



Highlights

- There were six petroleum discoveries reported in the quarter. *Offshore*, there were two gas discoveries made. Gas discoveries were at Highgrove and Kultarr in the Carnarvon Basin. *Onshore*, three gas and one oil discoveries were made. All were in the Cooper Basin with an oil discovery at Padulla and gas discoveries at Greenmount, Rosasco and Theta.

During 2005 there were 19 *offshore* discoveries with 12 in the Carnarvon Basin (6 gas, 4 oil and 2 oil and gas), 3 in the Otway Basin (gas), 2 in the Bonaparte Basin (gas) and 1 each in the Perth (oil) and Gippsland (Gas) Basins. *Onshore* there were 17 discoveries, 14 in the Cooper/Eromanga Basin (7 oil, 6 gas, 1 oil and gas) and one each in the Bowen (gas), Surat (gas) and Perth (oil) basins.

- During 2005 *offshore* exploration drilling accounted for 68 wells, which is the largest drilling activity since 1998. It is 26 wells more than that achieved in 2004 and 10 more than that in 2003. *Onshore* Exploration drilling in 2005 accounted for 77 wells drilled, which is four less than the 81 wells drilled in 2004. This current level of drilling is still significantly more than what was achieved in 2003 where 39 wells were drilled.

- Overall seismic activity in 2005 has remained similar to that achieved in 2004. *Onshore* seismic for both 2D and 3D has remained constant over the two periods. The biggest change was *offshore* where 2D seismic activity decreased 4923 km, and 3D increased by 13803 sqkm compared to 2004.

Drilling activity

Exploration drilling (Tables 1–3 & Figure 1) for the December quarter 2005, totalled 41wells, which is the same as that drilled in the previous quarter and one more than the same period in 2004, *Offshore* exploration wells drilled during the December quarter 2005 totalled 14 which is three less than in the September quarter 2005 and two less than in the December quarter 2004. Seven of these wells were drilled in the Carnarvon Basin, four in the Gippsland Basin, one each in the Browse, Bonaparte and Perth Basins.

Onshore exploration wells in the December quarter 2005 totalled 27 which is three more than the previous quarter and three more than the December quarter 2004. Thirteen of these wells were drilled in the Cooper/Eromanga Basin, five in the Perth Basin, three in the Otway Basin and one each in the Bowen and Gippsland Basins.

Development drilling (Tables 1–3 & Figure 1) activity for the December quarter 2005 of 22 wells is one more than the September quarter 2005 and one less than the December quarter 2004.

Offshore, the number of development wells drilled during the December quarter 2005 was seven. This is two less than the previous quarter and three less than the same quarter last year. Five of these wells were drilled in the Carnarvon Basin and two in the Gippsland Basin.

Onshore, there were 15 development wells drilled in the December quarter 2005. This is three more than the previous quarter and two more than the same quarter last year. All of these wells were drilled in the Cooper/Eromanga Basin.

Figure 1. Wells and metres drilled, 1995-2005

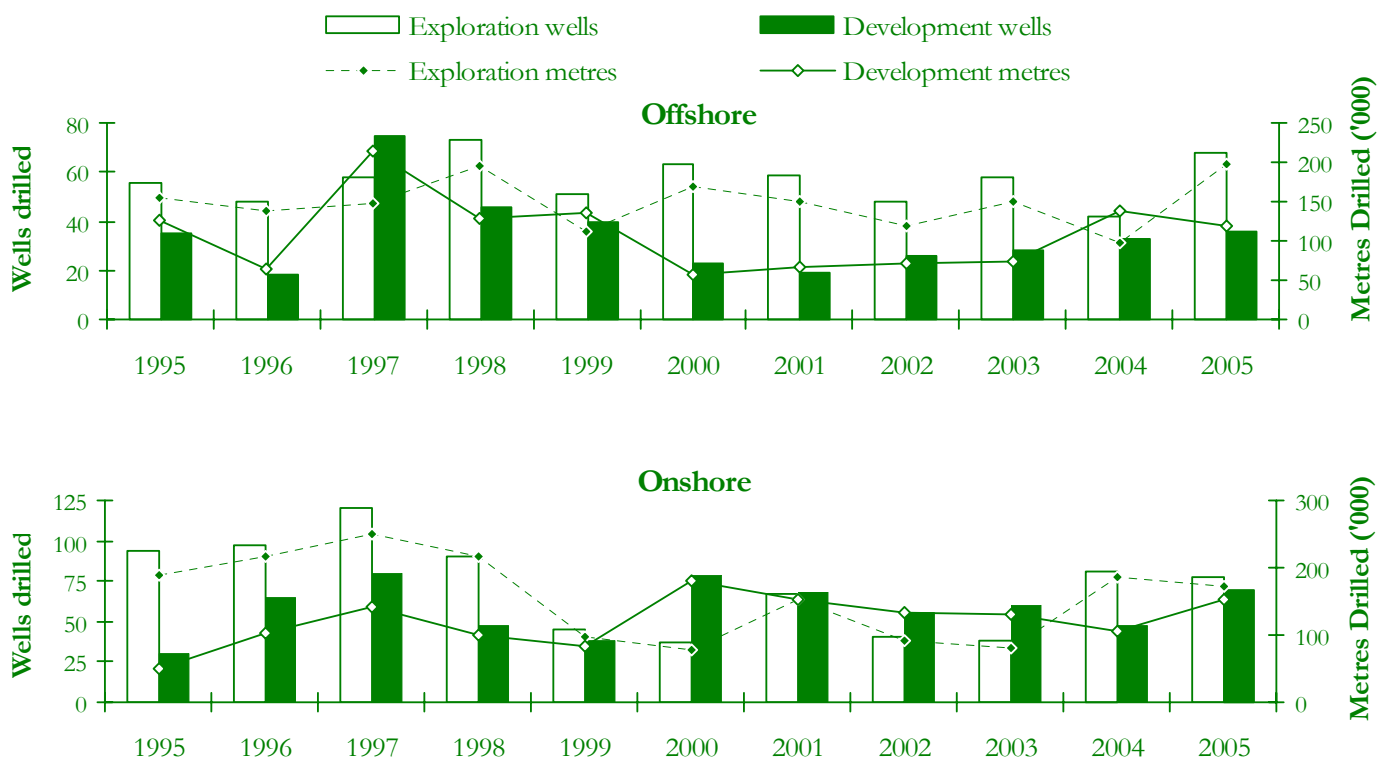


Table 1. Quarterly wells* and metres drilled 2002 to 2005

Quarter Ended	Exploration				Development				Exploration		Development		Total	
	Onshore		Offshore		Onshore		Offshore		Total		Total		Total	
	Wells	Metres	Wells	Metres	Wells	Metres	Wells	Metres	Wells	Metres	Wells	Metres	Wells	Metres
Sep-02	10	22 673	9	25 023	6	15 539	7	19 198	19	47 696	13	34 737	32	82 433
Dec-02	12	29 102	15	38 655	11	23 448	5	13 188	27	67 757	16	36 636	43	104 393
Total 2002	40	92 038	48	120 267	56	132 486	27	76 146	88	212 305	83	208 632	171	420 937
Mar-03	9	18 600	21	46 773	8	20 667	9	21 336	30	65 373	17	42 003	47	107 376
Jun-03	5	12 151	14	42 373	14	35 294	5	19 542	19	54 524	19	54 836	38	109 360
Sep-03	7	13 552	11	30 492	22	44 381	8	17 718	18	44 044	30	62 099	48	106 143
Dec-03	18	39 586	12	31 649	16	29 413	6	15 494	30	71 235	22	44 907	52	116 142
Total 2003	39	83 889	58	151 287	60	129 755	28	74 090	97	235 176	88	203 845	185	439 021
Mar-04	18	47 060	5	15 914	9	24 902	6	26 018	23	62 974	15	50 920	38	113 894
Jun-04	20	43 428	12	26 564	13	29 102	8	36 116	32	69 992	21	65 218	53	135 210
Sep-04	19	44 880	9	20 722	13	29 337	9	40 782	28	65 602	22	70 119	50	135 720
Dec-04	24	51 845	16	34 642	13	22 840	10	36 034	40	86 487	23	58 874	63	145 361
Total 2004	81	187 213	42	97 841	48	106 180	33	138 950	123	285 054	81	245 130	204	530 184
Mar-05	11	20 559	25	63 496	20	49 026	7	26 547	36	84 054	27	75 573	63	159 627
Jun-05	15	33 225	12	43 218	22	42 983	13	43 008	27	76 443	35	85 991	62	162 434
Sep-05	24	56 559	17	57 085	12	29 163	9	29 741	41	113 644	21	58 904	62	172 548
Dec-05	27	62 605	14	33 451	15	32 646	7	20 150	41	96 056	22	52 796	63	148 852
Total 2005	77	172 948	68	197 249	69	153 818	36	119 446	145	370 197	105	273 264	250	643 461

*Wells that reached total depth during the quarter

Changes in previously reported statistics are a result of additional information received by Geoscience Australia and revised classification of wells.

Table 2. Onshore and offshore wells and metres drilled, December quarter 2005*

State	Exploration				Development				Onshore		Offshore		Total	
	Onshore		Offshore		Onshore		Offshore		Total		Total		Total	
	Wells	Metres	Wells	Metres	Wells	Metres	Wells	Metres	Wells	Metres	Wells	Metres	Wells	Metres
Qld	9	17 929	0	0	10	22 557	0	0	19	40 486	0	0	19	40 486
Vic	2	4 999	4	4 293	0	0	2	3 497	2	4 999	6	7 790	8	12 789
SA	11	25 005	0	0	5	10 089	0	0	16	35 094	0	0	16	35 094
WA	5	14 672	9	25 483	0	0	5	16 653	5	14 672	14	42 136	19	56 808
JPDA**	0	0	1	3 675	0	0	0	0	0	0	1	3 675	1	3 675
Total	27	62 605	14	33 451	15	32 646	7	20 150	42	95 251	21	52 601	63	148 852

*Wells that reached total depth during the quarter.

Table 3. Onshore and offshore drilling status at 31 December 2005

State	Exploration wells											Development wells											
	Completed or C&S						Abandoned or secured					Completed or C&S					Abandoned or secured						
	D ¹	DA	Sus ²	Oil	Gas	O&G	Dry	Oil	Gas	O&G	Un	D ¹	DA	Sus	Oil	Gas	O&G	Ser ³	Dry	Oil	Gas	O&G	Un
Qld	9	3	-	1	2	-	6	-	-	-	-	10	-	-	1	7	1	-	1	-	-	-	-
Vic	6	1	-	-	-	-	6	-	-	-	-	2	-	-	2	-	-	-	-	-	-	-	-
SA	11	1	-	1	1	1	8	-	-	-	-	5	-	-	4	1	-	-	-	-	-	-	-
WA	14	3	-	-	1	-	11	-	2	-	-	5	5	-	-	-	1	-	-	-	-	-	-
JPDA	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Qtr	41	8	-	2	4	1	31	-	3	-	-	22	5	-	7	8	2	-	1	-	-	-	-
2005	145	8	-	22	27	4	72	7	12	1	-	105	5	-	30	42	12	-	16	2	3	-	-
2004	124	5	26	10	8	1	58	11	8	2	-	84	5	25	19	14	4	-	20	1	1	-	-
Previous quarter	40	-	-	10	8	2	15	2	3	-	-	15	-	-	3	8	2	-	1	1	-	-	-

C&S, cased and suspended; D, drilled; DA, drilling ahead; Sus, suspended; O&G, oil and gas; Un, unspecified; Ser, service well; JPDA: Joint Petroleum Development Area.

¹ Excludes wells drilling ahead or suspended. ² Indicates drilling has temporarily stopped before reaching final depth. ³ Classification applicable only to development wells.

⁴ Includes Territory of Ashmore and Cartier Islands.

Discoveries

Table 4 lists details of the reported discoveries of oil and gas during the year to 31 December 2005.

Table 4. Discoveries*, 1 January to 31 December 2005 (in order of discovery)

Operator	Field	Nature of discovery	Basin	State	Permit
Offshore					
Apache	Grayling	Gas	Gippsland	Vic	VIC/P54
Santos	Hurricane	Gas	Carnarvon	WA	WA208PR2
Woodside	Falcone	Gas	Carnarvon	WA	WA271PR1
Apache	Albert	Oil & Gas	Carnarvon	WA	TL/6
Woodside	Pluto	Gas	Carnarvon	WA	WA350P
Origin	Halladale	Gas	Otway	Vic	VIC/P37(V)
ROC	Hadda	Oil	Perth	WA	WA325P
OMV	Lauda	Oil	Carnarvon	WA	WA290P
Origin	Black Watch	Gas	Otway	Vic	VIC/P37(V)
Apache	Remus	Oil	Carnarvon	WA	TL/6
BHP Billiton	Langdale	Gas	Carnarvon	WA	WA155P
Eni	Vesta	Gas	Bonaparte	NT	AC/P21
Apache	Mohave	Oil	Carnarvon	WA	TL/1
Santos	Henry	Gas	Otway	Vic	VIC/P44
Conoco	Calidta	Gas	Bonaparte	NT	NT/P61
Apache	Jane	Oil & Gas	Carnarvon	WA	TL/6
Apache	Artreus	Oil	Carnarvon	WA	TL/6
Apache	Highgrove	Gas	Carnarvon	WA	TP/8
Apache	Kultarr	Gas	Carnarvon	WA	WA334P
Onshore					
Beach	Coolum	Oil	Eromanga	Qld	ATP269P
Sunshine	Champagne Creek	Gas	Bowen	Qld	ATP768P
Stuart Pet.	Baystone	Oil	Eromanga	SA	PEL 90
Santos	Dululu	Oil	Eromanga	Qld	ATP259P
Origin	Ungabilla	Gas	Surat	Qld	ATP754P
Santos	Matrix	Gas	Cooper	Qld	ATP259P
Santos	Terangie	Oil	Cooper	SA	PEL 114
Arc	Evandra	Oil	Perth	WA	L1
Santos	Stimpee	Oil	Cooper	SA	PEL 114
Santos	Bugito	Oil	Cooper	SA	PPL 149
Innamincka	Ginko	Gas	Cooper	SA	PEL 101
Santos	Winninia South	Gas	Cooper	SA	PH150
Beach	Kiana	Oil & Gas	Cooper	SA	PEL 107
Santos	Greenmount	Gas	Cooper	Qld	ATP337P
Stuart	Padulla	Oil	Cooper	SA	PEL 113
Great Artesian	Roscco	Gas	Cooper	SA	PEL 106
Santos	Theta	Gas	Cooper	Qld	ATP259P

*Subject to revision. † Inferred from logs only

Seismic survey activity

Offshore, there was a significant increase in seismic activity during the December quarter 2005 compared to the previous quarter, reflecting similar increases in previous years. The total 2D seismic of 9182 km was 8397 km more than the previous quarter and 2358 km less than the December quarter 2004. 3D seismic activity covered 4707 km², which was 2866 km², more than the previous quarter.

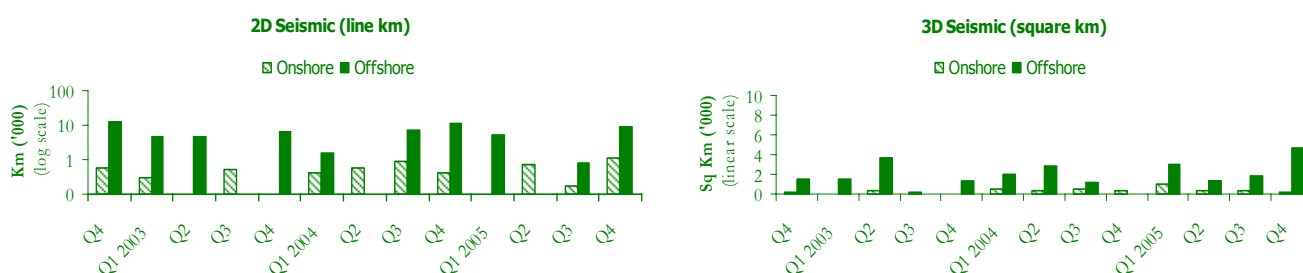
Onshore, a total of 1128 km of 2D seismic was acquired during the December quarter 2005, being 952 km more than the previous quarter and 728 km more than December quarter 2004. 3D seismic surveys covered 194 km², which is 119 km² less than the previous quarter and 219 km² less than the December quarter 2004.

Table 5. Seismic survey activity

State	2004				Nine months ending September Quarter 2005				December Quarter 2005			
	Onshore		Offshore		Onshore		Offshore		Onshore		Offshore	
	2D	3D km ²	2D	3D km ²	2D	3D km ²	2D	3D km ²	2D	3D km ²	2D	3D km ²
Qld	306	1553	-	-	-	894	-	-	538	50	-	-
NSW	543	110	1500	-	-	-	-	-	-	-	-	-
Vic	-	-	3881	-	-	-	359	2174	255	-	-	-
Tas	-	-	-	-	-	-	680	-	-	-	470	200
SA	1421	52	-	-	927	323	167	-	335	144	-	-
WA	-	-	9947	6030	-	400	4741	3951	-	-	8712	2747
NT	-	-	4724	-	-	-	-	-	-	-	-	560
JPDA*	-	-	-	-	-	-	-	-	-	-	-	1200
Sub-total	2270	1715	20052	6030	927	1617	5947	6125	1128	194	9182	4707
Grand	<i>Line km</i>		22322		6874		10310					
Total	<i>Square km</i>		7745		7742		4901					

*JPDA: Joint Petroleum Development Area. Line: approx. Line km for 3D surveys † Revised.

Figure 2. Seismic survey activity: December Quarter 2002 to December Quarter 2005



Rig activity

The number of active rigs at the end of December 2005 was 21, just one more than at the end of September 2005 (20) and three more than at the end of December 2004 (18). The number of active rigs during the quarter ranged from 21 to 23 during July increasing to twenty in August and September 2005.

Offshore, the number of available rigs during the December quarter 2005 has varied between eleven and nine. This is a small decrease over the average of eleven per month. The percentage of rigs active during the quarter ranged for 80 to 89 percent, reflecting the high demand for offshore rigs. Active rigs were drilling in the Bonaparte, Browse, Carnarvon, Perth, and Gippsland Basins.

Onshore, the number of active rigs during the quarter ended December 2005 varied between 13 and 14, which is slightly more than the previous quarter where it varied between 10 and 12 active rigs. The percentage of rigs active for the December 2005 continued to increase to 70 percent, reflecting a high demand for rigs. Active rigs were drilling in the Perth, Cooper/Eromanga, Otway, Gippsland, Bowen, Surat and Clarence/Moreton Basins.

Success rates

The success rates shown in Table 7 are based on the number of petroleum discoveries and new-field wildcat wells drilled in Australia onshore and offshore from 1993 to 2005. No assumptions have been made about whether a 'discovery' has proved or will prove to be commercial. Geoscience Australia defines a discovery as a well from which a measurable amount of oil or gas has been recovered and also includes those discoveries inferred from well logs.

Table 7. Success rates, 1992-2004

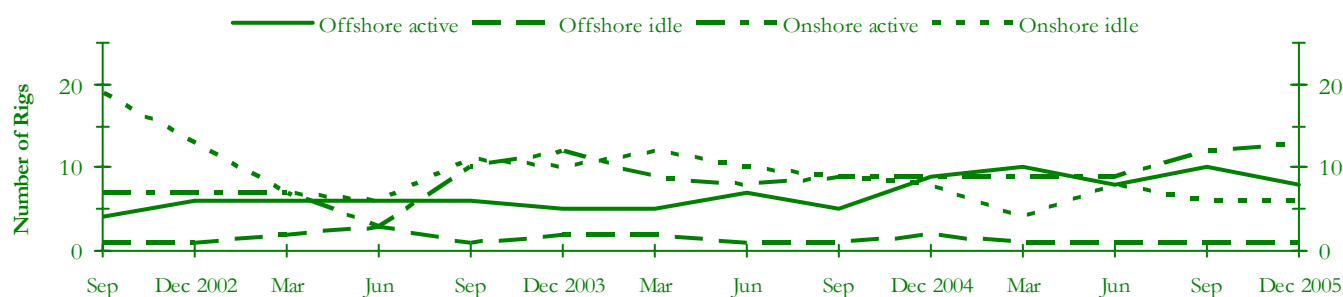
Year	Success Rate		
	Onshore	Offshore	Combined
1993	1:3.4	1:3.5	1:3.4
1994	1:1.9	1:4.0	1:2.3
1995	1:2.8	1:4.7	1:3.4
1996	1:2.8	1:3.5	1:3.1
1997	1:2.1	1:4.6	1:2.6
1998	1:2.2	1:4.9	1:3.0
1999	1:4.0	1:4.0	1:4.0
2000	1:3.3	1:2.9	1:3.0
2001	1:1.9	1:4.0	1:2.6
2002	1:1.5	1:2.8	1:2.2
2003	1:3.5	1:7.1	1:5.2
2004	1:2.2	1:2.8	1:2.3
2005	1:3.4	1:2.4	1:2.8

Table 6. Drilling rig activity, July 2004 to September 2005

	Active				Idle				Availability					
	Onshore		Offshore	Total	Onshore		Offshore	Total	Onshore		Offshore			
	S	M	D		(all deep)	S	M		D	(all deep)	Total	%Active	Total	%Active
Oct-04	0	2	9	7	18	2	2	3	3	10	18	61	10	70
Nov	0	3	9	8	20	1	2	3	2	8	18	67	10	80
Dec	0	2	7	9	18	1	3	4	2	10	17	53	11	82
Jan-05	0	1	6	10	17	1	2	2	1	6	12	58	11	91
Feb	0	2	7	8	16	2	2	2	1	7	14	57	9	89
Mar	0	2	7	10	19	1	2	2	1	6	14	64	11	91
Apr	0	2	8	10	20	1	3	3	1	8	17	59	11	91
May	0	2	8	9	19	1	4	2	1	8	17	59	10	90
Jun	0	1	8	8	17	2	3	3	1	9	17	53	9	89
Jul	0	1	9	9	19	2	3	1	2	8	16	63	11	82
Aug	0	1	10	10	20	2	3	1	1	7	16	63	11	91
Sep	0	2	10	10	20	3	2	1	1	7	16	63	11	91
Oct	0	2	11	8	21	3	2	3	2	10	21	62	10	80
Nov	0	2	12	9	23	2	2	2	2	8	20	70	11	82
Dec	0	2	11	8	21	2	2	2	1	7	19	68	9	89

S, shallow (<1525 m); M, medium (1525–2750 m); D, deep (>2750 m).

Figure 3. Drilling rig activity, September 2002 to December 2005



This publication includes preliminary statistics for wells and metres drilled, seismic survey line & square kilometres recorded and rig activity, to the end of December 2005. The data from which these statistics are derived have been compiled by Geoscience Australia from various sources, including the petroleum exploration industry and State and Northern Territory departments of mines.

Queries concerning these statistics should be directed to Eugene Petrie: Eugene.Petrie@ga.gov.au; Ph. (02) 6249 9270 or Fax (02) 6249 9962.

This document is available on the Internet at <http://www.ga.gov.au/oceans/> and look under 'Petroleum Industry Statistics'.