

## WA Well Stimulation - Well List

The following table is a summary of wells drilled in Western Australia (from the petroleum well records held by the Department of Mines and Petroleum) that have been subjected to some form of well stimulation. The start date refers to the commencement of drilling operations. Oil/Gas field refers to the classification of hydrocarbons that were encountered in the well and includes small 'shows' to commercially produced quantities of oil, gas and condensate. The range of fracture stimulation depths refers to the depths from surface that fracture stimulation(s) occurred.

Well Name	Type*	Drilling Start Date	Rig Release Date	Stimulation Start Date	Stimulation Completion Date	Lease	Oil/Gas	Operator	Onshore/Offshore	Basin	Approximate Location	Range of Stimulation Depth (metres)	Hydraulic Fracture Stimulation	Acid Fracturing	Matrix Acidising
Arrowsmith 2	Exploration	29/05/2011	23/06/2011	22/07/2012	30/09/2012	EP 413 R2	Oil & Gas	Norwest Energy NL	Onshore	Perth	30 km north of Eneabba	2639 - 3293.3	✓		
Asgard 1	Exploration	28/08/2012	11/10/2012	22/08/2015	30/08/2015	EP 371	Gas	Buru Energy Ltd	Onshore	Canning	60 km west of Fitzroy Crossing	Remains confidential	✓		
Barrow Island**	Development	1964 onwards	1964 onwards	1965 onwards		L1H	Oil & Gas	West Australian Petroleum Pty Limited	Onshore	Carnarvon	Barrow Island	Various	✓	✓	✓
Blina 3	Appraisal	21/11/1981	04/01/1982	22/12/1981	02/01/1982	EP 129	Oil	Home Energy Co Ltd	Onshore	Canning	100 km south east of Derby	1459.5 - 1478.5		✓	
Bootine 1	Exploration	09/08/1981	22/11/1981	14/05/1982	15/05/1982	EP 24 R2	Gas & Condensate	Mesa Australia Ltd	Onshore	Perth	West of Gingin	3752.5 - 4085		✓	
Corybas 1	Exploration	22/02/2005	07/03/2005	17/05/2009	17/05/2009	L2 R1	Gas	Arc Energy Limited	Onshore	Perth	Dongara area	2514 - 2536	✓		
Dongara 01	Exploration	30/03/1966	02/07/1966	Mar 1983	Mar 1983	LP-111H	Gas	West Australian Petroleum Pty Limited	Onshore	Perth	Dongara area	1670.9 - 1674.6			✓
Dongara 02	Appraisal	31/07/1966	12/08/1966	Mar 1983	Mar 1983	LP-111H	Gas	West Australian Petroleum Pty Limited	Onshore	Perth	Dongara area	1681 - 1684.6			✓
Dongara 03	Appraisal	02/09/1966	18/09/1966	Mar 1974 & Apr 1983	Mar 1974 & May 1983	LP-111H	Gas	West Australian Petroleum Pty Limited	Onshore	Perth	Dongara area	1602 - 1677	✓		✓
Dongara 09	Appraisal	15/04/1969	08/05/1969	Apr 1974 & Jul 1984	Apr 1974 & Jul 1984	LP-111H	Gas	West Australian Petroleum Pty Limited	Onshore	Perth	Dongara area	1500 - 1726	✓		
Dongara 10	Appraisal	14/06/1969	01/07/1969	Apr 1983	Apr 1983	LP-111H	Oil & Gas	West Australian Petroleum Pty Limited	Onshore	Perth	Dongara area	1728.2 - 1738.9			✓
Dongara 11	Appraisal	09/07/1969	25/07/1969	Mar 1983	Mar 1983	PE-27H	Gas	West Australian Petroleum Pty Limited	Onshore	Perth	Dongara area	1683.7-1709.9			✓
Dongara 12	Appraisal	30/07/1969	17/08/1969	Mar 1983	Mar 1983	PE-27H	Gas	West Australian Petroleum Pty Limited	Onshore	Perth	Dongara area	1625.8 - 1658.7			✓
Dongara 15	Appraisal	16/10/1969	04/11/1969	Mar 1974 & Apr 1983	Mar 1974 & Apr 1983	PE-27H	Gas	West Australian Petroleum Pty Limited	Onshore	Perth	Dongara area	1633.4 - 1717.9	✓		✓
Dongara 18	Appraisal	09/01/1970	26/01/1970	Aug 1982	Aug 1982	PE-27H	Gas	West Australian Petroleum Pty Limited	Onshore	Perth	Dongara area	1717.5 - 1749.6			✓
Dongara 20	Development	12/07/1974	20/07/1974	Aug 1982	Aug 1982	EP 23	Gas	West Australian Petroleum Pty Limited	Onshore	Perth	Dongara area	1710 - 1716			✓
Dongara 21	Development	13/02/1980	10/04/1980	Dec 1981	Dec 1981	L2	Oil & Gas	West Australian Petroleum Pty Limited	Onshore	Perth	Dongara area	1589.5 - 1601.2	✓		
Dongara 23	Development	06/12/1980	10/01/1981	May 1983	May 1983	L1	Gas	West Australian Petroleum Pty Limited	Onshore	Perth	Dongara area	1589 - 1677			✓
Dongara 24	Development	26/02/1981	09/04/1981	May 1983, Jun 1984, Jul 1985	May 1983, Jun 1984, Jul 1985	L2	Oil & Gas	West Australian Petroleum Pty Limited	Onshore	Perth	Dongara area	1626.5 - 1660	✓		✓
East Lake Logue 1	Exploration	16/12/1982	28/01/1983	01/02/1983	01/02/1983	EP 100 R1	Gas	Hudbay Oil (Australia) Ltd.	Onshore	Perth	Dongara area	2324 - 2335			✓
Ejarno 1	Exploration	21/04/1981	25/06/1981	05/06/1981	05/06/1981	L1	Gas	West Australian Petroleum Pty Limited	Onshore	Perth	Dongara area	2727 - 2734	✓		
Gingin 1	Exploration	16/11/1964	15/07/1965	Jul 1971	Jul 1971	LP-115-H	Gas	West Australian Petroleum Pty Limited	Onshore	Perth	West of Gingin	3949 - 3956		✓	
Goldwyer 1	Exploration	17/08/1958	22/11/1958	c 1958	c 1958	LP-55-H	Gas	West Australian Petroleum Pty Limited	Onshore	Canning	100 km south east of Broome	1161 - 1196			✓
Great Sandy 1	Exploration	27/09/1981	13/11/1981	21/11/1982	21/11/1982	EP 164	Oil	Meridian Oil NL	Onshore	Canning	150 km south east of Broome	1478 - 1494.7		✓	
Grevillea 1	Exploration	13/07/1982	21/09/1982	17/09/1982	17/09/1982	EP 102	Oil	International Energy Development Corporation of Australia	Onshore	Canning	100 km south west of Fitzroy Crossing	1635 - 1639		✓	
Hedonia 1	Exploration	11/05/1984	27/09/1984	c 1984	c 1984	EP 114	Gas	Gulf (Aust) Resources NL	Onshore	Canning	100 km south east of Broome	1512 - 1535			✓
Indoon 1	Exploration	02/11/1982	14/12/1982	13/12/1982	13/12/1982	EP 100 R1	Gas	Hudbay Oil (Australia) Ltd.	Onshore	Perth	Dongara area	2191 - 2208		✓	
Meda 1	Exploration	08/06/1958	21/11/1958	c 1958	c 1958	LP-54-H	Gas	West Australian Petroleum Pty Limited	Onshore	Canning	100 km south east of Derby	1600 - 2041			✓
Mondarra 2	Appraisal	19/12/1968	18/02/1969	c 1969	c 1969	LP-171-H	Gas	West Australian Petroleum Pty Limited	Onshore	Perth	Dongara area	2736 - 2740	✓		
Nita Downs 1	Exploration	04/09/1983	30/09/1983	25/11/1983	25/11/1983	EP 142	Oil	Sydney Oil Company	Onshore	Canning	150 km south east of Broome	1510 - 1540		✓	
Pictor 2	Appraisal	11/11/1990	05/12/1990	27/11/1990	27/11/1990	EP 175 R2	Oil & Gas	Bridge Oil Limited	Onshore	Canning	100 km south of Derby	929 - 956		✓	
Senecio 2	Appraisal	22/11/2005	24/11/2005	14/08/2012	17/08/2012	EP 386	Gas	Arc Energy Limited	Onshore	Perth	16 km east of Dongara	2800 - 2805	✓		
Setaria 1	Exploration	14/05/1989	31/05/1989	c 1989	c 1989	EP 143 R1	Dry	Western Mining Corporation Ltd	Onshore	Canning	200 km south of Fitzroy Crossing	436 - 447			✓
South Pepper 04	Appraisal	12/04/1984	17/05/1984	c 1984	c 1984	WA-149-P	Oil & Gas	Wesminco Oil Pty Ltd	Offshore	Carnarvon	30 km south of Barrow Island	1230 - 1236			✓
Turtle 1	Exploration	07/01/1984	09/03/1984	c 1984	c 1984	WA-128-P	Oil & Gas	Western Mining Corporation Ltd	Offshore	Bonaparte	150 km north east of Wyndham	1615 - 1624			✓
Turtle 2	Appraisal	20/03/1989	02/07/1989	c 1989	c 1989	WA-128-P (R1)	Oil & Gas	Western Mining Corporation Ltd	Offshore	Bonaparte	150 km north east of Wyndham	2420 - 2446			✓
Valhalla North 1	Exploration	16/01/2012	18/03/2012	Sep 2015	Sep 2015	EP 371	Gas	Buru Energy Ltd	Onshore	Canning	80 km west of Fitzroy Crossing	Remains confidential	✓		
Walayering 2	Exploration	24/06/1971	25/12/1971	c 1971	c 1971	EP 24	Gas	West Australian Petroleum Pty Limited	Onshore	Perth	Badgingarra Area	3702 - 3722	✓		
Warradong 1	Exploration	04/02/1981	14/04/1981	03/04/1981	03/04/1981	EP 105	Gas	Mesa Australia Ltd	Onshore	Perth	Dongara area	3178 - 3188	✓		
Warro 1	Exploration	27/02/1977	20/09/1977	c Sep 1977	c Sep 1977	EP 24	Gas	West Australian Petroleum Pty Limited	Onshore	Perth	70 km north east of Jurien Bay	3971 - 4093		✓	
Warro 2	Exploration	12/11/1977	05/04/1978	07/03/1978	23/03/1978	EP 24	Gas	West Australian Petroleum Pty Limited	Onshore	Perth	70 km north east of Jurien Bay	3991 - 4073	✓		
Warro 3	Appraisal	30/01/2009	19/03/2009	25/03/2009	18/05/2009	EP 407 R1	Gas	Latent Petroleum Pty Ltd	Onshore	Perth	70 km north east of Jurien Bay	3744 - 4254.1	✓		
Warro 4	Appraisal	11/04/2011	11/05/2011	26/07/2011	02/08/2011	EP 407	Gas	Latent Petroleum Pty Ltd	Onshore	Perth	60 km east of Jurien Bay	3878 - 4079	✓		
Warro 5	Appraisal	16/08/2015	29/09/2015	05/12/2015	12/01/2016	R7	Oil	Latent Petroleum Pty Ltd	Onshore	Perth	60 km east of Jurien Bay	Remains confidential	✓		
Warro 6	Appraisal	12/10/2015	09/11/2015	12/12/2015	09/01/2016	R7	Oil	Latent Petroleum Pty Ltd	Onshore	Perth	60 km east of Jurien Bay	Remains confidential	✓		
Whicher Range 1	Exploration	19/03/1968	22/09/1968	13/12/1997	22/12/1997	LP-198-H	Gas & Condensate	Union Oil Development Corporation	Onshore	Perth	20 km south of Busselton	4050 - 4285	✓		
Whicher Range 2	Appraisal	25/04/1980	27/07/1980	19/07/1980	19/07/1980	EP 130	Gas & Condensate	Mesa Australia Ltd	Onshore	Perth	20 km south of Busselton	3951 - 4026		✓	
Whicher Range 3	Appraisal	21/09/1981	08/05/1982	May 1982	May 1982	EP 130	Gas & Condensate	BP Petroleum Development Australia Pty Ltd	Onshore	Perth	20 km south of Busselton	4020 - 4357	✓	✓	✓
Whicher Range 4	Appraisal	30/08/1997	03/11/1997	02/12/1997	07/01/1998	EP 408	Gas & Condensate	Amity Oil NL	Onshore	Perth	20 km south of Busselton	4045 - 4380	✓		
Whicher Range 5	Appraisal	11/10/2003	21/01/2004	06/09/2004	06/09/2004	EP 408	Gas & Condensate	Amity Oil NL	Onshore	Perth	20 km south of Busselton	4001 - 4262	✓		
Woodada 02	Appraisal	28/06/1980	03/08/1980	c Aug 1980	c Aug 1980	EP 100	Gas	Hughes & Hughes Australia Pty Ltd	Onshore	Perth	20 km north east of Leeman	2309 - 2460			✓
Woodada 03	Exploration	10/12/1980	08/02/1981	09/04/1981	10/04/1981	EP 100	Gas	Hudbay Oil (Australia) Ltd.	Onshore	Perth	58 km south of Dongara	2413 - 2478.5			✓
Woodada 04	Appraisal	16/02/1981	05/04/1981	06/04/1981	06/04/1981	EP 100	Gas	Hughes & Hughes Australia Pty Ltd	Onshore	Perth	20 km north east of Leeman	2138 - 2271			✓
Woodada 05	Appraisal	15/01/1982	18/03/1982	07/03/1982	15/03/1982	EP 100	Gas & Condensate	Hudbay Oil (Australia) Ltd.	Onshore	Perth	20 km north east of Leeman	4372 - 2407		✓	
Woodada 06	Appraisal	24/03/1982	08/05/1982	14/09/1982	14/09/1982	EP 100	Gas	Hudbay Oil (Australia) Ltd.	Onshore	Perth	20 km north east of Leeman	2140 - 2238			✓
Woodada 08	Appraisal	22/08/1983	18/09/1983	07/10/1983	07/10/1983	EP 100 R1	Gas	Strata Oil NL	Onshore	Perth	20 km north east of Leeman	2146 - 2231			✓
Woodada 16	Development	17/05/1999	01/10/1999	20/09/1999	20/09/1999	L5	Oil	Phoenix Energy Pty Limited	Onshore	Perth	20 km north east of Leeman	2248 - 2286		✓	
Woodada Deep 1	Exploration	25/03/2010	19/04/2010	31/07/2012	10/08/2012	L5 R1	Gas	AWE Energy Ltd	Onshore	Perth	63 km south of Dongara	2283 - 2424.4	✓		
Yowalga 3	Exploration	19/08/1980	17/01/1981	c 1981	c 1981	EP 178	Dry	The Shell Company Of Australia Ltd	Onshore	Officer	550 km east of Wiluna	2057 - 2062			✓
Yulleroo 1	Exploration	21/05/1967	05/12/1967	26/11/1967	30/11/1967	LP-184-H	Gas	Gewerkschaft Elwerath	Onshore	Canning	100 km east of Broome	3394 - 3407			✓
Yulleroo 2	Exploration	22/01/2008	10/05/2008	31/08/2010	31/08/2010	EP 391 R1	Gas	Arc Energy Limited	Onshore	Canning	100 km east of Broome	2853 - 3119	✓		

\* **Type:**  
**Exploration** - The initial phase of petroleum operations that tests a potential, but unproven hydrocarbon play and includes drilling an exploration well.  
**Appraisal** - The phase of petroleum operations that immediately follows successful exploratory drilling and includes determining the physical extent, reserves and likely production rate of a field.  
**Development** - The phase of petroleum operations that occurs after exploration and appraisal have proven successful, before full-scale field production and includes drilling additional wells.

\*\* **Barrow Island:** Fracture stimulation or re-fracturing has been conducted on 563 wells on Barrow Island since 1965. These activities involved small scale fracturing and were conducted at relatively low hydraulic fracturing pressures (~1,300 psi (8,963 kPa)) for the purpose of improving oil recovery from the oil producing sands on Barrow Island.