



## **Pritchard 1 Well Summary Card**

Operator:	Essential Petroleum Resources Limited
Contractor:	Hunt Energy & Minerals Rig 2
Location:	PEP 151, Otway Basin, onshore western Victoria
Coordinates:	Easting 518,400.60 m, Northing 5,753,347.88 m, GDA94 Zone 54 Latitude 38 00' 26.48" S Longitude 141 12' 34.56"
Elevation:	Ground Level (GL): 36.75 metres AHD Rotary Table (RT): 41.05 metres AHD (Datum)
Seismic:	Line WGD85-352, Shotpoint 116
Total Depth:	2543.0 mRT
Spudded:	27/03/2006 at 19:00
Reached TD:	12/04/2006 at 07:00
Rig Released:	16/04/2006 at 12:00
Status:	Plugged and abandoned, no shows
Objectives:	The primary target of the well was oil below the Pember Mudstone seal in the Pebble Point Formation and/or the Timboon Sandstone. The structure is a rollover anticline developed on the south side of the Tartwarp fault during the time of deposition of the Sherbrook and Wangerrip Groups. Four way dip closure was created by subsequent east-west compression. Secondary targets were recognised in sand/shale pairs interpreted from seismic data and tentatively ascribed to the Nullawarre Greensand equivalent and the Flaxman Formation. These lower zones were considered a secondary target as the distribution of seals and reservoirs was uncertain, as was the nature of hydrocarbon charge (oil vs gas).
Summary:	<p>The well was drilled to the primary target in 8 ½" hole. No testing was carried out. The Pebble Point Formation was poorly developed as expected. The Timboon Sandstone was well developed and was intersected high to the adjacent Henke-1 well however there were no hydrocarbon shows.</p> <p>The well was deepened to intersect the Nullawarre and Flaxman Formation targets. The deeper part of the well encountered a thick sand-prone deltaic sequence. The well terminated within the targeted section. On subsequent palynological examination the base of the well is in the Morum Formation, equivalent in age to the lowermost Belfast Mudstone Unit A or Banoon Member of the Port Campbell Embayment. No oil shows were recorded.</p> <p>The well was terminated when a determination was made that the capacity of the rig brake could be exceeded by any further drilling. While the target stratigraphy was not fully penetrated the top had been intersected and found to not contain gas, and that drilling deeper was speculative and not justified.</p> <p>The well was logged and a velocity survey carried out to confirm that the top of the targeted section had been reached.</p>

# Pritchard-1

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## Casing Record

Hole Size	Hole Depth	Csg Size	Shoe Depth	Type	Cementing	Comment
20"	43 m	16"	40.3	68 ppf K55 BTC	To surface	
12 1/4	836.0 m	9 5/8"	831.6	36/47 ppf K55BTC	To surface	FIT with 8.6 ppg mud (EMW 1.17 SG ,9.8 ppg)

## Bit Record

Bit No	in mm	Jets	Make	Type	IADC code	In (mRT)	Out (mRT)	Made Hrs	Cond	Reason Pulled		
	20"	445	The Conductor hole was drilled with a precollar rig to 43 m				GL	43	38		Casing point	
1rr	12 1/4	311	18-18-18	CH1GMS	M22	1-1-7	43	836	793	57	C-I-WT-TD	Casing point
2rr	8 1/2	216	12-12-12	CH1GMS		1-1-7	836	1158	1063	39.5	8.6.WT.A.E.I.ER	Programmed bit change
3rr	8 1/2	216	14-14-15	CH1GMS		1-1-7	1158	1395			6 5 WT.A.E2.ER PR	Programmed bit change
4rr	8 1/2	216	5 x12	DBS	PDC	FS2565	1395	2098				Washed jt instrng
5rr	8 1/2	216	5 x12	DBS	PDC	FS2565	2098	2543	1148	97		TD

## Stratigraphic Table

Formation Tops			
	Ground level m AHD		36.75
	Datum (RT) m		41.05
	air gap m		4.3
Formation	wireline depth (mRT)	Elevation (mAHD)	thickness (m)
Alluvium	4.3	36.75	13.4
Pt Campbell Lst	17.7	23.35	66.3
Dilwyn Formation	84	-42.95	806
Pember Mudstone	890	-848.95	425.5
Pebble Point Formation	1315.5	-1274.45	7
Massacre Shale	1322.5	-1281.45	10
Timboon Formation	1332.5	-1291.45	183.5
Paarrate Formation	1516	-1474.95	145.5
Skull Ck Mudstone	1661.5	-1620.45	7.5
Nullawarre Greensand	1669	-1627.95	36.5
Mt Salt Fm (Belfast Mdst)	1705.5	-1664.45	540
(Belfast B equiv)	2245.5	-2204.45	102.5
Morum Fm (Belfast A equiv)	2348	-2306.95	195
TD	2543	-2501.95	

Palynological data

Depth	Yield	Preservation	SP Zone	SP Subzone	MP Zone	MP Subzone	
960	High	Very poor	Malvacipollis diversus	Proteacidites grandis	Apectodinium homomorphum		
1005	Moderate	Poor-fair					
1071	Low	Poor					
1164	Low	Poor					
1263	High	Very poor		Spinizonocolpites prominatus	Apectodinium hyperacanthum		
1305	Moderate	Very poor	Mixed M. diversus and L. balmei				
1326	Moderate	Very poor	Undifferentiated Forcipites longus		Manumiella druggii		
1348	High	Poor-fair	Lower Forcipites longus		Isabelidinium pellucidum		
1362	Moderate	Poor-fair					
1401	High	Fair					
1530	Moderate	Very poor	Nothofagidites senectus		Xenikoon australis		
1713	Moderate	Poor	Tricolporites apoxyexinus		Isabelidinium cretaceum		
1833	Low	Poor-fair					
1986	Moderate	Poor					
2025	Moderate	Poor					
2094	Moderate	Very poor					
2250A	Moderate	Very poor					
2250B	Moderate	Poor			Odontochitina porifera		
2358	Moderate	Very poor	Phyllocladidites mawsonii	Clavifera vultuosus		Conosphaeridium striatoconum	
2460	High	Very poor					
2517	Moderate	Very poor		Gleicheniidites ancorus or younger			
2520A	Moderate	Poor-very poor					
2520B	Low	Very poor					
2541	Moderate	Very poor					Trithyrodinium Subzone

## Checkshot survey data

MD (m)	TVD (m srd)	Corrected time msec srd)	Average Velocity
40	0	0	1339.3
189.9	147.6	79.23	1732.13
300	257.7	135.27	1812.8
550	507.7	249.74	1966.68
697	654.7	308.21	2062.39
850	807.7	367.02	2142.99
1009.9	967.6	429.07	2202.08
1179.9	1137.6	481.45	2309.72
1268	1225.7	511.92	2342.67
1316	1273.7	529.81	2353.62
1333	1290.7	537.46	2351.81
1365	1322.7	545.2	2375.97
1500	1457.7	582.63	2451.62
1750	1707.7	658.61	2544.65
1900	1857.7	701.18	2601.91
2030.1	1987.8	740.31	2638.81
2099.9	2057.6	756.56	2673.21
2250	2207.7	797.8	2721.57
2385	2342.7	820.36	2808.5
2530	2487.7	866.85	2824.64