

DEPARTMENT OF
PRIMARY INDUSTRIES



Statistical Review 2002/03

Minerals and Petroleum Division

Introduction

The Statistical Review provides an overview of Victoria's minerals, petroleum and extractive industries. It includes data on production, exploration and expenditure, as well as licensing and safety performance. These data are relevant to anyone involved in the mining, extractive or petroleum industries and the report is the most comprehensive public database available for these sectors in Victoria.

Victoria's earth resource industry production includes:

- brown coal used almost exclusively for power generation;
- oil and gas from the offshore Gippsland and onshore fields north of Port Campbell in western Victoria;
- gold primarily from the Stawell mine;
- industrial minerals including gypsum, silica, feldspar rutile, zircon, ilmenite and kaolin; and
- rock, sand and clay, used mainly for building and road construction.

Victoria has the thickest and most extensive brown coal seams in the world and approximately 85% of the State's electricity is generated by coal-fired power plants in the LaTrobe Valley. Since the 1920s, brown coal has provided an inexpensive energy source to run the industrial and manufacturing sectors of the Victorian economy.

Since 1969, gas production from Gippsland has supplied domestic and industrial customers largely for heating through a pipeline transmission system which now covers over 4000 km. The offshore Gippsland petroleum province has provided more than two thirds of Australia's cumulative oil production to date and has led to the establishment of major petrochemical facilities in the Melbourne area with significant follow-on employment and supply benefits. Oil and gas remains the most valuable commodity produced in Victoria.

Gold provided the foundation for Victoria's wealth in the 1800s and the gracious and substantial Victorian buildings seen in Melbourne, Ballarat and Bendigo are tangible evidence of the money generated by gold during the 50 years after the seminal discoveries at Warrandyte and Clunes in 1851. The potential for growth in mineral production is high, both from the redevelopment of existing goldfields and the discovery of new goldfields and for the development of mineral sands deposits in the Murray Basin.

The extractive industries are the foundation of Victoria's building and construction industries. Although not sharing the limelight of the other resource industries, they contribute the vital raw materials for a modern society. The extractive industries generate the greatest value, in direct royalties to the State, of any of the earth resource industries.

The Victorian Government's continued commitment to the Victorian Initiative for Minerals and Petroleum will enable the Department of Primary Industries, through its Minerals and Petroleum Division, to maintain its program of regional geological data acquisition for the minerals and petroleum industries.

In addition, the Division is continuing its program of legislative reform which has yielded complete rewrites of the, Extractive Industries (1995) Act and the Petroleum (1998) Act over the past decade.

ISSN: 1328 2654

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Minerals

Mineral production continues to be dominated by brown coal and gold.

Brown coal production, predominantly from the Latrobe Valley for electricity generation, has continued to increase in 2002/03 to a record high of 66.8 million tonnes.

Gold production, which increased markedly in the 1980s, has been in decline since 1999/2000 and this trend continued in 2002/03. Gypsum and kaolin are the other significant contributors to mineral production. Both show a high degree of variability in line with seasonal and market factors. A significant drop has been recorded in gypsum production in 2002/03 largely due to decreased demand by agricultural users. In 2002/03 kaolin production showed a significant increase reaching 248,692 tonnes, representing the highest recorded figure since the 1980s. Feldspar production in Victoria commenced in 1997/98 by Unimin Australia Ltd and has been steadily increasing since.

Mineral sands (ilmenite, rutile and zircon) production in Victoria commenced in 2000/01 by Murray Basin Titanium Pty Ltd and has grown each year since. However, the company announced that the production from its Wemen mine will discontinue from January 2004.

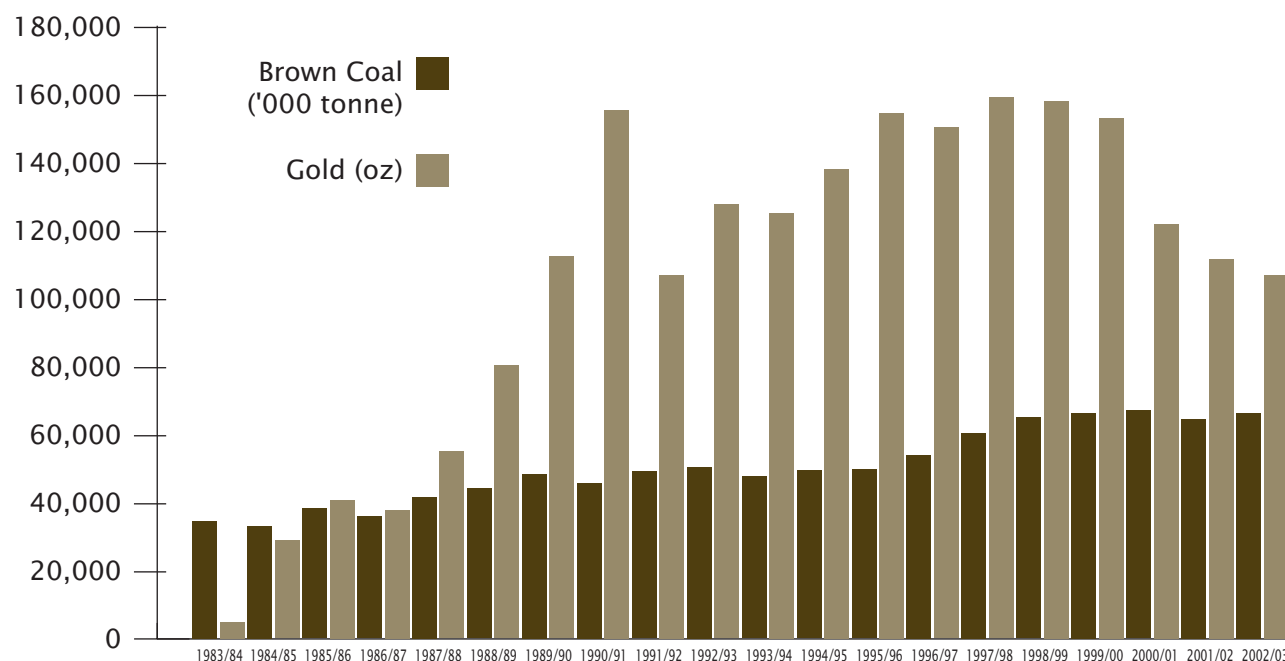


TABLE M1.1 Mineral Production – Victoria 1983/84-2002/03

Year	Fuel Minerals	Metallic Minerals				Industrial Minerals					
	Brown Coal (000 tonne)	Gold (kg)	Gold (oz)	Copper Concentrate (tonne)	Zinc Concentrate (tonne)	Zircon (tonne)	Rutile (tonne)	Ilmenite (tonne)	Feldspar (tonne)	Gypsum (cubic mtr)	Kaolin (tonne)
1983/84	33,198	150	4,823	-	-	-	-	-	-	207,400	83,700
1984/85	38,379	902	29,004	-	-	-	-	-	-	247,300	88,100
1985/86	36,069	1,272	40,901	-	-	-	-	-	-	138,800	35,900
1986/87	41,806	1,179	37,911	-	-	-	-	-	-	187,700	41,100
1987/88	44,288	1,719	55,274	-	-	-	-	-	-	203,100	100,800
1988/89	48,653	2,512	80,773	-	-	-	-	-	-	241,400	117,300
1989/90	45,960	3,515	113,025	-	-	-	-	-	-	301,500	168,900
1990/91	49,388	4,863	156,370	-	-	-	-	-	-	49,200	145,800
1991/92	50,717	3,346	107,591	-	-	-	-	-	-	53,100	87,800
1992/93	47,898	3,993	128,395	-	-	-	-	-	-	180,200	114,600
1993/94	49,683	3,917	125,960	16,287	1,012	-	-	-	-	176,800	105,400
1994/95	49,922	4,319	138,876	13,163	5,947	-	-	-	-	193,100	79,500
1995/96	54,281	4,838	155,550	1,338	6,384	-	-	-	-	198,667	55,065
1996/97	60,795	4,710	151,229	nil	nil	-	-	-	-	501,495	114,778
1997/98	65,274	4,979	160,122	nil	nil	-	-	-	25,703	479,820	166,100
1998/99	66,648	4,947	159,088	nil	nil	-	-	-	45,293	404,917	180,634
1999/00	67,363	4,790	154,043	nil	nil	-	-	-	46,162	462,806	201,436
2000/01	64,958	3,814	122,632	nil	nil	1,307	5,921	-	53,148	437,694	203,753
2001/02	66,661	3,492	112,283	nil	nil	4,043	21,328	30,627	56,757	600,931	202,370
2002/03	66,809	3,345	107,544	nil	nil	10,841	28,329	50,984	68,198	420,293	248,692

Source: Fuel Minerals: Department records, Statutory returns under the Mineral Resources Development Act 1990
 Metallic & Industrial Minerals: Statutory returns under the Mineral Resources Development Act 1990

GRAPH M1.1 Coal and Gold Production – 1983/84-2002/03

TABLE M1.2 Major Gold Producers – Victoria 2002/03
(Producers more than 1,000 grams)

Producer	Location	Licence	Production (gm)	Production (oz)	Estimated Value*
Stawell Gold Mines	Stawell	MIN 5260	3,077,905	98,968	\$56,411,760
Alliance Energy Limited	Tooleen	MIN 5096	99,330	3,194	\$1,820,580
Alliance Energy Limited	Maldon	MIN 5146	79,146	2,545	\$1,450,650
Perseverance Exploration Pty Ltd	Fosterville	ML 1868	38,129	1,226	\$698,820
Wanbana Pty Ltd	Dunolly	MIN 4803	24,489	787	\$448,590
Tech-Sol Resources	Mt Egerton	MIN 4422	4,028	129	\$73,530
LeeTech Corp Pty Ltd	Avoca	MIN 4023	3,921	126	\$71,820
Kinglake Resource Pty Ltd	Buninyong	MIN 4658	3,732	120	\$68,400
L E Sewell	Tarnagulla	MIN 5200	3,054	98	\$55,860
Boral Resources Vic. Pty Ltd	Buninyong	MIN 4777	2,754	89	\$50,730
Lougoon DC	Eaglehawk	MIN 4618	2,043	66	\$37,620
S W Trickey	Moliagul	MIN 5346	1,617	52	\$29,640
Other		Licences < 5 ha	4,499	145	\$82,650
Total			3,344,647	107,544	\$61,300,650

* Estimated value A\$570/oz

Source: Statutory returns under the Mineral Resources Development Act 1990

MIN: Mining Licence

ML: Mining Lease

Gold production is dominated by one mine, with many smaller companies and individuals producing small amounts. The large part of Victoria's production is from Stawell Gold Mines Pty Ltd, at Stawell. In 2002/03 the other key producers were Alliance Energy Limited (Tooleen & Maldon) followed by Perseverance Exploration Pty Ltd (Fosterville) and Wanbana Pty Ltd (Dunolly).

TABLE M1.3 Brown Coal Production – Victoria 1982/1983-2002/03
(000 tonnes)

Year	Maddingley Brown Coal Co Bacchus Marsh	Alcoa Anglesea	SECV	Loy Yang	Yallourn	Hazelwood	Annual Total	Production Value* (000)
1982/83	83	1,210	33,415				34,708	-
1983/84	80	1,066	32,052				33,198	-
1984/85	89	1,205	37,085				38,379	-
1985/86	60	1,119	34,890				36,069	-
1986/87	43	1,272	40,491				41,806	-
1987/88	45	1,173	43,070				44,288	-
1988/89	47	1,253	47,353				48,653	-
1989/90	22	1,067	44,871				45,960	-
1990/91	40	1,179	48,169				49,388	-
1991/92	40	1,175	49,502				50,717	-
1992/93	36	1,084	46,778				47,898	-
1993/94	31	1,093	48,559				49,683	-
1994/95	43	1,162	48,717				49,922	-
1995/96	40	836	-	25,000	17,460	10,945	54,281	\$434,248
1996/97	39	1,005	-	27,808	17,083	14,860	60,795	\$486,360
1997/98	28	1,030	-	29,766	17,924	16,525	65,274	\$522,192
1998/99	22	1,091	-	30,510	17,350	17,675	66,648	\$533,184
1999/00	4	926	-	30,865	16,098	19,470	67,363	\$538,904
2000/01	11	963	-	28,686	16,234	19,063	64,958	\$519,664
2001/02	10	1,069	-	30,949	15,650	18,982	66,661	\$533,287
2002/03	15	1,051	-	29,017	17,515	19,210	66,809	\$534,472

* Estimated value (\$8/tonne)

Brown coal production is dominated by the electricity generation companies in the Latrobe Valley – Hazelwood Power Corporation, Loy Yang Power Ltd and Yallourn Energy Ltd. The largest producer is Loy Yang followed by Hazelwood and Yallourn.

The other major brown coal miner is Alcoa of Australia Ltd, which produces brown coal at Anglesea to generate electricity for its Point Henry aluminium smelter. The Maddingley Brown Coal company produces a very small amount of coal at Bacchus Marsh, mainly for fuel and soil conditioning.

TABLE M1.4 Mineral Production
Value 2002/03

Mineral	Value (\$ million)
Coal	534.5*
Gold	61.3*
Feldspar	4.5
Gypsum	3.7
Kaolin	1.0
Ilmenite	8.2
Rutile	18.1
Zircon	6.9
Total	638.2

*estimate



TABLE M2.1 Expenditure on Mineral Exploration and Mining Development in Victoria 1994/1995-2002/03 (\$ million)

The Australian Bureau of Statistics (ABS) reports quarterly on private mineral exploration for all states. Victorian mineral exploration and mining expenditure is also reported by a requirement of the Mineral Resources Development Act (MRDA) (1990).

The ABS exploration expenditure statistics can vary significantly from expenditure reported under the MRDA. However, the ABS statistics are the only basis for comparison of Victorian expenditure with that of other States and are generally preferred as a guide to exploration trends.

	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03
Exploration (ABS)	31.2	42.6	52.3	43.1	37.0	33.8	32.7	33.9	46.2
Exploration (MRDA)	41.1	35.1	37.6	36.9	38.0	35.8	43.4	39.3	43.3*
Mining (MRDA)	66.7	73.8	156.8	165.2	174.6	188.3	195.5	213.5	258.2

* Incomplete data due to changes to mode of data collection under the new Regulations in 2002/03

Source: The above figures are collated from Six Monthly (for 2002/03 Annual) reports forwarded to the Department of Primary Industries, as required by the Mineral Resource Development Act 1990, and ABS: Actual and Expected Private Mineral Exploration (Catalogue No. 8412.0).

Note: The MRDA mining expenditure figures represent total expenditure; ie capital and operating; by commercial entities engaged in exploration and mining activity during the relevant periods. The MRDA exploration expenditure figures include exploration expenditure on mining and exploration licences.

Mineral exploration expenditure is a lead indicator of mineral industry activity. ABS data indicates that 2002/03 exploration expenditure is on a strong growth trend.

Expenditure on mine development was boosted by the inclusion of expenditure reported by brown coal mines in the Latrobe Valley for the first time in 1996/97. The upward trend has continued in 2002/2003.

TABLE M2.2 Mineral Exploration and Mining Development Expenditure in Victoria by Sector 2002/2003 (\$ million)

Section	Exploration	Mining
Brown Coal*	-	160.9
Gold	41.8	72.7
Other	1.5	24.6
Total	43.3	258.2

GRAPH M2.1 Expenditure on Private Mineral Exploration and Mining Development in Victoria 1993/94-2002/03 (\$ million)

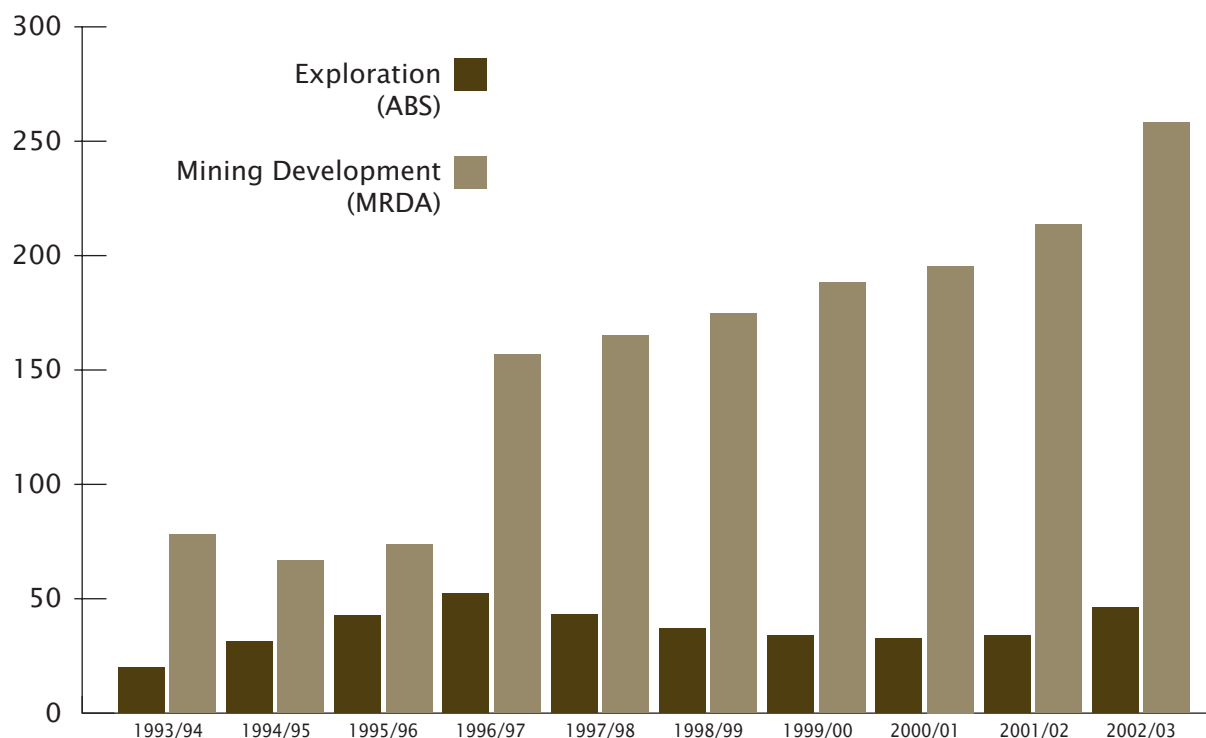


TABLE M3.1 New and Renewal Applications for Mining and Exploration Licences – 2002/2003

	Received	Granted	W/drawn	Refused	Invalid
New Mining Licence Applications	19	13	3	4	1
Renewal Mining Licence Applications	22	26	0	2	0
Total Mining Licence Applications	41	39	3	6	1
New Exploration Licence Applications	76	55	25	9	0
Renewal Exploration Licence Applications	49	47	0	1	0
Total Exploration Licence Applications	125	102	25	10	0

Source: Department Records

Note: "Granted" includes applications that were on hand as at 1 July 2002

In 2002/03, 166 new and renewal applications were received for mining and exploration licences, with about 75% of these being for exploration licences. 141 mining and exploration licences were granted or renewed, with about 72% of these being exploration licences.

GRAPH M3.1 Mining Licence Grants – 1996/97-2002/03

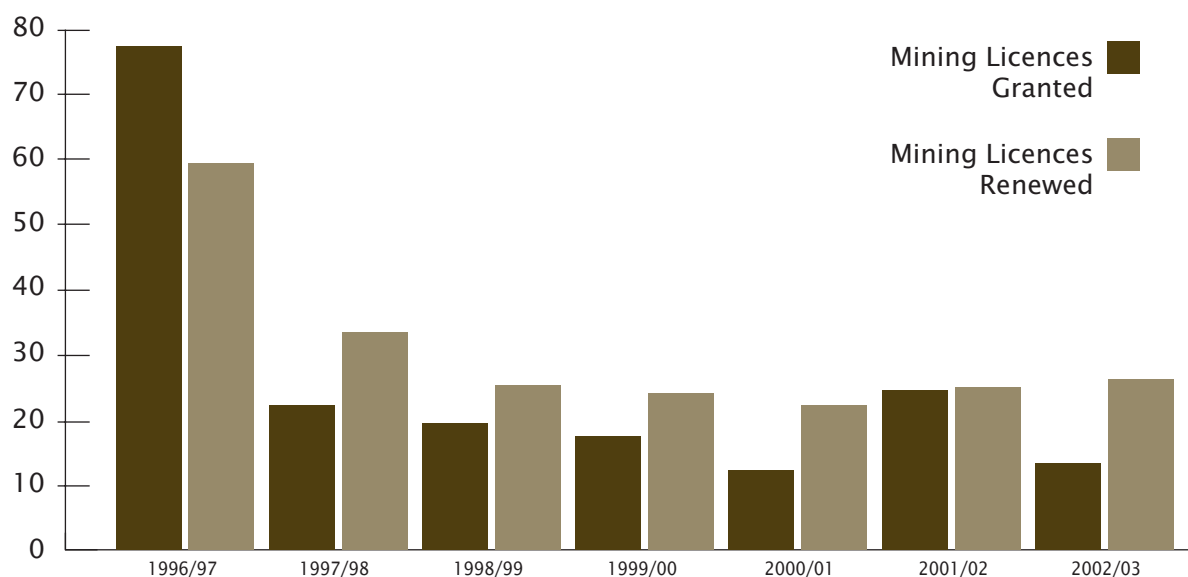


TABLE M3.2 Mining and Exploration Licences Granted and Renewed 1996/97-2002/03

	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03
Mining Licences Granted	77	22	19	17	12	24	13
Mining Licences Renewed	59	33	25	24	22	25	26
Total Mining Licences Granted and Renewed	136	55	44	41	34	49	39
Exploration Licences Granted	130	180	77	39	39	45	55
Exploration Licence Renewed	162	94	82	100	63	49	47
Total Exploration Licences Granted and Renewed	292	274	159	139	102	94	102

Source: Department records

Note: "Granted" includes applications that were on hand as at 1 July 2002

The total number of exploration and mining licences granted is a broad indicator of exploration and mining activity.

There has been a general decline in the number of exploration licences granted and renewed in the period 1997/98 to 2001/02. This trend has been reversed in 2002/03. The total number of mining licence grants and renewals decreased in 2002/03.

GRAPH M3.2 Exploration Licence Grants – 1996/97-2002/03

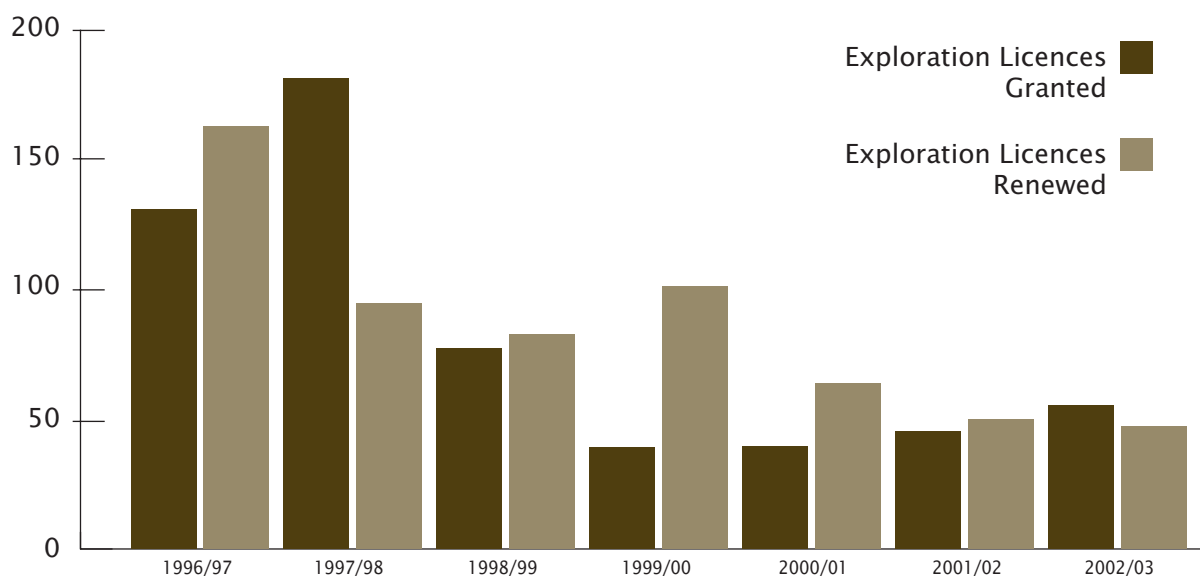


TABLE M3.3 Current Mining and Exploration Licences at 30 June each year 1997-2003

	1997	1998	1999	2000	2001	2002	2003
Mining Licences	397	377	341	320	312	305	279
Exploration Licences	375	361	245	274	209	170	184
Total	772	738	586	594	521	475	463

Source: Department records

The number of current mining and exploration licences has steadily fallen over the last six years. A significant number of amalgamations have contributed to the lower number of current mining and exploration licences. In 2002/03 the number of current exploration licences has increased slightly, while mining licences fell.

GRAPH M3.3 Current Mining and Exploration Licences as at 30 June each year (1997-2003)

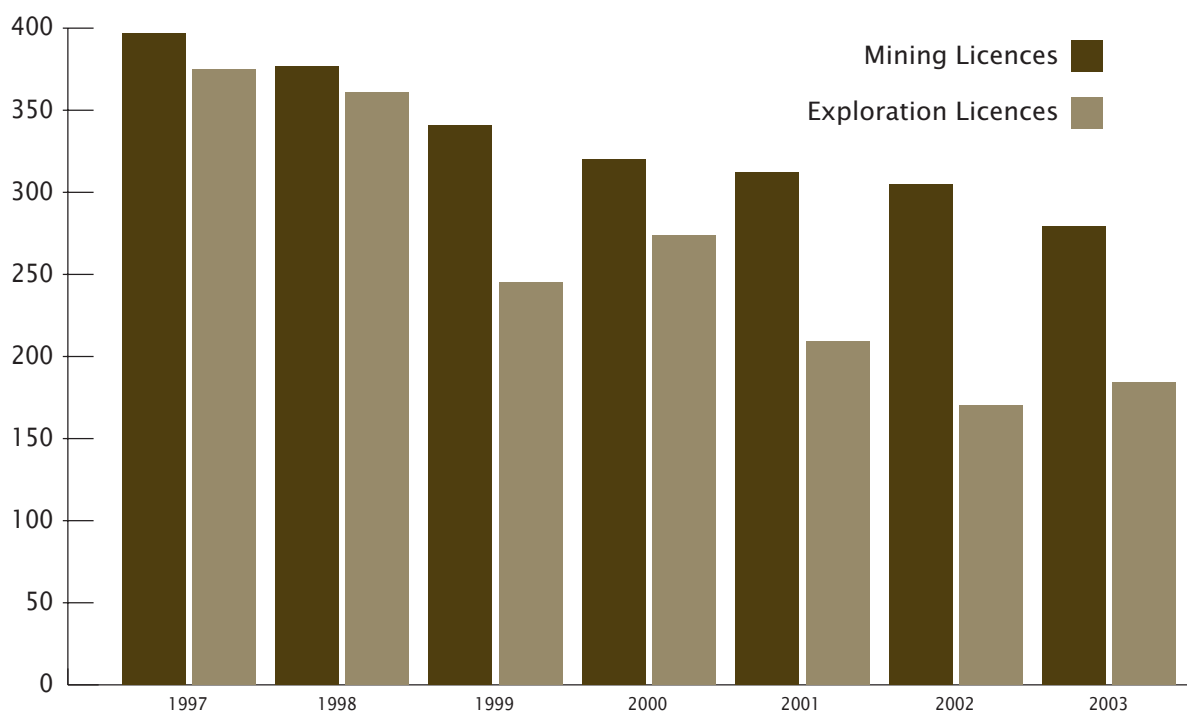


TABLE M4.1 Mining Safety Statistics 1993/94-2002/03

Operation	Lost Time Injuries (LTIs)	Employed*	Days Lost	LTI Frequency Rate	LTI Incidence Rate	LTI Duration Rate	Severity Rate	Fatalities
1993/94	36		-	35.0	-	-	-	2
1994/95	24		-	18.7	-	-	-	0
1995/96	26		-	20.0	-	-	-	0
1996/97	50		-	16.0	-	-	-	0
1997/98	45		612	14.1	23.4	13.6	192.2	0
1998/99	34	1,782	444	10.2	19.0	13.0	133.1	0
1999/00	28	1,742	474	9.4	16.1	16.9	158.0	0
2000/01	27	2,365	537	8.8	11.4	19.9	176.4	1
2001/02	22	2,175**	176	6.1	10.1	8.0	48.7	0
2002/03	27	1,855	440	8.0	14.6	16.3	130.6	0

* Average number of person employed as reported

** Revised to reflect updated data

Source: Returns made under the Mineral Resources Development Act 1990

Note: Lost Time Injuries are defined as those occurrences that resulted in a fatality, permanent disability or time lost from work of one day/shift or more.

Lost Time Injury Frequency Rate is defined as the number of occurrences of lost time injury for each one million hours worked.

Lost Time Injury Incidence Rate is defined as the number of lost time injuries per thousand employees.

Lost Time Injury Duration Rate is defined as the average days lost for every lost time injury.

Severity Rate is defined as the number of days lost for each one million hours worked.

The total number of Lost Time Injuries (LTI) reported in the mining industry showed a significant increase from 22 in 2001/02 to 27 in 2002/03. LTI Frequency Rate has also increased as a result. There were no fatalities in 2002/03.

GRAPH M4.1 Mining Safety Statistics 1993/94-2002/03

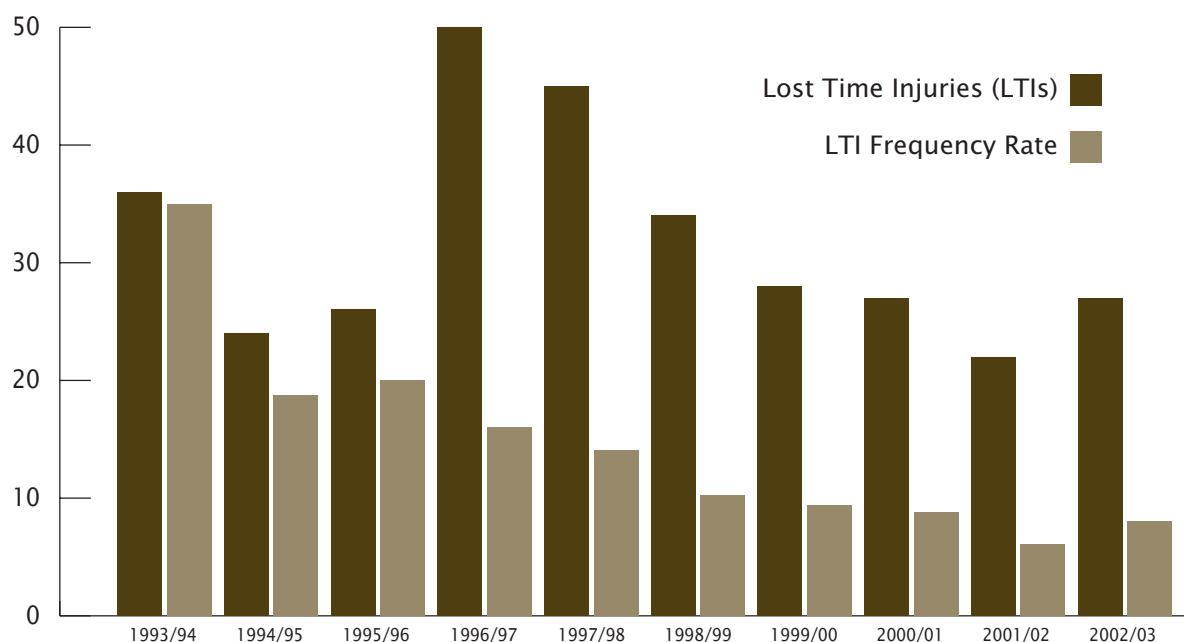


TABLE M4.2 Mining Safety Statistics by Sector – 2002/03

Sector**	Employed*	Hours Worked	Days Lost	Lost Time Injuries (LTI)	LTI Freq Rate	LTI Incidence Rate	LTI Duration Rate	Severity Rate	Fatalities
Metalliferous O/C	151	144,855	4	1	6.9	7.1	4.0	27.6	0
Metalliferous U/G	437	750,110	88	12	16.0	27.2	7.3	117.3	0
Non-Metalliferous***	172	243,132	268	3	12.3	17.5	8.9	110.2	0
Coal	1,085	2,210,669	80	11	5.0	10.1	7.3	36.4	0
Exploration	213	83,640	0	0	0.0	0.0	0.0	0.0	0

* Average number of person employed as reported

** Based on returns for the six monthly period ending 30/6/03

*** Includes mineral sands mines

Source: Returns made under the Mineral Resources Development Act 1990

Note: Lost Time Injuries are defined as those occurrences that resulted in a fatality, permanent disability or time lost from work of one day/shift or more.

Lost Time Injury Frequency Rate is defined as the number of occurrences of lost time injury for each one million hours worked.

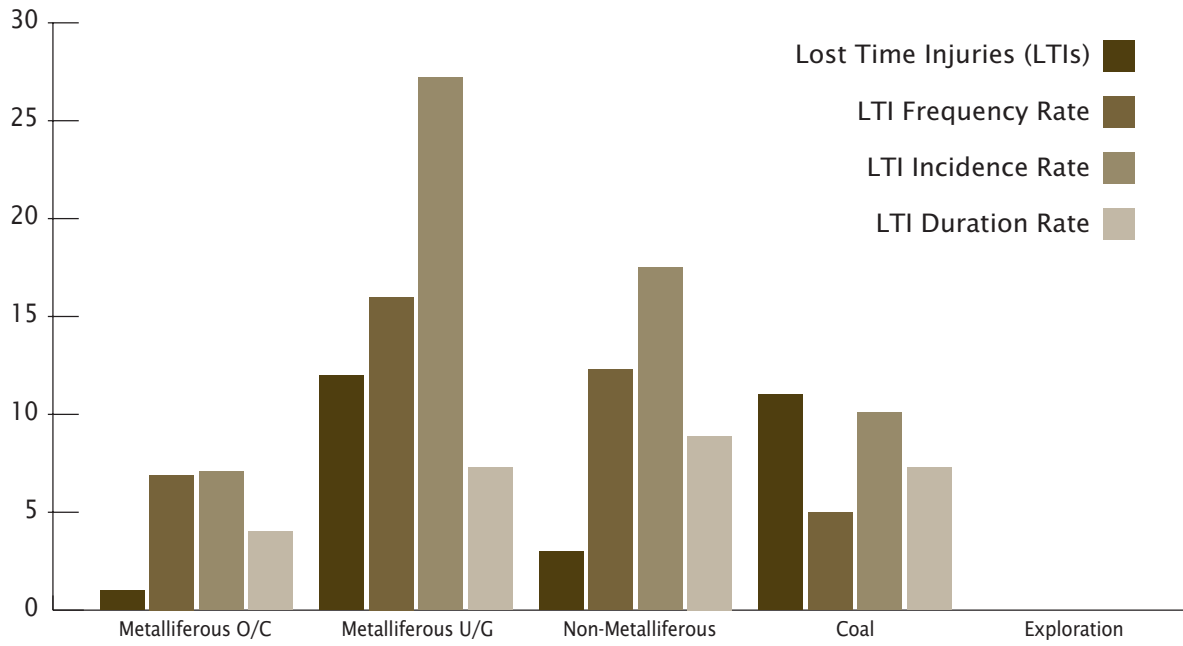
Lost Time Injury Incidence Rate is defined as the number of lost time injuries per thousand employees.

Lost Time Injury Duration Rate is defined as the average days lost for every lost time injury.

Severity Rate is defined as the number of days lost for each one million hours worked.

Metalliferous underground (U/G) and coal mining were the main contributors to high LTI counts for the mining industry in 2002/03, followed by non-metalliferous operations and metalliferous open-cut (O/C) operations. The highest lost-time-injury-frequency-rate (LTIFR) for the year was recorded for metalliferous (U/G) operations, followed by non-metalliferous mines.

GRAPH M4.2 Mining Safety Statistics by Sector.
LTI, LTIIR, LTIFR and LTIDR- 2002/03





Petroleum

During the 2002/03 fiscal year, Victoria experienced a high level of seismic data acquisition and drilling of exploration, appraisal and development wells both onshore and offshore.

Production of crude oil and condensate from the offshore Gippsland Basin had been declining significantly since mid-1980. This occurred as reserves in the first-generation major fields diminished and the rate of new discoveries could not compensate for the production decline in the major fields. Production levels increased during 1997/98 compared to 1996/97, due to the development of Bream B, Moonfish and West Tuna. Development and production from Blackback Field has maintained the production level in 1998/99. The lower crude oil and gas production levels in the year 1998/99 are due to the two months hiatus after the Longford incident. Although oil production levels increased 1999/2000, it is still 15% lower than the levels of 1997/98. The declining rate in production continued at about 15% during 2002/03.

Gas production levels increased during 2001/02 is linked to demand level, and will probably increase in time especially with increased interstate gas sales through new interstate pipelines.

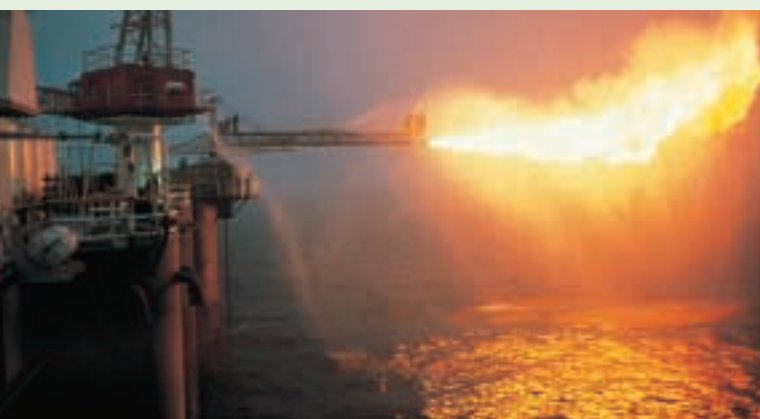
Petroleum Tenement Activities – Victoria 2002/03

Offshore Acreage Release

The Commonwealth of Australia and the State of Victoria jointly released 11 petroleum exploration areas at the April 2002 APPEA Conference. The locations of these exploration areas are shown in Graph P1.

Areas were released based on a six-year work program bidding system.

- The closing date for five State waters bids was 11 April 2002, and
- The closing date for four offshore Commonwealth bids was 19 April 2003.



The offshore bids (Commonwealth and Offshore State waters) were assessed according to the Petroleum Submerged Lands Act 1967 guidelines and gazetted areas were granted to the following exploration companies:

Commonwealth Areas

Offshore Otway Basin:

- V02-1: No bids

Offshore Gippsland Basin:

- V02-2/VIC/P-54: Nexus Energy NL
- V02-3/VIC/P-55: Basin Oil Pty Ltd
- V02-4/VIC/P-56: Nexus Energy NL

State Waters Areas (3-nautical miles zone)

Offshore Otway Basin:

- V02-1 (v): No bids
- V02-2 (v): No bids
- V02-3 (v)/VIC/P-37 (v): Origin Energy Ltd/
Woodside Energy Ltd
- V02-4 (v)/VIC/P-38 (v): Origin Energy Ltd/
Benaris Energy NV

Offshore Gippsland Basin:

- V02-5 (v): No successful bid, insufficient work program

Onshore Acreage Release

Two areas were released during 2001/02 for exploration activities. The released areas were in the onshore Gippsland Basin and the Murray Basin. The onshore bid assessment of the 2001/02 resulted in the award to the following companies:

Gippsland Basin:

- VIC/G 02 (1)/PEP-166: Petroteck Pty Ltd – Aus Am Resources

Murray Basin:

- VIC/M 02 (1)/PEP-165: Knight Industries Pty Ltd

Licences and Retention Leases

The following retention leases applications for a five-year renewal were received and are under review:

- VIC/RL-2 offshore Gippsland Basin
- VIC/RL-7 offshore Otway Basin

Production Licences

- VIC/L-21: Offshore section of the OMV-operated Patricia/Baleen gas project was completed in December 2002. The commissioning of the onshore gas plant at Orbost started in January 2003. Gas production and transmission to the OMV onshore plant began in April 2003.
- VIC/L-22: Offshore Otway Basin, a field development plan was approved and a production licence was granted to BHP Billiton/Santos for the Minerva gas field in November 2002.



TABLE P1 Offshore Gippsland Oil and Gas Revenue 1995-2003

Year	Oil Production Rate (Bbl/d)	Oil Production (Mbbbl)	Oil Price US \$/bbl	Exchange Rates	Oil Price AS\$/bbl	Oil Revenue (mAS\$)	Gas Production Rate (Mcf/d)	Gas Yearly Production (Bscf)	Gas Price AS\$/GJ	Gas Revenue (mAS\$)	Oil & Gas Revenue (mAS\$)
1995	247,743.50	90.43	15.00	0.76	19.66	1,777.91	680.19	248.27	2.70	737.36	2,515.27
1996	210,908.47	76.98	17.00	0.78	21.78	1,676.42	683.31	249.41	2.70	740.74	2,417.17
1997	205,339.46	74.95	20.00	0.68	29.52	2,212.46	665.83	243.03	2.70	721.80	2,934.25
1998	233,480.71	85.22	18.00	0.62	28.81	2,455.56	687.70	251.01	2.70	745.50	3,201.06
1999	168,112.88	61.36	13.00	0.63	20.80	1,276.23	544.84	198.87	2.70	590.64	1,866.87
2000	200,053.58	73.02	17.00	0.53	31.98	2,335.27	538.78	196.66	2.70	584.07	2,919.34
2001	161,896.17	59.09	20.00	0.52	38.13	2,253.20	623.62	227.62	3.00	751.14	3,004.35
2002	156,174.75	57.00	25.00	0.59	42.46	2,420.58	628.27	229.32	3.00	756.75	3,177.33
2003	132,754.50	48.46	28.57	0.67	42.68	2,068.08	635.63	232.00	3.00	765.62	2,833.69

Oil Price Sources: (1995-2002) BP Statistical Review (www.bp.com/statisticalreview) (2003); Australia Bureau of Agricultural and Resources Economics – Australian Commodity Statistics
Exchange Rates Source: www.rba.gov.au/Statistics/Bulletin/index



GRAPH P2.1 Offshore Gippsland Oil and Gas Revenue 1995-2003

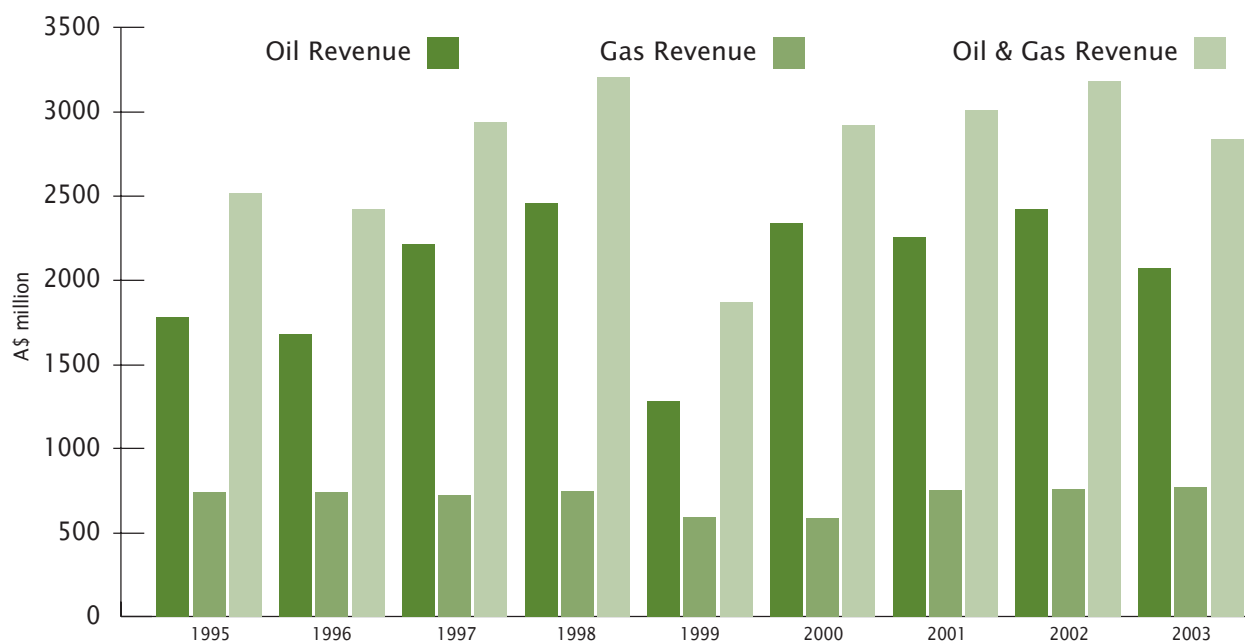


TABLE P2.1 Annual Bass Strait Petroleum Production (since 1968)

Year	Victoria Annual Petroleum Production		
	C+C, GL	LPG, GL	Gas, Gm ³
Prior 1984	290.20	34.30	51.20
1984/85	26.40	3.00	6.00
1985/86	25.78	2.97	5.79
1986/87	24.44	2.88	5.69
1987/88	22.87	2.83	5.65
1988/89	18.61	2.68	5.91
1989/90	18.68	2.69	6.71
1990/91	17.48	2.50	6.01
1991/92	16.97	2.57	6.26
1992/93	17.80	2.74	6.14
1993/94	16.60	2.66	6.05
1994/95	14.35	2.56	6.77
1995/96	12.26	2.25	6.65
1996/97	11.93	2.12	6.01
1997/98	13.56	2.29	6.12
1998/99	9.73	1.63	5.66
1999/00	11.60	1.89	5.56
2000/01	9.40	1.75	6.44
2001/02	9.06	1.80	6.49
2002/03	7.70	1.97	6.57
2002/03	0.00	0.00	0.08
Total	595.43	80.08	167.76
Source: Esso/BHP Billiton			
* 2002/03 (Baleen/Patricia)	0.00	0.00	0.08

* Baleen Patricia (Source: OMV Australia Pty Ltd)

Note: C+C is Crude and Condensate

GRAPH P2.2 Bass Strait Historical Petroleum Production
1984/85-2002/03

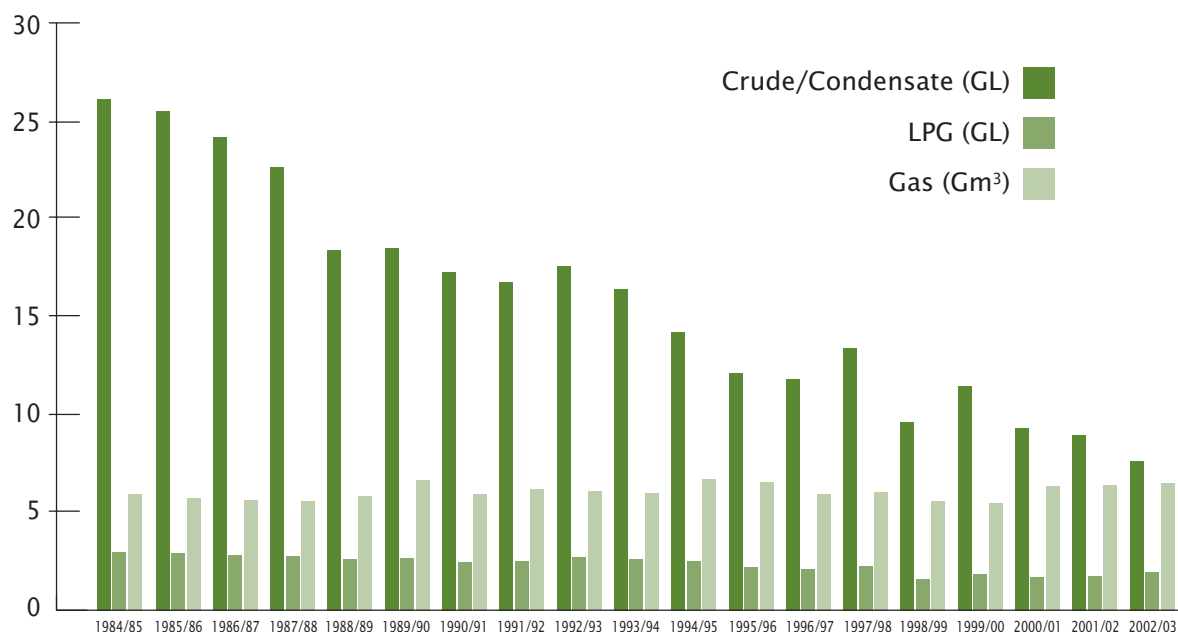


TABLE P2.2 Gross Gippsland Basin Petroleum Production 2002/03

Esso/BHP Billiton Fields	2001/02			2002/03		
	C+C, GL	LPG, GL	Gas, Gm ³	C+C, GL	LPG, GL	Gas, Gm ³
Barracouta	0.082	0.133	0.864	0.070	0.142	0.814
Blackback	0.282	0.056	0.103	0.135	0.020	0.049
Bream	0.629	0.060	0.062	0.604	0.185	0.615
Cobia	0.267	0.014	0.003	0.335	0.021	0.003
Dolphin	0.241	0.014	0.010	0.200	0.014	0.008
Flounder	0.834	0.213	0.404	0.688	0.254	0.479
Fortescue	0.381	0.022	0.004	0.346	0.023	0.004
Halibut	0.789	0.041	0.010	0.595	0.038	0.007
Kingfish	0.531	0.043	0.024	0.483	0.045	0.022
Mackerel	0.182	0.020	0.004	0.175	0.023	0.004
Marlin	0.478	0.521	2.405	0.456	0.607	2.450
Moonfish	0.071	0.003	0.015	0.053	0.002	0.012
Perch	0.047	0.001	0.001	0.052	0.001	0.001
Seahorse	0.026	0.001	0.000	0.023	0.001	0.000
Snapper	0.323	0.279	2.233	0.248	0.255	1.812
South Mackerel	0.019	0.002	0.000	0.009	0.001	0.000
Tarwhine	0.102	0.027	0.015	0.074	0.023	0.011
Tuna	1.455	0.108	0.205	1.107	0.117	0.182
West Kingfish	0.668	0.061	0.030	0.557	0.060	0.024
West Tuna	1.654	0.183	0.099	1.492	0.140	0.071
Total	9.061	1.802	6.491	7.703	1.971	6.570

Source: Esso/BHP Billiton

Note: Bream and Flounder gas injection has been subtracted from the production volume

The major oil and condensate producers in 2002/03 were Marlin, Kingfish, West Kingfish, Halibut, Bream, Flounder, Tuna and West Tuna. These eight fields are now responsible for more than 80% of liquid production from the Gippsland Basin. Although production from the major fields is declining, infill drilling, development and work-over activities continued during 2002/03.

OMV Australia Pty Ltd Field	2001/02			2002/03		
	C+C, GL	LPG, GL	Gas, Gm ³	C+C, GL	LPG, GL	Gas, Gm ³
Baleen/Patricia	-	-	-	-	-	0.080

Source: OMV Australia Pty Ltd

GRAPH P4 Gross Gippsland Production 2001/02-2002/03

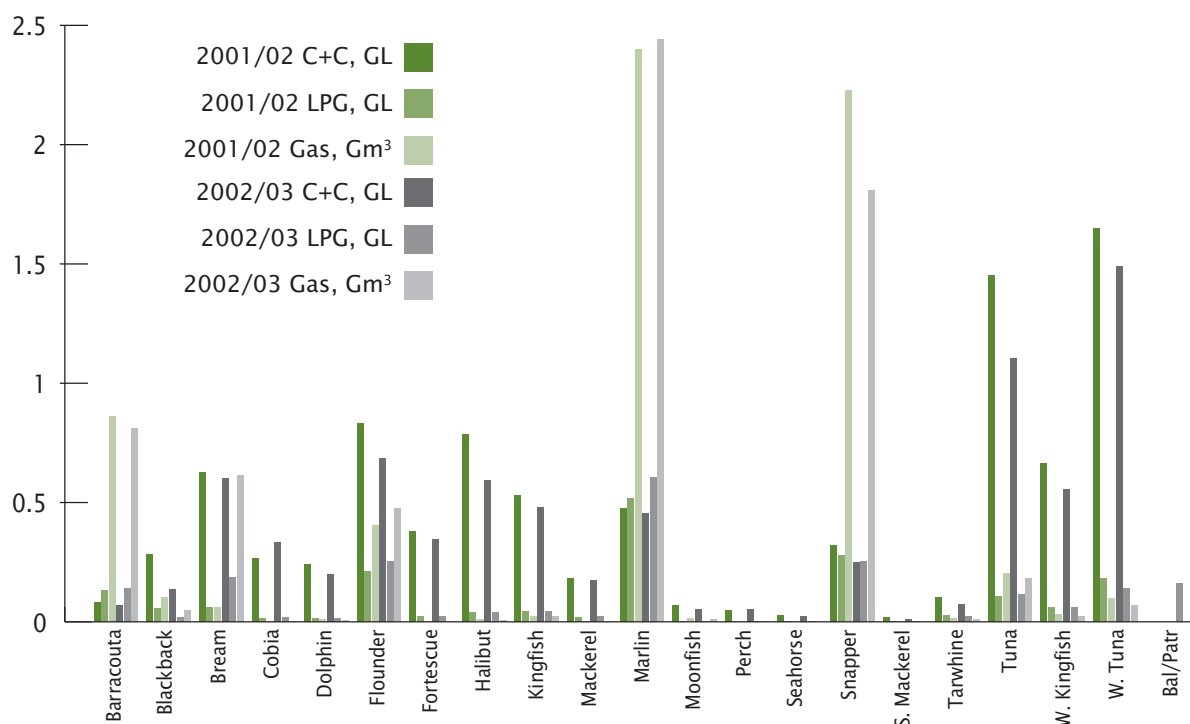


TABLE P2.3 Gippsland Basin Cumulative Production And Remaining Reserves

Esso/BHP Year	Initial Recoverable Reserves			Cumulative Production			Remaining Reserves		
	C+C, GL	LPG, GL	Gas, Gm ³	C+C, GL	LPG, GL	Gas, Gm ³	C+C, GL	LPG, GL	Gas, Gm ³
1982	498.00	88.20	220.90	246.00	28.10	38.90	252.00	60.10	182.00
1983	499.10	81.70	224.20	266.30	31.10	44.90	232.80	50.60	179.30
1984	502.60	81.40	212.90	290.20	34.30	51.20	212.40	47.10	161.70
1985	520.40	82.30	213.60	316.60	37.30	57.20	203.80	45.00	156.40
1986	520.40	82.30	213.60	342.38	40.27	62.99	178.02	42.03	150.61
1987	549.70	89.10	227.50	366.82	43.15	68.68	182.88	45.95	158.82
1988	566.20	91.70	232.40	389.69	45.98	74.33	176.51	45.72	158.07
1989	579.50	95.90	247.70	408.30	48.66	80.24	171.20	47.24	167.46
1990	579.10	96.20	250.20	426.98	51.35	86.95	152.12	44.85	163.25
1991	580.00	96.40	250.50	444.46	53.85	92.96	135.54	42.55	157.54
1992	581.80	96.40	250.30	461.43	56.42	99.22	120.37	39.98	151.08
1993	585.20	96.20	250.50	479.23	59.16	105.36	105.97	37.04	145.14
1994	608.60	98.30	252.70	495.83	61.82	111.41	112.77	36.48	141.29
1995	620.20	99.30	253.50	510.18	64.38	118.18	110.02	34.92	135.32
1996	632.60	100.10	255.60	522.44	66.63	124.83	110.16	33.47	130.77
1997	640.60	101.10	261.50	534.37	68.75	130.84	106.23	32.35	130.66
1998	647.60	105.30	272.30	547.93	71.04	136.96	99.67	34.26	135.34
1999	647.60	105.30	272.30	557.69	72.67	142.60	89.91	32.63	129.70
2000	647.60	105.30	272.30	569.29	74.55	148.15	78.31	30.75	124.15
2001	647.60	105.30	272.30	578.66	76.31	154.62	68.94	28.99	117.68
2002	647.60	105.30	272.30	587.72	78.11	161.11	59.88	27.19	111.19
2003	647.60	105.30	272.30	595.43	80.08	167.76	52.17	25.22	104.54

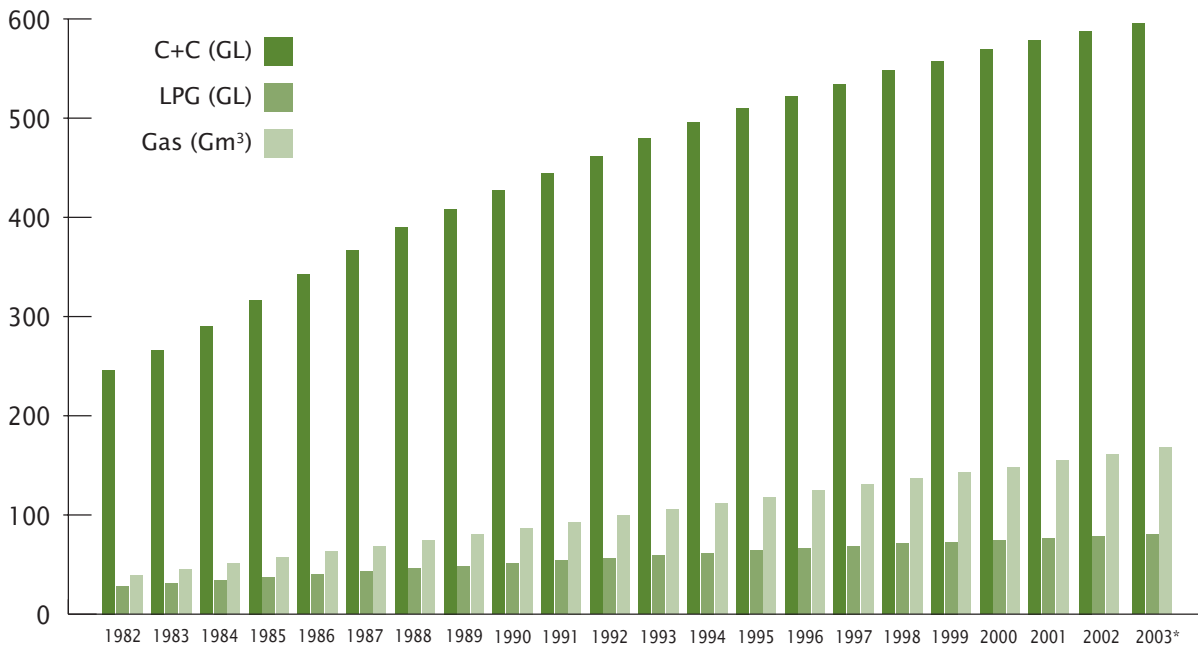
Source: Esso/BHP Billiton

OMV Australia Pty Ltd									
Year	Initial Recoverable Reserves			Cumulative Production			Remaining Reserves		
	C+C, GL	LPG, GL	Gas, Gm ³	C+C, GL	LPG, GL	Gas, Gm ³	C+C, GL	LPG, GL	Gas, Gm ³
2003	0.00	0.00	2.00	0.00	0.00	0.08	0.00	0.00	1.92

Source: OMV Australia Pty Ltd

The estimated Bass Strait oil, condensate, LPG and gas original reserves have all increased since 1982, with the discovery of some new reserves in existing and new fields. However, this increase in the original reserves has been modest, with an increase of 28% for crude oil and condensate, 14% for LPG and 18% for gas, as seen, when compared with the 1997 figures.

GRAPH P5 Gippsland Basin – Cumulative Production 1982-2003



* Includes Baleen/Patricia

GRAPH P6 Gippsland Basin – Remaining Petroleum Reserves 1982-2003

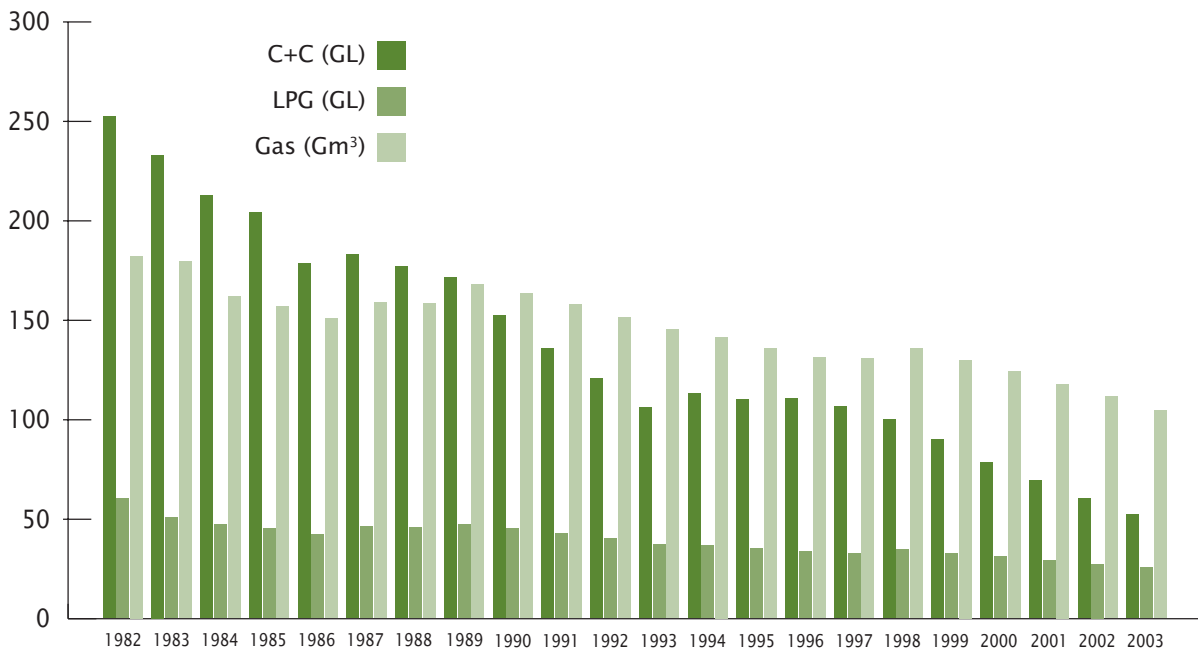


TABLE P3.2 Gross Onshore Otway Basin Gas/Condensate Production 2002/03

Field	2001/02		2002/03	
	Gas, Mm ³	cond. KI	Gas, Mm ³	cond. KI
North Paaratte	5.1	55.3		
Iona	77.3	335.6	69.0	
Wallaby Creek	6.0	99.7		
Mylor	27.8	1853.1		0.9
Penryn	38.1	2254.1	11.9	589.1
Dunbar	9.2	215.0		
Fentom	21.1	1046.7	0.1	2.1
Tregony	70.2	4139.3	46.9	2263.6
McIntee	36.8	973.6	130.8	2890.7
Naylor	4.8	258.5	66.4	3227.1
Croft	8.5	409.4	104.8	4607.6
Seamer			16.2	
Total	304.9	11640.3	446.1	13581.1
Boggy*	17.7	10.4	19.2	9.6

Source:

Santos for:

Mylor, Fantom Creek and Penryn fields"

Western Underground Gas Storage for:

Iona, North Paaratte and Wallaby Creek fields"

Origin for:

Skull Creek, Wild Dog Road and Dunbar Fields"

British Oxygen Company (BOC) for:

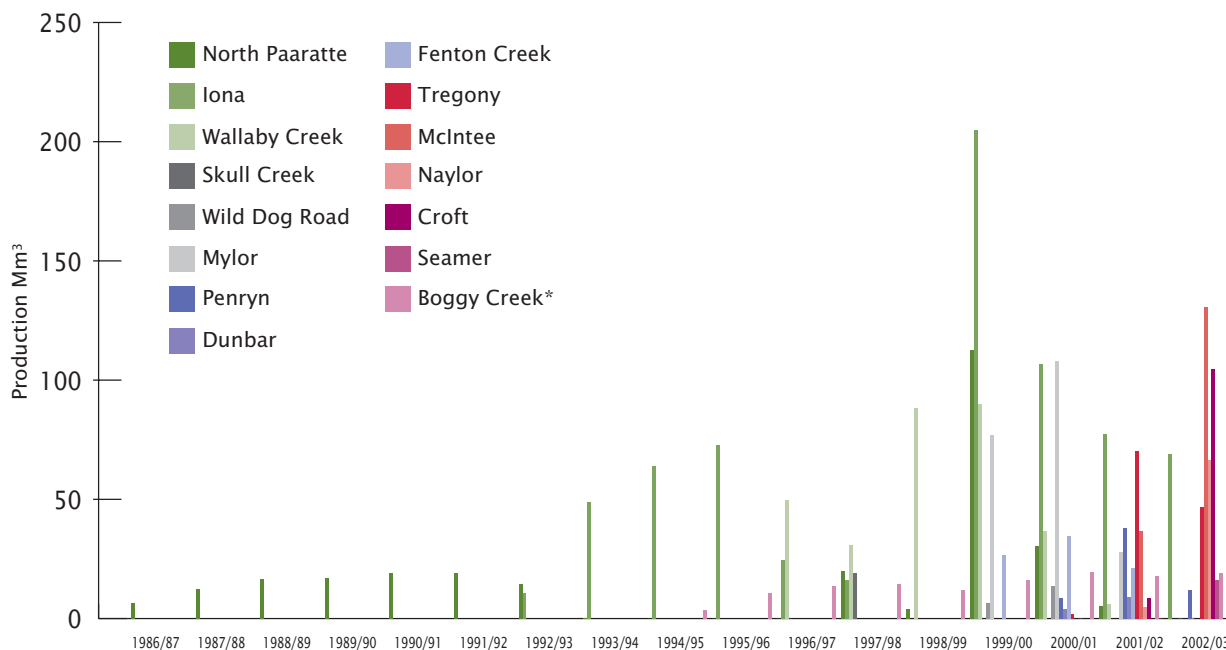
Boggy Creek

Wallaby Creek came on stream in September 1996. Mylor and Fentom Creek in August 1999, Wild Dog Road in January 2000 and Seamer in April 2003

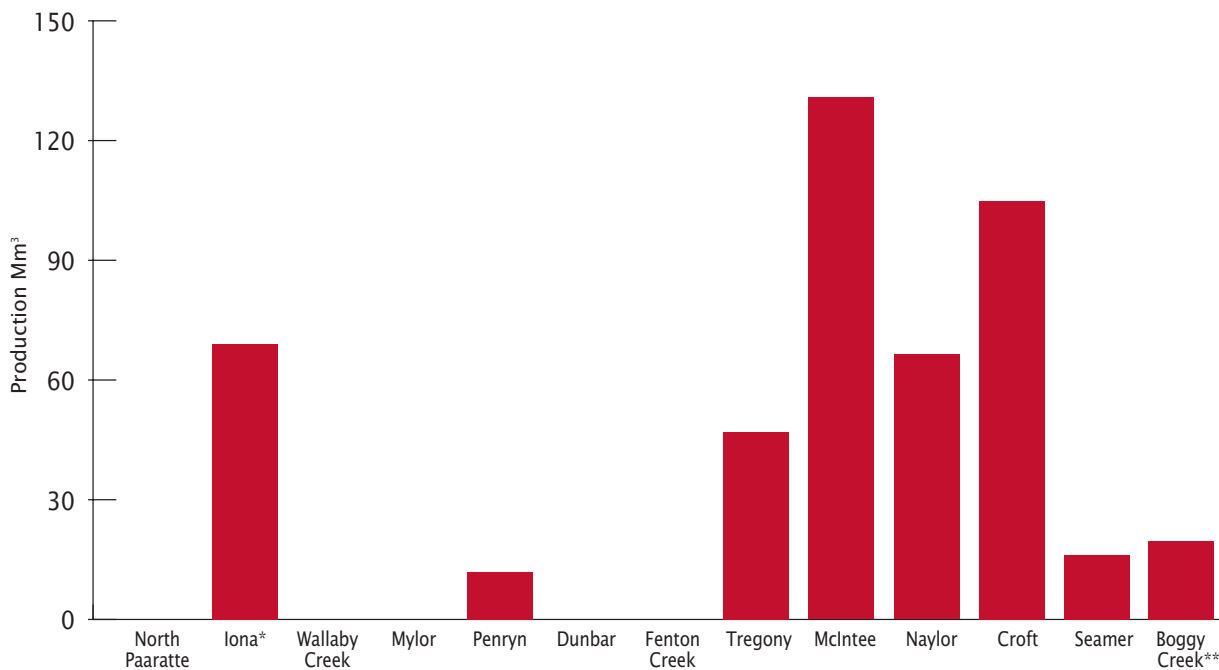
* Boggy Creek is primarily a CO₂ producer



GRAPH P7 Victorian Otway Basin Historical Gas Production – 1986/87-2002/03



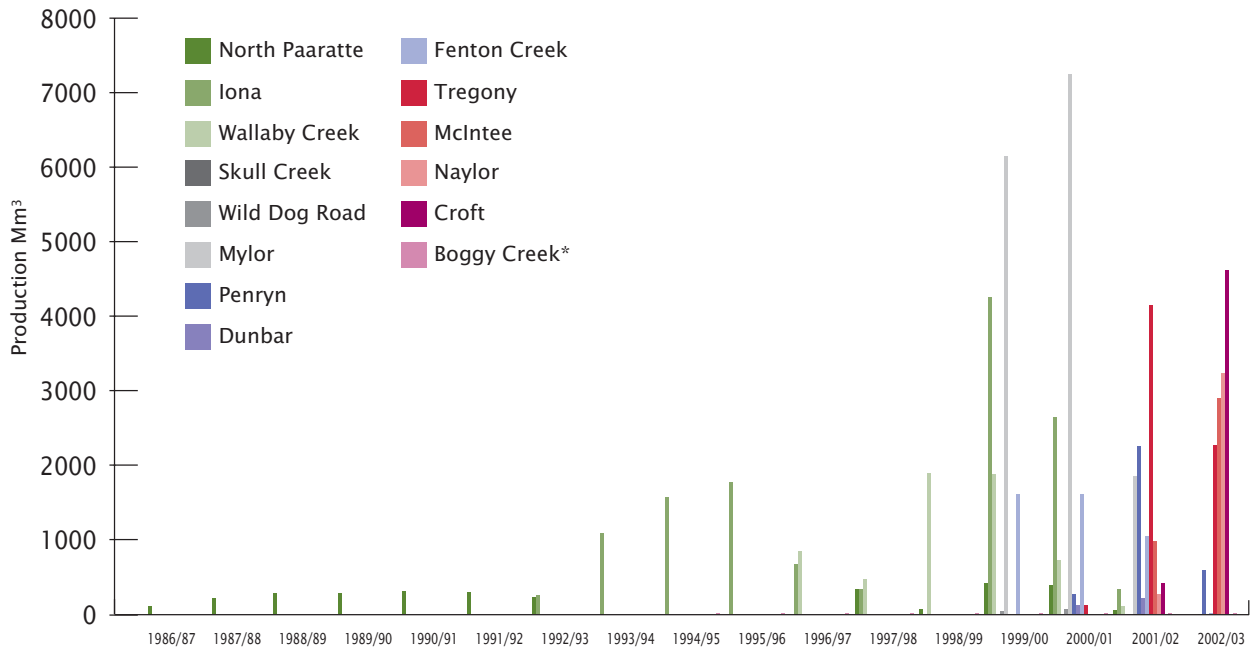
GRAPH P8 Victorian Otway Basin Gas Production – 2002/03



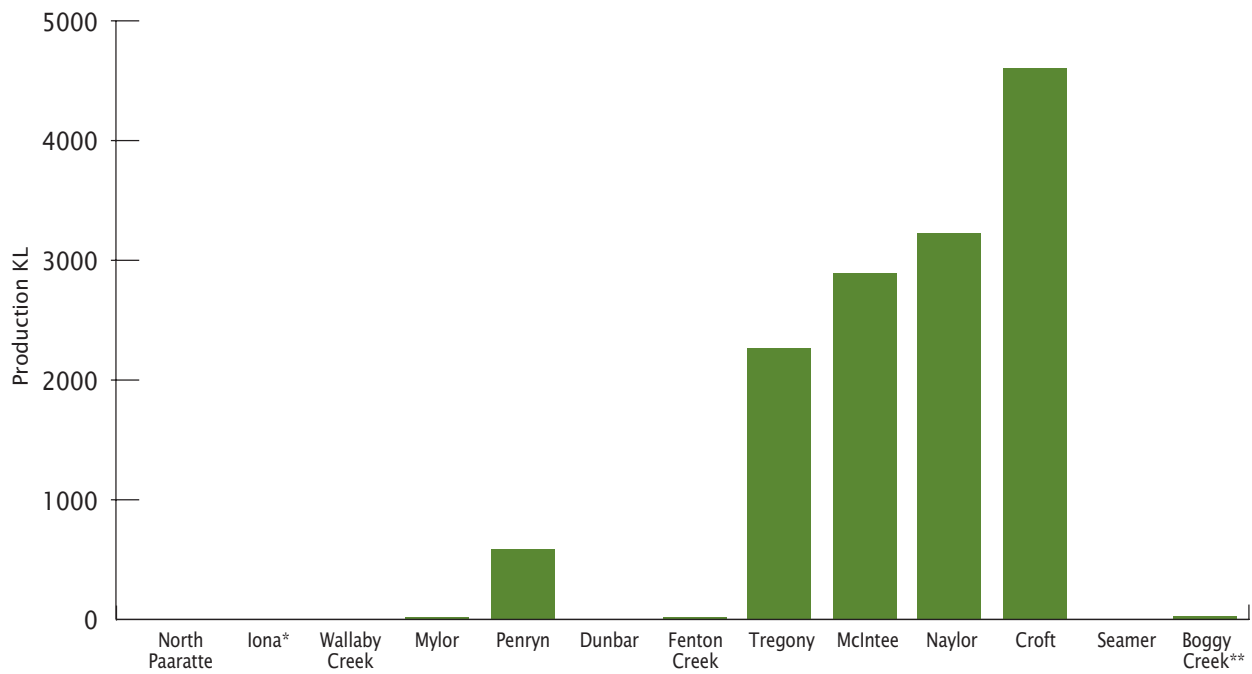
* Iona Field - Underground Storage

** Bogy Creek Field - CO₂

GRAPH P9 Victorian Otway Basin Historical Condensate Production - 1986/87-2002/03



GRAPH P10 Victorian Otway Basin Condensate Production - 2002/03



* Iona Field - Underground Storage

** Boggy Creek Field - CO₂

TABLE P3.3 Onshore Otway Basin Sales Gas Reserves Status (Mm³), June 2003

Licence Area	Initial Reserves	Cumulative Production	Remaining Reserves
H/C gas in Port Campbell area, as listed below	2919.9	2167.1	752.8
Boggy Creek (CO ₂ Producer)	396.4	126.8	269.62

Note: * Producing fields in the Port Campbell area consist of Boggy Creek, Fenton Creek, Tregoney, McIntee, Croft, Penryn, Seamer and Naylor

** The newly discovered Lavers Field in the onshore Port Campbell region is not in production yet

*** The total gas in place for undeveloped offshore gas fields - excluding Tasmanian fields - (Minerva, La Bella, Casino-1 and Geograph) is estimated at about 1269 billion cubic feet (Bcf) or 35.94 billion cubic metres (Bm³), and including Tasmania fields (Thylacine and Yolla) 2369 Bcf or 67.1 Bm³

TABLE P4.1 Seismic Surveys 2002/03

3D-Seismic							
Region	Basin	Survey Name	Permit	Operator	Start	Area Sq km	Exp. \$ million
Offshore	Gippsland	HBR2002A	VIC/P-45	BHP	11/8/02	1002	13.1
Offshore	Gippsland	CBA02B	VIC/P-42	Bass Strait oil	1/7/02	426	4.0
Offshore	Gippsland	G03A	VIC/L-20	Esso/W. Monarch	1/1/03	1000	19.0
Offshore	Otway	OS0Z	VIC/P-51, 52	Santos/Monarch	1/10/02	760	11.1
Onshore	Otway	OEP03A	PEP-151	Essential Resources	13/5/03	106.5	1.1
Total						3294.5	48.3
2D-Seismic							
Region	Basin	Survey Name	Permit	Operator	Start	Area Sq km	Exp. \$ million
Offshore	Gippsland	GS02	VIC/RL-3	Santos	5/1/03	223.3	0.5
Offshore	Gippsland	GBS02	VIC/P-41	Santos	1/1/03	221.5	0.5
Offshore	Otway	OEP02A	VIC/P-46	Essential Resources	1/11/02	740	1.2
Offshore	Otway	OS02	VIC/P-51, 52	Santos/Polar Duke	24/11/02	1148	1.8
Offshore	Otway	GLO03A	VIC/P-47	Lakes Oil	Mar 03	170	0.3
Onshore	Otway	OEP03A	PEP-151	Essential Resources	13/5/03	30	0.9
Total						2532.8	5.1

Source: The above figures are collated from reports forwarded to the Department of Natural Resources and Environment by permit holders under the provisions of the Petroleum Act 1985

TABLE M4.2 Seismic Surveys 1984/85-2002/03

Year	Offshore Basin		Onshore Basin			No. of Surveys
	Gippsland	Otway	Gippsland	Otway	Murray	
Pre 1984	54	23	33	60	0	
1984/85	5	2	0	8		15
1985/86	1	0	1	6		8
1986/87	0	2	0	6		8
1987/88	4	4	0	6		14
1988/89	9	2	0	3	1	15
1989/90	1	0	0	3		4
1990/91	1	2	3	3		9
1991/92	5	0	0	3		8
1992/93	4	0	0	6		10
1993/94	2	0	1	5		8
1994/95	4	0	0	3		7
1995/96	1	2	0	3	1	7
1996/97	0	0	2	4		6
1997/98	0	0	0	3		3
1998/99	4	0	0	0		4
1999/00	1	1	3	3		8
2000/01	1	0	1	2		4
2001/02	4	2	0	4		10
2002/03	5	4	0	2		11
Total	106	44	44	133	2	159

GRAPH P11 Seismic Surveys Victoria - 1984/85-2002/03

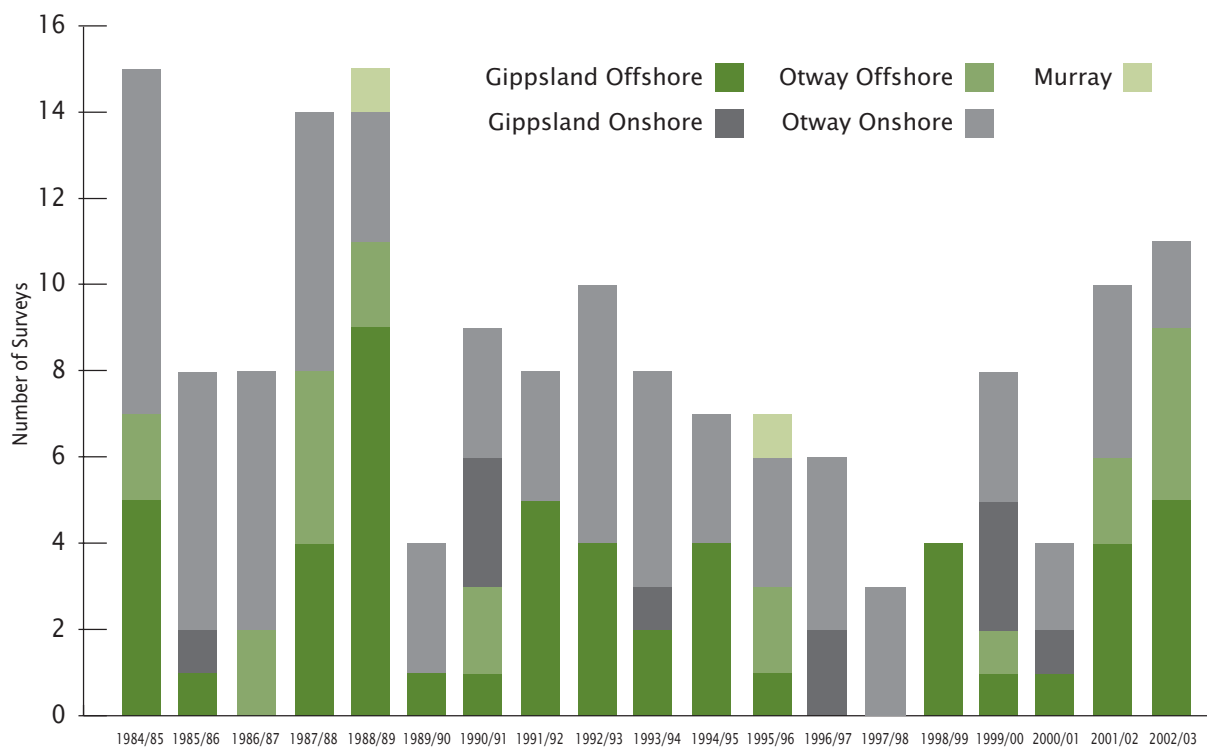


TABLE P5.1 Exploration/Appraisal Wells 2002/03

Rigion	Basin	Well Name	Spud Date	Operator	Tenement	Status	Total Depth (m)
Onshore	Otway	Seamer-1	12/18/02	Santos/BOL	PEP-153	Gas Discovery Suspended	1360
Onshore	Otway	Koroit West-1	1/15/03	Origin/Essential	PEP-152	Dry	858
Onshore	Otway	Banganna-1	2/5/03	Origin	PEP-159	Dry	2125
Onshore	Otway	Melba-1		Santos	PEP-154	Dry	1668
Offshore	Otway	Casino-1	25/8/02	Strike/Santos	VIC/P-44	Gas Discovery P + A	2118
Offshore	Otway	Casino-2	21/9/02	Strike/Santos	VIC/P-44	Gas Discovery P + A	2112
Onshore	Gippsland	Bunga Creek-1	8/11/02	Lakes Oil	PEP-155	Stratigraphic Well - P + A	346
Onshore	Gippsland	Bunga Creek-2	Feb 03	Lakes Oil	PEP-155	P + A	351
Onshore	Gippsland	Patties Pies-1	Mar 03	Lakes Oil	PEP-156	P + A	441
Offshore	Gippsland	Sole-2	9/7/02	Shell	VIC/RL3	Gas Discovery Suspended	1005
Offshore	Gippsland	Beardie-1	26/7/02	Esso	VIC/L2	P + A	1905
Offshore	Gippsland	Scallop-1	2/2/03	Santos	VIC/L2	Uneconomic Gas Discovery P+A	3174

Source: The above figures are collated from reports forwarded to the Department of Natural Resources and Environment by operators under the provisions of the Petroleum (Submerged Lands) Acts 1967 (Commonwealth) & 1982 (State) and the Petroleum Act 1958

TABLE P5.2 Historical Petroleum Exploration/Appraisal Wells – Victoria 1984/85-2002/03

Year	Offshore Basin		Onshore Basin			Total wells	Total drilled (m)
	Gippsland	Otway	Gippsland	Otway	Murray		
Pre 1984						381	
1984/85	10	0	2	2	0	14	29,223
1985/86	9	1	3	5	0	18	36,925
1986/87	2	0	2	2	0	6	9,282
1987/88	1	0	2	7	0	10	13,839
1988/89	9	0	0	1	0	10	29,871
1989/90	17	0	0	2	0	19	51,941
1990/91	0	0	2	6	1	9	9,893
1991/92	5	0	0	2	0	7	14,953
1992/93	4	4	0	1	0	9	21,255
1993/94	2	1	0	3	0	6	12,682
1994/95	6	0	2	5	0	13	27,563
1995/96	2	2	0	3	0	7	16,281
1996/97	2	0	1	5	0	8	17,112
1997/98	2	0	0	1	0	3	6,518
1998/99	0	0	1	0	0	1	1,743
1999/00	3	0	3	2	0	8	10,745
2000/01	1	1	2	5	0	9	17,712
2001/02	4	2	4	7	1	18	28,208
2002/03	3	2	3	4	0	12	17,463
Total	82	13	27	63	2	568	373,209

Source: The above figures are collated from reports forwarded to the Department of Natural Resources and Environment by operators under the provisions of the Petroleum (Submerged Lands) Acts 1967 (Commonwealth) & 1982 (State) and the Petroleum Act 1958

GRAPH P12 Exploration Wells – Victoria 1984/85-2002/03

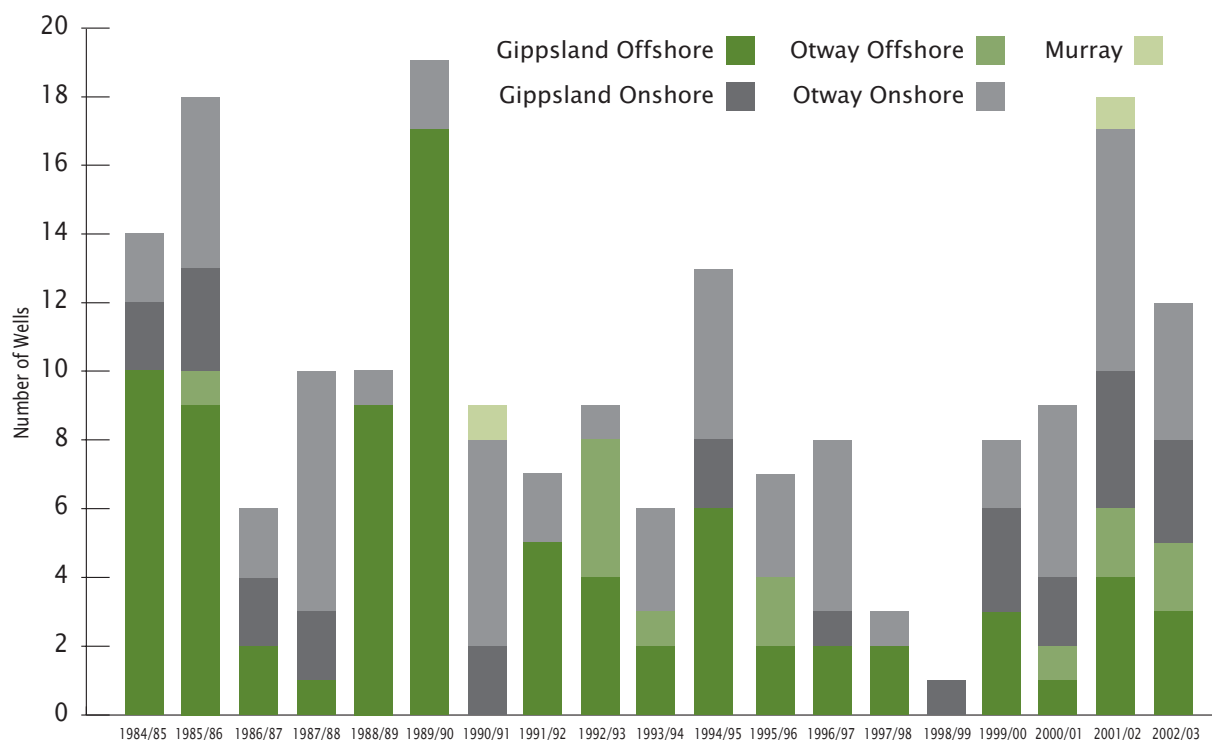


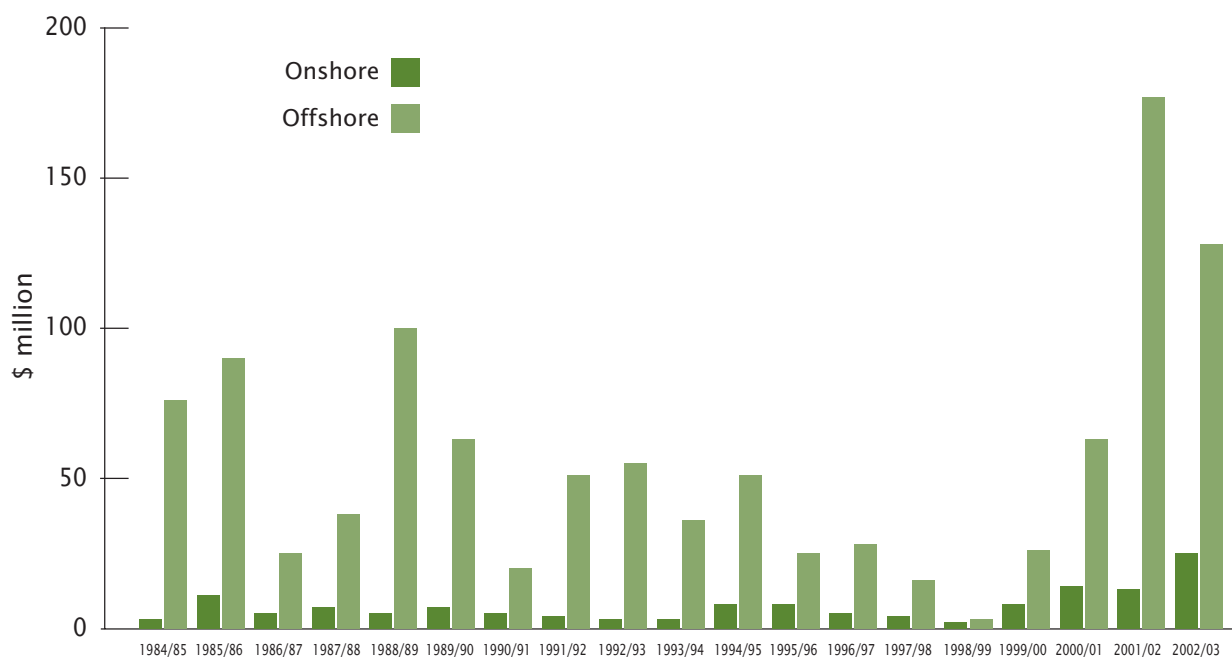
TABLE P6 Petroleum Exploration/Appraisal Expenditure 1984/85-2002/03

	Onshore	Offshore	Total A\$ million
1984/85	3	76	79
1985/86	11	90	101
1986/87	5	25	30
1987/88	7	38	45
1988/89	5	100	105
1989/90	7	63	70
1990/91	5	20	25
1991/92	4	51	55
1992/93	3	55	58
1993/94	3	36	39
1994/95	8	51	59
1995/96	8	25	33
1996/97	5	28	33
1997/98	4	16	20
1998/99	2	3	5
1999/00	8	26	34
2000/01	14	63	77
2001/02	13	177	190
2002/03	25	131	156

Petroleum exploration (wells and seismic acquisition) and appraisal drilling expenditure in Victoria in 2002/03 was A\$156 million. During the year a total of 12 exploration wells have been drilled, out of which four wells in onshore Otway Basin and three in onshore Gippsland Basin. In offshore regions five wells were drilled, three in Gippsland and two in Otway Basin. Data acquisition in onshore Otway Basin (Port Campbell Region) comprises 30 km² 2D and 106.5 km² 3D. In offshore Otway Basin 760 km² 3D and 2058 km² 2D. In offshore Gippsland Basin total of 444.8 km² 2D and 2428 km² 3D.



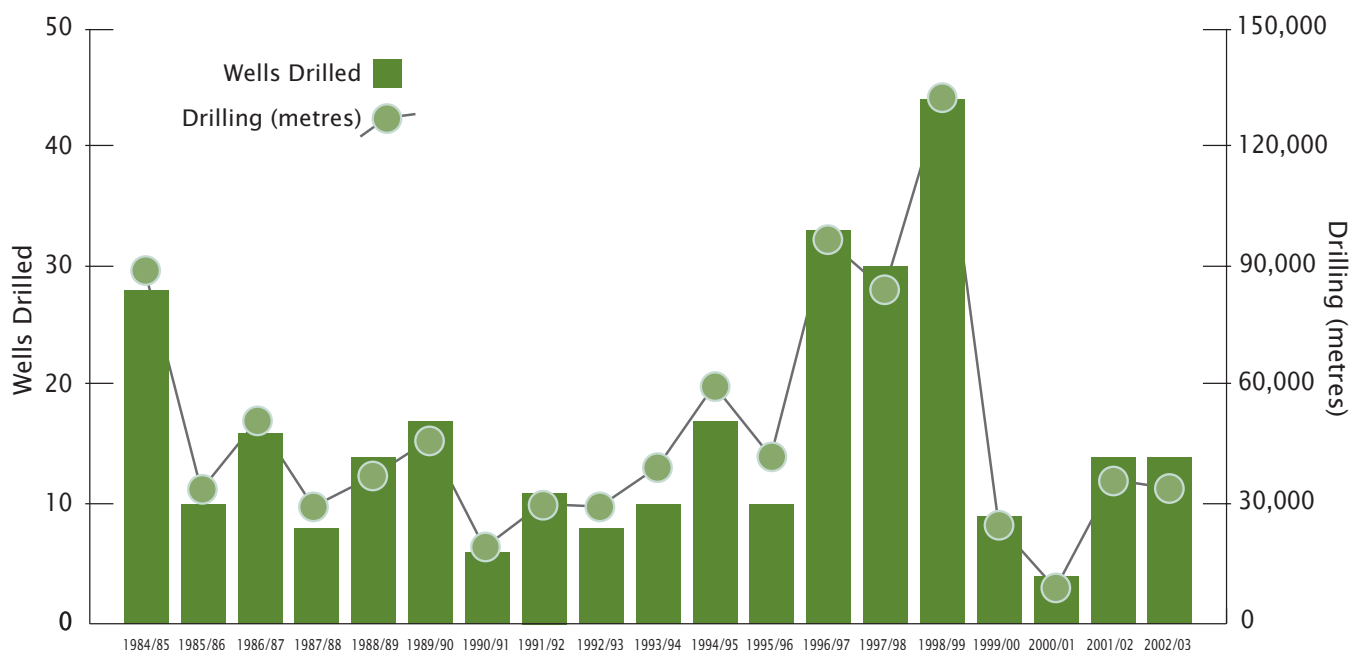
Source: Over the last decade annual petroleum expenditure has fluctuated significantly, with peaks of over \$100 million per annum in the 1980s. The average annual expenditure in the 1990s has been \$39 million.

GRAPH P13 Petroleum Exploration/Appraisal Expenditure
 1984/85-2002/03

 TABLE P7.1 Development Wells (Offshore) – Victoria July 2002-
 June 2003

Region	Well	Spud Date	Operator	Licence	Total depth (m)
Offshore Gippsland	A-20	3/2/03	Esso	VIC/L-6	3,132
Offshore Gippsland	A-24A	2/3/03	Esso	VIC/L-6	3,193
Offshore Gippsland	A-12A	3/2/03	Esso	VIC/L-6	2,920
Offshore Gippsland	A-18a	7/6/03	Esso	VIC/L-6	3,736
Offshore Gippsland	A-31	30/6/02	Esso	VIC/L-9	3,220
Offshore Gippsland	A-29	27/7/02	Esso	VIC/L-9	3,075
Offshore Gippsland	A-30	22/7/02	Esso	VIC/L-9	3,075
Offshore Gippsland	A-10a (ST)	4/10/02	Esso	VIC/L-9	2,336
Offshore Gippsland	A-11b	11/11/02	Esso	VIC/L-9	3,058
Offshore Gippsland	A-5	9/11/02	Esso	VIC/L-9	3,225
Offshore Otway	Minerva-3	24/11/02	BHP Billiton	VIC/RL-8	1,760
Offshore Otway	Minerva-4	18/12/02	BHP Billiton	VIC/RL-8	1,870
Total					34,600

Source: The above figures are collated from reports forwarded to the Department of Natural Resources and Environment by operators under the provisions of the Petroleum (Submerged Lands) Acts 1967 (Commonwealth) & 1982 (State) and the Petroleum Act 1958

GRAPH P1.4 Development Wells – Victoria 1984/85-2002/03



Source: The above graph is collated from reports forwarded to the Department of Natural Resources and Environment by operators under the provisions of the Petroleum (Submerged Lands) Acts 1967 (Commonwealth) & 1982 (State) and the Petroleum Act 1958

TABLE P7.2 Development Wells – Victoria 1984/85-2002/03

Year	No. of Wells Drilled	Annual Drilling (metres)
Pre-1984	499	N/A
1984/85	28	89,664
1985/86	10	34,320
1986/87	16	51,221
1987/88	8	29,613
1988/89	14	37,783
1989/90	17	46,369
1990/91	6	19,551
1991/92	11	30,664
1992/93	8	30,021
1993/94	10	39,810
1994/95	17	60,469
1995/96	10	42,519
1996/97	33	97,678
1997/98	30	84,823
1998/99	44	133,166
1999/00	9	25,915
2000/01	4	9,644
2001/02	14	36,429
2002/03	14	34,600
Total	802	934,259

TABLE P8 Offshore Petroleum Safety Statistics

Year	Lost Time Injuries (LTI)
1989/90	39
1990/91	17
1991/92	8
1992/93	3
1993/94	2
1994/95	2
1995/96	0
1996/97	0
1997/98	0
1998/99	1
1999/00	1
2000/01	1
2001/02	0
2002/03	0

Source: The above figures are collated from reports forwarded to the Department of Natural Resources and Environment by operators under the provisions of the Petroleum (Submerged Lands) Acts 1967 (Commonwealth) & 1982 (State) and the Petroleum Act 1958



Extractive Industries



TABLE E1.1 Victorian Extractive Industries Production and Sales by Rock Type 2002/03

Product Group	Product Type	Sales (tonne)	Sales*
Hard Rock	BASALT	12,863,813	\$151,787,371
	GRANITE	2,533,035	\$33,163,435
	DOLERITE	529,149	\$4,749,196
	GNEISS	18,191	\$147,550
	HORNFELS	3,798,266	\$45,206,841
	QUARTZITE	129,968	\$1,086,653
	TRACHYTE	6,192	\$69,659
	RHYODACITE	1,122,762	\$16,533,210
	SCHIST	173,337	\$1,888,060
	SEDIMENTARY	1,183,546	\$6,396,715
	SLATE	88	\$239,200
Hard Rock Total		22,359,143	\$261,267,889
Soft Rock	CLAY & CLAY SHALE	1,091,452	\$3,837,524
	LIMESTONE	1,821,855	\$25,935,892
	SAND & GRAVEL	10,913,831	\$114,919,631
	SCORIA	784,173	\$8,266,844
	SOIL	24,939	\$189,987
	TUFF	526,508	\$2,541,101
Soft Rock Total		15,162,758	\$155,690,979
GRAND TOTAL		37,521,901	\$416,958,868

* Where no data is supplied by the operator, an estimated value is used

Source: Statutory returns under the Extractive Industries Development Act 1995

Only operations reported under the Extractive Industries Development Act 1995 are included in the above figures.

Stone production in 2002/03 showed a small drop to 37.5 million tonnes from the 2001/02 production of 38.3 million tonnes. This is interpreted largely as a reflection of reporting, rather than a decreased demand for construction materials in 2002/03.



TABLE E1.2 Victorian Extractive Industries Production and Sales by Product 2002/03

Product Group	Product Type	Sales (tonne)	Sales
Single-size products	AGGREGATE	12,472,781	\$167,946,719
	ARMOUR	107,701	\$1,183,810
Single size products Total		12,580,482	\$169,130,529
Multi-size products	ROAD BASE	5,400,545	\$63,787,784
	ROAD SUB-BASE	5,635,108	\$41,033,156
	FILL	1,738,958	\$11,452,845
Multi size products Total		12,774,610	\$116,273,784
Sand products	CONCRETE SAND	5,180,667	\$67,200,332
	FOUNDRY SAND	15,716	\$284,570
	FINE SAND	1,911,337	\$15,503,279
	INDUSTRIAL	4,412	\$75,270
Sand products Total		7,112,132	\$83,063,451
Limestone Products	CEMENT	745,892	\$4,190,851
	AGRICULTURE	383,438	\$8,499,667
	LIME	98,295	\$8,046,888
Limestone Products Total		1,227,625	\$20,737,406
Clay products	BRICK	930,896	\$3,362,543
	FIREBRICKS	308	\$2,464
	STONEWARE	3,258	\$48,870
	TILE/PIPE	20,369	\$186,593
Clay products Total		954,831	\$3,600,470
Miscellaneous	DIMENSION STONE	15,214	\$1,177,505
	UNSPECIFIED	2,857,008	\$22,975,724
Miscellaneous Total		2,872,222	\$24,153,229
Total		37,521,901	\$416,958,868

Source: Statutory returns under the Extractive Industries Development Act 1995

Notes: Only operations reported under the Extractive Industries Development Act 1995 are included in Tables E1.1 and E1.2

TABLE E1.3 Victorian Dimension Stone Production 1993/1994-2002/03

	1993/94 (tonne)	1994/95 (tonne)	1995/96 (tonne)	1996/97 (tonne)	1997/98 (tonne)	1998/99 (tonne)	1999/00 (tonne)	2000/01 (tonne)	2001/02 (tonne)	2002/03 (tonne)
Basalt	5,607	11,845	10,065	2,000	6,060	-	19,063	20,868	18,803	12,200
Granite	5,235	5,213	5,516	4,405	1,821	2,572	3,462	233	1,058	2,212
Sandstone	857	902	196	1,400	256	1,295	343	23	415	185
Slate	625	780	730	977	1,130	1,058	538	1,233	613	617
Total	12,324	18,740	16,507	8,782	9,267	4,925	23,406	22,357	20,889	15,214

Source: Operators, Departmental records and statutory returns under the Extractive Industries Development Act 1995

Dimension stone production in 2002/03 was significantly lower than the previous year. In view of the small size of the total dimension stone production in the State, this drop may likely be due to reporting.

TABLE E2.1 Status of Current Extractive Industry Work Authorities at 30/6/2003

	Proposal	Application	Granted
E I Search Permit	0	9	1
Work Authority	145	26	825
Total	145	35	826

Source: Department records

Note: A Search Permit and Work Authority are granted under the Extractive Industries Development Act 1995

TABLE E3.1 Extractive Industry Safety Statistics 1993/94-2002/03

Year	Lost Time Injuries (LTIs)	Employed*	Days Lost	LTI Frequency Rate	LTI Incidence Rate	LTI Duration Rate	Severity Rate	Fatalities
1993/94	40	-	-	29.0	-	-	-	0
1994/95	32	-	-	20.2	-	-	-	0
1995/96	28	-	-	13.4	-	-	-	0
1996/97	30	-	-	20.6	-	-	-	0
1997/98	41	-	710	17.3	26.0	17.3	282.0	0
1998/99	46	1542	550	18.7	29.8	11.9	223.7	0
1999/00	40	1520	436	18.4	26.3	10.9	200.8	0
2000/01	31	1741	597	14.6	17.8	19.3	281.2	0
2001/02	31	1690	355	13.7	18.3	11.5	156.5	0
2002/03	26	2096	417	8.5	12.4	16.0	137.2	1

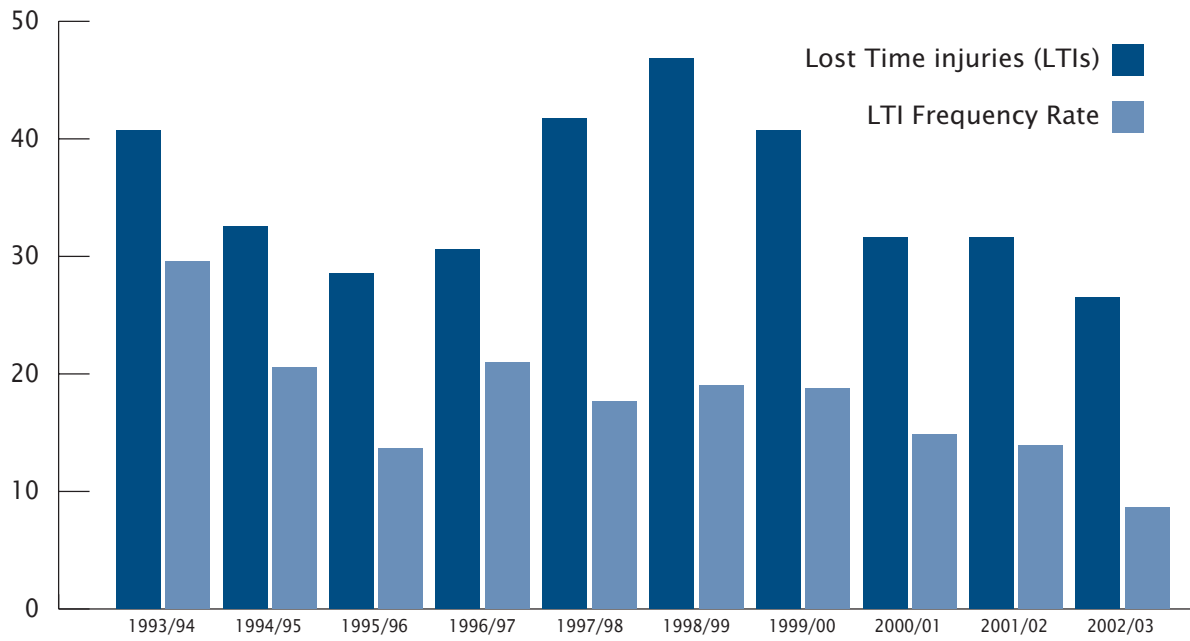
* Figures include part-time and casual employment

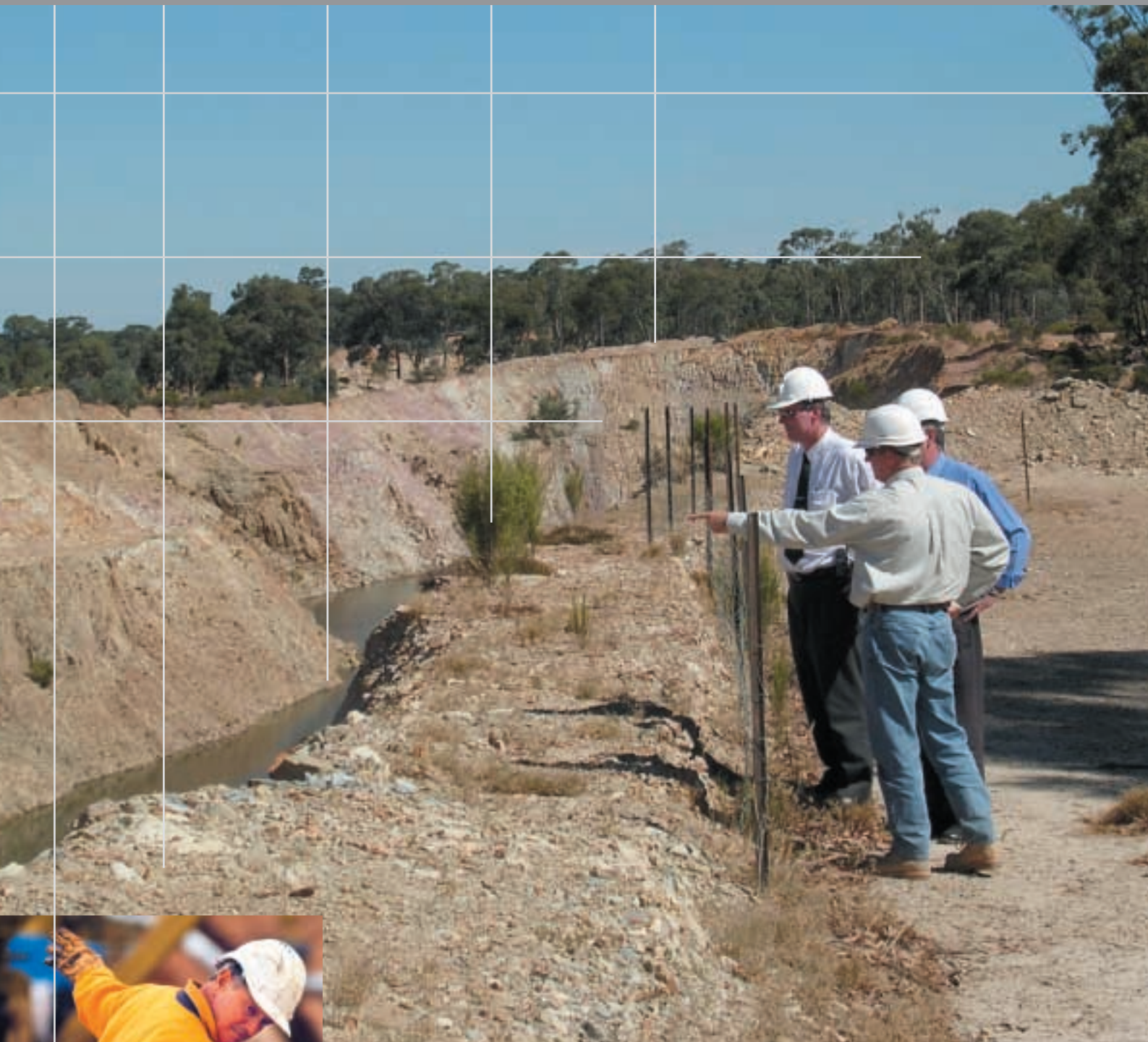
Sources: Departmental records

Note: Lost Time Injuries (LTI) is defined as those occurrences that resulted in a fatality, permanent disability or time lost from work of one day/shift or more
LTI Frequency Rate is defined as the number of occurrences of lost time injury for each one million hours worked.
Lost Time Injury Incidence Rate is defined as the number of lost time injuries per thousand employees.
Lost Time Injury Duration Rate is defined as the average days lost for every lost time injury.
Severity Rate - is defined as the number of days lost per one million hours worked.

The total number of Lost Time Injuries (LTI) in the extractive industry fell to 26 in 2002/03 from the previous year figure of 31. LTI Frequency Rate has also decreased as a result. There was one fatality in 2002/03.

GRAPH E3.1 Extractive Industry Safety Statistics – 1993/04-2002/03





Regulation

TABLE G1 Minerals & Petroleum Regulation – Revenue 2002/03

Type	Revenue (\$ million)
Administration fees	0.7
Rentals	2.9
Royalty	14.6
Total	18.2

Source: Departmental of Primary Industries

TABLE G2 Minerals & Petroleum Regulation – Royalty by Sector 2002/03

Type	Revenue (\$ million)
Mining	8.5
Extractive	3.5
Petroleum (Onshore)	2.6
Total	14.6

Source: Departmental of Primary Industries

The Commonwealth collects resources rent tax (RRT) from offshore petroleum operations. The Australian Taxation Office reported that in 2001/02 total RRT collection was \$1.4 billion.

GRAPH G1 Minerals & Petroleum Revenue 2002/03

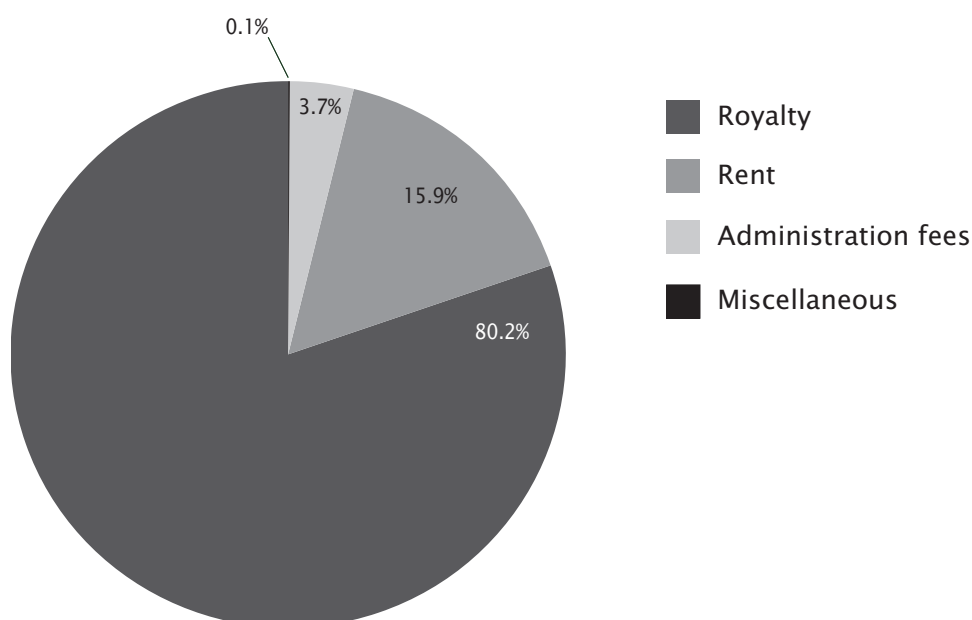


TABLE G3 Rehabilitation Bonds by Sector – Value (\$ million) June 99-June 03

Date	Exploration	Mining	Extractive	Total
June 99	1.504	53.154	20.203	74.861
June 00	1.279	53.262	22.782	77.323
June 01	1.234	57.434	31.392	90.060
June 02	1.130	57.459	34.540	93.129
June 03	1.132	57.045	37.515	95.692

TABLE G4 Rehabilitation Bonds Review - 2002/03

	Result of Bond Review		
Number of Bonds Reviewed	Bond Increase	No Change	Bond Decrease
332	85	237	10

Bond Reviews

The Department has a program of regular bond review for active sites. Bonds are reviewed every one to six years depending on the risk associated with the operation.

TABLE G5 Mines and Quarries Explosive Licences Applications and Grants 1999-2003 (calender years)

Licence Type	1999	2000	2001	2002	2003
Licence to use Application	12	35	40	28	38
Licence to use Issued	25	11	21	17	29
Licence to store Application	83	79	66	8	8
Licence to store Issued	74	74	67	10	6
Licence to Manufacture Application	0	0	4	11	4
Licence to Manufacture Issued	0	0	11	12	3

GRAPH G5 Explosive Licences Mines and Quarries

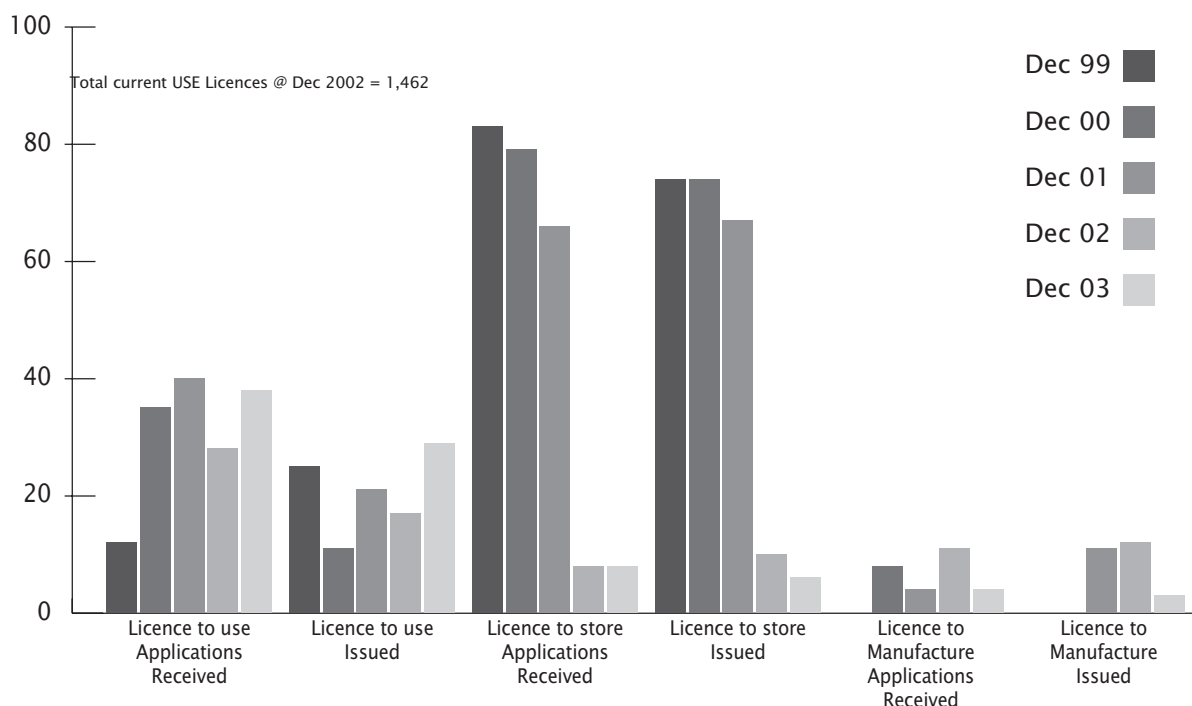


TABLE G6 Quarry Manager
Certificates Applications
& Grants 1990-2003

Year Ending 31 December	Applications	Issued
1990	20	13
1991	11	13
1992	14	24
1993	26	14
1994	20	21
1995	17	19
1996	21	21
1997	9	8
1998	17	9
1999	19	13
2000	6	13
2001	10	9
2002	14	14
2003	11	11
Total	215	202

TABLE G7 Compliance Monitoring
Activities – Health,
Safety & Environment
2002-2003

	Extractive	Mining	Petroleum
System Audits	10	5	-
Compliance Audits	88	21	7
Investigations	25	38	-

GRAPH G6 Quarry Managers Certificates Issued under the EIDA 1995

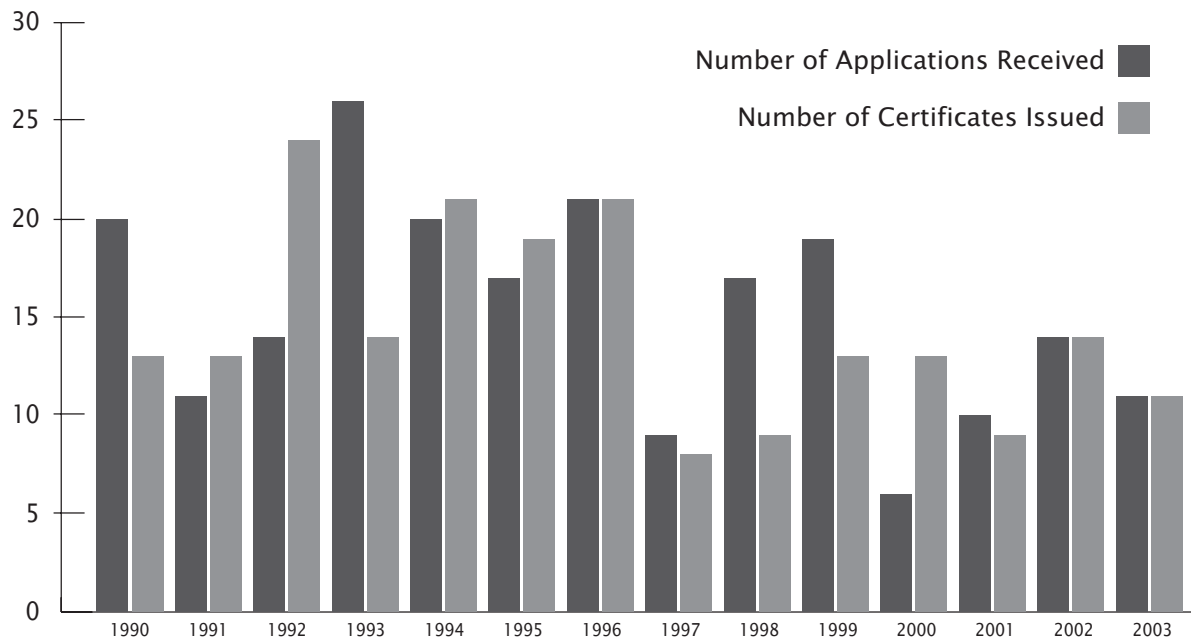


TABLE G8 Enforcement – 2002/03

Acts	Notives/ Directions	Infringement	Improvement Notices	Prohibition Notices	Prosecutions in Progress	
					Indictable	Summary
MRDA 1990	-	14	N/A	N/A	1	3
EIDA 1995	7	27	N/A	N/A	-	-
PETROLEUM 1998	-	N/A	N/A	N/A	-	-
PSLA 1967	-	N/A	N/A	N/A	-	-
PSLA 1982	-	N/A	N/A	N/A	-	-
OHS 1985	-	N/A	199	8	1	-
DG 1985	8	N/A	-	-	-	-
PIPELINES 1967	-	N/A	N/A	N/A	-	-
Total	15	41	199	8	2	3

N/A: Not present in legislation
MRDA: Mineral Resources Development Act 1990
EIDA: Extractive Industries Development Act 1995
PETROLEUM: Petroleum Act 1998
PSLA 1967: Petroleum (Submerged Lands) Act 1967 (Cth)
PSLA 1982: Petroleum (Submerged Lands) Act 1982 (Vic)
OHS: Occupational Health and Safety Act 1985
DG: Dangerous Goods Act 1985
PIPELINES 1967: Pipelines Act 1967

