

**Oklahoma Coal  
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Due to the nation's limited supply of energy, there has been increasing interest in coal reserves. Increasing prices for oil and natural gas have created an increased demand for coal. This demand for coal has brought attention directed toward estimating the quantity of coal in Oklahoma. These estimates include the original quantities of coal resources, the amount previously mined, and the remaining reserves.

The coal reserves as of 1974 in Oklahoma are found primarily in 19 counties in the eastern part of the state. A listing of these counties along with a summary of coal resources is presented in Table 1. Table 1 is separated into the three sections previously mentioned.

Section one includes estimates of total coal reserves prior to any mining activity. For each county, the acres with underlying coal are shown along with total estimated tons and finally tons/acre. For example, in Atoka County, it is estimated that there were originally 30.4 million tons of coal reserves under 6,371 acres. These estimations result in an average of 4,776 tons/acre in Atoka County. The largest original quantities of coal were projected in Leflore, Haskell, and Pittsburg Counties with 2.04 billion, 1.54 billion, and 1.51 billion tons, respectively. However, the density/acre is greatest in Coal County with an average of 7,326 tons/acre.

Section two of Table 1 shows the quantity of coal that has been mined by county. Additionally, this section gives a breakdown between acres surface mined (strip mined) and underground mined. In Atoka County, there have been 70 acres strip mined yielding 365,000 tons for an average of 5,214 tons/acre. In addition, there have been 77 acres underground mined yielding 444,000 tons for an average of 5,766 tons/acre. Thus, there have been 147 acres of coal mined in Atoka County with total production at 809,000 tons or 5,503 tons/acre.

The third section of Table 1 contains an estimation of remaining reserves in each of the counties that are known to have coal reserves. For example, it is estimated that there are 29.6 million tons remaining under 6,224 acres in Atoka County. The greatest coal reserves remain in Leflore, Haskell, and Pittsburg Counties. This is not to indicate that these will or will not be the areas to be mined in the near future. Rather, the data only indicates the location of reserves. Many other factors need to be considered before determining the location of mining activities.

Perhaps the most important information in Table 1 is the totals for each of the sections. Projections indicate that originally there were 7.7 billion tons of coal reserves in eastern Oklahoma. Of this total, 487.6 million tons have been mined with approximately 7.2 billion tons remaining to be mined.

**Summary of Coal Mining in Oklahoma**

Table 2 contains a summary of coal mining in Oklahoma by year. The number of counties with coal mining activity is shown along with the total number of mines in operation for each year. Furthermore, the data is differentiated by surface or underground mines with total production given for each type of mining. For example, in 1950 there were 94 active mines in 13 counties in eastern Oklahoma. Fifty-nine of the mines were underground mines that produced over 950,000 tons of coal. The remaining 35 mines were surface mines that produced 1.8 million tons of coal. Total production in 1950 was 2.76 million tons of coal.

Table 2 can be used to gain insight into the character of coal mining in the state of Oklahoma. From 1950 until 1961, there were more underground mines than surface mines in the state. Since 1961 the number of surface mines has been greater than the number of underground mines. Underground mining totally disappeared in 1972 and has not been present in the state since. Also from Table 2, it can be seen that there was a large increase in surface mining in 1975 and 1976. In 1974, there were 16 active mines in the state. This total increased to 37 in 1975 and to 42 in 1976.

Table 1. Summary of Original, Mined & Remaining Bituminous Coal Resources in Oklahoma by County 1950-1974.

County	ORIGINAL			MINED						REMAINING		
	Acres	Tons		Surface Mined			Underground Mined			Total		
		'000	Per Acre	Acres	Tons '000	Tons/Acre	Acres	Tons '000	Tons/Acre	Acres	Tons '000	Tons/Acre
ATOKA	6,371	30,428	4.776	70	365	5,214	77	444	5,766	147	809	5,503
COAL	49,315	361,265	7.326	576	4,438	7,705	8,225	63,952	7,775	8,801	68,390	7,771
CRAIG	70,075	128,488	1.834	3,861	7,436	1,926	--	--	--	3,861	7,436	1,926
CREEK	3,547	14,046	3.960	--	--	--	--	--	--	--	--	--
HASKELL	317,623	1,541,471	4.853	5,569	21,278	3,821	953	6,512	6,933	6,522	27,790	4,261
LATIMER	173,503	887,203	5.113	540	2,343	4.339	5,090	42,892	8,427	5,630	45,235	8,035
LEFLORE	370,834	2,040,563	5.503	2,203	13,263	6,020	6,778	53,938	7,958	8,981	67,201	7,483
MAYES	2,318	4,514	1.947	186	510	2,742	--	--	--	186	510	2,742
MCINTOSH	14,041	49,429	3.520	646	2,674	4.139	--	--	--	646	2,674	4.139
MUSKOGEE	31,056	64,155	2.066	979	3,181	3,249	--	--	--	979	3,181	3,249
NOWATA	3,920	7,032	1.794	492	969	2,010	--	--	--	492	969	2,010
OKFUSKEE	21,607	79,351	3.672	--	--	--	--	--	--	--	--	--
OKMULGEE	93,998	444,663	4.761	1,273	5,104	4.009	13,209	68,966	5,221	14,482	74,070	5,115
PITTSBURG	281,750	1,513,445	5.372	278	1,491	5.363	21,450	128,121	5,973	21,728	129,613	5,965
ROGERS	105,435	278,513	2.642	10,898	34,607	3.176	--	--	--	10,898	34,607	3.176
SEQUOYAH	12,896	30,370	2.355	1,459	3,224	2,210	--	--	--	1,459	3,224	2,210
TULSA	39,896	152,465	3.822	1,331	4,889	3.673	1,920	9,179	4,781	3,251	14,068	437
WAGONER	25,997	71,392	2.746	2,830	7,951	2,774	--	--	--	2,830	7,951	2,774
WASHINGTON	1,293	4,655	3.600	--	--	--	--	--	--	--	--	--
TOTAL		7,703,780			113,648			374,004			487,652	
											1,542,994	7,216,128

S. A. Friedman, The Investigation of the Coal Reserves in the Ozarks Section of Oklahoma and Their Potential Uses, (Final Report to the Ozarks Regional Commission) July 10, 1974. Tons per acre for the original, mined, and remaining are calculated. These determinations were made as of January 1, 1974.

## Value of Oklahoma Coal Production

Table 3 contains the total production data presented in Table 2 along with the total tons shipped from Oklahoma mines by year. In addition, Table 3 gives the estimated value of the coal produced by year in Oklahoma. The total value is estimated by the Bureau of Mines using an average price received by year. The 2.76 million tons produced in 1950 were valued at over \$14.5 million. An average price/ton could be derived by dividing the total value by the total tons produced. However, such an average would be misleading due to the many quality differences in Oklahoma coal. Therefore, to calculate the average price/ton in this manner would not be a true indication of how the value had changed through time.

Perhaps a better indication of the changes in coal value would be to compare the total tons produced and total value between 1950 and 1975. Total tons produced in 1975 were 2.85 million with an estimated value of \$47.95 million. The 1975 production was 3.3 percent greater than the 1950 production, but the total value of production was 242.76 percent greater in 1975. This does not reflect the relative change in profitability, only the gross value of the coal produced.

## Coal Mining Employment

The final two tables (Tables 4 and 5) contain statistics related to the employment furnished by coal mining activity in Oklahoma. Table 4 contains the number of counties, number of mines, days worked, average days worked per mine, and number of men employed. Table 5 expands on Table 4 by relating the employment to the total production of coal. For example, in 1951 there were 80 mines in 13 counties with total employment of 2,077 persons (Table 4). Total days worked were 9,793 with an average of 112 days worked per mine (Table 4). The total production was 2.23 million tons (Table 5). Table 5 also shows a total of 383,861 man days worked accounting for over 3 million total man hours worked. The final two columns in Table 5 show simple averages relating tonnage produced per man day and man hour. For example, in 1951, the average tonnage per man day worked was 6.24 tons and the average tonnage per man hour was .782 tons. In 1975 these averages rose to 16.3 and 2.039 pointing out the productivity advances in the industry.

## Conclusion

The primary purpose of this fact sheet is to summarize the coal mining activities for the state of Oklahoma. The tables herein are designed only to show the relevant statistics, not to offer research analyses. The data included are presented such that land owners, policy makers, or any interested individual may quickly survey the coal mining activity that has taken place in Oklahoma.

**Table 2. Summary of Coal Mining in Oklahoma by Year.**

Year	No. of Mines	No. of Counties	Tons Produced Underground	No. of Underground Mines	Tons Produced		Total Tons Produced
					Surface (Strip)	No. of Strip Mines	
1950	94	13	950,413	59	1,808,633	35	2,759,046
1950	80	13	1,008,330	48	1,218,169	32	2,226,499
1952	77	14	867,589	52	1,343,179	26	2,210,768
1953	66	14	866,407	37	1,293,275	29	2,159,682
1954	60	14	740,249	28	1,042,539	32	1,782,788
1955	55	13	700,519	28	1,284,144	27	1,984,663
1956	45	13	499,283	25	1,423,769	24	1,923,052
1957	44	12	724,946	25	1,325,617	19	2,050,563
1958	38	12	371,883	20	1,255,355	18	1,627,238
1959	39	11	350,977	21	1,192,461	18	1,543,438
1960	42	11	256,530	23	1,107,972	19	1,364,502
1961	53	13	150,720	25	869,997	28	1,020,717
1962	37	10	161,294	16	891,431	21	1,052,725
1963	33	9	55,713	10	956,232	23	1,011,945
1964	38	9	12,817	10	1,026,161	28	1,038,979
1965	34	8	9,523	8	954,043	26	963,566
1966	28	8	6,291	3	835,692	25	841,983
1967	25	8	2,352	4	822,903	21	825,255
1968	24	8	45,979	4	1,059,263	20	1,105,242
1969	17	7	120,490	3	1,716,877	14	1,837,367
1970	17	8	237,594	2	2,204,870	15	2,442,464
1971	17	5	194,928	3	2,038,565	14	2,233,493
1972	16	7	000,000	0	2,530,211	16	2,530,211
1973	12	5	000,000	0	2,194,670	12	2,194,670
1974	16	5	000,000	0	2,374,685	16	2,374,685
1975	33	8	000,000	0	2,850,427	33	2,850,427
1976	42	10	000,000	0	3,626,781	42	3,626,781

Department of Mines, Chief Inspector, Oklahoma, *Annual Reports* (by Calendar), 1950-1976.

**Table 3. Comparative Figures for Previous Years Coal Production and Value in Oklahoma.**

Year	Total Tons Produced	Total Tons Shipped	Value \$
1950	2,759,046	2,678,571	14,571,426
1951	2,226,499	2,223,229	13,873,424
1952	2,210,768	2,193,409	12,687,855
1953	2,159,682	2,167,594	13,226,881
1954	1,782,788	1,914,834	11,264,692
1955	1,984,663	2,163,536	12,667,563
1956	1,923,052	2,006,987	12,340,642
1957	2,050,563	2,195,000	14,165,000
1958	1,627,238	1,629,000	10,858,000
1959	1,543,438	1,525,000	10,272,000
1960	1,364,502	1,342,000	9,113,000
1961	1,020,717	1,032,000	6,784,000
1962	1,052,725	1,048,000	6,978,000
1963	1,011,945	1,008,000	5,667,000
1964	1,038,979	1,028,000	5,474,000
1965	963,566	974,000	5,520,000
1966	841,983	843,000	4,935,000
1967	825,255	823,000	4,703,000
1968	1,105,242	1,089,000	6,401,000
1969	1,837,367	1,838,000	10,662,000
1970	2,442,464	2,427,000	15,211,000
1971	2,233,493	2,234,000	15,004,000
1972	2,530,211	2,624,000	19,112,000
1973	2,194,670	2,183,000	16,779,000
1974	2,374,685	2,356,000	24,759,000
1975	2,850,427	2,872,000	47,946,000
1976	3,626,781		

Column 1—Department of Mines, Chief Inspector, Oklahoma, *Annual Reports* (by Calendar), 1950-1976.

Columns 2 and 3—*Bureau of Mines, Minerals Year Book, Area Reports*: Domestic, U.S. Department of Interior, U.S. Government Printing Press, Washington, 1951-1975.

**Table 4. Oklahoma Coal Mining Employment by Year.**

Year	No. of Counties	No. of Mines	Days Worked	Av. Days Worked/Mine	No. of Men Employed
1950	13	94	11,198	118	2,384
1951	13	80	9,793	122	2,077
1952	14	77	8,608	112	1,745
1953	14	66	7,798	118	1,559
1954	14	60	6,804	113	1,412
1955	13	55	6,232	113	1,307
1956	13	45	5,623	125	1,414
1957	12	44	5,599	127	1,059
1958	12	38	4,705	124	907
1959	11	39	4,641	119	920
1960	11	42	4,720	112	989
1961	13	53	4,711	89	694
1962	10	37	3,726	101	605
1963	9	33	3,171	96	464
1964	9	38	3,635	96	283
1965	8	34	3,267	96	269
1966	8	28	2,732	98	221
1967	8	25	1,778	71	211
1968	8	24	1,990	83	271
1969	7	17	2,326	137	371
1970	8	17	2,612	154	552
1971	5	17	2,364	139	578
1972	7	16	2,999	187	546
1973	5	12	2,192	183	386
1974	5	16	3,479	217	518
1975	8	33	5,540	168	858
1976	10	42	6,259	149	1,076

Department of Mines, Chief Mine Inspector, Oklahoma, *Annual Report*, 1950-1976.

**Table 5. Oklahoma Coal Mining Productivity by Year.**

Year	Total Tons Produced	Total Man Days Worked	Total Man Hours Worked	Tonnage Per Man Day	Tonnage Per Man Hour
1950	2,759,046				
1951	2,226,499	383,861	3,070,888	6.24	.782
1952	2,210,768	340,589	2,724,712	6.346	.793
1953	2,159,682	309,061	2,472,488	7.431	.929
1954	1,782,788	243,286	1,946,288	7.687	.961
1955	1,984,663	247,691	1,981,528	7.696	.962
1956	1,923,052	143,759	1,150,072	12.45	1.53
1957	2,050,563	207,305	1,658,440	9.38	1.17
1958	1,627,238	215,027	1,720,216	8.68	1.08
1959	1,543,438	171,843	1,374,744	8.00	1.23
1960	1,364,502	188,556	1,508,448	7.907	.988
1961	1,020,717	96,690	773,520	10.55	1.320
1962	1,052,725	97,594	780,752	10.787	1.348
1963	1,011,945	67,572	540,576	14.976	1.872
1964	1,038,979	60,785	486,280	17.093	2.137
1965	963,566	55,668	445,344	17.309	2.164
1966	841,983	48,912	391,296	17.214	2.152
1967	825,255	42,595	340,760	19.374	2.422
1968	1,105,242	68,832	550,656	16.057	2.007
1969	1,837,367	100,723	805,784	18.242	2.280
1970	2,442,464	149,851	1,198,808	16.299	2.037
1971	2,223,493	131,337	1,050,696	17.006	2.126
1972	2,530,211	132,715	1,061,720	19.065	2.383
1973	2,194,670	106,825	854,600	20.545	2.568
1974	2,374,685	137,053	1,096,424	17.327	2.166
1975	2,850,427	204,306	1,634,448	13.952	1.744
1976	3,626,781	222,319	1,778,552	16.313	2.039

Columns 1, 2, and 3—Department of Mines, Chief Mine Inspector, Oklahoma, *Annual Report*, 1950-1976.

Columns 4 and 5—Calculated.

Tables presented in this fact sheet were taken from a forthcoming research report by Michael S. Salkin and Tesfa Ghebremedhin, "An Analysis of the Oklahoma Coal Industry."