



### Highlights

- There were 12 discoveries reported in the quarter. *Offshore*, two gas, two oil and one oil and gas were made. Gas discoveries were at Henry in the Otway Basin and Caldita in the Bonaparte Basin. In the Carnarvon Basin oil was discovered at Mohave and Artretus, and oil and gas was discovered at Jane. *Onshore*, four oil, two gas and one oil and gas were made. In the Cooper Basin oil discoveries were made at Teringie, Stimpee, and Bugito, with gas was discovered at Ginko and Winninia South and oil and gas at Kiana. In the Perth Basin oil was discovered at Evandra.
- The number of exploration wells drilled in the September quarter 2005 was 40, which is an increase of 13 from the previous quarter. *Offshore*, drilling activity increased to 17 wells from the 12 of the previous quarter. Drilling occurred in the Carnarvon (12), Bonaparte (2), Otway (1), Gippsland (1) and Browse(1) Basins. *Onshore*, drilling activity increased to 23 wells, from the previous quarter's 15. Drilling activity occurred in the Cooper/Eromanga (15), Otway (2), Bowen (1) and Clarence/Moreton (1) Basins.
- 2D seismic activity has increased over the June quarter 2005, however, activity only occurred in only South Australia and Western Australia.
- *Offshore* development completions were undertaken at Carnarvon (4) and Gippsland (1) Basins. *Onshore* the 10 development completions were all undertaken in the Cooper/Eromanga Basin.

### Drilling activity

**Exploration drilling** (Tables 1-3 & Figure 1) for the September quarter 2005, totalled 40 wells, 11 more than drilled during the same period in 2004, and 13 more than the 27 wells drilled in the previous quarter.

*Offshore* exploration wells drilled during the September quarter 2005 totalled 17 which is five more than in the June quarter 2005 and seven more than in the same period in 2004. Twelve of these wells were drilled in the Carnarvon Basin, two in the Bonaparte Basin, one each in the Browse, Otway and Gippsland Basins.

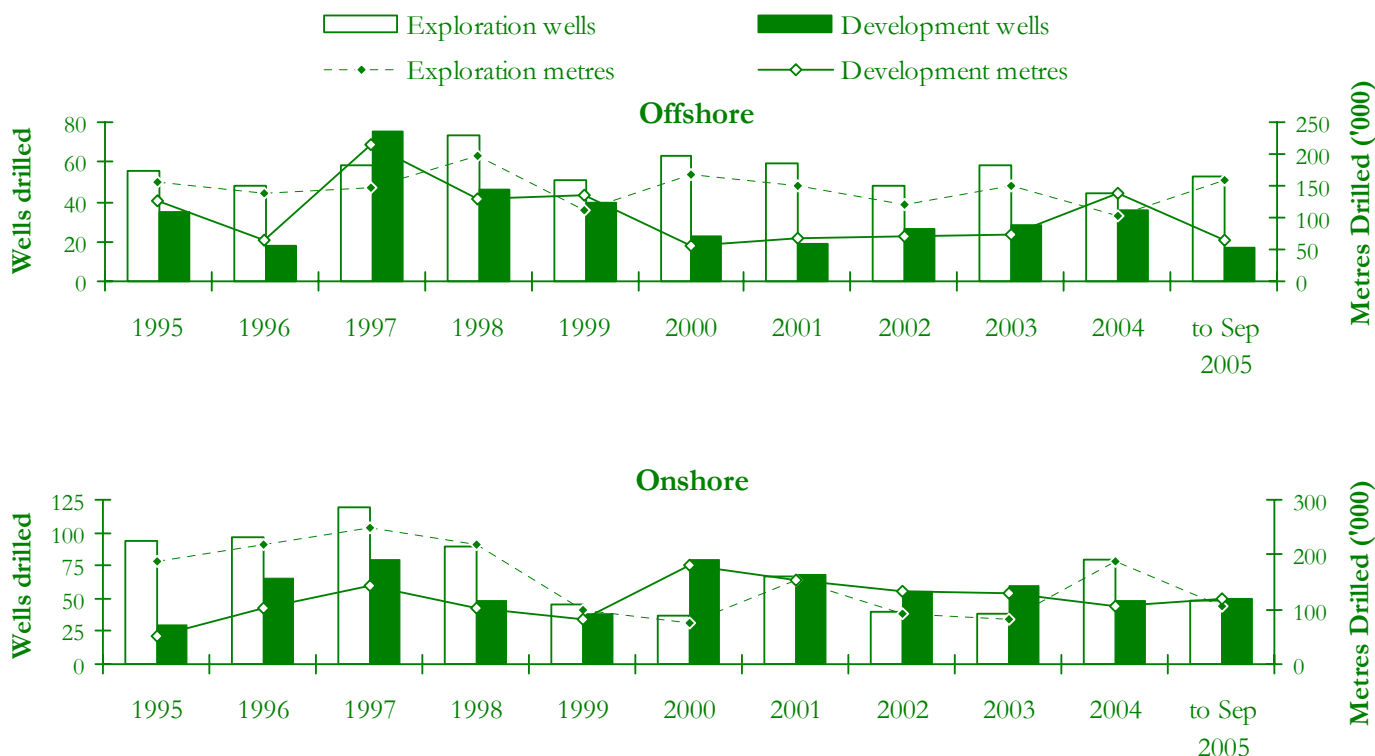
*Onshore* exploration wells in the September quarter 2005 totalled 23 which is eight more than the previous quarter and four more than the September quarter 2004. Fifteen of these wells were drilled in the Cooper/Eromanga Basin, four in the Perth Basin, two in the Otway Basin and one each Bowen and Clarence/Moreton Basins.

**Development drilling** (Tables 1-3 & Figure 1) activity for the September quarter 2005 of 15 wells is eight less than the September quarter 2004 and 14 less than the June quarter 2005.

*Offshore*, the number of development wells drilled during the September quarter 2005 was five. This is four less than the previous quarter and five less than the same quarter last year. Four of these wells were drilled in the Carnarvon basin and one in the Gippsland Basin.

*Onshore*, there were 10 development wells drilled in the September quarter 2005. This is 10 less than the previous quarter and three less 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
<b>Total 2002</b>	<b>40</b>	<b>92 038</b>	<b>48</b>	<b>120 267</b>	<b>56</b>	<b>132 486</b>	<b>27</b>	<b>76 146</b>	<b>88</b>	<b>212 305</b>	<b>83</b>	<b>208 632</b>	<b>171</b>	<b>420 937</b>
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	17	37 068	12	31 649	16	29 413	6	15 494	29	68 718	22	44 907	51	113 624
<b>Total 2003</b>	<b>38</b>	<b>81 371</b>	<b>58</b>	<b>151 287</b>	<b>60</b>	<b>129 755</b>	<b>28</b>	<b>74 090</b>	<b>96</b>	<b>232 658</b>	<b>88</b>	<b>203 845</b>	<b>184</b>	<b>436 503</b>
Mar-04	17	46 480	6	17 584	9	24 902	7	26 018	23	64 064	16	50 920	39	114 984
Jun-04	20	43 428	12	26 564	13	29 102	9	36 116	32	69 992	23	70 119	52	139 766
Sep-04	19	44 880	10	24 768	13	29 337	10	40 782	29	69 648	28	82 245	59	149 863
Dec-04	24	51 845	16	34 642	13	22 840	10	36 034	40	86 487	23	58 874	63	145 361
<b>Total 2004</b>	<b>80</b>	<b>186 633</b>	<b>44</b>	<b>103 557</b>	<b>48</b>	<b>106 180</b>	<b>36</b>	<b>138 950</b>	<b>124</b>	<b>290 190</b>	<b>84</b>	<b>245 130</b>	<b>208</b>	<b>535 320</b>
Mar-05	10	17 944	24	61 566	20	49 026	3	18 534	34	79 509	23	67 560	57	147 069
Jun-05	15	33 225	12	43 218	20	41 465	9	28 583	27	76 443	29	70 048	56	146 491
Sep-05	23	54 244	17	53 448	10	28 705	5	19 019	40	107 692	15	47 724	55	155 416

\*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, September 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	5	10 318	0	0	4	11 321	0	0	9	21 639	0	0	9	21 639
NSW	1	1 152	0	0	0	0	0	0	1	1 152	0	0	1	1 152
Vic	2	4 511	2	6 451	0	0	1	3 249	2	4 511	3	9 700	5	14 211
SA	11	21 913	0	0	6	17 384	0	0	17	39 297	0	0	17	39 297
WA	4	16 350	13	39 112	0	0	4	15 770	4	16 350	17	54 882	21	71 232
NT	-	-	2	7 885	0	0	0	0	0	0	2	7 885	2	7 885
JPDA**	-	-	-	-	-	-	-	-	-	-	-	-	0	0
<b>Total</b>	<b>23</b>	<b>52 244</b>	<b>17</b>	<b>53 448</b>	<b>10</b>	<b>28 705</b>	<b>5</b>	<b>19 019</b>	<b>33</b>	<b>82 949</b>	<b>22</b>	<b>72 467</b>	<b>55</b>	<b>155 416</b>

\*Wells that reached total depth during the quarter.

**Table 3. Onshore and offshore drilling status at 30 September 2005**

State	Exploration wells										Development wells												
	Completed or C&S					Abandoned or secured					Completed or C&S					Abandoned or secured							
	D <sup>1</sup>	DA	Sus <sup>2</sup>	Oil	Gas	O&G	Dry	Oil	Gas	O&G	Un	D <sup>1</sup>	DA	Sus	Oil	Gas	O&G	Ser <sup>3</sup>	Dry	Oil	Gas	O&G	Un
Qld	5	-	-	3	-	2	-	-	-	-	-	4	-	-	3	-	-	-	1	-	-	-	-
Vic	4	-	1	-	-	2	-	1	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-
NSW	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SA	11	-	5	1	2	3	-	-	-	-	6	-	1	3	2	-	-	-	-	-	-	-	-
WA	17	-	4	3	-	6	2	2	-	-	4	-	1	2	-	-	-	-	1	-	-	-	-
NT <sup>4</sup>	2	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JPDA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Qtr</b>	<b>40</b>	<b>-</b>	<b>6</b>	<b>7</b>	<b>-</b>	<b>10</b>	<b>3</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>15</b>	<b>-</b>	<b>10</b>	<b>10</b>	<b>2</b>	<b>-</b>	<b>2</b>	<b>-</b>	<b>3</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>2004</b>	<b>124</b>	<b>5</b>	<b>26</b>	<b>10</b>	<b>8</b>	<b>1</b>	<b>58</b>	<b>11</b>	<b>8</b>	<b>2</b>	<b>-</b>	<b>84</b>	<b>5</b>	<b>25</b>	<b>19</b>	<b>14</b>	<b>4</b>	<b>-</b>	<b>20</b>	<b>1</b>	<b>1</b>	<b>-</b>	<b>-</b>
<b>2003</b>	<b>96</b>	<b>4</b>	<b>9</b>	<b>6</b>	<b>9</b>	<b>-</b>	<b>57</b>	<b>6</b>	<b>9</b>	<b>-</b>	<b>-</b>	<b>88</b>	<b>4</b>	<b>46</b>	<b>16</b>	<b>4</b>	<b>1</b>	<b>-</b>	<b>19</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>-</b>
Previous quarter	28	5	-	6	7	-	10	3	2	-	-	27	3	-	10	10	2	-	2	-	3	-	-

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.

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

<sup>4</sup> Includes Territory of Ashmore and Cartier Islands.

## Discoveries

Table 4 lists details of the reported discoveries of oil and gas during the year to 30 September 2005.

**Table 4. Discoveries\*, 1 January to 30 September 2005 (in order of discovery)**

Operator	Field	Nature of discovery	Basin	State	Permit
<b>Offshore</b>					
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
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	Calidra	Gas	Bonaparte	NT	NT/P61
Apache	Jane	Oil & Gas	Carnarvon	WA	TL/6
Apache	Artreus	Oil	Carnarvon	WA	TL/6
<b>Onshore</b>					
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	PI150
Beach	Kiana	Oil & Gas	Cooper	SA	PEL 107

\*Subject to revision. †Inferred from logs only

## Seismic survey activity

**Offshore**, the only seismic activity during the September quarter 2005 was undertaken in Western Australia in the Bonaparte and Carnarvon Basins. (Table 5 & Figure 2). The total 2D seismic undertaken of 785 km was considerably less than the 7012 km for the corresponding September quarter 2004. It was however, an increase on the nil for the June quarter 2005. 3D seismic surveys were conducted over 1841km<sup>2</sup> during the September quarter 2005, being 497km<sup>2</sup> more the previous June quarter total.

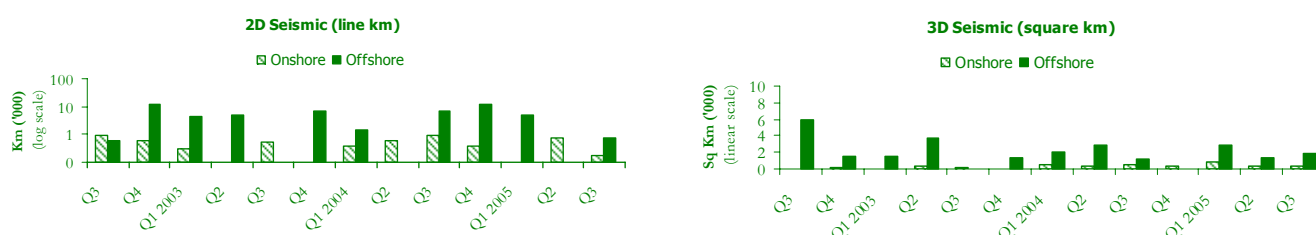
**Onshore**, the only seismic activity during the September quarter 2005 was undertaken in South Australia in the Cooper Basin. A total of 176 km of 2D seismic was acquired during the September quarter 2005, being 575 km less than the June quarter 2004. The previous September quarter had 909 km of 2D seismic acquired. 3D seismic surveys were undertaken over 313 km<sup>2</sup>, which is only 61 km<sup>2</sup> less than the June quarter and 115 km<sup>2</sup> less than the September quarter 2004.

**Table 5. Seismic survey activity**

State	2004				Six months ending June 2005				September Quarter 2005			
	Onshore		Offshore		Onshore		Offshore		Onshore		Offshore	
	2D	3D km <sup>2</sup>	2D	3D km <sup>2</sup>	2D	3D km <sup>2</sup>	2D	3D km <sup>2</sup>	2D	3D km <sup>2</sup>	2D	3D km <sup>2</sup>
Qld	306	1553	-	-	-	894	-	-	-	-	-	-
NSW	543	110	1500	-	-	-	-	-	-	-	-	-
Vic	-	-	3881	-	-	-	359	2174	-	-	-	-
Tas	-	-	-	-	-	-	680	-	-	-	-	-
SA	1421	52	-	-	751	10	167	-	176	313	-	-
WA	-	-	9947	6030	-	400	3956	2110	-	-	785	1841
NT†	-	-	4724	-	-	-	-	-	-	-	-	-
JPDA*	-	-	-	-	-	-	-	-	-	-	-	-
<b>Sub-total</b>	<b>2270</b>	<b>1715</b>	<b>20052</b>	<b>6030</b>	<b>751</b>	<b>1304</b>	<b>5162</b>	<b>4284</b>	<b>176</b>	<b>313</b>	<b>785</b>	<b>1841</b>
<b>Grand Total</b> <i>Line km</i>	<b>22322</b>				<b>5913</b>				<b>961</b>			
<b>Total</b> <i>Square km</i>	<b>7745</b>				<b>5588</b>				<b>2154</b>			

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

**Figure 2. Seismic survey activity: September Quarter 2002 to September Quarter 2005**



**Rig activity**

The number of active rigs at the end of September 2005 was twenty, three more than at the end of June 2005 (17) and six more than at the end of September (14). The number of active rigs during the quarter ranged from nineteen during July increasing to twenty in August and September 2005.

Offshore, the number of available rigs during the September quarter 2005 has remained steady at eleven. This is a small increase on the months of May and June 2005. The percentage of rigs active during the quarter peaked at 91 percent, reflecting the high demand for offshore rigs. Active rigs were drilling in the Bonaparte, Browse, Carnarvon, Otway and Gippsland Basins.

Onshore, the number of active rigs during the quarter ended September 2005 varied between ten and twelve, which is more than the previous quarter where it varied between nine and ten active rigs. The percentage of rigs active for the September 2005 increased to 63 percent, reflecting a decrease in the number of idle rigs in the quarter. Active rigs were drilling in the Perth, Cooper/Eromanga, Bowen, Otway 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 1992 to 2004. 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**

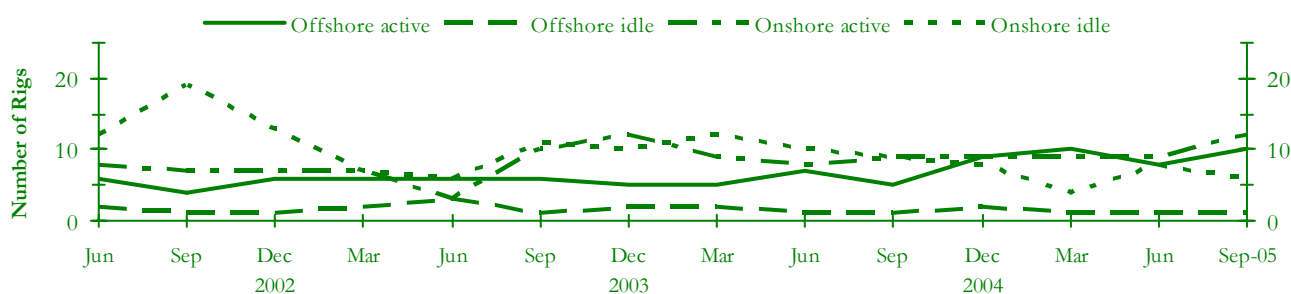
Year	Success Rate		
	Onshore	Offshore	Combined
1992	1:3.4	1:4.3	1:3.7
1993	1:3.4	1:3.5	1:3.4
1994	1:1.9	1:4.0	1:2.3
1995	1:2.8	1:4.7	1:3.4
1996	1:2.8	1:3.5	1:3.1
1997	1:2.1	1:4.6	1:2.6
1998	1:2.2	1:4.9	1:3.0
1999	1:4.0	1:4.0	1:4.0
2000	1:3.3	1:2.9	1:3.0
2001	1:1.9	1:4.0	1:2.6
2002	1:1.5	1:2.8	1:2.2
2003	1:3.5	1:7.1	1:5.2
2004	1:2.2	1:2.8	1:2.3

**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
Jul-04	0	1	6	6	13	2	3	4	1	10	16	44	7	86
Aug	0	3	7	6	16	3	3	3	1	10	19	53	7	86
Sep	0	2	7	5	14	2	4	3	1	10	18	50	6	83
Oct	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

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

**Figure 3. Drilling rig activity, June 2002 to September 2005**



This publication includes preliminary statistics for wells and metres drilled, seismic survey line & square kilometres recorded and rig activity, to the end of September 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 Petric: Eugene.Petric@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'.