Open File Envelope No. 53

OEL 12

PIRIE-TORRENS BASIN AND STUART SHELF

WOOMERA 1

GEOLOGICAL SAMPLE INSPECTION AND DRILLING PROGRESS REPORTS, PLUS WELL TEST TECHNICAL DATA

Submitted by

SADM, Clarence River Basin Oil Exploration Co. Ltd and Roxby Management Services Pty Ltd
1981

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0003

REPORT OF INSPECTION

OIL EXPLORATION LICENCE No.12

SOUTH AUSTRALIA

FOR

CLARENCE RIVER BASIN OIL EXPLORATION CO. N.L.

BY

F. K. Hanlon, B.Sc., M.Aus.I.M.M.

WOOMERA No.1 BORE

The bore located at Phillip Ponds, near Woomera, stopped at a depth of 2,005 feet. The log of the bore is given in Appendix A. The sequence encountered consists essentially of two shale formations alternating with two sandstone formations. The topmost shale formation is 784 feet thick, generally reddish-brown and greenish-grey in colour, with some sandstone beds in the top 263 feet. This is underlain by 333 feet of medium to coarse, pinkish sandstone. Underlying the sandstone there are 373 feetof grey shale, while the bottom 515 feet of the bore passed through sandstones, predominantly reddish-brown in colour. In the time available for examination, no fossils were found anywhere in the sequence, nor were there any discernible traces of hydrocarbons.

It is felt that all the information possible should be obtained from the bore and for this reason it is recommended that, if it can be arranged, the following should be carried out.

(a) Expert palaeontological examination of the core.

(b) Electric Log.

(c) Formation Test, at 1490 feet.

(d) Hydrocarbon analysis.

Prospects in this part of the Exploration Licence will be assessed when the full information is available. Present indications might favour correlating the sequence drilled with the Late Proterozoic rather than the early Cambrian. The palaeontological examination may help to decide this point.

MT EBA-MILLERS CREEK AREA

At the time of Dr. Keith Miles' Report on the area there was no fossil evidence as to the age of the beds in this area and they were tentatively assigned as ?Cretaceous and regarded as entirely non-marine. However, in August 1957, two officers of the C.S.I.R.O., Messrs Myers and F. Jessup reported the discovery of fossils in the Mt. Eba-Millers Creek Area. According to a telephone conversation between Mr. F. Jessup and Mr. J. Divett (Secretary, Clarence River Basin Oil Exploration Co.) plant fossils were found in the vicinity of Mt. Eba Homestead and <u>Cretaceous marine fossils</u> in the Millers Creek Area. This makes the area much more interesting as a petroleum prospect and it is recommended that further geological work be carried out in the area to assess its potential and possibly select a site for a bore to test the sequence in the area.

June 1958

(F. N. Hanlon)
Consulting Geologist

APPENDIX A

WOOMERA No.1 BORE

0005

Location: Phillip Ponds, near Woomera.

Date Completed: 30th May 1958

Total Depth: 2,005 feet.

STRATA	THICKNESS	DEPTHS	
Broken surface material, gibbers and alluvium	12'10"	0	12'10"
Shales, grey and reddish-brown in upper section, becoming more reddish-brown in lower part; slump structures at 63 feet	79' 2"	12'10"	92' 0"
Shales, reddish-brown and grey, becoming silty and grading to siltstones	10' 4"	92' 0"	102' 4"
Shales and siltstones, grey and reddish-brown, rhythmically interbedded, current bedded in part; some shale breccia; becoming more silty towards base	35' 8"	102' 4"	138' 0"
Sandstone, fine, interbedded with shale and siltstone, grey and reddish-brown; shale breccia in central portion	15' 0"	138' 0"	153' 0"
Sandstone, fine to medium, reddish-brown and and grey, few shale fragments		153' 0"	
Shale, grey and reddish-brown, interbedded with siltstones in part			160' 6"
Sandstone, medium, shale pebbles and lenses	2' 0"	160' 6"	162' 6"
Sandstone, medium to coarse, reddish-brown and grey, with shale lenses and pebbles	16' 9"	162' 6"	179' 3"
Shale, reddish-brown and grey, interbedded with siltstones	5' 9"	179' 3"	185' 0"
Siltstone and shale with medium to coarse sandstone bands	11' 0"	185' 0"	196' 0"
Sandstone, fine, thinly bedded	7' 3"	196' 0"	203' 3"
Sandstone, medium to fine, reddish-brown and grey, thinly bedded in part	23' 9"	203' 3"	227' 0"
Shale and sandstone, reddish-brown and grey	7' 0"	227' 0"	234' 0"
Sandstone, fine, reddish-brown	6' 0"	234' 0"	240' 0"
Shale, reddish-brown, with sandstone bands	3' 9"	240' 0"	243' 9"
Sandstone and shale, reddish-brown and rhythmically interbedded	19' 3"	243' 9"	263' 0"
Shale, reddish-brown with greenish-grey bands, tending to siltstones in places, some current-bedding	521' 6"	263' 0"	784' 6"
Sandstone, coarse, pinkish, finer grained in top 3 feet	58' 6"	784' 6"	843' 0"

STRATA	THICKNESS	DEPTHS	
Sandstone, coarse to medium with few thin finer-grained bands	42' 0"	843' 0"	885' 0"
Clayey material, silty, reddish-brown	1' 0"	885' 0"	886' 0"
No core	20' 0"	886' 0"	906' 0"
Sandstone, coarse, pinkish, only 4" of core recovered	4' 0"	906' 0"	910' 0"
Sandstone, coarse to medium, pinkish, porous, friable, current-bedded in part. About half the core lost	94' 0"	910' 0"	1004' 0"
Clayey material, silty, large core loss	16' 0"	1004' 0"	1020' 0"
Sandstone, coarse to medium, pinkish, some finer bands in lower half, grading to ironstained grey colour towards base	88' 0"	1020' 0"	1108' 0"
Sandstone, fine to medium	3' 0"	1108' 0"	1111' 0"
Shale, grey, slickensided, probably large pebble	6"	1111' 0"	1111' 6"
Sandstone, coarse, pebbly, pebbles up to ¼"	6' 0"	1111' 6"	1117' 6"
Shale breccia	1' 0"	1117' 6"	1118' 6"
Shale, grey, some veins of gypsum and anhydrite, silty bands becoming more frequent towards base	371' 6"	1118' 6"	1490' 0"
Sandstone, medium to coarse with fine bands, pebbly in part with pebbles up to ½" and odd ones up to 1", reddissh-brown colour predominating over lighter colours, generally finer-grained in lower part; some beds arkosic and micaceous.	515' 0"	1490' 0"	2005' 0"

DEPARTMENT OF MINES—SOUTH AUSTRALIA

5-11-1

DEPARTMENTAL MEMORANDUM

250blks200—1.55 4672

Date 13/2/58

From:	*To:*
DIRECTOR OF MINES:	DEPUTY DIRECTOR OF MINES: Copy - Secretary C.M. & B.E.

Subject: Procedures for drilling on behalf of Clarence River Basin Oil Syndicate.

Docket Reference D.M. 2203/57. Security File No.

These matters were discussed with Mr. H. Gregory Forster, Managing Director, Clarence River Syndicate in the presence of the Secretary, Mr. H.S. Rush on Tuesday February 11th 1958.

The upshot of the discussion was that Mr. Forster was informed the Mines Department was acting solely as a drilling contractor with respect to the boring at present in progress at Phillip Ponds.

To the best of our ability we were prepared to carry out this drilling to the satisfaction of Mr. Forster or his accredited representatives. Technical direction of the operations was vested in the C.M. & B.E. and our drillers could only receive instructions through the C.M. & B.E.

Mr. Forster was most anxious to receive limited geological assistance with respect to preliminary logging and advice on core. This was declined as being the responsibility of his technical consultants.

The weekly telegram reporting progress will include any comments from the driller, of anything unusual encountered in the bore, and Mr. Forster will decide whether the report merits a special visit from his technical consultants. Core will be despatched weekly from the field in locked boxes, stowed in the Depot Core Shed, and be available for inspection by Mr. Forster's staff by appointment only.

Core is to be logged independently by Mines Department geologists, and samples selected for testing and retention. A weekly geological and drilling report will be submitted by the Mines Department to the Hon. the Minister of Mines but this information is not to be made available outside Departmental circles.

Please ensure that a very close watch is kept on all aspects of this drilling.

M. Johnson

To note above and arrange for logging and sampling

Director of Mines 18/2/58

T.A. Bowes

DIRECTOR OF MINES.

CONFIDENTIAL.

DEPARTMENT OF MINES
SOUTH AUSTRALIA.

WEEKLY PROGRESS REPORT ON THE CLARENCE RIVER BASIN OIL SYNDICATE BORE AT PHILLIP PONDS.

The bore on 19/2/58 was 256' in red shale. The driller reported that progress was slow.

A summarised log of the core received at the Depot to date is as follows.

0 - 87'	Chocolate shale.
87 - 111'	Principally light chocolate to pinkish brown fine grained sandstone with some shale bands showing slump brecciation.

W. JOHNSON

Senior Geologist,
Fuel & Uranium Section.

3-45 p.m. 21-2-58 4/-

CHEARBE
SYDNEY

DRILLER	REPORTS	QUOTE	DEPTH	325
FEET	RED	GREEN	SHALE	UNQUOTE

MINING DEPARTMENT.

COPY

TO SENIOR GEOLOGIST: Uranium & Fuel.

21-2-58. DIRECTOR OF MINES.

CONFIDENTIAL.

DEPARTMENT OF MINES.
SOUTH AUSTRALIA.

Progress report on Clarence River Basin Oil Syndicate bore at Phillip Ponds, Woomera for week ended 26-2-58.

The driller reported that the bore was at 450' in red shale.

Core to a depth of 370' is at the Depot and the summarised log is as follows:-

0'	- 111'	previously reported.
111'	- 137'	chocolate shale with greenish silty bands and lenses of coarse sandstone.
137'	- 154'6	buff and brown shale breccia with fine to coarse sandstone matrix.
154'6-	163'	brown and grey shale with some fine grained sandstone and some shale breccia at base.
163'	- 179'	brown and greenish grey coarse sandstone.
179'	- 185'	brown and grey interbedded shale and siltstone.
185'	- 227'	buff fine and coarse sandstone with silty and shaley laminae.
227'	- 234'	chocolate shale or siltstone.
234'	- 237'	buff fine grained cross laminated sandstone.
237'	- 370'	chocolate brown shale with fine grained sandstone bands. Becoming greenish grey after 270ft.

CONFIDENTIAL

DEPARTMENT OF MINES
SOUTH AUSTRALIA.

Clarence River Basin Oil Syndicate
Bore at Woomera.

Progress Report for week ended 5-3-57

Driller reports bore at 523 in red shale

Core to this depth received at Depot, and logged by the Senior Geologist.

0 - 370 Previously logged

370- 520 Chocolate brown and green grey banded and laminated shale and siltstone.

Some tight joints and shearing occur otherwise no structure. Bedding appears horizontal.

W. JOHNSON
SENIOR GEOLOGIST.
FUEL & URANIUM
SECTION.

Week ended 12-3-58.

Hole at 722' - no formation
report from driller.

Core to Mo received depot 14-3-58 -
no charge.

D.M. 274/58.

21-3-58.

CEEARBE
SYDNEY

DRILLER	REPORTS	QUOTE	DEPTH	885
HAVE	SAMPLED	CLAY	AND	FINE
SAND	USING	NX	DRAG	BIT
NO	CORE	UNQUOTE		

MINES DEPARTMENT.

To Senior Geologist: Uranium & Fuel.

For your information.

21-3-58. DIRECTOR OF MINES.

COPY

CONFIDENTIAL

DEPARTMENT OF MINES.
SOUTH AUSTRALIA

Clarence River Basin Oil Syndicate Progress Report for week ended 26-3-58

Drilling

Driller reports that the bore is at a depth of 905 feet in shale.

Core to 843 feet depth received in depot and logged.

Summary Log

0'	-	520'	Previous reported
520'	-	784'	Chocolate and grey banded shale or siltstone
784'	-	843'	Light purple and mauve coarse grained sandstone.

WJ:AVR
27-3-58

W. JOHNSON
SENIOR GEOLOGIST
FUEL & URANIUM SECTION.

CONFIDENTIAL

DEPARTMENT OF MINES.
SOUTH AUSTRALIA

Clarence River Basin Oil Co. N.L., Progress Report for week ended 2-4-58

Drilling

Driller reports that the Drilling rods are jammed in the hole with the depth at 905 feet.

No further core received in depot since previous report.

Driller reports strata penetrated as:-

843' - 885' Coarse purple sandstone.

885' - 905' Mud (crushed shale?)

WJ:AVR
27-3-58

W. JOHNSON
SENIOR GEOLOGIST
FUEL & URANIUM SECTION.

12-20 p.m. 28-3-57. D.M. 274/58.

CSEARSE
SYDNEY

DRILLER REPORTS QUOTE DEPTH 900
FEET DRILL RODS STUCK AT
896 FEET UNQUOTE

MINES DEPARTMENT.

COPY

TO SENIOR GEOLOGIST: Uranium and Fuel.

For your information.

28-3-58. DIRECTOR OF MINES.

Deptl. Sample No. ..P. 435/58.

.....

.....

PETROLOGICAL REPORT

Description of Sample(s) Quartz grit.

Marks or Nos. -

Locality etc. O/C., near Woomera. Clarence River Oil Co. No.1 bore, at 880 ft.

Submitted by T.A. Barnes, DIRECTOR OF MINES, H.O.

P. 435/58 .. T.S. 3468 -

The main constituents of this rock are quartz and quartzite-grains, cemented by silica. The matrix is in optical continuity with the quartz grains and even with individual patches of quartz in the quartzite grains. The optical continuity of the matrix is responsible for the "twinkling" observed in the hand-specimen, since many grains have grown into small euhedral quartz-crystals.

There are a number of grains, brick-red in hand-specimen, which appear to consist of very decomposed intermediate igneous rocks, both fine and coarse-grained. Iron-oxides, derived from ferromagnesian constituents, are responsible for the red coloration.

A few grains of chert, felspar (microcline and orthoclase) and decomposed acid igneous rock are present; all are well-rounded.

A characteristic of nearly all grains is that they are fringed with minute rhombs of dolomite.

Grain diameters range from 0.4 mm. to 1.5 mm., the bulk of the grains being in the range 0.9 - 1.1 mm. According to Pettijohn's classification this would be a medium-grained sandstone, but according to other authors the rock would be classified as a coarse sandstone. Sorting appears to have been good.

Examined by : H. W. Fander.

A. W. Whittle,
CHIEF MINERALOGIST AND
PETROLOGIST.

31/3/58.

Sen Geol (Fuel)

D.D.M

11 APR 1958

TAB

CONFIDENTIAL

DEPARTMENT OF MINES
SOUTH AUSTRALIA.

Clarence River Oil Co. N.L. Progress Report for week ended 9th April, 1958.

Drilling

Freeing of jammed rods proceeding. Core is 864'2" received in depot. Depth remains at 905'.

0'	to	843'3"	Previously reported.
843'3"	to	864'2"	Buff and purple coarse grained sandstone.

W. JOHNSON
SENIOR GEOLOGIST
FUEL & URANIUM SECTION.

11/4/58.

SENIOR GEOLOGIST,
Fuel & Uranium.

11/4/58. 2.15 p.m. DM 274/58

CSEARBE
SYDNEY

DRILLER REPORTS QUOTE 690 FEET
RECOVERED UNQUOTE

MINES DEPT

COPY

DEPARTMENT OF MINES.
SOUTH AUSTRALIA.

Confidential.

Weekly Drilling report, ClarenceRiver Oil Co. N.L.

Progress Report for week ended 16th April, 1958.

Drilling - hole now clear. Reaming Down. Depth remains at 905'.

TO SENIOR GEOLOGIST: Uranium and Fuel.

For your information.

17-4-58. DIRECTOR OF MINES.

D.M. 274/58. 18-4-58 2-15 p.m.

CEEARBE
SYDNEY

DRILLER	REPORTS	QUOTE	DEPTH	930
COARSE	RED	SANDSTONE	STONE	UNQUOTE.

MINES DEPARTMENT.

TO THE SENIOR GEOLOGIST: Uranium and Fuel.

For your information.

18-4-58. DIRECTOR OF MINES.

COPY

2-50 p.m. 24-4-58. D.M. 274/58.

CEEARBE
SYDNEY

1004 FEET AT 10 a.m. WEDNESDAY
23rd

MINES DEPARTMENT.

COPY

TO SENIOR GEOLOGIST: Fuel & Uranium Section.

For your information.

24-4-58. DIRECTOR OF MINES.

CONFIDENTIAL

DEPARTMENT OF MINES
SOUTH AUSTRALIA

Clarence River Oil Co. N.L. Progress Report for week ended 23rd April, 1958.

Drilling resumed; depth reported as 100 ft. in sand and clay at 23/4/58.

No further core received in depot below 864'2" previously reported on.

W. JOHNSON
Senior Geologist
Fuel & Uranium Section

28/4/58.

SENIOR GEOLOGIST, FUEL & URANIUM:

28/4/58 2.p.m. DM 274/58.

CEEARB E
SY DNEY

DRILLER	REPORTS	QUOTE	1020	SATURDAY
26TH	COARSE	WHITE	SAND	UNQUOTE

MINES DEPT

CONFIDENTIAL.

DEPARTMENT OF MINES
SOUTH AUSTRALIA.

Clarence River Oil Co. N.L. Progress report for week ending 30th April 1958.

Driller reports depth at 1134' in shale.

Sample of conglomeratic grit from 1114' received through D. Watson.

No further core received since 864'2" and previously reported.

E. HILLWOOD.
Fuel & Uranium

SENIOR GEOLOGIST, Fuel and Uranium.

2/5/58. 2.45 p.m. D.M. 274/58.

CHEARBE
SYDNEY

DRILLER	REPORTS	QUOTE	DEPTH	1174
BLUE	SHALE	CHANGE	AT	1117
UNQUOTE				

MINES DEPT

CONFIDENTIAL.

DEPARTMENT OF MINES.
SOUTH AUSTRALIA.

Clarence River Oil Co. N. L. Progress report for week ending 8th May, 1958.

Bore at 1334'.

Core received and logged at 1134'.

864' to 1117'6"	Purple and brown coarse grained sandstone.
1117'6" to 1134'	Dark grey massive shale. Distinct lithological change at 1117'6".

E. HILLWOOD.
Fuel & Uranium.

SENIOR GEOLOGIST, Fuel and Uranium.

9/5/58 3.30 p/m. D.M.274/58.

CHEARER
SYDNEY

DRILLER REPORTS QUOTE DEPTH 1404
ELKS SEALS UNQUOTE

MINES DEPT

DEPARTMENT OF MINES
SOUTH AUSTRALIA

CLARENCE RIVER OIL CO NL - PROGRESS REPORT

FOR THE WEEK ENDED 15TH MAY 1958

Bore at 1514' at end of period. Core received and logged to 1386'9". One sample from 1493'0" also received.

0 - 1134' Previously reported.

1134'- 1386'9" Dark and light grey shale laminated and with grey limestone bands, up to 6" thick at top. Bands decrease in thickness and increase in number downwards. Some siliceous grains appearing in the deeper section.

Driller reports a lithological change at 1493feet. A sample of the new stratum proved to be a crystalline, possibly arkosic limestone with some siliceous detrital grains.

W. JOHNSON
SENIOR GEOLOGIST
FUEL & URANIUM SECTION

2-10 p.m. 16-5-58.

CEEARBE
SYDNEY

DRILLER REPORTS QUOTE DEPTH 1580
RODS STUCK UNQUOTE

MINES DEPARTMENT.

TO SENIOR GEOLOGIST: Fuel & Uranium.

For your information.

COPY

16-5-58. DIRECTOR OF MINES.

Deptl. Sample No. P. 266/58.

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.....

PETROLOGICAL REPORT

Description of Sample(s) Clarence River Basin 1.

Marks or Nos.

Locality etc. near Woomera.

Submitted by E.R. Hillwood, Govt. Offices, RUNDLE STREET.

P. 266/58 -

The rock is a dolomitized conglomeratic sandstone. Under the microscope the sandstone is composed of large and well rounded pebbles of such rocks and minerals as - strained and sheared quartz and felspar, quartzite, chert, flint, limestone, granite, felsite and other felspathic rocks. The matrix is a cryptocrystalline dolomite mingled with fine-granular clastic material (mainly quartz and felspar). A very small amount of accessories and glauconite may be seen in the rock also.

Examined by : N. Chebotarev.

A. W. Whittle,
CHIEF MINERALOGIST AND
PETROLOGIST.

20/5/58.

Deptl. Sample No. P. 267/58.

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.....

PETROLOGICAL REPORT

Description of Sample(s) Clarence River Woomera Bore.

Marks or Nos.

Locality etc. 2 miles E. of Woomera.

Submitted by W. Johnson, MINES DEPARTMENT.

This dark grey coloured dolomitic rock is composed of fine grained dolomite, quartz, clay, chlorite and sericite. The dark colour is due to ferruginous staining and minor amounts of opaque minerals (magnetite, etc.).

The light grey breccia fragments are composed of very fine grained dolomite and a little clay and quartz.

Examined by : A. J. Marlow.

A. W. Whittle,
CHIEF MINERALOGIST AND
PETROLOGIST.

20/5/58.

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DEPARTMENT OF MINES.
SOUTH AUSTRALIA.

Clarence River Basin Oil Co., N.L.

Progress report for week ended 30th May, 1958.

Bore at a depth of 1964'.

Core received at Depot and logged to 1660'.

0	-	1508'	Previously reported.
1508	-	1660'	Fine to very coarse grained sandstone with scattered quartz/pebbles and occasional quartz pebble conglomerate bands.

Company's consulting geologist F.N. Hanlon, inspected and logged core at Depot on 28th May, 1958 and flew to Woomera to inspect drill site on 29th May, 1958. Company will advise whether electrical log of bore is required on completion.

TO SENIOR GEOLOGIST: Fuel and Uranium.

For your information.

30-5-58. DIRECTOR OF MINES.

Orig. in DM 427/58

Mr W. Johnson

File

25. 5. 58

Director. Domes
Adelaide.

Hanlon Geologist Ablamowicz Drilling Engineer May Require
Hole To Go Deeper Understand They Are Seeing Yowe Today Stop.
Then Proceeding Woomera Stop We Await Their Report Stop.
Please Continue Drilling.

Secretary Clarence River O.I

DEPARTMENT OF MINES.
SOUTH AUSTRALIA.

CONFIDENTIAL.

Clarence River Oil Co., N.L.

Progress report for week ended 21st May, 1958.

Bore at a depth of 1680ft.

Core received and logged to 1508 ft.

1386'9" - 1488'6" Dark grey fine compact shale with sub-horizontal calcareous laminations.

1488'6" - 1508' Coarse to medium grained calcareous sandstone with conglomeratic pebbles, abundant at 1507 - 1508'.

TO SENIOR GEOLOGIST: Fuel & Uranium.

For your information.

23-5-58 DIRECTOR OF MINES.

MR. JOHNSON:

30/5/58. 3.25 p.m. D.M.274/58.

CREARDE
Sydney

DEPTH	2005	FEET	STOP	HOLE
COMPLETED	ON	ADVICE	HANLON	STOP
REQUEST	URGENT	DECISION	ELECTRIC	LOG

DOWNER
ADELAIDE.

COPY

D.M. 427/58.

TO THE CHIEF MECHANICAL & BORING ENGINEER:

Tests on drill-hole at Woomera.

The following tests were carried out on 9th and 10th June by myself on diamond drill hole No. 1 at Woomera, that was constructed for Clarence River Oil Basin Syndicate.

Formation Test.

A formation tester that could be used in a BX hole was designed and manufactured by the Mechanical & Boring Branch.

This equipment was lowered down the hole and the packer expanded to seal the hole at a depth of 1445 feet. It had been intended to expand the packer at a depth of 1485 feet but an obstruction in the hole 40 ft. above bottom would not allow the tail rods to go right to the bottom of the hole. Examination of the core shows that at a depth of 1445 feet the walls of the hole should have been smooth and suitable for the packer to make a good seal.

The packer was left expanded for a period of one hour. No water was forced to the top of the rods and there was no evidence of any gas. The height the water came up the rods could not be determined but there was no evidence of any pressure developing below the packer.

On withdrawal of the formation tester, the packer showed evidence that it had sealed the hole.

Surging of Bore.

A surger to fit inside BX casing was made and was used at Woomera in an attempt to develop the bore.

On 9th June, 1958 surging was carried out for a period of 1½ hours at an estimated rate of 1200 to 1500 gallons per hour. A total of approximately 2000 gallons of water was drawn from the bore. Samples of water were taken at the commencement and end of the surging.

During surging a film of greasy material was noticed on the surface of the settling pit. This was found to be fluorescent and a sample was collected.

It was then learnt from the driller that some of the casing and rods used in the hole was new and still had on the manufacturers preservative grease. The surger was a close fit in the casing and would have removed any grease that may have still been on the inside of the casing. The sludge in the settling pit appeared to contain a certain amount of grease and a sample of it was collected. This surging was done prior to the formation test being carried out.

On 10th June, 1958 after the formation test was completed further surging was done. In this test, in order to prevent contamination from any grease that might be in the drain or settling pit, the water was run direct into a clean tank.

A light scum formed on the surface of the water whilst surging was in progress but it did not persist after surging was stopped. It was similar to scum that is normally obtained in surging and was not of a greasy nature. There was not sufficient to collect a sample.

Sir Geo, FOR / For information

11 JUN 1958

Director of Mines

Conclusions.

1. No results were obtained from the formation test.

2. The greasy material collected from the first surge test is considered to have come from the preservative grease on the rods and casing and which had probably collected in the settling pit.

Negative results were obtained from the second surge test and this test was the more reliable one.

11-6-58.

F. N. BETHERAS,
ASSISTANT CHIEF MECHANICAL
AND BORING ENGINEER.

Deptl. Sample No. P.270 - ....

.....P. 273/58.

.....

PETROLOGICAL REPORT

Description of Sample(s) Clarence River Basin samples.

Marks or Nos.

Locality etc. Toomere.

Submitted by G.H. Hillwood; Govt. Offices, HUNTER STREET.

P.270/58 - 223'6" (T.S. 3860) :

This sample is a pink, fine grained, bedded quartz-feldspathic sandstone. It is composed of semi-rounded to subangular grains of quartz, grains of felspar (albite microcline, orthoclase), sub-rounded grains of recrystallised quartz, magnetite and traces of zircon, apatite, sericite, chlorite, tourmaline, biotite and altered sphene.

The grains are cemented by fine films of ferruginous material and by slight recrystallisation of the quartz grains. The rock has a banded appearance due to the greater concentration of ferruginous material along some bedding planes.

P.271/58 - 523'0" (T.S. 3861) :

This sample is a very fine grained, dense, finely laminated purple shale. It is composed of fine chlorite flakes, fine quartz grains, fine sericite flakes, clay, ferruginous material, minor magnetite, altered rutile and calcite and traces of apatite and epidote.

The fine laminations vary in composition. Some contain very abundant ferruginous material. Some contain abundant magnetite and altered rutile. Some are rich in micaceous material.

The fine laminations have false bedding.

P.272/58 - 1214'0" (T.S. 3862) :

This sample is a dark grey, extremely fine grained, dense, finely laminated dolomitic mudstone.

It consists of fine dolomite, angular crystals of quartz and of albite, fine flakes of chlorite, sericite, and biotite, ferruginous material, clay and accessory pyrite, altered rutile and apatite.

The parallel laminations are very fine.

P.273/58 - 1620'0" (T.S. 3863) :

This sample is a purplish coloured, banded quartz grit. It consists of grains, ranging up to 0.4 inches, of quartz and recrystallised quartz - semi-rounded to angular in shape. The grains are cemented in a matrix of sericite, secondary silica and by slight recrystallisation of the grains themselves. Occasional flakes of muscovite are present.

The purplish colour is due to staining of grains and matrix by ferruginous material.

Examined by : A. J. Harlow.

A. U. Whittle,
CHIEF MINERALOGIST & PETROLOGIST.

8/7/58.

Clarence Rive

F. N. HANLON, B.Sc., M.Aus.I.M.M.
CONSULTING GEOLOGIST

TELEPHONE : JX 2354

4 PEARSON AVENUE
GORDON
N.S.W.

10th October 1958

Mr. W. Johnson,
Senior Geologist,
Department of Mines,
Adelaide, S.A.

Dear Bill,

Mr. H. G Roberts, who is assisting me, is proceeding to Woomera to work in that area for Clarence River Basin Oil Exploration Co. N.L. He will be passing through Adelaide on Tuesday and Wednesday next, 14th and 15th October and will call on you at the Department. Any help you can give him will be appreciated.

Please remember me to your family.

Sincerely,

Fred Hanlon

(F. N. Hanlon)

SR11/5/11.

TO THE CHIEF GEOLOGIST:

CLARENCE RIVER BASIN OIL EXPLORATION

GEOLOGICAL INVESTIGATIONS O.E.L.12

Mr. H. G. Roberts called at my office on 14/10/58 and discussed his programme with me. He also had discussions with Dr. Ludbrook and Mr. Nixon. A reconnaissance to establish the boundaries and thickness of the Cretaceous on O.E.L.10 is intended.

W. Johnson

SENIOR GEOLOGIST

FUEL AND URANIUM.

WJ:JAH.
15/10/58.

S.R. 11/5/11

TO THE CHIEF GEOLOGIST:

Subsidy for Proposed Stratigraphic Hole

O.E.L. 12.

CLARENCE RIVER BASIN OIL EXPLORATION Co.

The letter from the Director, Bureau of Mineral Resources, of 27th November, 1958 is the first indication that this Department had of the intention of Clarence River Basin Oil Exploration Co. to apply for a subsidy in respect of a drill hole proposed on O.E.L.12.

The letter of our Director of 3rd December, 1958 indicates that a stratigraphic hole in the Cretaceous sediments on O.E.L.12 may be of interest and certainly does not condemn the proposal. However, the next correspondence we have on the subject is another letter from the Director, Bureau of Mineral Resources, informing us that a subsidy has been refused on the grounds that the hole would be too close to outcrop to yield significant new information.

It is not known on what information the Director of the Bureau based the above opinion, possibly it was a geological report by Hanlon for Clarence River, but it seems to me that the views of this Department have not been given sufficient weight by the Bureau. At the same time we have been left in the dark by the Company.

I suggest therefore that,

1. The Company be told that this Department had learnt of the Company's request for a subsidy for a stratigraphic drill hole in O.E.L.12 only through correspondence from the Bureau of Mineral Resources and that owing to lack of information on the proposal, we had not been able to support it.

It would be suggested that it is in the Company's best interests, as well as an obligation under the Mining (Petroleum) Act, to keep the Mines Department informed of any proposal such as the drilling of a stratigraphic hole, as the Department can lend support to the proposal if the evidence warrants it.

The Company might also be asked to supply copies of any geological report, with maps, made by its consultant, Mr. F.N. Hanlon, as a result of Mr. Roberts field work on O.E.L.12.

2. The Bureau be written asking them for more details of the grounds on which the Clarence River Company's application was refused. It could be pointed out that the south-western margin of the Great Australian Artesian Basin is a little known area geologically and that the reconnaissance mapping done by the Company's consultant geological staff, has shown an interesting geological succession in the area which warrants more detailed mapping and perhaps some stratigraphic drilling. It could be further suggested that our Department would have appreciated a decision on the granting of the subsidy being delayed until we had a chance to obtain and study the Company's proposal.

Finally, returning to a matter of internal administration, it would be appreciated if this file could be sent to me more often for information as between the last two dates on which it was referred to me (16/10/58 and 4/2/59) a considerable amount of correspondence has been received.

W. Johnson,
Senior Geologist, Fuel & Uranium Section

WJ:PMT
11/3/59.

CONFIDENTIAL

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

Project CLARENCE RIVER BASIN OIL CO. DM -

Bore No. 1 Bore Serial No. DD 63/58

~~Hundred~~ P.S. ~~Section~~ P.L. Plan Reference

WOOMERA

Co-ordinates R.L. of Collar

Bearing Depressed 90° Driller R. Strempel

Date Drilling commenced 7.2.58 Date Drilling completed

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
0	0	11	9			Gibbers and soil.
[illegible]	9	23	7	8	6	Dark greyish brown hard shale laminated - micaceous thin lenticular bands greenish very fine grained sandstone.
23	7	29	6	1	6	Ditto.
29	6	35	9	6	3	"
35	9	46	0	10	8	"
46	0	55	10	10	5	"
55	10	66	6	10	9	Specimen 1 " becoming more chocolate in colour downwards and with contorted small [illegible] sandstone suggestive of submarine slumping
66	6	76	0	8	9	Principally chocolate coloured very hard micaceous shale or slate some grey green and grey brown layers near top.
76	0	87	8	10	11	Chocolate shale with fine grained contorted sand lenses becoming more of a hard siltstone lower down.
87	8	92	0	4	4	Chocolate siltstone or very fine grained sandstone.
92	0	102	1	8	6	Light purplish chocolate fine to very fine grained sandstone cross laminated at top and with very sparse greyish shaley bands.
102	1	104	0	2	1	Dark brown and light brown alternating laminate hard siltstone NX Core from this depth.
104	0	105	1	2	1	Chocolate and green massive argillite or mudstone.
106	1	105	6	0	5	Light chocolate brown coarse grained sandstone.

Bore logged by W. JOHNSON

Date 26.2.58

50 [illegible]850—6.53 3341

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

Project CLARENCE RIVER BASIN OI CO

DM -

Bore No. 1

Bore Serial No. DD 63/58

P.S. P.L.

~~Hundred~~ WOOMERA ~~Section~~

Plan Reference

Co-ordinates

R.L. of Collar

Bearing Depressed 90°

Driller R. Strempel

Date Drilling commenced 7.2.58

Date Drilling completed

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
106	6	107	1	0	7	Chocolate and green shale.
[illegible]	1	110	1	3	0	Light buff and chocolate brown current laminated very fine grained sandstone.
110	1	116	2	6	1	Chocolate and green shale breccia in a buff brown micaceous fine grained sandstone with some coarse grains. Slump breccia?
116	2	137	8	21	6	Chocolate brown shale with greenish grey silty bands and lenses of coarse grained micaceous felspathic sandstone. Shale shows slump structures. Increasing proportion of siltston and fine grained sandstone bands downwards.
137	8	142	8	5	0	Buff and brown shale breccia with rounded shale boulders in an illsorted fine to very coarse grained sandstone matrix - shale pieces become tea leaf flakes downwards.
[illegible]42	8	152	6	9	10	Ditto.
[illegible]52	6	153	0		6	Dark green grey shale.
153	0	154	6	1	6	Shale breccia in unsorted fine to coarse sandstone matrix.
154	9	161	2	6	5	Brown and grey shale interbedded with cross laminated siltstone and very fine grained sandstone light grey shale at base.
161	2	162	10	1	8	Shale breccia in fine to very coarse sandstone matrix. Shale pieces are angular boulders up to 6" thick.
162	10	179	3	17	3	Chiefly brown buff and greenish grey coarse grained sandstone with shale slump breccia fragments and shaly bands
179	3	183	0	3	9	Brown and grey interbedded shale and siltstone

Bore logged by W. JOHNSON

Date 26.2.58

50 ks50—6.53 3341

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

Project CLARENCE RIVER BASIN OIL CO

DM -

Bore No. 1

Bore Serial No. DD 63/58

~~Hundred~~ P.S. ~~Section~~ P.L.

Plan Reference

Co-ordinates

R.L. of Collar

Bearing Depressed 90°

Driller R. Strempel

Date Drilling commenced 7.2.58

Date Drilling completed

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
183	0	185	0	2	0	Brown and grey interbedded shale and siltstone
185	0	192	2	7	2	Buff and speckled whitish brown fine to coarse grained sandstone with ten leaf shale flakes. Unsorted with occasional shale layers, for the most part. Cross bedded near base.
192	2	203	3	10	1	Buff fine grained sandstone current laminated with silty and shaly laminae.
203		223	6	20	6	Ditto.
223	6	227	0	3	6	Ditto.
227	0	234	0	7	0	Chocolate brown shale or siltstone with very fine grained sandstone interlaminated.
234	0	237	6	3	6	Buff and light brown fine to very fine grained cross laminated sandstone.
237	6	244 (243'9" on marker)	6	7	0	CONTACT Chocolate brown shale with fine grained sandstone bands. Spec 3 at 246'.
244	6	263	0	9	6	Ditto, core broken and ground in this section.
263	0	273		7	0	Ditto, with greenish grey bands.
273	0	293	0	20	0	Ditto with light greenish grey shale or siltstone bands increasing in proportion.
293		313		20		Ditto from this point dark grey and greenish shale bands constitute about 25% of section.
313		334 333 on marker		21		Ditto
334		353		18	0	Ditto
353		370 on marker		21	6	Ditto

Bore logged by W. JOHNSON

Date 26.2.58

50 ks50—6.53 3341

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

Project Clarence River Basin Oil Co. DM

Bore No. Boomera 1 Bore Serial No. DD

Hundred PS 7N Section DL 976 Plan Reference

Co-ordinates R. L. of Collar

Bearing Depressed Driller

Date Drilling commenced Date Drilling completed

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
370		390				Mtto
[redacted]		410	5	22	0	"
410		430	6	19	2	"
430	6	443	0	11	6	"
443	0	453	0	11	6	"
453	0	464	5	11	0	"
464	5	482	0	15	8	"
482	0	503	0	20	6	" sheared - phear surfaces polistic
503	0	520		18	0	" Note. Logged to this depth 6/3/58.

Bore logged by W. JOHNSON

Date 6/3/58

40blks50—10.51 1479

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

Project Clarence River Basin Oil Syndicate

Bore No. 1 Woomera

~~Hundred~~ PS 7N ~~Section~~ P.L. 976

Co-ordinates

Bearing Depressed

Date Drilling commenced

DM

Bore Serial No. DD 63/58

Plan Reference

R. L. of Collar

Driller

Date Drilling completed

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
520'	5	523		2	4	Chocolate and green grey shales and siltstone interbedded in bands varying in thickness between 1/16" and 3 inches Some current laminations not particularly fossile
523		543		19	3	Ditto
543		563	5	20	5	Ditto
563	5	583	7	20	2	
583	7	603		20		Ditto
603		621		18		
621		641		20		Ditto shearing and slickensides at 627'
641		661		20		Ditto shearing or crushing at 652'
661		681		20		Ditto
681		701	6	20	6	Spec 4 Ditto
701	6	718	6	17	0	Ditto
718		722		3	3	Ditto
722		742		21		Ditto
742		762		18	3	Ditto
762		783		21	4	Ditto
783		784	7	1	7	Ditto
784	7	803		14	5	Light purplemauve coarse grained sandstone. Grains well rounded principally pink or buff quartz some rock fragments Cement appears to be purple or mauve clay. Rock somewhat friable some kaolin? grains possibly representing weathered felspar.

Bore logged by W Johnson

Date 26/27 - 3 - 58

40blks50—10.51 1479

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

Project Clarence River Basin Oil Syndicate DM

Bore No. 1 Woomera

Bore Serial No. DD

Hundred Section

Plan Reference

Co-ordinates

R. L. of Collar

Bearing Depressed

Driller

Date Drilling commenced

Date Drilling completed

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
803		823		14	9	Ditto
823		843		14	6	Ditto

Bore logged by

40blks50—10.51 1479

Date

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

Project: *Clarence River Basin Oil Exploration Co.*	DM
Bore No.: *Woomebah*	Bore Serial No. DD
Hundred .... Section	Plan Reference
Co-ordinates	R. L. of Collar
Bearing .... Depressed	Driller
Date Drilling commenced	Date Drilling completed

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
843	3	864	2	21'	2"	Buff & mauve alternating bands of coarse to very coarse, medium, fine & v.f.-grained sst. Laminated grading grey & buff pink grains. Cemented with [illegible] grey, brown [illegible] clay or kaolin?

Bore logged by ....

40blks50—10.51 1479

Date ....

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

Clarence River Basin Oil Syndicate,

Project Woomera Bore — DM

Bore No. — Bore Serial No. DD 63/58

Hundred P.S. 7 N Section P.L. 976 — Plan Reference

Co-ordinates — R.L. of Collar

Bearing — Depressed — Driller

Date Drilling commenced — Date Drilling completed

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
						Shoe at 884'
864	2	885		12		Purple brown coarse grained sandstone. Grains are well rounded quartz and purplish cement. Bedding horizontal.
885		886			9	Brown slightly sandy clay.
886		906				No core.
906		912	6	2	5	Green and brown well compacted sandstone.
912	6	940		18		Purple brown coarse grained sandstone.
940		998		31		Purple coarse grained sandstone. Well bedded rounded grains.
998		1000		2		Med. to fine grained sandstone.
1000		1004		2		Coarse grained sandstone.
1004		1020		1	6	Fine red clayey sand and 6" of brown clay.
1020		1070		20		Purple brown coarse grained sandstone.
1070		1074		4		Purple brown coarse grained sandstone and more abundant clay shale cementation.
1074		1094		20		Brown coarse grained sandstone. Dip 3 - 4°.
1094		1110		1	6	Fine to med. sandstone with siliceous cement.
1110		1110	9		9	Dark grey compact shale.
1110	9	1117	6	16		Coarse grained sandstone with siliceous cement. Well rounded grains.
1117	6	1134		16	6	Dark grey massive shale with brecciated slightly calcareous fragments to 1123'6".
						Shoe at 1153'
						7 at 1993'3

Bore logged by E.R. Hillwood

Date 8/5/58

50 4s50—6.53 3341

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

Project CLARENCE RIVE BASIN OIL CO. DM

Bore No. Bore Serial No. DD 63/58

Hundred Section Plan Reference

Co-ordinates R. L. of Collar

Bearing Depressed Driller

Date Drilling commenced Date Drilling completed

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
1134		1154				Dark grey and greenish grey shale interbedded Some of grey laminae may be of siltstone grain size. Slump bedding prominent.
1154	0	1174	0	21	6	Ditto
1174	0	1194	0	18	3	Ditto with bands of grey fine grained recrystallised limestone at 1174'4" (4" thick) 1177'0"(6" 1182'9"(6" 1184'6"(3" 1185'9"(7" and some thinner bands. Limestone bands merge into shale at both upper and lower contacts. Similar bands occur downwards throughout shale section.
1194	0	1214	0			Ditto lithology. Core broken into pieces by action of drill.
1214	0	1234	0	19	8	Ditto) Limestone bands appear to decrease
		1254	0	16	6	") in individual thickness and
		1274	0	17	9	") increase in number downwards.
		1294	9	21	0	")
		1314		20	2	")
		1334		20	0?	Last 4' of core broken into pieces by action of drill.
		1354		21	0	
		1374		20	0	
1374		1386	9	12	9	Thin limestone bands in shale at this level have well defined contacts, are coarser grained and have a clastic appearance.

Bore logged by W. JOHNSON

Date 14.5.58

40blks50—10.51 1479

CLARENCE RIVER BASIN OIL SYNDICATE
COOMBRA BORE

63/58

xxxxxx P.S. 7E P.L. 976

1386'9"	~~1488'6"~~ 1490'	101'	Dark grey fine compact shale with subhorizontal banding of slightly calcareous material.
1488'6"	1508'	19'6"	Coarse to medium grained calcareous sandstone with conglomeratic pebbles (up to $\frac{3}{8}$" in diameter) throughout but abundant from 1507'-1508'. Pyrite at 1507'6" and evidence of pyritic cement in latter conglomeratic portion.

E.R. Hillwood

22/5/58

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

Project CLARENCE RIVER BASIN OIL CO N.L.

DM

Bore No. WOOMERA NO 1

Bore Serial No. DD 63/58

~~Hundred~~ PS 7N ~~Section~~ PL 976

Plan Reference

Co-ordinates

R.L. of Collar

Bearing Depressed

Driller

Date Drilling commenced

Date Drilling completed

LOG

Depth From Ft.	In.	Depth To Ft.	In.	Core Recovered Ft.	In.	
1508	0	1514	0	6	0	Greenish buff subgreywacke or arkose. Greenish black colouration on bedding planes - grades to fine grained finely quartz pebble conglomerate. Come rock pebbles - pyrite and chalcopyrite in places.
1514	0	1534	0	20	0	Buff to purple coarse grained sandstone - white to light green kaolin matrix. Some thin quartz pebble conglomerate bands.
1534	0	1536	0	3	0	Light brown conglomerate. Scattered quartz pebbles in coarse to very coarse sandstone with some kaolin Also some siliceous cement.
1536	0	1541	7			Brownish buff medium to coarse grained sandstone Ill sorted. Siliceous and kaolinitic matrix.
1541	7	1554		12	5	Buff to purple medium to very coarse grained sandstone to fine grained. conglomerate inter-bedded in bands 3 inches to 8 fee t thick. Matrix chocolate, ferruginous material and white kaolin in part - also cemented by silica. Rock is hard and tough. In places appears quite porous otherwise poor sorting makes it non porous.
1554		1574		20	0	
1574		1580		6	0	Ditto porous zone
		1600		20	9	porous zone 1589 to 1610
		1620		20	0	
		1640		20		" " 1627
		1660		20		" mostly porous in external appearance.

Bore logged by W. JOHNSON

Date 29.5.58

50 Ks50—6.53 3341

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

Project Clarence River Basin Oil Co. DM

Bore No. Woomera No 1 Bore Serial No. DD 63/58

Hundred PS 7N Section PL 976 Plan Reference

Co-ordinates R.L. of Collar

Bearing Depressed Driller

Date Drilling commenced Date Drilling completed

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
1660		1680		18	2	Purple and white fine medium coarse to very coarse grained sandstone - kaolinitic and ferruginous cement - some secondary silica - some very fine grained beds with greenish clay and mica - also fine conglomerate layers various layers alternating - sorting quite good - hard rocks . Formation contains many porous zones in coarse grained layers.
1680		1700		20	1	Ditto
1700		1720		20	0	"
1720		1740		20	0	"
1740		1750	2	10	2	"
1750	2	1751	3	1	1	Grey fine grained hard micaceous sandstone.
1751	3	1760		8	7	Purple grey and white fine, medium coarse and very coarse grained sandstone etc.
[illegible]60		1780		20		Ditto perhaps great number of fine grained bands
1780		1800		20		Ditto
1800		1820		20	3	"
1820		1840		19	7	"
1840		1860		20	8	"
1860		1880		22	6	"
1880		1893		13	0	"
1893		1896	8	3	8	Purple and buff fine grained sandstone - micaceous sedimentary quartzite.
1896	6	1900		2	7	Same rock as above 1893' 0"

Bore logged by W. JOHNSON

Date 13.6.58

50 [illegible]850—6.53 3341

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

Project Clarence River Basin Oil Co

Bore No. Woomera No 1

Hundred PS 7N Section PL 976

Co-ordinates

Bearing Depressed

Date Drilling commenced

DM

Bore Serial No. DD 63/58

Plan Reference

R.L. of Collar

Driller

Date Drilling completed

LOG

Depth From Ft.	Depth From In.	Depth To Ft.	Depth To In.	Core Recovered Ft.	Core Recovered In.	
1900		1940		39	3	Ditto
1940		1946		21	6	"
1946		1985		18	4	"
1985		2005		22	0	"
						BOTTOM OF BORE

Bore logged by

Date

50 4850—6.53 3341

Clarence River ~~Oil~~ Basin Oil Exploration Company.

Wowera No 1

Summary log

0' to 237'	Chocolate to buff blueffy, fine grained sandstone and siltstone and shale interbedded - some coarse grained layers and slump breccias
230' to 784'	Chocolate and greenish grey shale or siltstone bands interbedded
784' to 1117'	Purple to buff coarse grained porous sandstone well ferruginous and argillaceous - some siliceous cement
1117 to 1488	Dark grey shale with light grey calcareous shale and limestone bands
1488 to 2005	Grey greenish, buff & purple medium to very coarse grained sandstone with conglomerate pebbles scattered throughout & occasional conglomeratic layers. More compact & coarser than ~~coarser than~~ sandstone at 784 to 1117 but resembles it in places & also has porous zones.

Office Use Only

Sample No. A594/58

Reference ~~———~~ 19

DEPARTMENT OF MINES, ADELAIDE

APPLICATION FOR EXAMINATION OF SPECIMENS OR SAMPLES

DESCRIPTION AND MARK Clarence River ~~Oil~~ Basin Oil Co. N.L.

LOCATION: County .... Distance, direction and name of nearest

Hundred .... town or station Woomera

~~Section~~ No. PS 7N/ No. of Claim or Lease ....

Pastoral Lease (~~if out of Hundreds~~) ~~PL~~ 976

METHOD OF COLLECTION: * Representative or picked material.

* Taken from surface, open working, prospecting shaft, underground working,

borehole, etc. Borehole

ESTIMATED SIZE OF OCCURRENCE ....

HAS THE MATERIAL BEEN PREVIOUSLY EXAMINED? ....

NAMES OF KNOWN PURCHASERS ....

INFORMATION REQUIRED ~~[illegible]~~ Determine if greasy material from settling pit is identical with any of known samples of grease

NAME W Johnson provided

ADDRESS Rundle St Office

Artificial grease only

Please forward to :—

The Director,
Department of Mines,
31 Flinders Street,
ADELAIDE, S.A.

Signed W Johnson

Date 11-6-58

* Strike out whichever does not apply.

OFFICE USE ONLY

Approved for submission to :—

Assay Department for............

Geological Laboratory for............

Other Departments............

Remarks ....

Entered P/Sicle

....
Director of Mines

2M—7.49 3924

......../........./19

Telephone :
UX 1662.

SOUTH AUSTRALIA

Reference No.

RDA599/58
A159/3

DEPARTMENT OF MINES

RESEARCH AND DEVELOPMENT BRANCH

W1362/58

Director of Mines,
Government Offices,
Rundle Street,
ADELAIDE.

Flemington Street, Parkside, S.A.

4th July, 1958.

Sample of water marked W1362/58 yielded on analysis as under :—

	Grains per Gallon
Chlorine, Cl	1879.8
Sulphuric acid (radicle), SO_4	225.5
Carbonic acid (radicle), CO_3	4.7
Nitric acid (radicle), NO_3	Nil
Sodium, Na	984.5
Potassium, K	-
Calcium, Ca	106.1
Magnesium, Mg	118.2
~~Iron, Fe~~ Ferrous Iron, Fe"	1.1
Silica, SiO_2	-
Total saline matter, Grains per gallon	3319.9
" " " Ounces per gallon	7.59
Suspended matter	-
Organic matter	-

Name WOOMERA.
Address Clarence River Basin Oil Co.

Hundred Pastoral Sheet 7N.
Section P/L 976.
Sample collected by F.N.B. ? W. Johnson.
Bore No. 1
Water Cut -
Water Level - 76'
Supply -
Depth Bore - 2005'
Date Collected 9/6/58.

Remarks Surgeng one (1) hour.

ASSUMED COMPOSITION OF SALTS

Iron Carbonate	2.3
Calcium carbonate	5.8
Calcium sulphate	319.6
Calcium chloride	26.9
Magnesium carbonate	-
Magnesium sulphate	-
Magnesium chloride	462.9
Sodium carbonate	-
Sodium sulphate	-
Sodium chloride	2502.4
Sodium nitrate	Nil
Potassium chloride	-
.....	-
Silica	-

HARDNESS
DEGREES (English)

Total	753.4
Temporary	7.8
Permanent	745.6
Due to Calcium	265.0
Due to Magnesium	486.4

Due to Iron 2.0

Thomas R. Frost.
Chief Analyst

4M—11.57 7457

Percussion D. H. done
to Clarence R Bond

	0 - 8	Alluvium
98'	8 - 106	Purple & green shale
15'	106 - 121	Red sst
	121 - 136	Purple shale
	136 - 146	Purple shale with seams of red sst
	146 - 157	Red sst
	157 - 168	Red green shale
	179 - 181	Red sst
	181 - 201	Red brown shale
	201 - 220	Red sst
	220 - 704	Red brown shale

log by T.A Barnes

ROXBY MANAGEMENT SERVICES PTY. LIMITED
(Incorporated in Victoria)
MANAGER OF THE OLYMPIC DAM JOINT VENTURE

TELEPHONE 2748300 TELEX 88794
P.O. BOX 405 UNLEY, 5061
168-169 GREENHILL ROAD, PARKSIDE
SOUTH AUSTRALIA

17th February 1981

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

Attention: CORE LIBRARY CONTROLLER
TECHNICAL INFORMATION SERVICES

Dear Sir,

Your Ref: DM 396/78

Please find enclosed copy of results of work carried out on a sample of core from your Core Library, along with the residues of same core remaining after the work had been carried out.

We apologise for the delay in forwarding results which was partly caused by relocation of our office and transfers of personnel.

Yours faithfully

P.J. ARDEN
GEOLOGIST

REPORT ON SAMPLE TAKEN FROM WOOMERA BORE NO. 1

DEPTH OF SAMPLE:	Between 57'5" - 57'7½"
NATURE OF SAMPLE:	Thin slice from side of core.
WORK DONE ON SAMPLE:	Thin section made and described.
RESULTS:	Examination of hand specimen and thin section in conjunction with its stratigraphic position suggest the rock is Tregolana Shale.

DESCRIPTION OF ROCK

Hand Specimen Rock is pale greyish brown coloured and moderately hard, thinly bedded (approximately perpendicular to core axis) micaceous shale with weak development of thin alternating reduced layers.

Thin Section The rock is argillaceous and consists of fairly well sorted, (moderately strained) quartz in a matrix of micas and clay and has a fiarly well developed schistority defined by alignment of micas. The rock appears to have suffered fairly mild burrial metamorphism. Micas, (principally muscovite?), account for approximately 40% of the rock and occur as small variably altered flakes and fragments up to 0.05mm in size with low to moderate rounding and sphericity. Fresher muscovite up to 0.07mm in size and commonly as thin elongate flakes occurs in a more random orientation. Quartz occurs as moderately strained grains (0.01-0.04mm diameter), of moderate to high sphericity and rounding. Most of the quartz is well sorted and some grains contain inclusions (mostly micas). Some small 'mini lense' like accumulations of slightly coarser grained (to sandy) quartz occur irregularly through the rock. Quartz comprises about 30% of the rock. Fairly minor (about 10-15% only) amounts of rock flour and clays ± chlorite, sericite and hematite occur as matrix to the quartz grains. Chlorite also occurs as small irregular 'network' masses to bent flakes commonly in close association with the more altered micas. The trace amounts of opaques which consist of ragged and poor to moderately rounded and sorted grains (0.004-0.01mm) are scattered throughout the rock.