very wet and into water.
Moved rig to hole No. AB-34.		

PROJECT Delamere/Waitpinga Shale	BORE NO. AB-36	Page	of
SAMPLE INTERVALS XXX 6 feet (1.83 metre)	Planned Depth 25 m.	Drilled Depth	12 m.
COLLAR R.L. 318 metres			
DIRECTION -	ANGLE Vertical	Drill Contractor Drillminex Pty Ltd	
DATE HOLE COMMENCED 4.5.84		Driller Brenton Baker	
DATE HOLE COMPLETED 4.5.84		Driller's Assistant Ashley Modra	
HOLE LOGGED BY R.M. Catt		Drill Rig Investigator Mk.V.	
DATE HOLE LOGGED 4.5.84		Method Auger Drill	
OBJECT Aluminous Clay Search		Bit Size 6" diam.	
RESULTS		Casing Run -----	
		Casing Withdrawn -----	

Depths in Metres		Geological Log and Remarks
From	To	
Zero	1.83	Approx. 150 mm. loamy topsoil then moist orange coloured weathered shale.
1.83	3.66	Light fawn weathered shale - moist.
3.66	5.49	Mid fawn weathered shale - moist.
5.49	7.32	Fawn and moist with light build-up on flights.
7.32	9.14	Fawn and moist with medium build-up on flights.
9.14	10.98	Fawn and very damp with heavy build-up.
10.98	12.80	Fawn and very wet - flights completely clogged. Into free water.
Moved rig to hole No. AB-37.		

PROJECT Delamere/Waitpinga Shale BORE NO. AB-37 Page of
SAMPLE INTERVALS 2M 6 feet (1.83 metre) Planned Depth 50 m. Drilled Depth 22 m.
COLLAR R.L. 320 metres
DIRECTION - ANGLE Vertical Drill Contractor Drillminex Pty Ltd
DATE HOLE COMMENCED 4.5.84 Driller Brenton Baker
DATE HOLE COMPLETED 4.5.84 Driller's Assistant Ashley Modra
HOLE LOGGED BY R.M. Catt Drill Rig Investigator Mk.V.
DATE HOLE LOGGED 4.5.84 Method Auger Drill
OBJECT Aluminous Clay Search Bit Size 6" diam.
RESULTS Casing Run -----
Casing Withdrawn -----

Depths in Metres		Geological Log and Remarks
From	To	
Zero	1.83	150 mm. loamy topsoil then slightly moist orange coloured and weathered shale.
1.83	3.66	Orange thru. to pinkish-rust to orange-brown - moist.
3.66	5.49	Orange-brown thru. to mid fawn - moist.
5.49	7.32	Mid-fawn - damp with slight flight build-up.
7.32	9.14	Mid-brown - damp with light build-up.
9.14	10.98	Deep-fawn - damp with light build-up.
10.98	12.80	Deep-fawn - damp with light build-up.
12.80	14.63	Deep-fawn - damp with light build-up.
14.63	16.46	Deep-fawn - very moist with medium build-up.
16.46	18.28	Deep-fawn - very moist with heavy build-up and nodules.
18.28	20.12	Light-fawn - wet with heavy flight build-up.
20.12	21.95	Light-fawn - very wet and complete clogging of flights. Into water.
		Moved rig to hole No. AB-39.

PROJECT Delamere/Waitpinga Shale	BORE NO. AB-38	Page of
SAMPLE INTERVALS 2 6 feet (1.83 metre)	Planned Depth 25 m.	Drilled Depth 21 m.
COLLAR R.L. 328 metres		
DIRECTION - ANGLE Vertical	Drill Contractor	Drillminex Pty Ltd
DATE HOLE COMMENCED 4.5.84	Driller	Brenton Baker
DATE HOLE COMPLETED 4.5.84	Driller's Assistant	Ashley Modra
HOLE LOGGED BY R.M. Catt	Drill Rig	Investigator Mk.V.
DATE HOLE LOGGED 4.5.84	Method	Auger Drill
OBJECT Aluminous Clay Search	Bit Size	6" diam.
RESULTS	Casing Run	-----
	Casing Withdrawn	-----

Depths in Metres		Geological Log and Remarks
From	To	
Zero	1.83	Approx. 150 mm. loamy topsoil then slightly moist bright-orange coloured deeply weathered shale.
1.83	3.66	Creamy-fawn thru. to mid-orange weathered shale with low moisture level.
3.66	5.49	Mid-orange weathered shale - slightly moist.
5.49	7.32	Mid-orange weathered shale - slightly moist.
7.32	9.14	Dark-fawn and moist.
9.14	10.98	Dark-fawn and moist.
10.98	12.80	Dark-fawn and moist.
12.80	14.63	Mid-fawn and moist.
14.63	16.46	Mid-fawn and moist.
16.46	18.28	Mid-fawn and moist.
18.28	20.12	Mid-fawn and moist - including a few 1" quartz pieces.
20.12	21.	Into hard quartz - recovered a few quartz chips only.
Drilling programme completed.		

PROJECT Delamere/Waitpinga Shale	BORE NO. AB-39	Page of
SAMPLE INTERVALS 2x 6 feet (1.83 metre)	Planned Depth 25 m.	Drilled Depth 17 m.
COLLAR R.L. 315 metres		
DIRECTION - ANGLE Vertical	Drill Contractor	Drillminex Pty Ltd
DATE HOLE COMMENCED 4.5.84	Driller	Brenton Baker
DATE HOLE COMPLETED 4.5.84	Driller's Assistant	Ashley Modra
HOLE LOGGED BY R.M. Catt	Drill Rig	Investigator Mk.V.
DATE HOLE LOGGED 4.5.84	Method	Auger Drill
OBJECT Aluminous Clay Search	Bit Size	6" diam.
RESULTS	Casing Run	-----
	Casing Withdrawn	-----

Depths in Metres		Geological Log and Remarks
From	To	
Zero	1.83	Approx. 150 mm. loamy topsoil then slightly moist light fawn-coloured and weathered shale.
1.83	3.66	Mid-fawn weathered shale - slightly moist.
3.66	5.49	Light fawnish grey shale - moist.
5.49	7.32	Dark fawnish grey shale - moist.
7.32	9.14	Dark fawnish grey shale - moist.
9.14	10.98	Mid-grey - damp with light build-up on flights.
10.98	12.80	Mid-grey - very damp with medium build-up on flights.
12.80	14.63	Mid-grey - very damp with heavy build-up.
14.63	16.46	Mid-grey - very wet with heavy build-up.
		Into water.
		Moved rig to hole No. AB-38.

HOLE	AB - 13			
Depth ft	0 - 18	18 - 36	36 - 54	54 - 66
Depth m.	0 - 5.48	5.48-10.97	10.97-16.46	16.46-20.12
Approx. RL.	328.3 - 319.82	319.82 - 314.33	314.33 - 308.84	308.84 - 305.18
SiO ₂	51.37	60.51	65.78	66.41
Al ₂ O ₃	22.97	18.35	15.66	15.46
Fe ₂ O ₃	12.13	8.21	6.29	5.97
CaO	0.13	0.22	0.09	0.08
MgO	0.27	0.93	1.73	1.75
TiO ₂	1.02	0.85	0.80	0.81
P ₂ O ₅	0.02	0.07	0.07	0.08
Na₂O	0.00	0.00	0.00	0.00
K ₂ O	1.57	1.61	2.27	2.17
Equiv. Na ₂ O	1.10	1.18	1.61	1.52
Loss	10.00	7.17	5.64	5.54
Total	98.56	98.04	98.45	98.39
S/R	1.46	2.28	3.00	3.10
A/F	1.89	2.24	2.49	2.59
TC	0.0	0.0	0.0	0.0

HOLE	AB - 14						
Depth ft	0 - 18	18 - 36	36 - 54	54 - 72	72 - 90	90 - 108	L/flight
Depth m.	0 - 5.48	5.48-10.97	10.97-16.46	16.46-21.95	21.95-27.43	27.43-32.92	bottom
Approx. RL.	326.0 - 320.52	320.52 - 315.03	315.03 - 309.54	309.54 - 304.05	304.05 - 298.57	298.57 - 293.08	
SiO ₂	56.32	58.88	58.88	59.15	59.07	58.38	59.21
Al ₂ O ₃	22.92	21.89	20.64	20.79	19.86	20.23	19.09
Fe ₂ O ₃	8.03	6.85	8.37	7.77	7.58	8.14	7.19
CaO	0.07	0.18	0.13	0.06	0.17	0.07	0.07
MgO	0.28	0.28	0.35	0.60	1.38	1.11	2.24
TiO ₂	1.02	0.88	0.87	0.86	0.83	0.85	0.82
P ₂ O ₅	0.01	0.02	0.06	0.06	0.10	0.07	0.10
Na₂O	0.00	0.00	0.00	0.00	0.00	0.00	0.00
K ₂ O	1.54	1.52	1.56	1.80	2.41	2.13	2.85
Equiv. Na ₂ O	1.16	1.14	1.20	1.33	1.71	1.59	2.03
Loss	8.18	7.82	7.82	7.35	6.77	7.28	6.26
Total	98.73	98.46	98.84	98.60	98.29	98.43	98.00
S/R	1.83	2.05	2.03	2.07	2.15	2.06	2.25
A/F	2.83	3.20	2.47	2.67	2.62	2.49	2.66
TC	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HOLE	AB - 15			
Depth ft	0 - 18	18 - 36	36 - 54	54 - 66
Depth m.	0 - 5.48	5.48-10.97	10.97-16.46	16.46-20.12
Approx. RL.	315.0 - 309.52	309.52 - 304.03	304.03 - 298.54	298.54 - 294.88
SiO ₂	65.55	67.73	65.35	67.65
Al ₂ O ₃	16.94	15.25	15.97	15.18
Fe ₂ O ₃	6.07	5.30	5.87	5.45
CaO	0.05	0.02	0.04	0.07
MgO	1.04	1.50	1.92	1.84
TiO ₂	0.76	0.73	0.76	0.71
P ₂ O ₅	0.02	0.02	0.05	0.06
Na₂O	0.00	0.00	0.00	0.00
K ₂ O	1.65	2.42	2.96	2.72
Equiv. Na ₂ O	1.16	1.66	2.03	1.88
Loss	6.35	8.06	5.18	4.71
Total	98.50	98.09	98.18	98.48
S/R	2.85	3.30	2.99	3.28
A/F	2.79	2.88	2.72	2.79
TC	0.0	0.0	0.0	0.0

HOLE	AB - 16				
Depth ft	0 - 18	18 - 36	36 - 54	54 - 72	72 - 84
Depth m.	0 - 5.48	5.48-10.97	10.97-16.46	16.46-21.95	21.95-25.60
Approx. RL.	334.5 - 329.02	329.02 - 323.53	323.53 - 318.04	318.04 - 312.55	312.55 - 308.90
SiO ₂	57.62	58.91	58.18	54.15	56.71
Al ₂ O ₃	24.55	21.17	21.77	23.49	21.76
Fe ₂ O ₃	4.98	8.52	7.97	9.22	7.62
CaO	0.07	0.06	0.01	0.01	0.01
MgO	0.29	0.19	0.20	0.28	0.27
TiO ₂	0.90	0.87	0.88	1.00	0.91
P ₂ O ₅	0.06	0.06	0.04	0.08	0.06
Na₂O	0.00	0.00	0.00	0.00	0.00
K ₂ O	1.31	1.43	1.66	1.78	1.51
Equiv. Na ₂ O	0.99	1.05	1.21	1.29	1.13
Loss	9.23	7.48	7.72	8.32	7.63
Total	99.12	98.79	98.54	98.43	96.60
S/R	1.95	1.98	1.96	1.66	1.93
A/F	4.93	2.48	2.73	2.55	2.86
TC	0.0	0.0	0.0	0.0	0.0

HOLE	AB - 17				
Depth ft	0 - 18	18 - 36	36 - 54	54 - 72	72 - 84
Depth m.	0 - 5.48	5.48-10.97	10.97-16.46	16.46-21.95	21.95-25.60
<i>Approx. R.L.</i>	<i>335.0-329.52</i>	<i>329.52-324.03</i>	<i>324.03-318.54</i>	<i>318.54-313.05</i>	<i>313.05-309.40</i>
SiO ₂	55.93	66.36	67.08	65.61	62.30
Al ₂ O ₃	21.23	17.65	16.14	16.24	17.57
Fe ₂ O ₃	10.47	5.20	7.07	6.43	7.11
CaO	0.06	0.13	0.02	0.05	0.07
MgO	0.27	0.25	0.26	0.65	0.88
TiO ₂	1.12	0.78	0.76	0.77	0.78
P ₂ O ₅	0.04	0.16	0.15	0.09	0.10
_____	_____	_____	_____	_____	_____
K ₂ O	0.56	1.17	1.10	1.34	1.74
_____	_____	_____	_____	_____	_____
Equiv. Na ₂ O	0.40	0.83	0.78	0.93	1.23
Loss	8.93	6.46	5.97	6.78	8.21
Total	98.65	98.21	98.61	98.05	98.86
S/R	1.76	2.90	2.89	2.89	2.52
A/F	2.03	3.40	2.28	2.53	2.47
TC	0.0	0.0	0.0	0.0	0.0

HOLE	AB - 20				
Depth ft	0 - 18	18 - 36	36 - 54	54 - 72	72 - 84
Depth m.	0 - 5.48	5.48-10.97	10.97-16.46	16.46-21.95	21.95-25.60
<i>Approx. R.L.</i>	<i>330.0-324.52</i>	<i>324.52-319.03</i>	<i>319.03-313.54</i>	<i>313.54-308.05</i>	<i>308.05-304.40</i>
SiO ₂	64.69	65.67	66.26	67.58	67.15
Al ₂ O ₃	17.14	17.82	15.83	15.76	15.90
Fe ₂ O ₃	7.27	6.36	7.94	5.37	5.44
CaO	0.13	0.18	0.07	0.17	0.49
MgO	0.23	0.22	0.25	1.07	1.11
TiO ₂	0.89	0.79	0.74	0.73	0.76
P ₂ O ₅	0.05	0.06	0.09	0.09	0.08
_____	_____	_____	_____	_____	_____
K ₂ O	0.82	1.25	1.16	2.09	2.16
_____	_____	_____	_____	_____	_____
Equiv. Na ₂ O	0.58	0.83	0.79	1.48	1.50
Loss	7.63	6.62	6.50	5.43	5.32
Total	98.89	98.96	98.88	98.37	98.48
S/R	2.65	2.72	2.79	3.20	3.15
A/F	2.36	2.80	1.99	2.93	2.92
TC	0.0	0.0	0.0	0.0	0.0

HOLE	AB - 31				
Depth ft	0 - 18	18 - 36	36 - 54	54 - 72	72 - 84
Depth m.	0 - 5.48	5.48-10.97	10.97-16.46	16.46-21.95	21.95-25.60
<i>Approx. R.L.</i>	<i>328.0-322.52</i>	<i>322.52-317.03</i>	<i>317.03-311.54</i>	<i>311.54-306.05</i>	<i>306.05-302.40</i>
SiO ₂	63.18	63.54	60.10	62.93	65.56
Al ₂ O ₃	18.61	18.24	21.59	19.65	17.57
Fe ₂ O ₃	7.28	7.34	6.13	5.86	5.51
CaO	0.11	0.00	0.06	0.12	0.11
MgO	0.29	0.29	0.63	0.75	1.11
TiO ₂	0.82	0.79	0.85	0.85	0.80
P ₂ O ₅	0.05	0.06	0.05	0.05	0.09
_____	_____	_____	0.21	_____	_____
K ₂ O	0.92	1.59	2.65	2.24	2.22
_____	_____	_____	_____	_____	_____
Equiv. Na ₂ O	0.68	1.22	1.95	1.65	1.61
Loss	7.34	6.64	6.41	6.36	6.07
Total	98.68	98.56	98.68	99.00	99.19
S/R	2.44	2.48	2.17	2.47	2.84
A/F	2.56	2.49	3.52	3.35	3.19
TC	0.0	0.0	0.0	0.0	0.0

HOLE	AB - 32						
Depth ft	0 - 18	18 - 36	36 - 54	54 - 72	72 - 90	90 - 108	108 - 120
Depth m.	0 - 5.48	5.48-10.97	10.97-16.46	16.46-21.95	21.95-27.43	27.43-32.92	32.92-36.58
<i>Approx. RL</i>	<i>325.5-320.02</i>	<i>320.02-314.53</i>	<i>314.53-309.04</i>	<i>309.04-303.55</i>	<i>303.55-298.07</i>	<i>298.07-292.58</i>	<i>292.58-286.92</i>
SiO ₂	64.02	64.96	66.45	66.27	63.54	65.03	64.56
Al ₂ O ₃	19.49	16.68	16.72	16.23	17.54	16.80	17.08
Fe ₂ O ₃	5.10	7.97	6.32	6.47	6.57	6.51	6.61
CaO	0.24	0.08	0.10	0.05	0.08	0.01	0.04
MgO	0.21	0.25	0.34	0.88	1.41	1.21	1.25
TiO ₂	0.84	0.81	0.79	0.77	0.79	0.78	0.80
P ₂ O ₅	0.02	0.03	0.07	0.08	0.10	0.10	0.09
Na₂O	0.11	0.11	0.11	0.11	0.21	0.11	0.11
K ₂ O	1.16	1.20	1.41	1.70	2.44	2.06	2.09
Equiv. Na ₂ O	0.86	0.85	1.02	1.19	1.81	1.46	1.54 X
Loss	7.43	6.57	6.13	6.02	6.01	6.06	5.80
Total	98.61	98.60	98.42	98.55	98.69	98.68	98.49
S/R	2.60	2.64	2.88	2.92	2.64	2.79	2.72
A/F	3.82	2.09	2.64	2.51	2.67	2.58	2.58
TC	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HOLE	AB - 33				
Depth ft	0 - 18	18 - 36	36 - 54	54 - 72	72 - 84
<i>Approx. RL</i>	<i>319.5-314.02</i>	<i>314.02-308.53</i>	<i>308.53-303.04</i>	<i>303.04-297.55</i>	<i>297.55-293.90</i>
Depth m.	0 - 5.48	5.48-10.97	10.97-16.46	16.46-21.95	21.95-25.60
SiO ₂	57.84	66.67	67.27	64.62	62.68
Al ₂ O ₃	20.87	16.09	15.22	15.92	17.26
Fe ₂ O ₃	8.98	5.91	5.58	6.49	6.59
CaO	0.09	0.00	0.03	0.06	0.05
MgO	0.34	1.26	1.76	2.08	2.05
TiO ₂	0.90	0.84	0.78	0.81	0.79
P ₂ O ₅	0.03	0.02	0.04	0.09	0.10
Na₂O	0.11	0.11	0.11	0.11	0.11
K ₂ O	1.04	2.04	2.36	2.62	2.98
Equiv. Na ₂ O	0.71	1.38	1.64	1.87	2.12
Loss	8.83	5.85	5.20	5.41	5.52
Total	98.95	98.71	98.33	98.25	98.18
S/R	1.94	3.03	3.23	2.88	2.63
A/F	2.32	2.72	2.73	2.45	2.62
TC	0.0	0.0	0.0	0.0	0.0

HOLE	AB - 34				
Depth ft	0 - 18	18 - 36	36 - 54	54 - 72	72 - 78
<i>Approx. RL</i>	<i>312.5-307.42</i>	<i>307.42-301.53</i>	<i>301.53-296.04</i>	<i>296.04-290.55</i>	<i>290.55-286.90</i>
Depth m.	0 - 5.48	5.48-10.97	10.97-16.46	16.46-21.95	21.95-23.77
SiO ₂	60.67	60.12	60.70	61.31	61.57
Al ₂ O ₃	17.83	18.79	19.19	19.80	18.10
Fe ₂ O ₃	6.79	7.01	6.96	7.19	6.83
CaO	0.18	0.03	0.02	0.08	0.55
MgO	2.36	2.01	1.51	0.38	2.38
TiO ₂	0.78	0.78	0.82	0.80	0.77
P ₂ O ₅	0.11	0.12	0.10	0.06	0.11
Na₂O	0.11	0.11	0.11	0.11	0.11
K ₂ O	0.32	0.11	0.21 X	0.11	0.65
	2.93	3.11	2.50	1.40	2.78
Equiv. Na ₂ O	2.25	2.22	1.86	1.10	2.48
Loss	7.84	6.67	6.12	5.80	5.01
Total	99.81	98.80	98.14	97.03	98.74
S/R	2.46	2.33	2.32	2.27	2.47
A/F	2.63	2.68	2.76	2.75	2.65
TC	0.0	0.0	0.0	0.0	0.0

HOLE	AB - 35			
Depth ft	0 - 18	18 - 36	36 - 54	54 - 60
Depth m.	0 - 5.48	5.48-10.97	10.97-16.46	16.46-18.28
<i>Approx. RL</i>	<i>308.5-303.02</i>	<i>303.02-297.53</i>	<i>297.53-292.04</i>	<i>292.04-290.22</i>
SiO ₂	58.41	60.63	60.91	61.68
Al ₂ O ₃	20.49	18.34	18.08	16.79
Fe ₂ O ₃	7.77	7.02	6.99	6.65
CaO	0.05	0.13	0.33	0.65
MgO	1.20	2.10	2.34	2.46
TiO ₂	0.82	0.79	0.76	0.73
P ₂ O ₅	0.02	0.10	0.10	0.12
Na₂O	0.76	0.76	1.07	1.52
K ₂ O	2.17	2.87	2.82	3.28
Equiv. Na ₂ O	1.62	2.65	2.93	3.68
Loss	7.53	5.40	4.76	3.80
Total	98.66	98.14	98.15	97.67
S/R	2.07	2.39	2.43	2.63
A/F	2.64	2.61	2.59	2.53
TC	0.0	0.0	0.0	0.0

HOLE	AB - 36		
Depth ft	0 - 18	18 - 36	36 - 42
Depth m.	0 - 5.48	5.48-10.97	10.97-12.80
<i>Approx. RL</i>	<i>315.5-308.02</i>	<i>313.02-307.53</i>	<i>307.53-305.70</i>
SiO ₂	68.07	68.62	67.43
Al ₂ O ₃	15.38	14.31	14.79
Fe ₂ O ₃	6.08	5.62	5.73
CaO	0.12	0.05	0.07
MgO	0.70	1.73	1.75
TiO ₂	0.74	0.73	0.75
P ₂ O ₅	0.06	0.07	0.07
Na₂O	0.93	1.84	1.80
K ₂ O	1.39	2.52	2.49
Equiv. Na ₂ O	0.93	1.84	1.80
Loss	6.12	4.76	4.95
Total	98.67	98.59	98.20
S/R	3.17	3.44	3.29
A/F	2.53	2.55	2.58
TC	0.0	0.0	0.0

HOLE	AB - 37			
Depth ft	0 - 18	18 - 36	36 - 54	54 - 72
Depth m.	0 - 5.48	5.48-10.97	10.97-16.46	16.46-21.95
<i>Approx. RL</i>	<i>320.0-314.52</i>	<i>314.52-309.03</i>	<i>309.03-303.54</i>	<i>303.54-298.05</i>
SiO ₂	66.57	67.90	63.13	66.88
Al ₂ O ₃	16.20	15.52	17.38	15.63
Fe ₂ O ₃	6.16	5.34	6.35	5.47
CaO	0.07	0.05	0.04	0.06
MgO	0.80	1.34	1.98	1.85
TiO ₂	0.79	0.73	0.79	0.74
P ₂ O ₅	0.04	0.04	0.07	0.08
Na₂O	1.61	2.01	2.76	2.42
K ₂ O	1.61	2.01	2.76	2.42
Equiv. Na ₂ O	1.18	1.39	1.95	1.72
Loss	6.21	5.47	5.62	5.21
Total	98.58	98.46	98.26	98.47
S/R	2.98	3.25	2.66	3.17
A/F	2.63	2.91	2.74	2.86
TC	0.0	0.0	0.0	0.0

HOLE	AB - 38			
Depth ft	0 - 18	18 - 36	36 - 54	54 - 66
Depth m.	0 - 5.48	5.48-10.97	10.97-16.46	16.46-20.12
<i>Approx. RL</i>	<i>328.0-322.52</i>	<i>322.52-317.03</i>	<i>317.03-311.54</i>	<i>311.54-307.88</i>
SiO ₂	57.65	59.41	61.18	62.24
Al ₂ O ₃	20.92	19.83	19.10	18.34
Fe ₂ O ₃	8.61	8.13	7.06	6.69
CaO	0.15	0.08	0.06	0.04
MgO	0.33	0.74	1.07	1.52
TiO ₂	0.81	0.83	0.86	0.84
P ₂ O ₅	0.04	0.10	0.11	0.11
Na₂O	0.20	0.20 x	0.17	0.17
K ₂ O	1.71	2.23	2.47	2.54
Equiv. Na ₂ O	0.20	1.67	1.80	1.86
Loss	8.35	6.88	6.30	5.87
Total	98.70	98.44	98.39	98.38
S/R	1.95	2.12	2.34	2.49
A/F	2.43	2.44	2.70	2.74
TC	0.0	0.0	0.0	0.0

HOLE	AB - 39				
Depth ft	0 - 18	18 - 36	36 - 54	54 - 66	
Depth m.	0 - 5.48	5.48-10.97	10.97-16.46	16.46-20.12	
<i>Approx. RL.</i>	<i>315.5-310.02</i>	<i>310.02-304.53</i>	<i>304.53-299.04</i>	<i>299.04-295.38</i>	
SiO ₂	67.14	68.70	66.66	66.83	
Al ₂ O ₃	15.91	14.36	15.31	15.33	
Fe ₂ O ₃	4.80	5.05	5.52	5.52	
CaO	0.08	0.07	0.32	0.32	
MgO	1.46	1.85	2.13	2.12	
TiO ₂	0.75	0.76	0.78	0.78	
P ₂ O ₅	0.07	0.07	0.10	0.08	
Na₂O	0.49	0.24	0.52	0.53	
K ₂ O	2.25	2.55	2.62	2.63	
Equiv. Na ₂ O	1.49	1.92	2.24	2.26	
Loss	5.99	4.36	4.08	4.08	
Total	98.45	98.02	98.03	98.23	
S/R	3.24	3.54	3.20	3.20	
A/F	3.31	2.84	2.77	2.78	
TC	0.0	0.0	0.0	0.0	

Adelaide Brighton Cement Ltd.

INCORPORATED IN SOUTH AUSTRALIA
CHARLES STREET, BIRKENHEAD, SOUTH AUSTRALIA — TELEPHONE (08) 49 0400

CLN:RH

31 October 1984

The Director-General,
Department of Mines & Energy,
P.O. Box 151,
EASTWOOD,
South Australia 5063.

Attention Mr I. Grant.

Dear Sir,

Exploration Licence 1211 - Delamere/Waitpinga Shale
Quarterly Report for Period Ending 5 October 1984.

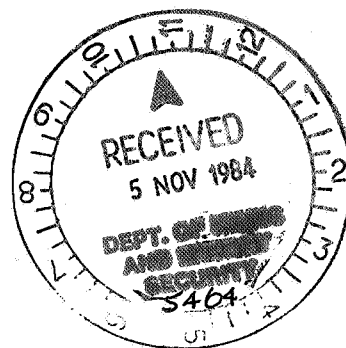
Since our last quarterly report, no further exploration activity has been undertaken. We are experiencing some difficulties in reaching agreement with the lessee of Section 220 Hundred of Yankalilla in order to carry out further exploration of our targetted area. However, we anticipate that we will be able to reach an agreement within the next two months.

Expenditure incurred since our last report is of an administrative nature arising from negotiations with the lessee and amounts to \$1 200.

Yours faithfully,



M. I. MOORE,
Group Technical Superintendent.



Adelaide Brighton Cement Ltd.

INCORPORATED IN SOUTH AUSTRALIA
CHARLES STREET, BIRKENHEAD, SOUTH AUSTRALIA – TELEPHONE (08) 49 0400

0027

CLN:RH

15 January 1985

The Director General,
Department of Mines & Energy,
P.O. Box 151,
EASTWOOD,
South Australia 5063.

Attention Mr I. Faulkes.

Dear Sir,

Exploration Licence 1211 - Fleurieu Peninsula
Final Report & Summary.

1. Final Report for Quarter Ending 4.1.85

Since our last report dated 31.10.85 we have not had any success in reaching agreement with the landholder of our targeted area on Section 220, Hundred of Yankalilla. In the meantime, we have been assessing the economics of the proposed operation and consider that the extraction of shale in this area is still a viable proposition for us. Although the Licence has now lapsed we will continue negotiations with the landholder.

Expenditure for the quarter of an administrative nature involved with the negotiations was \$1 200.

2. Summary of Work and Expenditure

First Quarter:

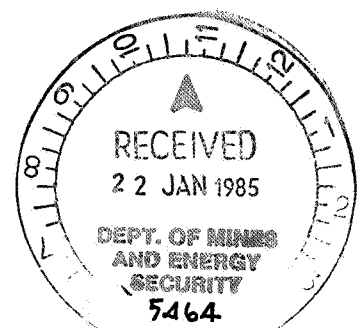
Negotiations with landholders -
Expenditure \$1 200

Second Quarter:

15 holes totalling 348.4 m drilled and samples analysed.
(Reports submitted to the Department of Mines & Energy.)
Section 220, Hundred of Yankalilla targeted as most suitable area -
Expenditure \$10 674

Third Quarter:

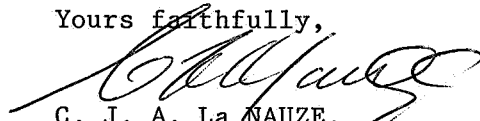
Negotiations with landholder -
Expenditure \$1 200



Fourth Quarter:
Negotiations with landholder -
Expenditure \$1 200

TOTAL EXPENDITURE = \$14 274.

Yours faithfully,



C. J. A. La NAUZE,
Group Process Engineer.