



WELL: Ronald 1
CRAE No. RD93MB26

<p>Status: Plugged and abandoned</p> <p>Hole Size: 24" to 8.1m 12¼" to 69m 8½" to 289m 6" to 1150m (TD)</p> <p>Casing & Tubing Details: 13¾" to 8.1m 9⅝" to 58.5m 7" to 279.6m</p> <p>Perforations: Nil</p> <p>Plugs: Plug No. 1 1076 to 1016m Plug No. 2 395 to 250m Plug No. 3 20m to surface</p>	<p>Operator: Pacific Oil & Gas Pty. Limited</p> <p>Participants: Pacific Oil & Gas Pty. Limited 90% Omega Oil N.L. 10% (Non-contributory interest)</p> <p>Tenement: EP18</p> <p>Seismic Location: Line MD92-55; SP 1780</p> <p>Location: Lat: 16° 14' 57.0" South Long: 134° 09' 41.5" East AMG: Zone 53, 410 399mE, 8 203 313mN</p> <p>Basin: Beetaloo Sub-basin, McArthur Basin Elevation: KB 254.3m AHD (Datum) Spudded: 30th July 1993 Rig Released: 17th August 1993 Rig: Rockdril Rig 22 Drilling Contractor: Rockdril Contractors</p>
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STRATIGRAPHY:

AGE	UNIT AND SUB-UNIT	MBKB (Logger)	Metres AHD (Logger)	Thickness (m)
metaceous	Mullaman beds	5.3	249.0	76.2
Cambrian	Jinduckin Formation	64.3	190.0	17.2
	Tindall Limestone	81.5	172.8	105.5
	Antrim Plateau Volcanics	187.0	67.3	372.3
Proterozoic	"Hayfield Mudstone"	559.3	-305.0	213.4
	"Jamison Sandstone"	772.7	-518.4	99.0
	McMinn Formation			
	- Kyalla Member	871.7	-617.4	170.3
	- Moroak Sandstone Member	1042.0	-787.7	+108.0
Total Depth (Driller) (m)		1150.0	895.7	
Total Depth (Logger) (m)		1150.0	895.7	

FORMATION TESTS:

CHOKE: N/A (Closed Chamber DST)

TEST	TIMES (min)				PRESSURES (psi)								RESULT
	PF	FSI	F	SSI	IHH	IPP	FPP	BP	IFP	FFP	FBP	FHH	
DST 1													
1043.93 to 1069.91m	6½	61¼	18	63¼	Inside Gauge								Recovered
					1335.7	647.4	1152.2	1333.9	1122.6	1326.7	1335.2	1336.4	3108 litres of saline
					Outside Gauge								formation water and
					1358.4	1220.5	1243.0	1357.2	1303.2	1353.6	1357.8	1359.1	minor gas
					Recovery Gauge								
						2.7	921.1	917.1	900.8	1327.2	1307.3		

PF : Preflow Period	IHH : Initial Hydrostatic Head	IFP : Initial Flow Pressure
FSI : First Shut In	IPP : Initial Preflow Pressure	FFP : Final Flow Pressure
F : Flow Period	FPP : Final Preflow Pressure	FBP : Final Build Up Pressure
SSI : Second Shut In	BP : Build Up Pressure	FHH : Hydrostatic Head

LOGS:

CORES: Nil

TYPE LOG	RUN NO	INTERVAL (m)	DATE
DLL-GR-SDT-SP	1	1135.0-Surface	14/8/93
LDL-CNL-GR	2	1139.0-282.0	14/8/93
SHDT-GR (Dipmeter)	3	1149.0-555.0	14/8/93
SAT-B (Velocity Survey)	4	1130.0-54.3 20 levels	15/8/93

Analyses

Type of Analysis	DPO No	Comments
Water Analysis	77759 77764	Bore water Water recovered from DST #1. Taken from top of liquid recovery 850m above shut-in tool.
TOC/Rock Eval	77760 77765	6 samples from Kyalla Member 4 samples from Kyalla Member, 2 samples from Moroak Sandstone
Gas Compositional Analysis	77767	2 samples collected during chamber blowdown, final shut-in, DST #1
Gas Chromatography	77760 77764	Material extracted from 2 cuttings samples from the Jamison Sandstone. Material extracted from water, DST #1
Extraction and Liquid Chromatography	77760	Material extracted from two samples from the Jamison Sandstone
Thermal extraction/ pyrolysis - GC	77760	One sample each from the base of the Jamison Sandstone and the top of the Kyalla Member

Summary & Conclusions:

Ronald 1 was designed to test the "Jamison" and Moroak sandstones on a fault independent, seismically defined closure.

Formation tops were generally between 60 to 116m off prognosis. The Antrim Plateau Volcanics were 191.3m thicker than prognosed and the Kyalla Member was 176.7m thinner than prognosed.

A very low rate gas zone was intersected in the Antrim Plateau Volcanics. The zone was interpreted to be a weathered flow top (vesicular and fractured) in the basalt sequence.

The "Jamison Sandstone" at **Ronald 1** is predominantly composed of sandstones with a high clay matrix component (and hence poor reservoir characteristics) and interbedded claystones. A small flow of formation water and minor fluorescence were encountered in a cleaner sand at the base of the "Jamison Sandstone".

The top 30m of the Moroak Sandstone at **Ronald 1** exhibited good reservoir properties and was tested to assess reservoir potential. Results indicate the zone initially produced formation water at approximately 3000 bbls/day before killing itself. Minor gas (possibly solution gas) was also produced.

Information gained from the **Ronald 1** well has greatly increased the understanding of the northern "Beetaloo Sub-basin" demonstrating:

- the existence of the "Arnold Arch" as a regional pre-Jamison Sandstone structure;
- the excellent reservoir potential of the Moroak Sandstone;
- the optimal maturity of source rocks over the "Arnold Arch";
- the optimal timing of oil generation.

An absence of closure appears to best explain the lack of significant hydrocarbons in **Ronald 1** as both reservoir horizons came in significantly off-prognosis and the seismically fast Cambrian basalt section was almost 200m thicker than prognosed.

Ronald 1 was plugged and abandoned as a dry hole.

WELLSITE GEOLOGIST: S.A. Menpes	CARD PREPARED BY: S.A. Menpes	APPROVED BY:	DATE:
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