



Highlights

- A total of six discoveries were reported:
Offshore at Ravensworth (oil and gas) and at Ginger (gas) both in the Carnarvon Basin.
Onshore at Overston (gas) in the Bowen Basin and at Christies (oil), Carrickalinga (gas) and Worrior (oil), all in the Cooper/Eromanga Basin of South Australia.
- Overall level of exploration drilling in the first nine months of 2003 (66 wells) remains at historically low levels over the last two decades.
Offshore drilling activity (11 wells) in the September quarter is three wells less than the preceding June quarter and the lowest since the September quarter in 2002.
Onshore drilling activity for the September quarter (7 wells drilled) remains at low levels and in the first nine months of 2003 there were a total of 19 wells drilled – the lowest level of drilling for nearly three decades.
- 2D onshore seismic survey activity improved over the previous quarter as did 3D onshore activity from no activity in the June quarter. Offshore there was no 2D or 3D seismic survey activity reported which is the first lack of activity in the offshore area for any quarter for a number of decades.
- *Offshore* development completions occurred at Bayu Undan in the Bonaparte Basin, Flounder in the Gippsland Basin, Campbell, East Spar in the Carnarvon Basin. Taunton No.3 and Gipsy No.3 development wells failed to be completed and were abandoned.
- *Onshore* development completions were carried out at Alwyn, Big Lake, Cowralli, Dullingari, Dullingari North, Goyder, Jena, Merrimelia, Moomba, Pelican and Ulandi all in the Cooper and Cooper/Eromanga Basins and at Hovea and Jingemina in the Perth Basin.

Offshore exploration wells drilled during the September quarter 2003 (11) is two more than the nine of the September quarter 2002 and three less than in the previous quarter. Drilling was carried out in the Browse (1) and Carnarvon (10) Basins.

Two wells were drilling ahead at the end of September in the Carnarvon Basin.

Onshore exploration wells drilled during the September quarter 2003 (7) is four more than the three wells of the previous quarter and three less than the ten wells of the September quarter last year. Six of these wells were drilled in the Cooper/Eromanga Basin, with one well in the Carnarvon Basin.

One well was drilling ahead at the end of the quarter in Cooper/Eromanga Basin, one in the Surat Basin, and one well was suspended in the Canning Basin.

Development drilling (Tables 1–3 & Figure 1) activity for the third quarter of 2003 (28) is seven greater than the previous quarter (21) and is more than double of the same period last year (13).

Offshore, the number of development wells drilled during the September quarter of 2003 (6) is the same as the previous quarter and one more than in the September quarter of 2002 (7). Wells were completed in the Carnarvon and Gippsland Basins (2 each). Two wells were abandoned in the Carnarvon Basin and ten wells were drilling ahead in the Bonaparte Basin.

Onshore, development wells drilled in the third quarter (22) is seven more than the fifteen wells of the previous quarter. This is more than double the nine wells of the March quarter and nearly four times the figure drilled in the corresponding period of 2002 (6). Twenty of these were in the Cooper/Eromanga Basin (17 completions and 3 abandonments) and two were in the Perth Basin (1 completed and 1 abandoned).

Four wells were drilling ahead at the end of September in the Cooper/Eromanga Basin.

Drilling activity

Exploration drilling (Tables 1–3 & Figure 1) for the September quarter 2003 (18 wells) is only one less than drilled during the same period in 2002 (19) wells and is one more than the 17 wells drilled in the previous quarter this year.

Figure 1. Wells and metres drilled, 1993-2003

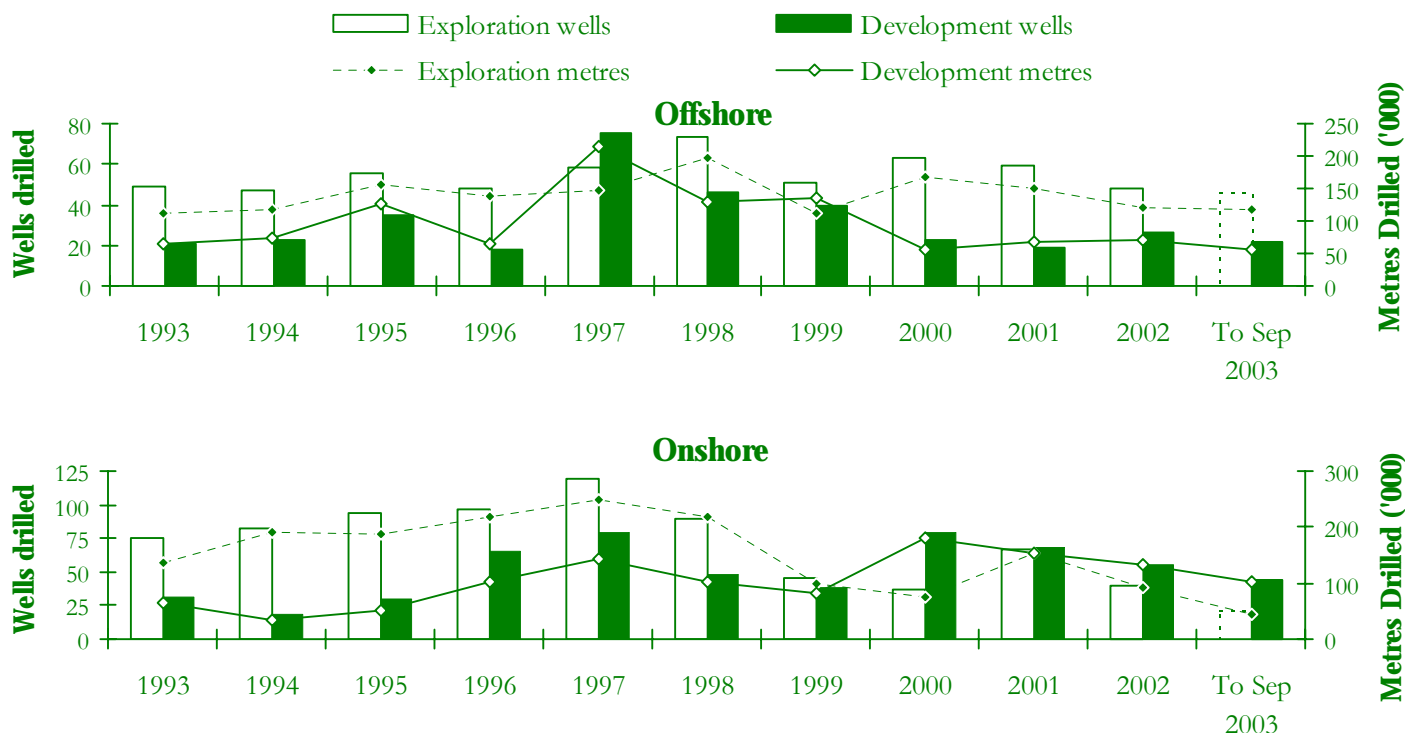


Table 1. Quarterly wells* and metres drilled 2000 to 2003

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
Mar-00	7	14 357	15 †	36 449 †	14	35 856	3 †	5 719 †	22 †	50 806 †	17 †	41 575 †	39	92 381 †
Jun-00	7	12 235	15	37 947	19	38 801	8	17 056	22	50 182	27	55 857	49	106 039
Sep-00	9	21 457	20	52 906	24	54 596	4	9 618	29	74 363	28	64 214	57	138 577
Dec-00	14	28 400	12	37 308	22	51 202	9	24 854	26	65 708	31	76 056	57	141 764
Total 2000	37	76 449	62 †	164 610 †	79	180 455	24 †	57 247 †	99 †	241 059 †	103 †	237 702 †	202	478 761 †
Mar-01	16	33 975	19	48 938	23	55 232	0	0	35	82 913	23	55 232	58	138 145
Jun-01	15	36 212	12	31 218	17	40 893	8	36 100	27	67 430	25	76 993	52	144 423
Sep-01	15	34 358	10	25 184	16	36 543	8 †	21 175	25	59 542	24 †	57 718	49 †	117 260
Dec-01	21	49 280	18	44 465	12	20 291	4	9 992 †	39	93 745	16	30 283 †	55	124 028 †
Total 2001	67	153 825	59	149 805 †	68	152 959	20 †	67 267 †	126	303 630 †	88	220 226 †	214 †	523 856 †
Mar-02	11	23 164	16	38 668	18	45 639	5 †	13 188 †	27	61 832	23 †	58 827 †	50 †	120 659 †
Jun-02	7	17 099	8	17 921	21	47 860	10	27 989	15	35 020	31	75 849	46	110 869
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 †	73 563 †	88	212 305	83 †	206 049 †	171 †	418 354 †
Mar-03	9	18 600	22	48 268	9	23 160	8	20 462	31	66 868	17	43 622	48	110 490
Jun-03	3	8 475	14	39 797	15	37 653	6	18 916	17	48 272	21	56 569	38	104 841
Sep-03	7	13 552	11	31 885	22	44 381	6	12 953	18	45 437	28	57 334	46	102 771

*Wells that reached total depth during the quarter. †Revised.

Table 2. Onshore and offshore wells and metres drilled, September 2003*

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	1	2 716	-	-	-	-	-	-	1	2 716	-	-	1	2 716
NSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vic	-	-	-	-	-	-	2	1 818	-	-	2	1 818	2	1 818
Tas	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SA	5	9 506	-	-	20	37 362	-	-	25	46 868	-	-	25	46 868
WA	1	1 330	11	31 885	2	7 019	4	11 135	3	8 349	15	43 020	18	51 369
NT	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JPDA**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	7	13 552	11	31 885	22	44 381	6	12 953	29	57 933	17	44 838	46	102 771

*Wells that reached total depth during the quarter.

Table 3. Onshore and offshore drilling status at 30 September 2003

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	1	1	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
NSW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vic	-	-	-	-	-	-	-	-	-	-	-	2	-	-	2	-	-	-	-	-	-	-	-	-
Tas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SA	5	1	-	3	-	-	2	-	-	-	20	3	-	12	4	1	-	3	-	-	-	-	-	-
WA	12	2	1	3	-	-	7	-	2	-	6	-	-	1	1	1	-	2	1	-	-	-	-	-
NT ⁴	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JPDA	-	-	-	-	-	-	-	-	-	-	-	10	2	-	-	-	-	-	-	-	-	-	-	-
Total Qtr	18	4	1	6	-	-	9	-	3	-	28	14	2	15	5	2	-	5	1	-	-	-	-	-
2002	88	5	1	14	22	2	32	12	3	3	-	83	7	2	35	41	3	-	4	-	-	-	-	-
2001	126	6	1	8	41	-	59	10	7	1	-	88	1	-	28	56	-	-	2	-	2	-	-	-
Previous quarter	17	3	-	-	-	-	12	2	1	2	-	21	5	-	4	12	-	-	5	-	-	-	-	-

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 at the end of March 2003.

Table 4. Discoveries*, 1 January to 30 September 2003 (in order of discovery)

Operator	Field	Nature of discovery	Basin	State	Permit	Operator	Field	Nature of discovery	Basin	State	Permit
Offshore						Onshore					
Apache	Dawn†	Gas	Carnarvon	WA	TL/1	Sunshine	Overston†	Gas	Bowen	Qld	ATP645P
Esso	Scallop†	Gas	Gippsland	Vic	Vic/RL2	Arc	Eremia†	Oil	Perth	WA	L 1 R1
BHPBilliton	Stybarrow†	Oil	Carnarvon	WA	WA-255-P	Arc	Christies	Oil	Cooper/Eromanga	SA	PEL 92
Tap	Cyrano†	Oil & Gas	Carnarvon	WA	EP 364	Beach	Carrickalinga	Gas	Cooper/Eromanga	SA	PEL 91
Tap	Crackling South†	Oil	Carnarvon	WA	EP 341	Stuart Pet	Worrior	Oil	Cooper/Eromanga	SA	PEL 93
BHPBilliton	Skiddaw†	Oil & Gas	Carnarvon	WA	WA-255-P R1						
BHPBilliton	Ravensworth†	Oil & Gas	Carnarvon	WA	WA-155-P R3						
Apache	Ginger	Gas	Carnarvon	WA	TL/1						

*Subject to revision. † Inferred from logs only

Seismic survey activity

Offshore, No 2D seismic surveys were recorded during the September quarter of 2003 (Table 5 & Figure 2). In comparison the total for the previous quarter was 4 737 km and 6 000 km was carried out during the same period in 2002.

No 3D seismic surveys were completed during this period, however 4 737 km² was carried out in the previous quarter and only 563 km² for the same period in 2002

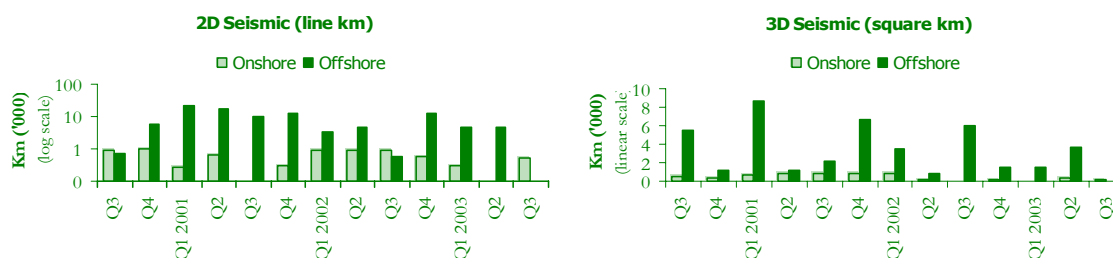
Onshore, 527 line kilometres were acquired in 2D seismic surveys during the September quarter of 2003. This is a small increase on the 364 km of the previous quarter and lower than the 936 km of the September quarter of 2002. A single 3D seismic survey of 92 square km was carried out onshore which follows the trend over the last few quarters.

Table 5. Seismic survey activity

State	2002				June Quarter 2003				September Quarter 2003			
	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	1 688	838	--	--	80	--	23	--	527	--	--	--
NSW	311	--	--	--	--	--	--	--	--	--	--	--
Vic	562	--	3 286	3885	284	--	--	--	--	--	--	--
Tas	--	--	1 142	--	--	--	--	--	--	--	--	--
SA	826	342	--	300	--	--	--	--	--	92	--	--
WA	--	57	14 867	2 110	--	--	4 036	3 658	--	--	--	--
NT	--	--	6 485	--	--	--	--	--	--	--	--	--
JPDA*	--	--	--	--	--	--	678	--	--	--	--	--
Sub-total	3 387	1 237	25 780	6 295	364	--	4 737	3 658	527	92	--	--
Grand	<i>Line km</i>		29 167		5 101		527					
Total	<i>Square km</i>		7 532		3 658		92					

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

Figure 2. Seismic survey activity Quarter 3, 2000 to Quarter 3, 2003



Rig activity

The total number of active rigs during the September 2003 quarter was thirty-nine, which is a decrease on the number active in the September 2002 quarter (31). Rig activity during the quarter ranged from 11 and 12, to 16 rigs active at the end of the quarter.

Offshore, the number of active rigs remained steady at 5, 5 and 6 respectively each month, with inactive rigs at 4, 3 and 1 during the quarter.

Development drilling occurred in the Carnarvon, Bonaparte and Gippsland Basins. Exploration drilling was carried out in the Carnarvon and Browse Basins. The active rigs drilling ahead at the end of the quarter were in the Bonaparte, Browse, Carnarvon and Gippsland Basins.

Onshore, the number of active rigs varied between 6 and 8, which is lower than in the same period last year (6-8). The total number of inactive rigs remained high, ranging from 11 to 15 compared with the same quarter last year of 14 to 19. During the third quarter of 2003, development drilling occurred in the Cooper/Eromanga, Bowen/Surat and Surat Basins. Exploration drilling was carried out in the Canning, Cooper, Cooper/Eromanga and Surat Basins. Development drilling was recorded in Cooper, Cooper/Eromanga and Perth Basins. Drilling ahead in the Cooper, Cooper/Eromanga and Surat Basins continued after the end of the quarter.

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 1990 to 2002. 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, 1990-2002

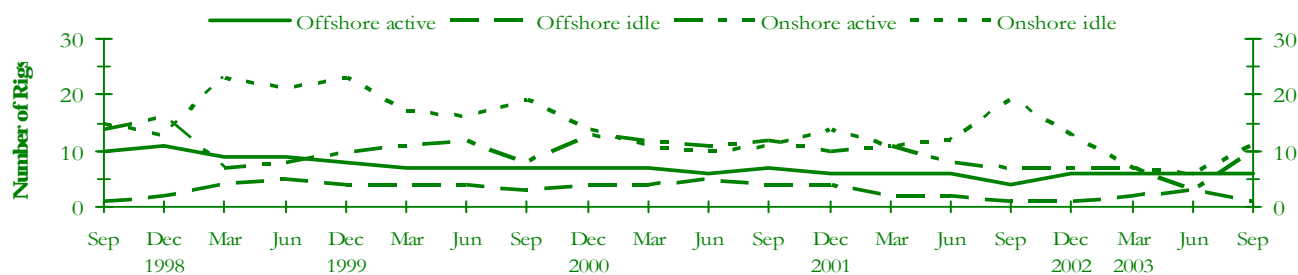
Year	Success Rate		
	Onshore	Offshore	Combined
1990	1:2.8	1:4.2	1:3.3
1991	1:2.4	1:8.0	1:3.1
1992	1:3.3	1:4.7	1:3.7
1993	1:2.6	1:3.3	1:2.8
1994	1:1.8	1:3.3	1:2.1
1995	1:2.5	1:3.8	1:2.8
1996	1:2.8	1:2.7	1:2.8
1997	1:1.9	1:4.6	1:2.3
1998	1:2.1	1:4.1	1:2.7
1999	1:2.5	1:3.5	1:3.0
2000	1:3.1	1:2.2	1:2.4
2001	1:1.8	1:3.6	1:2.4
2002	1:1.5	1:3.0	1:2.1

Table 6. Drilling rig activity, April 2002 to September 2003

	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
Jul	0	2	6	3	11	1	7	6	2	16	22	36	5	60
Aug	0	1	5	3	9	1	8	8	1	18	23	26	4	75
Sep	0	1	6	4	11	2	9	8	1	20	26	27	5	80
Oct	0	2	6	3	11	2	7	6	1	16	23	35	4	75
Nov	2	2	5	5	14	0	6	5	0	11	20	45	5	100
Dec	0	1	6	6	13	2	5	6	1	14	20	35	7	86
Jan-03	1	3	5	6	15	2	1	5	1	9	17	53	7	86
Feb	2	2	6	6	16	2	2	6	1	11	20	50	7	86
Mar	1	2	7	6	16	3	2	7	2	14	22	45	8	75
Apr	0	3	5	5	13	6	2	6	4	18	22	36	9	56
May	0	1	4	6	11	4	2	5	3	14	16	31	9	67
Jun	0	1	3	6	10	3	2	6	3	14	15	27	9	67
Jul	0	1	5	5	11	4	2	7	4	17	19	32	9	56
Aug	0	1	6	5	12	5	3	7	3	18	22	32	8	63
Sep	0	2	8	6	16	3	3	5	1	12	21	48	7	86

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

Figure 3. Drilling rig activity, Sep 1998-Sep 2003



This publication includes the following: preliminary statistics for wells and metres drilled, seismic survey line & square kilometres recorded and rig activity, to the end of June 2003. 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'.