THE MOONIE OIL COMPANY LIMITED

DAVIS 1 - COMPOSITE WELL LOG

OP 165 PERM_T STATE Northern Territory BASIN LOCATION Approx

Lat 22° 4 529"

Long 131° 04 7:07

GL 2100 5 teet M S i

ELEVATION KB 2015 feet above surf

TOTAL DEPTH Driller 6229 feet Logger 6230 feet COMPOSITE LOG SCALE 1 1200 STATUS Plugged, converted to water well and abandoned

DATE SPUDDED 5-4-81 DATE COMPLETED 9-5-81

DRILLED BY Techmin Pty. Ltd Mereenie Rig I LOGGED BY GO International

CEMENTED BY Haliburton GEOLOGISTS F. D. Baarda D Warner

<u>Hole size</u>

Cement Plugs

No. I

No. 2

No. 3

<u>Perforations</u>

I. Buckingham

LOG DATA

TYPE	внс - (BHC - GR - SONIC		DIHMETRS
RUN NUMBER	1	2		
Dote	15 - 4 - 81	7 5 8	7 5 - 81	8 5 8 1
Depth - Oritler	704	6229"	6229	6229
	702'	6230	6230'	6230'
Btm Log Interval	690'	6:96	6229	6228
Top Log Interval	48	699	699'	2000
Casing + Dritter	16 0 43	10 ³ /4" a) 699"	.ാ 4" ക 699"	
Casing — Lagger	48	699	699	
8 it Size	3 3/4	9 7/8"	→ A	
Max Hole Dev	· [I	1	
Type Fluid in Hole	Chem Ge-	Chem Ge	chem Gel	
Dens Visc	-] 38	8 4 40	8 4 40	
pH Fluid Loss		100 9 6 ml	0 96	
Source of Sample	1	€.owline	Fow ine	
Hm a) Meas Temp	1	1.3 a) 78° F		
Rmf @ Meas Temp	Ī	12 a) 82° F	. 2 0 82°F]
Rmc & Meas Temp	1	1.5 a) 84°F	5 a) 84°F	
Source Rmf Rmc	1	Meas Meas	Meas Meas	
Rm ov BHT	Ť	69 at 152° F	69 a 152° F	I
Time Since Circ	3 hours	7 hours	I	
_ Max. Res . Tangen				
Equip Location	DDL 003 ADEL	001.003 ABFL	DDL 003 ADEL	
Recorded By	£ White	l, White	, white	l
Witnessed By	J Mulready	F Boarda	• Roarda	F Boardo
	·- [1	J. Mulready

ENGINEERING DATA

From

From 6159

3758

853

Туре

To

<u>To</u>

6059

3658

<u>From</u>

603 (Tagged at 660')

<u>To</u>

No. per foot

17 1/2"	51	urface	43		
13 ³ /4 ''		43'	702"		
9 7/s "		702 '	6221	•	
7 ³ /4'''		6221'	6229	1	
Casing	<u>Weight</u>	<u>Grade</u>	Set to	Cemented with	Cemented to
16"			43'	12 sacks Class A	surface
10	***	_	40	4% Cacle	surrace
				_	
103/4"	40 5 lb/ft	H 40	699'	330 sacks Class A	surface
				2% Cacl ₂	
	يرواه المستعدد والمستهدوات والمستعدين				

LEGEND Glauconitic SHALE SILTSTONE Argillaceous SANDSTONE LIMESTONE Sandy (Micrite) META - SEDIMENTS Pebbly Calcareous

Size

2 /**s**" 196' 26 Biwire RESISTIVITY BIT TYPE DIP ANGLE INTERVAL LITHOLOGIC DESCRIPTION DEPTH INTERPRETED Rxo/Rt DRILLING RATE Ohms/metre CASING TRANSIT 8. CORES feet min./metre LITHOLOGY DIRECTION TIME REMARKS S.P. 00200 400 605 900 CARBONIFEROUS MOUNT ECLIPSE SANDSTONE Surface - 410' Interrupted graded sequence of Pebbly Sandstone to Silty Shale SANDSTONE- pinkish light grey to grey red, hard to moderately friable, consists of poorly sorted very fine to very coarse grained occasionally pebbly, subangular clear to red stained quartz; mica in parts in a spare kaolinitic/siliceous matrix. Tight, occasional trace of porosity. - grey-red with occasional green reduced mottling, hard blocky, micaceous to very micaceous in 8.1 No 2 parts, very silty to sandy, grades to siltstone in 3 3/4 parts. REED YC29 5 Yallrs 2 2 1 410 - 530' Graded Sandstone with some Shale interbeds: lithology as for surface - 410 feet. 530 - 844' Interbedded Sandstone and Shale :-13 3/4 SANDSTONE - grey red dirty, slightly friable, consists SMITH 1918 of moderately sorted fine to coarse predominantly fine 20 12Hrs grained, sub-angular quartz, abundant coarse chloritized biotite in a sparse (?) red stained kaolinitic matrix. Tight, possible porosity in basal A PARTY OF THE PAR SHALE - red brown to brick red with occasional green mottling, blocky to sub-fissile, firm to hard, micaceous (coarse biotite) in parts, silty to sandy grading to siltstone. Oxidation/reduction mottling increases with depth. BIT No 5 (RR) 9 1/6" SECURITY 22 1/2 Hrs 6 -5 -1 * * * 844 - 1473' Interbedded Sandstone and Shale with Calcareous Nodules: -SANDSTONE - light grey to red brown mottled, occasionally grades to siltstone, consists of very fine occasionally medium grained sub-angulaar quartz, trace mica and lithic grains, slightly calcareous, tight. SHALE - grey-red occasional green mottling, hard subfissile, silty to sandy, micaceous in parts, brick red, argillaceous, slightly calcareous. Common calcite fragments (fracture fillings?) and occasional LIMESTONE - buff coloured micrite (probably nodules). Poor samples - sandstone predominantly loose grains and argillaceous variety of shale washes out of samples. 1473 - 1762' Moderately well sorted sandstone with Shale interbeds and reduzate mottling increasing with <u>depth:-</u> SANDSTONE - down to 1690' - pinkish light grely with greenish grey reduced mottling. Samples poor predominantly loose grains, assume moderately friable with indurated stringers. Consists of fine to coarse BIE No 6 predominantly medium grained moderately to well sorted 9 % HTCsub-angular to sub-rounded clear to opaque occasional J = 22pink stained quartz, trace kaolinized feldspars and a 623/4 Hrs rare trace of mica in a sparse to abundant 8 - 8 - 1/2 calcareous/siliceous matrix. BIT WORN & TORQUEING SANDSTONE - below 1690' - medium grey to dark brown mottled green very hard consists of very fine to medium grained opaque occasionally red stained angular quartz, common trace of coarse biotite and chloritized biotite flakes, and common dark (carbonaceous?) specks and grains in a moderate calcareous/siliceous matrix. Tight. SHALE - orange brown, brick red, brown, red brown, grey brown and grey red (grades down into shale as for 1762 - 2551'), firm blocky to sub-fissile, part micromicaceous, very micaceous in parts, sandy in parts occasionally, grades to siltstone, grey-green reduced stringers in parts (very hard calcified and silicified). Black (carbonaceous?) mottling near base.

The second of th

BIT No 7

9 7e"

613/4 Hrs

5-5-1/2

1762 - 2551' Calcareous Shale with Sandstone Interbeds

SHALE - black, carbonaceous, blocky, argillaceous (a

Abundant calcite fragments (fracture fillings?)

Poor sample quality - bit worn and torqueing.

few?) stringers, trace only in samples.

and String :-

SHALE - Light brown to red brown, occasionally slightly silty, argillaceous, slightly calcareous to calcareous in parts, slightly micaceous in parts.

<u>SANDSTONE</u> - red_brown-purple mottled green occasionally light grey. Grain size very variable fine to very coarse occasionally pebbly, moderately to poorly sorted. Consists of predominantly sub-rounded slightly stained quartz, trace of mica and rare glauconitic grains and chloritized biotite flakes in a sparse kaolinite/calcite matrix (quartz grains calcite coated). Common calcite fragments and grains (shell

fragments?). Samples poor - hole "dusting" - sandstone predominantly loose grains, shale powdered.

Kemp Drafting & Cartography Ply Ltd

		a a J		
BIT TYPE and SON REMARKS	DEILLING RATE min /metre CASING	Σ α	Ohms/metre B. DIRECTION	LITHOLOGIC DESCRIPTION
BIT No. 7 978 HTC J 22 6234 Hrs 5-5-1/2	20 15 10 5	υ	S.P. 40 -25 75 75 75 75 75 75 75 75 75 75 75 75 75	2551 - 3270' Calcareous Shale with Sandstone interbeds and Strings (Lithologically identical to above unit, but character of sonic log distinctly different). From 2910 - 3060' a few stringers of Pyritic Sandstone and of Limestone. SANDSTONE - grey green, very fine grained, grades to siltstone. Trace pyrite. LIMESTONE - buff coloured, hard, micrite.
BIT No 8 9 7/8" HTC J-22 53 5/4 Hrs 6:5 1/4				ORDOVICIAN KERRIDY SANDSTONE 3270 - 3676' Very fine grained micaceous Sandstone grading to and thinly interbedded with minor Siltstone and Shale: SANDSTONE - light brown occasionally mottled green and dark brown. Consists of very fine to fine occasionally medium grained sub-rounded to sub-angular, clear to opaque partly light brown stained calcite coated quartz and a trace of mica and calcite grains. In parts grades to siltstone. SILTSTONE - Red-brown, micaceous, calcite coating on grains, grades to fine grained Sandstone. SHALE - Tan/light brown very silty grades to Siltstone, calcareous. ORDOVICIAN DJAGAMARA FORMATION 3676 - 3710' Light brown argillaceous and calcareous Shale:- SHALE - Tan/light brown argillaceous and very calcareous (marl). 3710 - 3870' Interbedded Sandstone, Shale and Limestone, all more or less glauconitic:-
BIT No 9 9 %" SECURITY H7UG 36 % Hrs 8-6-%6				UPPER SANDSTONE - Light grey, very hard. Consists of very fine to fine occasional medium grained well sorted sub-angular clear quartz and a trace of glauconite grains (occasionally abundant in fragments), a rare trace of pyrite. Very calcareous, (calcite coated grains). LIMESTONE - light grey, glauconitic, micrite. SHALE - dark greenish grey, hard silicified, very silty, glauconitic, non-calcareous at the top, grading down to very calcareous. LOWER SANDSTONE - as for Upper Sandstone, but dark grey, very fine to coarse grained, poorly sorted. Samples very poor. Very hard slow-drilling layers resulted in samples consisting predominantly of powder. Lithology interpreted from occasional fragments and from wire-line logs. 3870 - 4042' Siltstone/with minor Sandstone and Limestone stringers in upper 50 feet: SILTSTONE - Dark grey-brown, shaley, blocky to slightly fissile, slightly micaceous, very slightly calcareous, occasionally sandy. SANDSTONE - Grey-green, hard, glauconitic, very fine grained, slightly pyritic.
BIT NO O 3 /8 SECURITY H736 9 / 4 - 4 NO 1 NS EN NO	CORE - 1 (N.R)			LIMESTONE - Light grey-green, micrite, glauconitic (?) 4042 - 4138' Non-Calcareous Shale :- SHALE - Light-medium brown or light-dark grey, soft-firm, blocky argillaceous - sub-fissile silty, non-calcareous. ADELAIDEAN MOUNT DOREEN FORMATION 4138 - 4289' LIMESTONE - white to light to medium grey, blocky firm occasionally, hard mircrite, with a rare trace of black specks and occasional pyrite blebs near the base. 4289 - 4346' SHALE - medium to dark grey, hard silicified, pyritic in parts, silty, slightly micaceous, slightly calcareous. 4346 - 4400' LIMESTONE - white to light grey samples consist of predominantly clear to opaque solution rounded course calcite spar and micrite fragments. 4400 - 4426' SANDSTONE - grey, hard, lithic, very calcareous. Consists of poorly sorted medium to very coarse grained sub-angular clear to opaque quartz, abundant calcite spar as grains and cement, 5.10% dark grey black lithic grains in a calcareous matrix, tight. 4426 - 4474' Dark Grey Shale grading down to Limestone SHALE - dark grey, hard, silicified, lithic (contains dark grains and mica flakes), very calcareous grades down to: LIMESTONE - dark grey, hard arqillaceous, lithic as for above shale.
BIT No 12 9 %" HTC J-22 52 Hrs 3-4-1	50 RPM 30,000 lb 60 RPM			### Add ### Ad
BIT No 13 9 % " HTC J-22 37 % 2 Hrs 2-1				of fine occasionally medium grained sub-angular clear to opaque quartz, abundant calcite spar and trace of large muscovite flakes. 5554 - 5760' SHALE - dark grey, hard, silty, micaceous, slightly pyritic, slightly calcareous. 5760 - 5800' SHALE - dark grey, very calcareous, very argillaceous 5800 - 5890 SHALE - dark grey-black, blocky, micaceous, silty in parts occasional grades to SILTSTONE, slightly calcareous. 5890 - 5985' Non Calcareous Shale interbedded with Calcareous Shale increasing with depth SHALE - dark grey speckled, firm sub-fissile, non-calcareous. SHALE - dark grey, very calcareous occasionally grades to MICRITE, occasionally grades to black fissile SHALE with slicken sides(?). In parts silty, finely laminated. 5985 - 6080 SHALE - black fissile non-calcareous. 6080 - 6097' SHALE - medium grey, firm-hard, blocky. PRECAMBRIAN PATMUNGALA BEDS 6097 - 6160' ORTHOQUARTZITE - very variable grainsize, poor samples, very hard metamorphosed sandstone, with occasional pebbles,