

**NATIONAL MINING
ASSOCIATION**

**1998
COAL PRODUCER SURVEY**

July 1999

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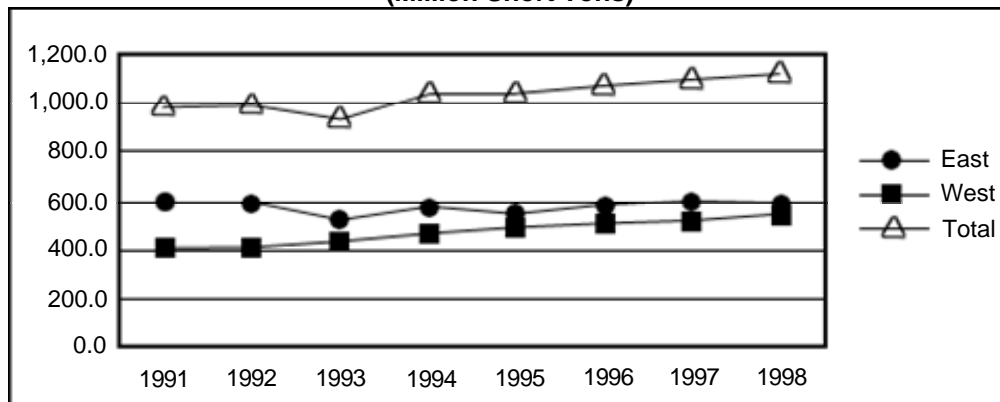
Coal Industry Trends

Coal production was a record 1,118.1 million short tons in 1998 according to the Energy Information Administration (EIA) preliminary estimate, (Table 1). This was 28 million tons (2.6%) more than 1997 and 170 million tons (18.3%) more than the earlier part of this decade (1993). Production in 1998 marks the fifth consecutive year in which U.S. coal output topped 1 billion tons. Production east of the Mississippi River was 570.6 million tons or 51 percent of total. In the West, production reached a record of 547.6 million tons, 49 percent of production, (Figure 1).

Coal production continues to shift to the West and particularly to the Powder River Basin, where the largest surface mines in the world produce low-sulfur coal from very thick coal seams. Production in the eastern part of the U.S. is primarily from underground operations (64% of eastern production), located in the Appalachian region, and here too the trend is toward larger, more efficient mines. In general, EIA data indicate that the coal industry's productivity level, as measured in tons per miner per hour has more than doubled since 1985 (Table 7). Greater use of longwall and continuous mining methods continue to contribute to the increase in underground productivity.

Figure 1

U.S. Coal Production
1990 - 1998
(Million Short Tons)



Source: [U.S. Department of Energy/Energy Information Administration](http://www.eia.doe.gov)

Major Mergers and Acquisitions in 1998

1998 was a very active year for coal company consolidations. After merging with Ashland Coal in 1997, Arch Coal acquired ARCO's U.S. coal interests in June 1998. AEI Resources, Inc. purchased both Zeigler Coal Holding Company's and Kindill Mining's coal interests in September 1998. AEI Resources Inc. also purchased MAPCO Coal Inc.'s Martiki Coal Company (November 1998) and a portion of Cyprus-Amax Coal Company's coal properties in June 1998. CONSOL Energy Inc. acquired Rochester and Pittsburgh Coal Company in September 1998. Kennecott Energy Company purchased Kerr-McGee's Jacobs Ranch Mine in June 1998. The American Coal Corporation purchased Kerr-McGee's Galatia Mine in June 1998. In May 1998, A.T. Massey bought Pittston's Elkay Mining properties. MAPCO Coal Inc. purchased Andalex Resources' Cimarron Division (Hopkins County Coal) in January 1998. James River Coal Company purchased Blue Diamond Coal in May 1998.

The production figures reported in this survey reflect ownership of mine production as of the end of calendar year 1998.

The 1998 Major Coal Producing Companies

In 1998, Peabody Group was the largest coal producer in the United States with output (including sales) of 168.5 million short tons, 15.1 percent of total U.S. coal production. The second largest was Arch Coal, Inc. with 105.4 million tons, 9.4 percent of total U.S. coal production. The third was Kennecott Energy Company with 102.6 million tons, 9.2 percent of U.S. production, and the fourth largest coal producer, CONSOL Energy Inc., had output of 74.3 million tons, 6.6 percent of U.S. production.

Table 2, compiled by National Mining Association (NMA) from data supplied by its recent survey of the 1998 major coal producers, shows production for 45 major coal companies in the United States. Foreign coal production (production outside the U.S.) was not included in this report, but was reported by 7 of the 45 companies surveyed.

The 1998 Major U.S. Coal Mines (Tables 3 - 5)

According to the 1998 survey, the top four underground mines were (1) the Enlow Fork Mine in Pennsylvania (Consol Pennsylvania Coal Company), (2) Twentymile Mine in Colorado (Twentymile Coal Company), (3) Bailey Mine in Pennsylvania, (Consol Pennsylvania Coal Company), and (4) the Mountaineer Mine in West Virginia (Arch Coal, Inc.). The four largest surface mines in 1998 were the North Antelope/Rochelle Mine (Peabody's Powder River Coal Company), Black Thunder Mine (Arch Coal, Inc.), Caballo Rojo Mine (Kennecott Energy's combined Cordero Mining Company and Caballo Rojo, Inc.), and Jacobs Ranch Mine (Kennecott Energy Company), all located in Wyoming's Powder River Basin region.

A list of major underground and surface operations is found in Tables 3 and 4. Table 5 shows the 1998 output of major multi-mine production complexes.

The 1998 Major U.S. Coal Reserve Holders (Table 6)

Based on the Bureau of Land Management's estimation that the Federal Government holds about one-third ownership of the nation's coal resources, the U.S. Government holds the most coal reserves with approximately 92 billion short tons of estimated recoverable coal reserves. The Great Northern Limited Partnership reported the second largest reserve holding with 20 billion tons. Third, is the Peabody Group with 10.3 billion tons. Fourth and fifth are Consol Energy Inc., and Arch Coal, Inc. with 4.8 billion tons and 3.7 billion tons, respectively. Table 6 ranks the top 48 holders of U.S. coal reserves.

Survey Methodology

The National Mining Association has conducted a survey of major coal producers since the 1980's. Coal producers are asked to provide their company's total U.S. coal production and production including sales tonnage, foreign production (not included in Table 2), and reserve holdings for the calendar year past, in this case, 1998. They also are asked to name their mines and output using the following criteria: surface mines, production of 2 million tons or greater; underground mines, production of 1 million tons or greater; and any multi-mine production complex with output of more than 1 million tons. A multi-mine production complex is defined as a facility which is not a single mine, but one that processes production from more than one mine. Every effort was made to include as many coal producers as possible, whether or not a National Mining Association (NMA) member. A total of 45 coal companies were surveyed, all of which responded. A copy of the survey form is appended to this report.

Companies not included in the list are encouraged to submit data for next year. The results of prior surveys can be found in earlier editions of NMA's *Facts About Coal* and *Coal Data* publications.

TABLE 1

**U.S. Coal Production by State, 1991 - 1998
(Thousand Short Tons)**

State	1991	1992	1993	1994	1995	1996	1997	1998 p/
East:								
Alabama	27,269	25,796	24,768	23,266	24,640	24,637	24,468	23,013
Illinois	60,258	59,857	41,098	52,797	48,180	46,656	41,159	39,732
Indiana	31,468	30,466	29,295	30,927	26,007	29,670	35,497	36,803
Kentucky	158,980	161,068	156,299	161,642	153,739	152,425	155,853	150,295
Eastern	117,220	119,382	120,191	124,447	118,541	116,951	120,918	116,654
Western	41,760	41,686	36,108	37,195	35,198	35,474	34,936	33,641
Maryland	3,773	3,341	3,355	3,632	3,667	4,093	4,160	3,961
Ohio	30,569	30,403	28,816	29,897	26,118	28,572	29,154	28,048
Pennsylvania	65,381	68,981	59,700	62,237	61,576	67,942	76,198	81,017
Bituminous	61,936	65,498	55,394	57,616	56,893	63,190	71,520	75,786
Anthracite	3,445	3,483	4,306	4,621	4,682	4,751	4,678	5,231
Tennessee	4,290	3,476	3,047	2,987	3,221	3,651	3,300	2,696
Virginia	41,954	43,024	39,317	37,129	34,099	35,590	35,837	33,747
West Virginia	<u>167,352</u>	<u>162,164</u>	<u>130,525</u>	<u>161,776</u>	<u>162,997</u>	<u>170,433</u>	<u>173,743</u>	<u>171,244</u>
Total East	591,294	588,576	516,220	566,289	544,246	563,668	579,369	570,556
West:								
Alaska	1,436	1,534	1,601	1,567	1,698	1,481	1,450	1,344
Arizona	13,203	12,512	12,173	13,056	11,947	10,442	11,723	11,315
Arkansas	52	58	44	51	28	21	18	24
California	57	103	0	0	0	0	0	0
Colorado	17,834	19,226	21,886	25,304	25,710	24,886	27,449	29,631
Iowa	344	289	175	46	0	0	0	0
Kansas	416	363	341	284	285	232	360	341
Louisiana	3,151	3,240	3,134	3,463	3,719	3,221	3,545	3,216
Missouri	2,304	2,886	653	838	548	710	401	372
Montana	38,237	38,889	35,917	41,640	39,451	37,891	41,005	42,840
New Mexico	21,518	24,549	28,268	28,041	26,813	24,067	27,025	28,597
North Dakota	29,530	31,744	31,973	32,286	30,112	29,861	29,580	30,530
Oklahoma	1,841	1,741	1,758	1,911	1,876	1,701	1,621	1,661
Texas	53,825	55,071	54,567	52,346	52,684	55,164	53,328	52,583
Utah	21,945	21,339	21,847	24,399	25,167	27,507	26,683	26,075
Washington	5,143	5,251	4,739	4,893	4,868	4,565	4,495	4,638
Wyoming	<u>193,854</u>	<u>190,172</u>	<u>210,129</u>	<u>237,092</u>	<u>263,822</u>	<u>278,440</u>	<u>281,881</u>	<u>314,409</u>
Total West	404,690	408,967	429,205	467,217	488,728	500,188	510,563	547,577
Grand Total	995,984	997,545	945,425	1,033,504	1,032,974	1,063,856	1,089,932	1,118,133

Note: Data include mines producing less than 10,000 short tons/year.

p/ Coal Production for 1998 is preliminary.

Source: [U.S. Department of Energy/Energy Information Administration](http://www.eia.doe.gov)

TABLE 2

**Major U.S. Coal Producers - 1998
(Million Short Tons)**

Company	Tonnage	Pct. Of Total U.S.
1. The Peabody Group ¹	168.5	15.1%
2. Arch Coal, Inc.	105.4	9.4%
3. Kennecott Energy Company ²	102.6	9.2%
4. CONSOL Energy Inc.	74.3	6.6%
5. Cyprus Amax Coal Company	70.3	6.3%
6. AEI Resources Inc. (Addington Enterprises, Inc.)	51.0	4.6%
7. A.T. Massey Coal Co., Inc.	37.9	3.4%
8. The North American Coal Corporation	31.6	2.8%
9. Texas Utilities Mining Company (TUMCO)	28.3	2.5%
10. PacificCorp (Interwest Mining)	22.1	2.0%
11. The Pittsburg & Midway Coal Mining Company ³	22.1	2.0%
12. Triton Coal Company, LLC	17.3	1.5%
13. MAPCO Coal Inc.	16.0	1.4%
14. BHP Minerals	15.5	1.4%
15. Kiewit Mining Group, Inc. ⁴	15.0	1.3%
16. James River Coal Company	14.3	1.3%
17. Pittston Coal Company	12.9	1.2%
18. Western Energy Company	10.5	0.9%
19. American Electric Power	9.0	0.8%
20. Northwestern Resources Co.	8.8	0.8%
21. Lodestar Energy Inc.	8.4	0.8%
22. Jim Walter Resources, Inc.	8.1	0.7%
23. U.S. Steel Mining Company LLC	7.6	0.7%
24. Anker Coal Group, Inc.	7.3	0.7%
25. ANR Coal Company, LLC (Coastal Coal Co.)	7.2	0.6%
26. Westmoreland Coal Company	6.5	0.6%
27. Drummond Company, Inc.	6.4	0.6%
28. Aluminum Company of America (ALCOA Inc.)	5.8	0.5%
29. American Coal Company	5.5	0.5%
30. AMVEST Minerals Co. LLC	5.2	0.5%
31. The Ohio Valley Coal Co.	4.3	0.4%
32. Andalex Resources, Inc.	3.6	0.3%
33. Knife River Corporation	3.1	0.3%
34. Maple Creek Mining, Inc.	3.0	0.3%
35. Sun Coke Company	3.0	0.3%
36. Exxon Coal and Minerals Company	2.9	0.3%
37. Dolet Hills Mining Venture	2.3	0.2%
38. Trapper Mining Inc.	2.2	0.2%
39. KenAmerican Resources, Inc.	1.9	0.2%
40. Usibelli Coal Mine, Inc.	1.5	0.1%
41. Western Fuels Association, Inc.	1.5	0.1%
42. Canterbury Coal Company	1.4	0.1%
43. Phillips Coal Company	1.4	0.1%
44. PennAmerican Coal LP	0.5	0.0%
45. Cravat Coal Co.	0.1	0.0%
Other Producers	<u>201.1</u>	<u>18.0%</u>
Total U.S. Production	1118.1	100.0%

Notes: Figures are rounded. 1998 data compiled from 1999 NMA survey of major producers. May not be all-inclusive. Any companies not included in this listing are invited to submit data for the next edition. U.S. production Total for 1998 is an EIA preliminary estimate.

¹ Peabody Group production figure includes sales tonnage (production not reported).

² Kennecott Energy Includes 50% ownership (tonnage) of Decker Mine.

³ Pittsburg & Midway production figure includes one-third ownership of Black Beauty Coal Co. production of 5.7 million tons.

⁴ Kiewit production figure includes 100% of Decker, Black Butte, and Walnut Creek mine tonnage.

TABLE 3**Major U.S. Underground Coal Mines - 1998
(Million Short Tons)**

	Mine Name	Location	Tonnage	Operating Company
1.	Enlow Fork	Pennsylvania	8.8	CONSOL Pennsylvania Coal Company
2.	Twentymile	Colorado	8.5	Twentymile Coal Company
3.	Bailey	Pennsylvania	8.3	CONSOL Pennsylvania Coal Company
4.	Mountaineer	West Virginia	7.4	Arch Coal, inc.
5.	Baker	Kentucky	6.7	Lodestar Energy, Inc.
6.	McElroy	West Virginia	6.6	McElroy Mining Company
7.	Cumberland	Pennsylvania	6.3	Cyprus Cumberland Resources Corp.
8.	Mine No. 84	Pennsylvania	5.9	Eighty-Four Mining Co.
9.	West Elk	Colorado	5.9	Arch Coal, inc.
10.	SUFECO	Utah	5.7	Canyon Fuel Company
11.	Upper Big Branch	West Virginia	5.7	A.T. Massey Coal Co., Inc.
12.	Robinson Run	West Virginia	5.6	Consolidation Coal Company
13.	Galatia	Illinois	5.5	The American Coal Co.
14.	Emerald	Pennsylvania	5.4	Cyprus Emerald Resources Corp.
15.	Loveridge	West Virginia	5.4	Consolidation Coal Company
16.	Pinnacle (Gary No. 50)	West Virginia	4.8	U.S. Steel Mining Co.
17.	Shoemaker	West Virginia	4.8	Consolidation Coal Company
18.	Federal No. 2	West Virginia	4.7	Eastern Associated Coal Corp.
19.	Marissa	Illinois	4.4	Peabody Coal Company
20.	Buchanon	Virginia	4.3	Consolidation Coal Company
21.	Powhatan No. 6	Ohio	4.3	The Ohio Valley Coal Co.
22.	Dilworth	Pennsylvania	4.2	Consolidation Coal Company
23.	Shoal Creek	Alabama	4.2	Drummond Company, Inc.
24.	Rend Lake	Illinois	4.1	Consolidation Coal Company
25.	Skyline	Utah	4.1	Canyon Fuel Company
26.	Blacksville	West Virginia	3.9	Consolidation Coal Company
27.	Deer Creek	Utah	3.7	Energy West Mining Co.
28.	Crandall Canyon	Utah	3.6	Genwal Resources, Inc.
29.	Harris No. 1	West Virginia	3.6	Eastern Associated Coal Corp.
30.	Camp No. 11	Kentucky	3.5	Peabody Coal Company
31.	Dotiki	Kentucky	3.5	Webster County Coal Corp.
32.	Trail Mountain	Utah	3.4	Energy West Mining Co.
33.	Maple Creek	Pennsylvania	3.0	Maple Creek Mining, Inc.
34.	Mettiki	Maryland	3.0	Mettiki Coal Corp.
35.	Meigs No. 31	Ohio	2.9	Southern Ohio Coal Co.
36.	Monterey No. 1	Illinois	2.9	Monterey Coal Co.
37.	Camp No. 1	Kentucky	2.8	Peabody Coal Company
38.	Marrowbone	West Virginia	2.8	Mountaineer Coal Development
39.	Oak Grove	Alabama	2.8	U.S. Steel Mining Co.
40.	Powhatan No. 4	Ohio	2.7	Quarto Mining Company
41.	V.P.8	Virginia	2.7	Consolidation Coal Company
42.	North River	Alabama	2.5	The Pittsburg & Midway Coal Mining Co.
43.	Meigs No. 2	Ohio	2.4	Southern Ohio Coal Co.
44.	Mine # 11	Illinois	2.4	Old Ben Coal Company
45.	Turris	Illinois	2.4	Turris Coal Company
46.	No. 4	Alabama	2.3	Jim Walter Resources
47.	No. 7	Alabama	2.2	Jim Walter Resources
48.	Pattiki	Illinois	2.1	White County Coal Corp.
49.	Windsor	West Virginia	2.0	Windsor Coal Co.
50.	Paradise	Kentucky	1.9	KenAmerican Resources, Inc.

TABLE 3

**Major U.S. Underground Coal Mines - 1998
(Million Short Tons)
(Continued)**

	Mine Name	Location	Tonnage	Operating Company
51.	Beech Fork/Middle Fork	Virginia	1.9	Shamrock
52.	Conant	Illinois	1.9	Arch Coal, Inc
53.	Shoshone	Wyoming	1.9	Cyprus Shoshone Coal Corp.
54.	Aberdeen	Utah	1.8	Andalex Resources, Inc.
55.	No. 3	Alabama	1.8	Jim Walter Resources
56.	No. 5	Alabama	1.8	Jim Walter Resources
57.	Stockton	Kentucky	1.8	Cannelton Inc.
58.	Solid Energy	Kentucky	1.5	A.T. Massey Coal Co., Inc.
59.	Dianne	Pennsylvania	1.4	Canterbury Coal Co.
60.	Huff Creek	Kentucky	1.4	Arch Coal, Inc
61.	Ohio No. 11	Kentucky	1.4	Island Creek Coal Company
62.	Wabash	Illinois	1.4	Wabash Mine Holding Co.
63.	Big Mountain No. 16	West Virginia	1.3	Eastern Associated Coal Corp.
64.	Birch Fork	West Virginia	1.3	A.T. Massey Coal Co., Inc.
65.	Clean Energy	Kentucky	1.3	A.T. Massey Coal Co., Inc.
66.	Willow Creek	Utah	1.3	Cyprus Plateau Mining Corp.
67.	Bowie No. 2	Colorado	1.2	Bowie Resources
68.	Black Knight	West Virginia	1.1	A.T. Massey Coal Co., Inc.
69.	Freedom	Kentucky	1.1	A.T. Massey Coal Co., Inc.
70.	Sentinel	West Virginia	1.1	Anker West Virginia Mining Co.
71.	Brushy Creek	Illinois	1.0	Western Fuels Assoc., Inc.
72.	Burrell	Pennsylvania	1.0	PennAmerican Coal LP
73.	Darby Fork	Kentucky	1.0	Arch Coal, Inc
74.	Eagle Energy	West Virginia	1.0	A.T. Massey Coal Co., Inc.
75.	Rockhouse	Kentucky	1.0	A.T. Massey Coal Co., Inc.
76.	Smith	Kentucky	1.0	Lodestar Energy, Inc.
77.	White Knight	West Virginia	1.0	A.T. Massey Coal Co., Inc.

Note: Figures are rounded. 1998 data compiled from 1999 NMA survey of major producers.

May not be all-inclusive. Any companies not included in this listing are invited to submit data for the next edition.

TABLE 4**Major U.S. Surface Coal Mines - 1998
(Million Short Tons)**

	Mine Name	Location	Tonnage	Operating Company
1.	North Antelope/Rochelle	Wyoming	66.8	Powder River Coal Company
2.	Black Thunder	Wyoming	42.8	Arch Coal, Inc.
3.	Caballo Rojo Complex	Wyoming	37.0	Cordero Mining Co & Caballo Rojo, Inc.
4.	Jacobs Ranch	Wyoming	29.1	Jacobs Ranch Coal Company
5.	Caballo	Wyoming	27.3	Powder River Coal Company
6.	Belle Ayr	Wyoming	22.5	Amax Coal West, Inc.
7.	Antelope	Wyoming	19.4	Antelope Coal Company
8.	Eagle Butte	Wyoming	18.1	Amax Coal West, Inc.
9.	Buckskin	Wyoming	17.3	Triton Coal Co., LLC
10.	Freedom	North Dakota	16.4	The Coteau Properties Co.
11.	Martin Lake	Texas	13.5	Texas Utilities Mining Company
12.	Spring Creek	Montana	11.3	Spring Creek Coal Company
13.	Decker ¹	Montana	10.6	Kiewit Mining Group, Inc.
14.	Rosebud	Montana	10.5	Western Energy Co.
15.	Monticello	Texas	9.8	Texas Utilities Mining Company
16.	Jewett	Texas	8.8	Northwestern Resources Co.
17.	Navajo	New Mexico	8.4	BHP Navajo Coal Company
18.	Kayenta	Arizona	7.5	Peabody Western Coal Company
19.	Coal Creek	Wyoming	7.0	Arch Coal, Inc.
20.	Falkirk	North Dakota	6.9	The Falkirk Mining Company
21.	McKinley	New Mexico	6.9	The Pittsburg & Midway Coal Mining Co.
22.	Absaloka	Montana	6.5	Westmoreland Resources Inc.
23.	Jim Bridger	Wyoming	6.4	Bridger Coal Co.
24.	Sandow	Texas	5.8	Aluminum Co. of America
25.	Colowyo	Colorado	5.8	Colowyo Coal Co., LP
26.	Big Brown	Texas	5.0	Texas Utilities Mining Company
27.	Lee Ranch	New Mexico	4.9	Lee Ranch Coal Company
28.	Kemmerer	Wyoming	4.7	The Pittsburg & Midway Coal Mining Co.
29.	Centralia	Washington	4.6	Centralia Mining Co.
30.	Black Mesa	Arizona	4.5	Peabody Western Coal Company
31.	Samples	West Virginia	4.5	Arch Coal, Inc.
32.	Dave Johnston	Wyoming	4.0	Glenrock Coal Co.
33.	Strip # 2	West Virginia	3.9	Fola Coal Co. LLC
34.	La Plata	New Mexico	3.9	San Juan Coal Company
35.	Old Hickory	West Virginia	3.8	Arch Coal, Inc.
36.	S. Hallsville No. 1	Texas	3.8	The Sabine Mining Co.
37.	San Miguel	Texas	3.5	The North American Coal Corp.
38.	Rawhide	Wyoming	3.4	Powder River Coal Company
39.	Big Sky	Montana	3.3	Peabody Western Coal Company
40.	Hobet 21	West Virginia	3.3	Arch Coal, Inc.
41.	Ruffner	West Virginia	3.3	Arch Coal, Inc.
42.	San Juan	New Mexico	3.2	San Juan Coal Company
43.	Lynnville	Indiana	3.1	Peabody Coal Company
44.	Hawthorn	Indiana	3.0	Peabody Coal Company
45.	Beulah	North Dakota	2.8	Knife River Corp.
46.	Monoc	West Virginia	2.7	Vandalia Resources, Inc.
47.	Black Butte ¹	Wyoming	2.6	Kiewit Mining Group, Inc.
48.	17 West	Kentucky	2.6	Martiki Coal Corp.
49.	Starfire	Kentucky	2.4	Mt. Coals Corp.
50.	Dolet Hills	Louisiana	2.3	Dolet Hills Mining Venture
51.	Trapper	Colorado	2.2	Trapper Mining Inc.
52.	Twilight MTR (Progress)	West Virginia	2.1	A.T. Massey Coal Co., Inc.
53.	Wylo	West Virginia	2.0	Arch Coal, Inc.
54.	Walnut Creek ¹	Texas	1.8	Kiewit Mining Group, Inc.
55.	Usibelli	Alaska	1.5	Usibelli Coal Mine Inc.

Note: Figures are rounded. 1998 data compiled from 1999 NMA survey of major producers.

May not be all-inclusive. Any companies not included in this listing are invited to submit data for the next edition.

¹ Mines jointly owned by Kiewit Mining Group, Inc. (50%).

TABLE 5**Major Multi-Mine Production Complexes - 1998
(Million Short Tons)**

Complex Name	Location	Tonnage	Company
1. N. Antelope/Rochelle	Wyoming	66.8	Powder River Coal Company
2. Cordero Rojo	Wyoming	37.0	Cordero Mining & Caballo Rojo, Inc.
3. Rawhide/Caballo	Wyoming	30.6	Powder River Coal Company
4. Arizona	Arizona	11.9	Peabody Western Coal Company
5. Mingo Logan	West Virginia	11.3	Arch Coal, Inc.
6. Pond Fork	West Virginia	7.6	Eastern Associated Coal Corp.
7. Camp	Kentucky	6.2	Peabody Coal Company
8. Elk Run	West Virginia	6.1	A.T. Massey Coal Co., Inc.
9. Performance	West Virginia	6.1	A.T. Massey Coal Co., Inc.
10. Lady Dunn	West Virginia	5.8	Cannelton Inc.
11. Arch of West Virginia	West Virginia	5.5	Arch Coal, Inc.
12. Sidney	Kentucky	5.1	A.T. Massey Coal Co., Inc.
13. Leeco, Inc.	Kentucky	5.0	Leeco, Inc.
14. Dal-Tex	West Virginia	4.6	Arch Coal, Inc.
15. Martin County	Kentucky	4.2	A.T. Massey Coal Co., Inc.
16. Hobet 21	West Virginia	4.1	Arch Coal, Inc.
17. McCoy Elkhorn	Kentucky	3.8	McCoy Elkhorn Coal Corporation
18. Wells	West Virginia	3.8	Eastern Associated Coal Corp.
19. Rawl	West Virginia/Kentucky	3.7	A.T. Massey Coal Co., Inc.
20. Arch of Illinois	Illinois	3.5	Arch Coal, Inc.
21. Bledsoe	Kentucky	3.5	Bledsoe Coal Corporation
22. Mill Creek	Kentucky	3.4	CONSOL of Kentucky Inc.
23. Independence	West Virginia	3.2	A.T. Massey Coal Co., Inc.
24. Toms Creek	Virginia	3.2	Coastal Coal Company, LLC
25. Lynnville/Squaw Creek	Indiana	3.1	Peabody Coal Company
26. Marfolk	West Virginia	2.9	A.T. Massey Coal Co., Inc.
27. Jones Fork	Kentucky	2.5	CONSOL of Kentucky Inc.
28. Lone Mountain	Kentucky/Virginia	2.4	Arch Coal, Inc.
29. Progress	West Virginia	2.4	A.T. Massey Coal Co., Inc.
30. Hopkins County Coal	Kentucky	2.3	HCC, LLC
31. Alloy Barge Dock	West Virginia	2.0	Vandalia Resources, Inc.
32. Bell County	Kentucky	2.0	Bell County Coal Corporation
33. Keysone	Pennsylvania	2.0	Keystone Coal Mining Co.
34. Moss No. 3	Virginia	2.0	Clinchfield Coal Company
35. Ramsey	Virginia	2.0	Paramont Coal Corporation
36. Brooks Run	West Virginia	1.9	Coastal Coal-West Va., LLC
37. Big Mountain/Robin Hood	West Virginia	1.8	Eastern Associated Coal Corp.
38. Grand Eagle	Kentucky	1.7	Patriot Coal Company
39. Helvetia	Pennsylvania	1.7	Helvetia Coal Company
40. Patriot	West Virginia	1.6	Patriot Mining Co., Inc.
41. Pontiki	Kentucky	1.6	Pontiki Coal Corp.
42. Winoc	West Virginia	1.6	Vandalia Resources, Inc.
43. Hobet 7	West Virginia	1.4	Arch Coal, Inc.
44. McClure River	Virginia	1.4	Clinchfield Coal Company
45. Pardee	Kentucky/Virginia	1.4	Arch Coal, Inc.
46. Arch of Wyoming	Wyoming	1.3	Arch Coal, Inc.
47. Juliana	West Virginia	1.3	Juliana Mining Co., Inc.
48. Midwest	Kentucky	1.2	Peabody Coal Company
49. Amonate	West Virginia/Virginia	1.1	Consolidation Coal Company
50. Meadow River	West Virginia	1.1	Meadow River Coal Company
51. U.K. Complex	Kentucky	1.1	Addington, Inc.
52. Dominion	Virginia	1.0	Jewell Resources
53. Eagle Energy	West Virginia	1.0	A.T. Massey Coal Co., Inc.

Note: Figures are rounded. 1998 data compiled from 1999 NMA survey of major producers.

May not be all-inclusive. Any companies not included in this listing are invited to submit data for the next edition.

TABLE 6**Major Holders of U.S. Coal Reserves - 1998
(Billion Short Tons)**

	Holder	Estimated Reserves
1.	U.S. Government	91.700 *
2.	Great Northern Properties Limited Partnership	20.000
3.	Peabody Group	10.300
4.	CONSOL Energy Inc.	4.770
5.	Arch Coal, Inc.	3.690
6.	AEI Resources Inc. (Addington Enterprises, Inc.)	2.400
7.	Cyprus Amax Coal Company	2.016
8.	The North American Coal Corporation	1.992
9.	A.T. Massey Coal Co., Inc.	1.823
10.	Phillips Coal Company	1.800
11.	Kennecott Energy Company	1.600
12.	Norfolk Southern Corp. (Pocahontas Land Dev.)	1.480
13.	Drummond Company, Inc.	1.300
14.	Exxon Coal and Minerals Company	1.200
15.	Pittston Coal Company	1.200
16.	Western Pocahontas Limited Partnership	1.000
17.	American Electric Power	0.944
18.	Triton Coal Company, LLC	0.756
19.	Texas Utilities Mining Company (TUMCO)	0.747
20.	Western Energy Co. (includes Northwestern Res.)	0.737
21.	Westmoreland Coal Company	0.638
22.	Anker Coal Group, Inc.	0.552
23.	Kentucky River Coal Corp.	0.544
24.	ANR Coal Company, LLC (Coastal Co.)	0.535
25.	MAPCO Coal Inc.	0.504
26.	Kiewit Mining Group, Inc.	0.435
27.	Knife River Corporation	0.356
28.	PacifiCorp (Interwest Mining)	0.310
29.	Western Fuels Association, Inc.	0.298
30.	American Coal Company	0.274
31.	BHP Minerals	0.235
32.	Lodestar Energy Inc.	0.215
33.	Jim Walter Resources, Inc.	0.210
34.	Trapper Mining Inc.	0.160
35.	AMVEST Minerals Co. LLC	0.151
36.	U.S. Steel Mining Company LLC	0.135
37.	Sun Coke Company	0.120
38.	Usibelli Coal Mine, Inc.	0.080
39.	Andalex Resources, Inc.	0.075
40.	KenAmerican Resources, Inc.	0.070
41.	Dolet Hills Mining Venture	0.060
42.	Aluminum Company of America (ALCOA Inc.)	0.059
43.	The Ohio Valley Coal Co.	0.049
44.	Canterbury Coal Company	0.035
45.	Maple Creek Mining, Inc.	0.020
46.	PennAmerican Coal LP	0.012
47.	Energy Resources, Inc.	0.005
48.	Cravat Coal Co.	0.001
49.	The Pittsburg & Midway Coal Mining Co.	N/A
50.	James River Coal Company	N/A

Note: 1998 data compiled from 1999 NMA survey of major producers. May not be all-inclusive.

Any companies not included in this listing are invited to submit data for the next edition.

* U.S. government total is an NMA calculation based on federal ownership of about one-third of the Nation's coal resources (Bureau of Land Management, 1993) and estimated recoverable reserves of 275 billion short tons (Energy Information Administration, 1997).

N/A Not Available.

TABLE 7**U.S. Coal Mining Productivity
(Average Tons per Miner per Hour)**

Year	Underground	Surface	All Mines
1985	1.78	4.24	2.74
1986	2.00	4.60	3.01
1987	2.20	4.98	3.30
1988	2.38	5.32	3.55
1989	2.46	5.61	3.70
1990	2.54	5.94	3.83
1991	2.69	6.38	4.09
1992	2.93	6.59	4.36
1993	2.95	7.23	4.70
1994	3.19	7.67	4.98
1995	3.39	8.48	5.38
1996	3.57	9.05	5.69
1997	3.83	9.46	6.04

Note: Data excludes mines producing less than 10,000 short tons/year.
Data latest available.

SOURCE: [Energy Information Administration](#), *Coal Industry Annual*.

APPENDIX
NATIONAL MINING ASSOCIATION
ANNUAL SURVEY OF COAL PRODUCTION AND RESERVES
1998 - Information Request Sheet

Company Name: _____

Your Name and Phone #: _____

Please fax this form to Leslie Coleman: (202) 463-2666 or mail to: Leslie Coleman, National Mining Association, 101 Constitution Ave., Suite 500, N.W., Washington, D.C. 20001, telephone: (202) 463-2600, E-Mail: lcoleman@nma.org.

1. Your company's total coal production for calendar year 1998:

U.S. Production: _____ Million Short Tons

U.S. Production Including Sales: _____ Million Short Tons

Foreign Production Excluding U.S. (If applicable): _____ Million Short Tons

2. Surface coal mines operated by your company or its subsidiaries with production for 1998 of 2 million tons or more:

Name of Mine	Location (State)	1998 Tonnage	Operating Company
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3. Underground coal mines operated by your company or its subsidiaries with production for 1998 of 1 million tons or more:

Name of Mine	Location (State)	1998 Tonnage	Operating Company
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4. Multi-mine production complexes operated by your company or its subsidiaries with tonnages for 1998 of 1 million tons or more (these are facilities which are not a single mine, but which process production from several mines):

Name of Complex	Location (State)	1998 Tonnage	Operating Company
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5. Your Company's total estimated U.S. coal reserves: _____ Short Tons.