

Appendix A

Operator Data by Size Class

Operator Data by Size Class

Appendix A provides a series of tables of the proved reserves and production by production size class for the years 1998 through 2003 for oil and gas well operators. The tables show the volumetric change and percent change from the previous year and from 1998. In addition they show the 2003 average per operator in each class. All companies that reported to EIA were ranked by production size for each of the 6 years. We computed company production size classes as the sum of the barrel oil equivalent of the crude oil production, lease condensate production, and wet gas production for each operator. The companies were then placed in the following production size classes: 1-10, 11-20, 21-100, 101-500, and all "other" oil and gas operators. The "other" category contains 20,423 small operators. We estimated production and reserves for small operators for 2003 from a sample of approximately 3 percent.

Class 1-10 contains the 10 highest producing companies each year on a barrel oil equivalent basis. These companies are not necessarily the same 10 companies each year.

We also include statistics for operator Category sizes at the bottom portion of tables in this appendix. These are the categories used by EIA in processing and assessing reserves surveys and are presented here as additional perspective. For further explanation of categories sizes see definitions and descriptions in Appendix E.

Natural Gas

Proved Reserves

The wet natural gas proved reserves reported for 1998 through 2003 have changed from 172,443 billion cubic feet to 197,145 billion cubic feet (Table A1). These proved reserves are highly concentrated in the larger companies. In 2003, the top 20 operators (Class 1-10 and Class 11-20) producing companies had 57 percent of the proved reserves of natural gas. The next two size classes contain 80 and 400 companies and account for 27 and 10 percent of the U.S. natural gas proved reserves, respectively. The top 20 operators had an increase of 21 percent in their natural gas proved reserves from 1998 to 2003. The rest of the operators in

(Class 21-100, Class 101-500, and Class Other) had an increase of 2 percent in their reserves in the same period. In 2003, the top 20 operators' natural gas reserves had a decrease of 2 percent from 2002.

Production

Wet natural gas production has decreased from 20,248 billion cubic feet in 2002 to 20,231 billion cubic feet in 2003 (Table A2). In 2003, the top 20 producing companies had 56 percent of the production of wet natural gas. The next two size classes have 26 and 12 percent of the wet natural gas production, respectively. The top 20 operators had an increase of 11 percent in wet natural gas production from 1998 to 2003. The rest of the operators had a decrease of 5 percent from 1998 to 2003. The top 20 operators' wet natural gas production had a decrease of 4 percent in 2003 from 2002.

Crude Oil

Proved Reserves

Proved reserves of crude oil are more highly concentrated in a few companies than those of natural gas. The 20 largest oil and gas producing companies in 2003 had 70 percent of U.S. proved reserves of crude oil (Table A3), in contrast to wet natural gas where these same companies operated 57 percent of the total proved reserves.

U.S. proved reserves of crude oil decreased 4 percent in 2003. The top 20 producing companies proved reserves of crude oil during 2003 decreased 6 percent. The top 20 class had an increase of 16 percent in their crude oil proved reserves from 1998 to 2003.

Production

Crude oil production reported for 1998 to 2003 has decreased from 1,991 million barrels to 1,877 million barrels (Table A4). The 20 largest oil and gas producing companies had 67 percent of U.S. production of crude oil in 2003. In 1998 they accounted for 64 percent of production.

This is in contrast to wet natural gas where these same companies produced only 56 percent of the total. U.S. production of crude oil declined by 6 percent from 1998 to 2002. The top 20 operators had a decline of 2 percent in their oil production during the same period. U.S. production of crude oil remained level from 2002 to 2003, the top 20 operators production also decreased by 1 percent.

Fields

The number of fields in which Category I and Category II operators were active increased during the 1998-2002 period (Table A5). From 1998-2002, the number of fields in which the top 20 operators were active increased by 1,884 fields (44 percent) while in 2003 the number increased by 193 fields from 2002.

Table A1. Natural Gas Proved Reserves, Wet After Lease Separation, by Operator Production Size Class, 1998–2003
(Billion Cubic Feet at 14.73 psia and 60° Fahrenheit)

Size Class	1998	1999	2000	2001	2002	2003	2002–2003 Volume and Percent Change	1998–2003 Volume and Percent Change	2003 Average Reserves per Operator
Class 1-10	64,336	64,320	81,437	88,936	88,100	82,222	-5,878	17,886	8,222.176
Percent of Total	37.3%	36.5%	43.7%	46.4%	45.0%	41.7%	-6.7%	27.8%	
Class 11-20	28,338	24,925	22,590	24,588	25,938	29,890	3,952	1,552	2,989.003
Percent of Total	16.4%	14.1%	12.1%	12.8%	13.3%	15.2%	15.2%	5.5%	
Class 21-100	47,009	52,160	48,832	50,055	50,633	53,098	2,465	6,089	663.725
Percent of Total	27.3%	29.6%	26.2%	26.1%	25.9%	26.9%	4.9%	13.0%	
Class 101-500	24,471	25,967	22,620	19,046	19,723	20,030	307	-4,441	50.076
Percent of Total	14.2%	14.7%	12.1%	9.9%	10.1%	10.2%	1.6%	-18.1%	
Class Other (22,019)	8,289	8,289	11,030	9,118	11,167	11,905	737	3,616	0.583
Percent of Total	4.8%	5.0%	5.9%	4.8%	5.7%	6.0%	6.6%	43.6%	
Category I (179)	146,458	146,458	162,144	169,056	173,325	173,225	-100	26,767	1,056.252
Percent of Total	84.9%	82.8%	86.9%	88.2%	88.6%	87.9%	-0.1%	18.3%	
Category II (430)	18,033	18,033	13,123	13,346	11,051	11,983	932	-6,050	23.404
Percent of Total	10.5%	12.5%	7.0%	7.0%	5.7%	6.1%	8.4%	-33.5%	
Category III (22,519)	7,952	7,952	R11,243	9,342	11,184	11,937	752	3,985	0.590
Percent of Total	4.6%	4.7%	R6.0%	4.9%	5.7%	6.1%	6.7%	50.1%	
Total Published	172,443	176,159	186,510	191,743	195,561	197,145	1,584	24,702	9.422
Percent of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.8%	14.3%	

R = Revised

Note: There were 20,247 active Category III operators in the 2003 sample frame. The reserves and production of Category III operators were estimated from an adjusted sample of 838 Category III operators (Table E2). The "other" size class represents 20,423 operators in the 2003 frame (20,923 active operators minus the 500 largest operators).

Source: Energy Information Administration, Office of Oil and Gas.

Table A2. Natural Gas Production, Wet After Lease Separation, by Operator Production Size Class, 1998–2003
(Billion Cubic Feet at 14.73 psia and 60° Fahrenheit)

Size Class	1998	1999	2000	2001	2002	2003	2002–2003 Volume and Percent Change	1998–2003 Volume and Percent Change	2003 Average Production per Operator
Class 1-10	6,954	6,881	8,495	9,019	8,996	8,220	-776	1,266	821.954
Percent of Total	35.4%	34.7%	42.1%	43.7%	44.4%	40.6%	-8.6%	18.2%	
Class 11-20	3,317	3,560	2,886	3,064	2,854	3,136	282	-181	313.572
Percent of Total	16.4%	14.1%	14.3%	14.8%	14.1%	15.5%	9.9%	-5.5%	
Class 21-100	5,595	5,523	4,965	4,949	4,763	5,275	512	-320	65.942
Percent of Total	27.3%	29.6%	24.6%	24.0%	23.5%	26.1%	10.8%	-5.7%	
Class 101-500	2,721	2,793	2,780	2,609	2,475	2,386	-89	-335	5.965
Percent of Total	14.2%	14.7%	13.8%	12.6%	12.2%	11.8%	-3.6%	-12.3%	
Class Other (22,019)	1,035	1,099	1,038	1,000	1,161	1,215	54	180	0.059
Percent of Total	4.8%	5.0%	5.1%	4.8%	5.7%	6.0%	4.6%	17.3%	
Category I (179)	16,619	16,248	17,096	17,672	17,335	17,347	12	728	105.772
Percent of Total	84.9%	82.8%	84.8%	85.6%	85.6%	85.7%	0.1%	4.4%	
Category II (430)	2,019	2,556	1,921	1,932	1,738	1,648	-90	-371	3.219
Percent of Total	10.5%	12.5%	9.5%	9.4%	8.6%	8.1%	-5.2%	-18.4%	
Category III (22,519)	984	1,052	R1,147	1,038	1,176	1,236	61	252	0.061
Percent of Total	4.6%	4.7%	R5.7%	5.0%	5.8%	6.1%	5.2%	25.6%	
Total Published	19,622	19,856	20,164	20,642	20,248	20,231	-17	609	0.967
Percent of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	-0.1%	3.1%	

R = Revised

Note: There were 20,247 active Category III operators in the 2003 sample frame. The reserves and production of Category III operators were estimated from an adjusted sample of 838 Category III operators (Table E2). The "other" size class represents 20,423 operators in the 2003 frame (20,923 active operators minus the 500 largest operators).

Source: Energy Information Administration, Office of Oil and Gas.

Table A3. Crude Oil Proved Reserves by Operator Production Size Class, 1998–2003
(Million Barrels of 42 U.S. Gallons)

Size Class	1998	1999	2000	2001	2002	2003	2002–2003 Volume and Percent Change	1998–2003 Volume and Percent Change	2003 Average Reserves per Operator
Class 1-10	11,501	11,121	12,367	13,590	13,346	13,355	10	1,854	1,335.527
Percent of Total	54.7%	51.1%	56.1%	60.5%	58.9%	61.0%	0.1%	16.1%	
Class 11-20	2,894	2,585	3,172	2,901	2,817	1,907	-910	-987	190.721
Percent of Total	13.8%	11.9%	14.4%	12.9%	12.4%	8.7%	-32.3%	-34.1%	
Class 21-100	3,677	4,338	2,505	2,856	3,230	3,483	253	-194	43.539
Percent of Total	17.5%	19.9%	11.4%	12.7%	14.2%	15.9%	7.8%	-5.3%	
Class 101-500	1,754	2,379	2,286	1,794	1,817	1,705	-111	-49	4.264
Percent of Total	8.3%	10.9%	10.4%	8.0%	8.0%	7.8%	-6.1%	-2.8%	
Class Other (22,019)	1,208	1,342	1,716	1,305	1,468	1,440	-28	232	0.071
Percent of Total	5.7%	6.2%	7.8%	5.8%	6.5%	6.6%	-1.9%	19.2%	
Category I (179)	18,819	18,952	19,421	20,325	20,213	19,499	-714	680	118.895
Percent of Total	89.5%	87.1%	88.1%	90.6%	89.1%	89.1%	-3.5%	3.6%	
Category II (430)	1,018	1,521	873	794	992	937	-56	-81	1.830
Percent of Total	4.8%	7.0%	4.0%	3.5%	4.4%	4.3%	-5.6%	-8.0%	
Category III (22,519)	1,197	1,293	R1,751	1,326	1,472	1,456	-16	259	0.072
Percent of Total	5.7%	5.9%	R7.9%	5.9%	6.5%	6.6%	-1.1%	21.6%	
Total Published	21,034	21,765	22,045	22,446	22,677	21,891	-786	857	1.046
Percent of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	-3.5%	4.1%	

R = Revised

Note: There were 20,247 active Category III operators in the 2003 sample frame. The reserves and production of Category III operators were estimated from an adjusted sample of 838 Category III operators (Table E2). The "other" size class represents 20,423 operators in the 2003 frame (20,923 active operators minus the 500 largest operators).

Source: Energy Information Administration, Office of Oil and Gas.

Table A4. Crude Oil Production by Operator Production Size Class, 1998–2003
(Million Barrels of 42 U.S. Gallons)

Size Class	1998	1999	2000	2001	2002	2003	2002–2003 Volume and Percent Change	1998–2003 Volume and Percent Change	2003 Average Production per Operator
Class 1-10	1,025	974	961	1,061	1,037	1,047	10	22	104.708
Percent of Total	51.5%	49.9%	51.1%	55.4%	55.3%	55.8%	1.0%	2.2%	
Class 11-20	255	241	304	240	233	205	-28	-50	20.491
Percent of Total	12.8%	12.3%	16.2%	12.5%	12.4%	10.9%	-12.2%	-19.6%	
Class 21-100	342	350	214	233	240	272	32	-70	3.399
Percent of Total	17.2%	17.9%	11.4%	12.2%	12.8%	14.5%	13.2%	-20.5%	
Class 101-500	206	208	211	195	181	178	-3	-28	0.446
Percent of Total	10.3%	10.7%	11.2%	10.2%	9.7%	9.5%	-1.5%	-13.4%	
Class Other (22,019)	163	179	190	186	184	175	-9	12	0.009
Percent of Total	8.2%	9.2%	10.1%	9.7%	9.8%	9.3%	-4.9%	7.2%	
Category I (179)	1,714	1,617	1,572	1,612	1,573	1,574	1	-140	9.599
Percent of Total	86.1%	82.8%	83.6%	84.2%	83.9%	83.9%	0.1%	-8.2%	
Category II (430)	118	160	111	112	115	124	9	6	0.243
Percent of Total	5.9%	8.2%	5.9%	5.8%	6.1%	6.6%	7.8%	5.3%	
Category III (22,519)	159	175	R197	191	187	179	-8	20	0.009
Percent of Total	8.0%	9.0%	R10.5%	10.0%	10.0%	9.5%	-4.3%	12.3%	
Total Published	1,991	1,952	1,880	1,915	1,875	1,877	2	-114	0.090
Percent of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.1%	-5.7%	

R = Revised

Note: There were 20,247 active Category III operators in the 2003 sample frame. The reserves and production of Category III operators were estimated from an adjusted sample of 838 Category III operators (Table E2). The "other" size class represents 20,423 operators in the 2003 frame (20,923 active operators minus the 500 largest operators).

Source: Energy Information Administration, Office of Oil and Gas.

Table A5. Operator Field Count by Operator Production Size Class, 1998–2003

Size Class	1998	1999	2000	2001	2002	2003	2002–2003 Number and Percent Change	1999–2003 Number and Percent Change	2003 Average Number of Fields per Operator
Class 1-10	2,475	2,559	3,444	3,794	3,596	3,689	93	1,214	368.900
Percent of Total	9.5%	10.0%	13.0%	14.0%	12.9%	13.2%	2.6%	49.1%	
Class 11-20	1,822	1,514	1,923	2,212	2,392	2,492	100	670	249.200
Percent of Total	7.0%	5.9%	7.2%	8.2%	8.6%	8.9%	4.2%	36.8%	
Class 21-100	7,526	8,180	7,084	7,195	7,947	8,168	221	642	102.100
Percent of Total	29.0%	32.0%	26.7%	26.5%	28.4%	29.3%	2.8%	8.5%	
Class 101-500	12,817	12,344	12,580	12,435	12,661	11,859	-802	-958	29.648
Percent of Total	49.4%	48.2%	47.4%	45.9%	45.3%	42.5%	-6.3%	-7.5%	
Rest	1,524	1,287	1,529	1,480	1,349	1,709	360	185	9.710
Percent of Total	5.9%	5.0%	5.8%	5.5%	4.8%	6.1%	26.7%	12.1%	
Category I	15,666	15,120	16,174	16,196	17,049	16,760	-289	1,094	102.195
Percent of Total	60.4%	59.1%	60.9%	59.7%	61.0%	60.0%	-1.7%	7.0%	
Category II	10,271	10,467	10,146	10,764	10,473	10,688	215	417	20.875
Percent of Total	39.6%	40.9%	38.2%	39.7%	37.5%	38.3%	2.1%	4.1%	
Total	25,937	25,587	26,560	27,116	27,945	27,917	-28	1,980	41.297
Percent of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.00%	-0.1%	7.6%	

Note: Includes only data from Category I and Category II operators. In 2003, there were 164 Category I operators and 512 Category II operators. The "rest" size class had 176 operators in 2003.

Source: Energy Information Administration, Office of Oil and Gas.