

Operator Data by Size Class

Natural Gas

To remain competitive in the domestic oil and gas industry, companies have to reduce costs and look for areas of profitable growth. Over the past few years, we have seen companies restructure to focus on their core areas of profit. This restructuring has taken many forms, for example, mega-mergers, laying off employees, early retirements and buyouts, flattening management structure, selective sales of marginally profitable properties, and acquisitions. Documenting some of these changes is important.

Appendix A is a series of tables of the proved reserves and production by production size class for the years 1994 through 1999 for oil and gas well operators. The tables show the volumetric change and percent change from the previous year and from 1994. In addition they show the 1999 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 22,127 small operators. We estimate production and reserves for small operators each year from a sample of approximately 8 percent or less of these operators.

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.

Proved Reserves

The wet natural gas proved reserves reported for 1994 through 1999 have changed from 171,939 billion cubic feet to 176,159 billion cubic feet (Table A1). These proved reserves are highly concentrated in the larger companies. In 1999, the top 20 operators (Class 1–10 and Class 11–20) producing companies had 51 percent of the proved reserves of natural gas. The next two size classes contain 80 and 400 companies and account for 30 and 15 percent of the U.S. natural gas proved reserves, respectively. The top 20 operators had a decline of 10 percent in their natural gas proved reserves from 1994 to 1999. While the rest of the operators in (Class 21–100, Class 101–500, and Class Other) had an increase of 20 percent in their reserves. In 1999, the top 20 operators’ natural gas reserves decreased by 4 percent from 1998.

Production

Wet natural gas production has increased from 19,622 billion cubic feet in 1998 to 19,856 billion cubic feet in 1999 (Table A2). In 1999, the top 20 producing companies had 53 percent of the production of wet natural gas, while having 51 percent of the proved reserves. The next two size classes have 28 and 14 percent of the wet natural gas production, respectively. The top 20 operators had an increase of 1 percent in their wet natural gas production from 1994 to 1999. The rest of the operators had an increase of 6 percent from 1994 to 1999. The top 20 operators’ wet natural gas production had a increase of 2 percent in 1999 from 1998, while the rest of the operators had a increase of 0.1 percent.

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 1999 had 63 percent of U.S. proved reserves of crude oil (Table A3), in contrast to wet natural gas where these same companies operated only 51 percent of the total proved reserves. These companies have tended in the past few years to concentrate their domestic operations in fewer fields and focus more of their resources on their foreign operations.

U.S. proved reserves of crude oil increased 3.5 percent in 1999. The top 20 producing companies proved reserves of crude oil during 1999 decreased 5 percent. The top 20 class had a decline of 18 percent in their crude oil proved reserves from 1994 to 1999. The class "other" had a 22 percent decrease from 1994 to 1999. During the 1994–1999 period, many operators were continuing to actively buy, sell, and restructure their oil property positions.

Production

Crude oil production reported for 1994 to 1999 has decreased from 2.3 billion barrels to 1.9 billion barrels (Table A4). The 20 largest oil and gas producing companies had 62 percent of U.S. production of crude oil in 1999, while in 1994 they accounted for 68 percent of production. This is in contrast to wet natural gas where these same companies produced only 51 percent of the total. U.S. production of crude oil declined by 14 percent from 1994 to 1999. The top 20 operators had a decline of 21 percent in their oil production during the same period. U.S. production of crude oil declined by 2 percent from 1998 to 1999, while the top 20 operators production decreased by 5 percent. The next two size classes account for 18 and 11 percent of the U.S. crude oil production, respectively.

Fields

The number of fields in which Category I and Category II operators were active dropped significantly during the 1994–1999 period (Table A5). From 1994 through 1999, the number of fields in which the top 20 operators were active in dropped by 1,980 (33 percent), while in 1999 the number dropped 224 (5 percent) from 1998.

Table A1. Natural Gas Proved Reserves, Wet After Lease Separation, by Operator Production Size Class, 1994–1999
(Billion Cubic Feet at 14.73 psia and 60° Fahrenheit)

Size Class	1994	1995	1996	1997	1998	1999	1998–1999 Volume and Percent Change	1994–1999 Volume and Percent Change	1999 Average Reserves per Operator
Class 1–10	76,665	75,856	72,606	68,876	64,336	64,320	-16	-12,235	6,431.995
Percent of Total	44.6%	43.7%	41.5%	39.2%	37.3%	36.5%	0.0%	-16.1%	
Class 11–20	22,691	24,648	25,416	27,705	28,338	24,925	-3,413	2,234	2,492.482
Percent of Total	13.2%	14.2%	14.5%	15.8%	16.4%	14.1%	-12.0%	9.8%	
Class 21–100	40,566	42,604	43,300	45,593	47,009	52,160	1,151	11,594	652.006
Percent of Total	23.6%	24.6%	24.7%	25.9%	27.3%	29.6%	11.0%	28.6%	
Class 101–500	20,608	20,150	22,483	23,338	24,471	25,967	1,496	5,359	64.918
Percent of Total	12.0%	11.6%	12.8%	13.3%	14.2%	14.7%	6.1%	26.0%	
Class Other (23,120)	11,409	10,218	11,342	10,209	8,289	8,787	498	-2,622	0.408
Percent of Total	6.6%	5.9%	6.5%	5.8%	4.8%	5.0%	6.0%	-23.0%	
Category I (170)	143,703	148,233	146,601	147,491	146,458	145,922	-536	2,219	824.420
Percent of Total	83.6%	85.4%	83.7%	83.9%	84.9%	82.8%	-0.4%	1.5%	
Category II (418)	18,158	15,828	18,382	17,764	18,033	21,979	3,946	3,821	55.086
Percent of Total	10.6%	9.1%	10.5%	10.1%	10.5%	12.5%	21.9%	21.0%	
Category III (23,032)	10,078	9,416	10,164	10,466	7,952	8,257	305	-1,821	0.384
Percent of Total	5.9%	5.4%	5.8%	6.0%	4.6%	4.7%	3.8%	-18.1%	
Total Published	171,939	173,476	175,147	175,721	172,443	176,159	3,716	4,220	7.975
Percent of Total	100.0%	100.0%	100.0%	100.0%	100.00%	100.00%	2.2%	2.5%	

Note: There were 21,513 active Category III operators in the 1999 sample frame. The reserves and production of Category III operators were estimated from an adjusted sample of 1,953 Category III operators (Table E2). The "other" size class represents 21,589 operators in the 1999 frame (22,089 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, 1994–1999
(Billion Cubic Feet at 14.73 psia and 60° Fahrenheit)

Size Class	1994	1995	1996	1997	1998	1999	1998–1999 Volume and Percent Change	1994–1999 Volume and Percent Change	1999 Average Production per Operator
Class 1–10	7,216	7,174	7,448	7,178	6,954	6,881	-73	-335	688.074
Percent of Total	37.6%	38.0%	37.5%	35.7%	35.4%	34.7%	-1.0%	-4.6%	
Class 11–20	3,083	3,101	3,002	3,286	3,317	3,560	243	477	356.000
Percent of Total	16.0%	16.4%	15.1%	16.3%	16.9%	17.9%	7.3%	15.5%	
Class 21–100	4,878	4,871	5,316	5,729	5,595	5,523	-72	645	69.044
Percent of Total	25.4%	25.8%	26.7%	28.4%	28.5%	27.8%	-1.3%	13.2%	
Class 101–500	2,552	2,477	2,623	2,665	2,721	2,793	72	241	6.983
Percent of Total	13.3%	13.1%	13.2%	13.2%	13.9%	14.1%	2.6%	9.4%	
Class Other (23,120)	1,481	1,251	1,484	1,276	1,035	1,099	64	-382	0.051
Percent of Total	7.7%	6.6%	7.5%	6.3%	5.3%	5.5%	6.2%	-25.8%	
Category I (170)	15,656	15,800	16,381	16,897	16,619	16,248	-371	592	91.799
Percent of Total	81.5%	83.7%	82.4%	83.9%	84.7%	81.8%	-2.2%	3.8%	
Category II (418)	2,221	1,923	2,128	1,979	2,019	2,556	537	335	6.406
Percent of Total	11.6%	10.2%	10.7%	9.8%	10.3%	12.9%	26.6%	15.1%	
Category III (23,032)	1,333	1,151	1,364	1,258	984	1,052	68	-281	0.049
Percent of Total	6.9%	6.1%	6.9%	6.2%	5.0%	5.3%	6.9%	-21.1%	
Total Published	19,210	18,874	19,873	20,134	19,622	19,856	234	646	0.899
Percent of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	1.2%	3.4%	

Note: There were 21,513 active Category III operators in the 1999 sample frame. The reserves and production of Category III operators were estimated from an adjusted sample of 1,953 Category III operators (Table E2). The "other" size class represents 23,589 operators in the 1999 frame (22,089 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, 1994–1999
(Million Barrels of 42 U.S. Gallons)

Size Class	1994	1995	1996	1997	1998	1999	1998–1999 Volume and Percent Change	1994–1999 Volume and Percent Change	1999 Average Reserves per Operator
Class 1–10	14,351	13,891	13,362	11,434	11,501	11,121	-380	-3,230	1,112.080
Percent of Total	63.9%	62.1%	60.7%	50.7%	54.7%	51.1%	-3.3%	-22.5%	
Class 11–20	2,276	2,422	2,013	2,977	2,894	2,585	-309	309	258.454
Percent of Total	10.1%	10.8%	9.1%	13.2%	13.8%	11.9%	-10.7%	13.6%	
Class 21–100	2,607	2,623	3,155	4,384	3,677	4,338	661	1,731	54.224
Percent of Total	11.6%	11.7%	14.3%	19.4%	17.50%	19.9%	18.0%	66.4%	
Class 101–500	1,512	1,793	1,838	2,111	1,754	2,379	625	867	5.949
Percent of Total	6.7%	8.0%	8.3%	9.4%	8.3%	10.9%	35.6%	57.3%	
Class Other (23,120)	1,711	1,622	1,649	1,640	1,208	1,342	134	-369	0.062
Percent of Total	7.6%	7.3%	7.5%	7.3%	5.7%	6.2%	11.1%	-21.6%	
Category I (170)	19,648	19,647	19,312	19,461	18,819	18,952	133	-696	107.073
Percent of Total	87.5%	87.9%	87.7%	86.3	89.5%	87.1%	-3.3%	-3.5%	
Category II (418)	1,142	1,103	1,117	1,400	1,018	1,521	503	379	3.811
Percent of Total	5.1%	4.9%	5.1%	6.2	4.8%	7.0%	49.4%	33.2%	
Category III (23,032)	1,668	1,600	1,588	1,685	1,197	1,293	96	-375	0.060
Percent of Total	7.4%	7.2%	7.2%	7.5	5.7%	5.9%	-29.0%	-22.5%	
Total Published	22,457	22,351	22,017	22,546	21,034	21,765	731	-692	0.985
Percent of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	3.5%	-3.1%	

Note: There were 21,513 active Category III operators in the 1999 sample frame. The reserves and production of Category III operators were estimated from an adjusted sample of 1,953 Category III operators (Table E2). The “other” size class represents 21,589 operators in the 1999 frame (22,089 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, 1994–1999
(Million Barrels of 42 U.S. Gallons)

Size Class	1994	1995	1996	1997	1998	1999	1998–1999 Volume and Percent Change	1994–1999 Volume and Percent Change	1999 Average Production per Operator
Class 1–10	1,310	1,270	1,220	1,047	1,025	974	-51	-336	97.397
Percent of Total	57.8%	57.4%	56.1%	49.0%	51.5%	49.9%	-2.1%	-25.6%	
Class 11–20	224	221	185	262	255	241	-14	17	24.138
Percent of Total	9.9%	10.0%	8.5%	12.3%	12.8%	12.3%	-2.7%	7.6%	
Class 21–100	287	276	307	373	342	350	8	63	4.378
Percent of Total	12.7%	12.5%	14.1%	17.4%	17.2%	17.9%	-8.3%	22.0%	
Class 101–500	200	214	213	237	206	208	2	8	0.520
Percent of Total	8.8%	9.7%	9.8%	11.1%	10.3%	10.7%	-13.1%	4.0%	
Class Other (23,120)	247	232	248	219	163	179	16	-68	0.008
Percent of Total%	10.9%	10.5%	11.4%	10.2%	8.2%	9.2%	-25.6%	-27.5%	
Category I (170)	1,879	1,844	1,791	1,760	1,714	1,617	-97	-262	9.135
Percent of Total	82.8%	83.3%	82.4%	82.3%	86.1%	82.8%	-2.6%	-13.9%	
Category II (418)	150	139	143	157	118	160	42	10	0.401
Percent of Total	6.6%	6.3%	6.6%	7.3%	5.9%	8.2%	-24.8%	6.7%	
Category III (23,032)	239	230	239	221	159	175	16	-64	0.008
Percent of Total	10.5%	10.4%	11.0%	10.3%	8.0%	9.0%	-28.1%	-26.8%	
Total Published	2,268	2,213	2,173	2,138	1,991	1,952	-39	-316	0.088
Percent of Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	-2.0%	-13.9%	

Note: There were 21,513 active Category III operators in the 1999 sample frame. The reserves and production of Category III operators were estimated from an adjusted sample of 1,953 Category III operators (Table E2). The “other” size class represents 21,589 operators in the 1999 frame (22,089 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, 1994–1999

Size Class	1994	1995	1996	1997	1998	1999	1998–1999 Number and Percent Change	1994–1999 Number and Percent Change	1999 Average Number of Fields per Operator
Class 1–10	3,258	3,113	2,800	2,566	2,475	2,559	84	-699	255.900
Percent of Total	12.2%	11.9%	10.7%	10.4%	9.5%	10.0%	3.4%	-21.5%	
Class 11–20	2,795	2,772	2,441	2,257	1,822	1,514	-308	-1,281	151.400
Percent of Total	10.5%	10.6%	9.3%	9.1%	7.0%	5.9%	-16.9%	-45.8%	
Class 21–100	7,752	7,569	7,526	7,159	7,526	8,180	654	177	102.250
Percent of Total	29.1%	28.9%	28.7%	28.9%	29.0%	32.0%	8.7%	2.2%	
Class 101–500	11,878	11,886	12,492	12,878	12,817	12,344	473	466	30.860
Percent of Total	44.6%	45.4%	47.7%	52.0%	49.4%	48.2%	-3.7%	3.9%	
Rest	1,897	1,601	^a 952	1,332	1,524	1,287	-237	-359	1.778
Percent of Total	7.1%	6.1%	^a 3.6%	5.4%	5.9%	5.0%	-15.6%	-21.8%	
Category I	16,161	16,256	15,635	15,232	15,666	15,120	-546	-1,041	85.424
Percent of Total	60.7%	62.1%	59.7%	58.2%	60.4%	59.1%	-3.5%	-6.4%	
Category II	10,452	9,939	10,576	R9,530	10,271	10,467	196	15	26.233
Percent of Total	39.3%	37.9%	40.3%	41.8%	39.6%	40.9%	1.9%	0.1%	
Total Reported	26,613	26,195	26,211	R24,762	25,937	25,587	-350	-1,026	44.422
Percent Change	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	-1.3%	-3.9%	

^aThe reduced 1996 survey had fewer operators and fields in the “rest” class.

R = Revised

Note: Includes only data from Category I and Category II operators. In 1999, there were 177 Category I operators and 399 Category II operators. The “rest” size class had 76 operators in 1999.

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