



Highlights

A total of seven discoveries were reported all of which were onshore. Four gas discoveries were reported in the Cooper / Eromanga Basin (three in South Australia and one in Queensland), one gas discovery in the Gippsland Basin and one gas discovery in the Perth Basin. There was an oil discovery reported in the Cooper / Eromanga Basin of South Australia.

Overall level of exploration drilling in the first quarter of 2004 (27 wells) is below last years first quarter (30 wells)

Offshore drilling activity (7 wells) is the lowest March quarter drilling activity for a number of years. Drilling occurred in the Carnarvon Basin (5 wells) and the Browse Basin (2 wells).

Onshore drilling activity (20 wells) is at its highest level since December 1998 and is 3 wells more than the number drilled in the December quarter of 2003. Drilling was undertaken in the Cooper / Eromanga (12 wells), Bowen / Surat (4 wells), Perth (3 wells) and Gippsland (1 well) Basins.

2D offshore seismic survey acquisition decreased compared to the previous December quarter 2003 and is also lower than the March quarter 2003. 3D offshore seismic survey acquisition is higher than the December and March quarters of 2003. All of the 3D acquisition occurred in Western Australia whilst 2D acquisition occurred in NSW – the first seismic acquisition for many years.

Offshore development completions were undertaken at Bayu / Undan in the Bonaparte Basin, Marlin in the Gippsland Basin, Exeter, Gudrun, Linda and Scindian in the Carnarvon Basin.

Onshore developments were undertaken at Whicher Range in the Perth Basin, Myall Creek in the Surat Basin and Big Lake, Gidgealpa, Swan Lake in the South Australian portion of the Cooper / Eromanga Basin and Challum in the Queensland portion of the Cooper / Eromanga Basin.

Drilling activity

Exploration drilling (Tables 1–3 & Figure 1) for the March quarter 2004 (27 wells) is three less than drilled during the same period in 2003 (30 wells) and is one more than the 26 wells drilled in the previous quarter.

Offshore exploration wells drilled during the March quarter 2004 (7) is thirteen less than the twenty of the March quarter 2003 and two less than in the previous quarter. Drilling was carried out in the Carnarvon (5) Basin and the Browse Basin.

Onshore exploration wells drilled during the March quarter 2004 (20) is three more than the seventeen wells of the previous quarter and nine more than the nine wells of the March quarter last year. Twelve of these wells were drilled in the Cooper/Eromanga Basin, four in the Bowen/Surat Basin and one in the Perth Basin.

Development drilling (Tables 1–3 & Figure 1) activity for the first quarter of 2004 (15) is thirteen less than the previous quarter (28) and is three less than for the same period last year (18).

Offshore, the number of development wells drilled during the March quarter of 2004 (7) is two less than the previous quarter. These wells were drilled in the Bonaparte (2), Carnarvon (4), Gippsland (1)

Onshore, development wells drilled in the fourth quarter (8) is seven less than the fifteen wells of the previous quarter. This is one less than the figure drilled in the corresponding period of 2003 (9). Six wells were drilled in the Cooper/Eromanga Basin, one in the Perth Basin and one in the Surat Basin.

Figure 1. Wells and metres drilled, 1993-2004

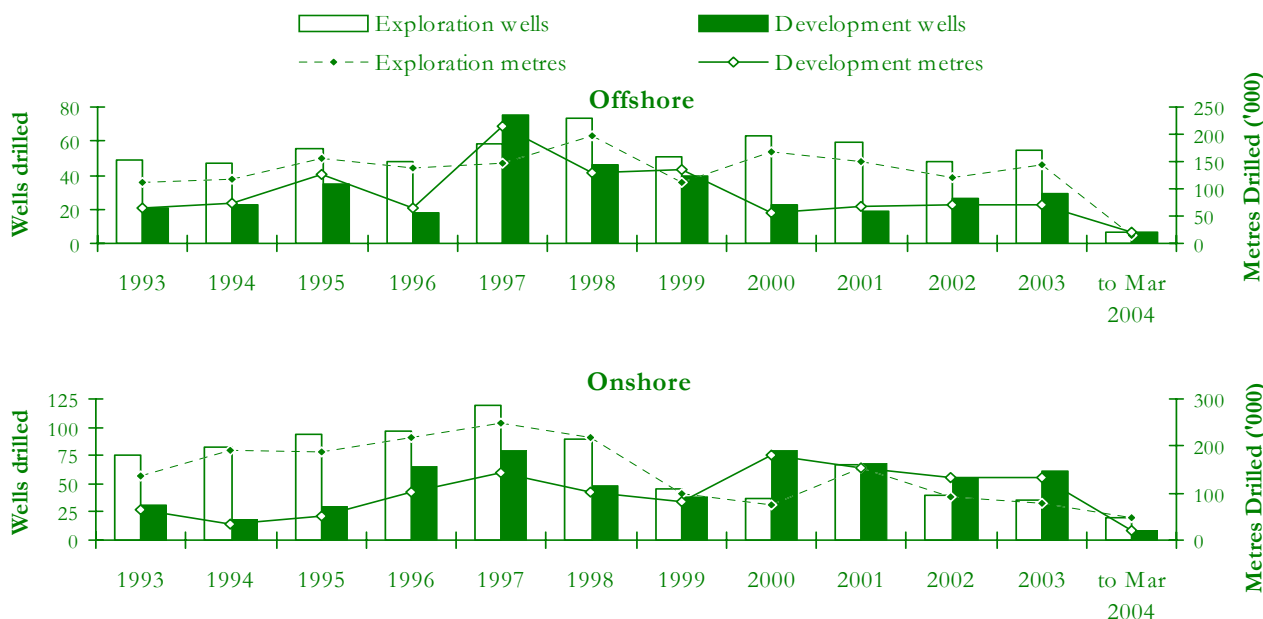


Table 1. Quarterly wells* and metres drilled 2001 to 2004

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-01	17	38 159	19	48 938	23	55 232	0	0	36	87 097	23	55 232	59	142 329
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	9 932	39	93 745	16	30 283	55	124 028
Total 2001	68	158 009	59	149 805	68	152 959	20	67 207	127	307 814	88	220 226	215	528 040
Mar-02	11	23 164	16	38 668	18	45 639	5	15 771	27	61 832	23	61 410	50	123 242
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	76 146	88	212 305	83	208 632	171	420 937
Mar-03	9	18 600	21	46 773	9	23 160	8	20 462	30	65 373	17	43 622	47	108 995
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
Dec-03	17	36 970	9	26 249	15	27 221	9	19 978	26	63 219	24	47 199	50	110 418
Total 2003	36	77 597	55	144 704	61	132 415	29	72 309	91	222 301	90	204 724	181	427 025
Mar-04	20	49 106	7	14 483	8	22 276	7	21 985	27	63 589	15	44 261	42	107 850

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

Table 2. Onshore and offshore wells and metres drilled, March 2004*

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	19 989	0	0	3	6 828	0	0	12	26 817	0	0	12	26 817
Vic	1	1 990	0	0	0	0	1	3 268	1	1 990	1	3 268	2	5 258
SA	7	18 884	0	0	4	11 094	0	0	11	29 978	0	0	11	29 978
WA	3	8 243	7	14 483	1	4 354	4	10 067	4	12 597	11	24 550	15	37 147
JPDA**	0	0	0	0	0	0	2	8 650	0	0	2	8 650	2	8 650
Total	20	49 106	7	14 483	8	22 276	7	21 985	28	71 382	14	36 468	42	107 850

*Wells that reached total depth during the quarter.

Table 3. Onshore and offshore drilling status at 31 March 2004

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	2	2	-	1	1	6	-	-	-	-	3	-	1	-	1	-	-	1	-	-	-	-
Vic	1	1	-	-	1	-	-	-	-	-	-	1	1	-	-	-	-	-	1	-	-	-	-
SA	6	1	2	1	1	-	3	-	-	-	-	4	1	1	1	2	-	-	-	-	-	-	-
WA	6	2	1	-	-	-	7	-	-	1	-	5	-	-	2	1	-	-	2	-	-	-	-
JPDA	0	-	-	-	-	-	-	-	-	-	-	2	-	-	-	2	-	-	-	-	-	-	-
Total Qtr	27	6	5	1	3	1	16	-	-	1	-	15	-	2	3	6	-	-	4	-	-	-	-
2003	94	4	11	6	9	-	62	6	10	-	-	90	4	48	16	4	1	-	19	2	-	-	-
2002	88	3	20	6	9	1	39	7	3	1	-	84	7	34	20	13	2	-	14	1	-	-	-
Previous quarter	28	4	7	-	1	-	18	1	2	-	-	23	4	12	6	-	-	-	4	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 at the end of December 2003.

Table 4. Discoveries*, 1 January to 31 March 2004 (in order of discovery)

Operator	Field	Nature of discovery	Basin	State	Permit
Offshore					
No Reported Discoveries					
Onshore					
Innamincka	Yarrow	Gas	Cooper/Eromanga	SA	PEL103
Lakes Oil	Wombat	Gas	Gippsland	Vic	PEP157
Santos	Hebe	Gas	Cooper/Eromanga	Qld	ATP259P
Innamincka	Flax	Oil	Cooper/Eromanga	SA	PEL103
Great Artes	Nutmeg	Gas	Cooper/Eromanga	SA	PEL106
Origin	Redback	Gas	Perth	WA	EP320R3
Great Artes	Paranta	Gas	Cooper Eromanga	SA	PEL106

*Subject to revision. † Inferred from logs only

Seismic survey activity

Offshore, 2D seismic surveys recorded 1 500 line km during the March quarter of 2004 (Table 5 & Figure 2). This is 5 136km less than in the previous quarter and 3149km less than for the same period in 2003. This survey was carried out in the Sydney Basin. 3D seismic surveys recorded 2 078 km² in the quarter which is more than the 1 294 km² recorded in the previous quarter and 578 km² more than in the same period in 2003. The surveys were undertaken in the Carnarvon Basin.

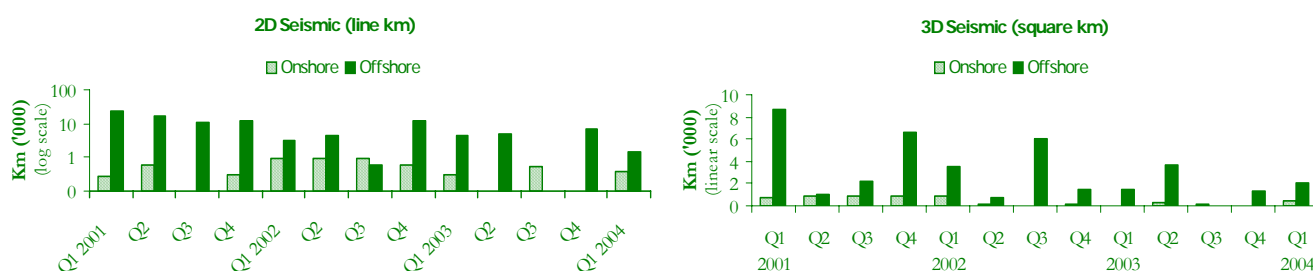
Onshore, a total of 395 km of 2D seismic were acquired during the March quarter of 2004. This is more than in the previous quarter and 90 line km more than in the march quarter of 2003. These surveys were undertaken in the Cooper and Otway Basins. 3D seismic surveys were undertaken over 481 km² slightly more than in the previous quarter. These surveys were carried out in the Cooper Basin.

Table 5. Seismic survey activity

State	2002				2003				March Quarter 2004			
	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	-	-	210	509	23	-	25	429	-	-
NSW	311	-	-	-	175	-	-	-	-	-	1 500	-
Vic	562	-	3 286	4 185	284	-	954	1 709	-	-	-	-
Tas	-	-	1 142	-	-	-	1 336	-	-	-	-	-
SA	826	342	-	-	702	-	507	-	370	52	-	-
WA	-	57	14 867	2 110	-	-	18 594	6 204	-	-	-	2 078
NT	-	-	6 485	-	-	-	-	-	-	-	-	-
JPDA*	-	-	-	-	-	-	678	-	-	-	-	-
Sub-total	1 298	3 250	62 079	18 537	1 371	509	22 092	7 913	395	481	1 500	2 078
Grand Total	<i>Line km</i>		63 377		23 463		1 895					
Total	<i>Square km</i>		21 787		8422		2 559					

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

Figure 2. Seismic survey activity Quarter 1, 2001 to Quarter 1, 2004



Rig activity

The total number of active rigs during the March 2004 quarter was forty-three, four less than in March 2003 (47). Rig activity during the quarter ranged from 13 to 16 rigs active at the end of the quarter.

Offshore, the number of active rigs remained steady at five for each month, with inactive rigs at three, three and one during the quarter. Active rigs were drilling in the Browse, Bonaparte, Carnarvon and Gippsland Basins.

Onshore, the number of active rigs varied between eight and eleven, which is similar than in the same period last year (9-10). The total number of inactive rigs ranged from 10 to thirteen.

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 2003. 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, 1990-2003

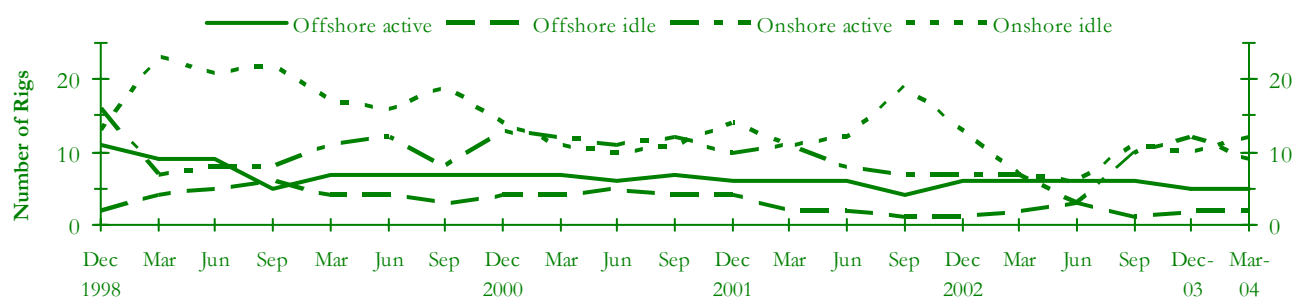
Year	Success Rate		
	Onshore	Offshore	Combined
1990	1:2.7	1:5.2	1:3.5
1991	1:2.7	1:5.1	1:3.2
1992	1:3.4	1:4.3	1:3.7
1993	1:3.4	1:3.5	1:3.4
1994	1:1.9	1:4.0	1:2.3
1995	1:2.8	1:4.7	1:3.4
1996	1:2.8	1:3.5	1:3.1
1997	1:2.1	1:4.6	1:2.6
1998	1:2.2	1:4.9	1:3.0
1999	1:4.0	1:4.0	1:4.0
2000	1:3.3	1:2.9	1:3.0
2001	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

Table 6. Drilling rig activity, Jan 2003 to March 2004

	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
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
Oct	0	2	7	5	14	3	2	6	3	14	20	45	8	63
Nov	0	2	9	5	16	3	2	4	2	11	20	55	7	71
Dec	0	2	10	5	17	3	4	3	2	12	22	55	7	71
Jan-04	0	1	10	5	16	3	5	2	3	13	21	52	8	63
Feb	0	1	7	5	13	3	5	5	3	16	21	38	8	63
Mar	0	1	8	5	14	3	5	5	1	14	22	41	6	83

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

Figure 3. Drilling rig activity, Dec 1998-Mar 2004



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 March 2004. 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'.