EXPLANATION

——— *m* ——— ? —

Coal bed, approximately located; dashed where inferred; queried where doubtful. Letter symbol indicates coal-bed name: *m*, Mineral; *r*, Rowe; *tu*, Tulsa; *b*, Bluejacket

U/D — — — ? — —

Fault; dashed where approximately located; dotted where concealed; queried where probable; U, upthrown side; D, downthrown side

——— 1.0 ——————

Isopach contour, in feet; dashed where inferred; dotted where reconstructed; contour interval, 0.2 foot (some lines omitted where tightly contoured)

Abandoned mine shaft

Inaccessible drift or slope mine

Small abandoned open pit

○ 3

Coal drill hole; number corresponds to core hole, Appendix 2; unnumbered holes from other studies

× 62

Point of exposure; number corresponds to measured sections of this report; unnumbered points from other studies

Mined out areas

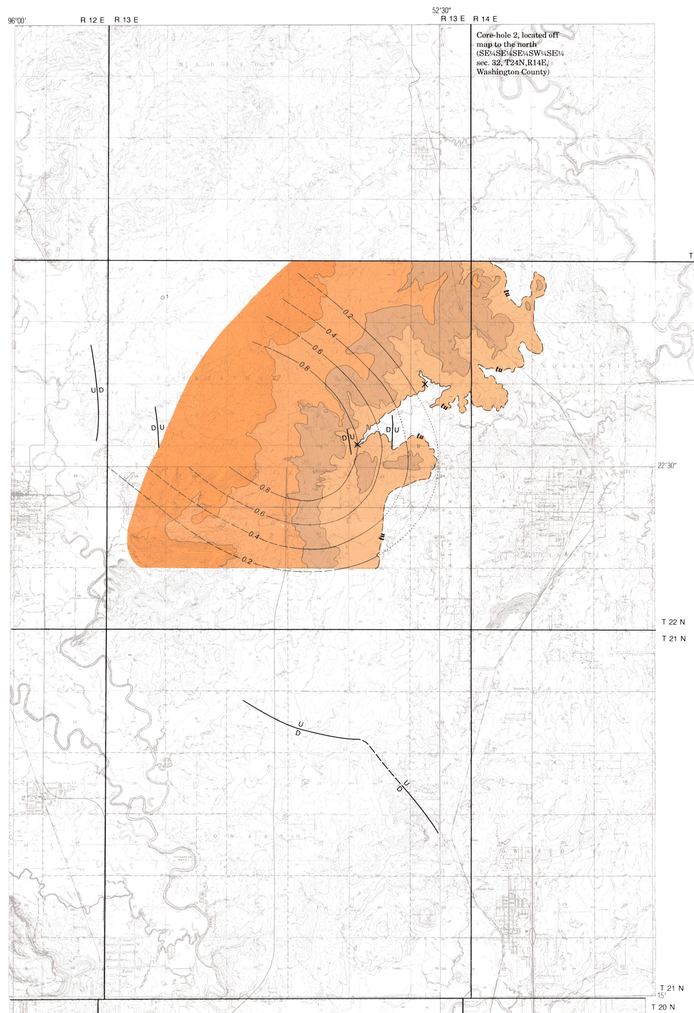
THICKNESS OF OVERBURDEN

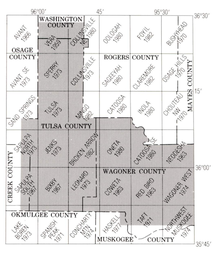
≤ 20 feet

> 20 feet to ≤ 40 feet

> 40 feet to ≤ 100 feet

> 100 feet





BASE FROM U.S. GEOLOGICAL SURVEY
7½-MINUTE-QUADRANGLE MAP SERIES

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

SECTIONIZED TOWNSHIP

On the basis of information provided by coal companies, the average value of the coal produced during 1980 was estimated at $26 per ton. By multiplying the produced tonnage of coal reported to the Oklahoma Department of Mines (252,468 tons) by the average value ($26/ton), the total value of coal produced in the study area was determined to be about $6,564,000. Most of the coal mined in the study area is used for coke manufacture, for generating electric power, or for industrial purposes (Friedman, 1982b). The coal is transported mainly by truck and rail, but some tonnage is moved by barge down the McClellan-Kerr Arkansas River Navigation System.

Mining Methods

At the time the study was made, all coal produced in the area was mined by surface methods. Several methods of overburden removal are used in the stripping operations. McNabb Coal Co. and Bill's Coal Co. use draglines for overburden removal (Figs. 11,12). This system has proved to be efficient in area stripping operations when used in conjunction with bull dozers and scrapers for reclamation and topsoil handling. The smaller companies operate with only crawler tractors, dirt scrapers, and front-end loaders for removal of overburden and reclamation work.

Figure 11. Dragline owned by Bill's Coal Co. stripping overburden from the Secor coal near Porter, in Wagoner County, Oklahoma. The coal bed is 17 in. thick at this site in the NE¼NW¼SW¼SE¼ sec. 6, T. 16 N., R. 17 E., and the average depth of overburden is ~40 ft.

Resources and Reserves

Appendix 1 contains coal data that include original resources, remaining resources, coal mined or lost in mining, and reserves. The data are tabulated by township. Data pertain to each of the 14 coals in the study area that have economic importance: Tullahassee, Rowe, Drywood, Secor, Bluejacket, Weir-Pittsburg, Tebo, Mineral, Croweburg, Iron Post, Jenks, Dawson, Tulsa, and Cedar Bluff. Table 1 shows a combined grand total of 339,549,000 short tons as the original resources of the study area; 337,952,000 short tons as the remaining resources; 21,597,000 short tons as mined or lost in mining; and 50,620,000 short tons as reserves. These figures combine the statistics for all 14 commercial coals in Tulsa, Wagoner, Creek, and Washington Counties.

Table 2 lists the statistics by coal beds for each of the four counties. The Dawson coal is the only coal having economic potential in Creek County, with remaining resources of 15,573,000 short tons, and with reserves of 770,000 short tons. In Tulsa County the Dawson coal has the greatest remaining resources, with 136,616,000 short tons. It also leads in reserves, with 23,109,000 short tons. In Wagoner County, the Mineral coal has the greatest remaining resources, with 42,562,000 short tons. The Mineral coal also leads in reserves with 6,028,000 short tons. The Dawson coal has the greatest remaining resources in Washington County, with 17,636,000 short tons. The Cedar Bluff coal leads in reserves, with 1,276,000 short tons.

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Figure 12. View of strip mine operated by Bill's Coal Co. in the N½SE¼ sec. 6, T. 16 N., R. 17 E., near Porter, Wagoner County, Oklahoma. One of two draglines used to remove overburden from the Secor coal is visible at the far end of the cut. (For a description of the strata, see Appendix 2, measured section 19.)

TABLE 1.—COAL RESOURCES AND RESERVES IN TULSA, WAGONER, CREEK, AND WASHINGTON COUNTIES ACCORDING TO TOWNSHIP AND COAL THICKNESS*
(thousands of short tons)

Township, range, county	Remaining resources: 0.8–1.2 ft Acres	Tons	1.2–2.4 ft Acres	Tons	2.4–3.5 ft Acres	Tons	>3.5 ft Acres	Tons	Total remaining resources Acres	Tons	Mined or lost in mining Acres	Tons	Original resources Acres	Tons	Reserves Acres	Tons
T. 15 N., R. 17 E., Wagoner	202	328	749	1,927					951	2,255			951	2,255	73	95
T. 15 N., R. 18 E., Wagoner	6	9							6	9			6	9	3	4
T. 16 N., R. 12 E., Creek and Tulsa	110	198	299	782					409	980	3	8	412	988	346	695
T. 16 N., R. 14 E., Wagoner	6	9	1,863	5,032					1,869	5,041			1,869	5,041	28	74
T. 16 N., R. 15 E., Wagoner	170	306	1,698	4,357					1,868	4,663	4	10	1,872	4,673	297	468
T. 16 N., R. 16 E., Wagoner	668	1,281	4,259	11,401					4,927	12,682	66	189	4,993	12,871	216	408
T. 16 N., R. 17 E., Wagoner	3,553	6,163	4,911	13,389					8,464	19,552	745	2,127	9,209	21,679	2,390	4,776
T. 16 N., R. 18 E., Wagoner	801	1,311							801	1,311			801	1,311	144	192
T. 17 N., R. 12 E., Creek and Tulsa	151	271	4,736	14,524					4,887	14,795	1	3	4,888	14,798	1,010	2,566
T. 17 N., R. 13 E., Tulsa			725	2,481					725	2,481			725	2,481	397	1,087
T. 17 N., R. 14 E., Tulsa			1,075	2,711					1,075	2,711			1,075	2,711	109	220
T. 17 N., R. 15 E., Wagoner	878	1,316	328	841					1,206	2,157			1,206	2,157	218	356
T. 17 N., R. 16 E., Wagoner	1,702	2,574	14	34					1,716	2,608	2	3	1,718	2,611	727	901
T. 17 N., R. 17 E., Wagoner											1	1	1	1		
T. 17 N., R. 18 E., Wagoner	781	1,422	96	213					877	1,635	42	72	919	1,707	750	1,113
T. 18 N., R. 12 E., Creek and Tulsa			9,710	30,447	378	1,603			10,088	32,050	107	337	10,195	32,387	2,050	5,574
T. 18 N., R. 13 E., Tulsa			408	1,388					408	1,388			408	1,388	357	968
T. 18 N., R. 14 E., Tulsa			4,577	11,691					4,577	11,691	314	847	4,891	12,538	66	141
T. 18 N., R. 15 E., Wagoner	2,899	4,910	8,760	23,538					11,659	28,448	1,339	4,563	12,998	33,011	1,309	2,822
T. 18 N., R. 16 N., Wagoner	1,984	3,392	87	191					2,071	3,583	5	9	2,076	3,592	746	693
T. 18 N., R. 17 E., Wagoner	1,130	1,962	1,970	4,640	2	7			3,102	6,609	2	4	3,104	6,613	2,040	4,070
T. 18 N., R. 18 E., Wagoner	3	3	193	435					196	438	2	3	198	441	195	350
T. 19 N., R. 12 E., Tulsa			73	312	971	4,280			1,044	4,592			1,044	4,592	85	296
T. 19 N., R. 13 E., Tulsa			1,792	7,321	2,261	10,062			4,053	17,383	868	3,845	4,921	21,228	1,139	4,000
T. 19 N., R. 14 E., Tulsa			597	1,504					597	1,504			597	1,504		
T. 19 N., R. 15 E., Wagoner	2,618	4,683	11,451	29,168	701	3,637			14,770	37,488	1,738	5,006	16,508	42,494	1,832	4,612
T. 19 N., R. 16 E., Wagoner	302	476							302	476			302	476	133	173
T. 20 N., R. 13 E., Tulsa			6,795	25,912					6,795	25,912	635	2,516	7,430	28,428	1,663	4,788
T. 21 N., R. 13 E., Tulsa			6,052	15,130					6,052	15,130	4	13	6,056	15,143	1,121	2,294
T. 21 N., R. 14 E., Tulsa			212	495					212	495	12	28	224	523	197	368
T. 22 N., R. 12 E., Tulsa	974	1,417	1,313	4,253					2,287	5,670			2,287	5,670	10	11
T. 22 N., R. 13 E., Tulsa	2,926	4,367	7,326	21,374					10,252	25,741	1	2	10,253	25,743	744	1,259
T. 22 N., R. 14 E., Tulsa			6,914	23,024					6,914	23,024	623	2,011	7,537	25,035	1,341	3,970
T. 23 N., R. 12 E., Washington	229	392	490	1,586					719	1,978			719	1,978		
T. 23 N., R. 13 E., Washington	1,690	2,921	3,071	9,224					4,761	12,145			4,761	12,145	787	1,276
T. 23 N., R. 14 E., Washington			3,610	9,327					3,610	9,327			3,610	9,327		
TOTAL	23,783	39,711	96,154	278,652	4,313	19,589			124,250	337,952	6,514	21,597	130,764	359,549	22,463	50,620

*See Appendix 1 for details.

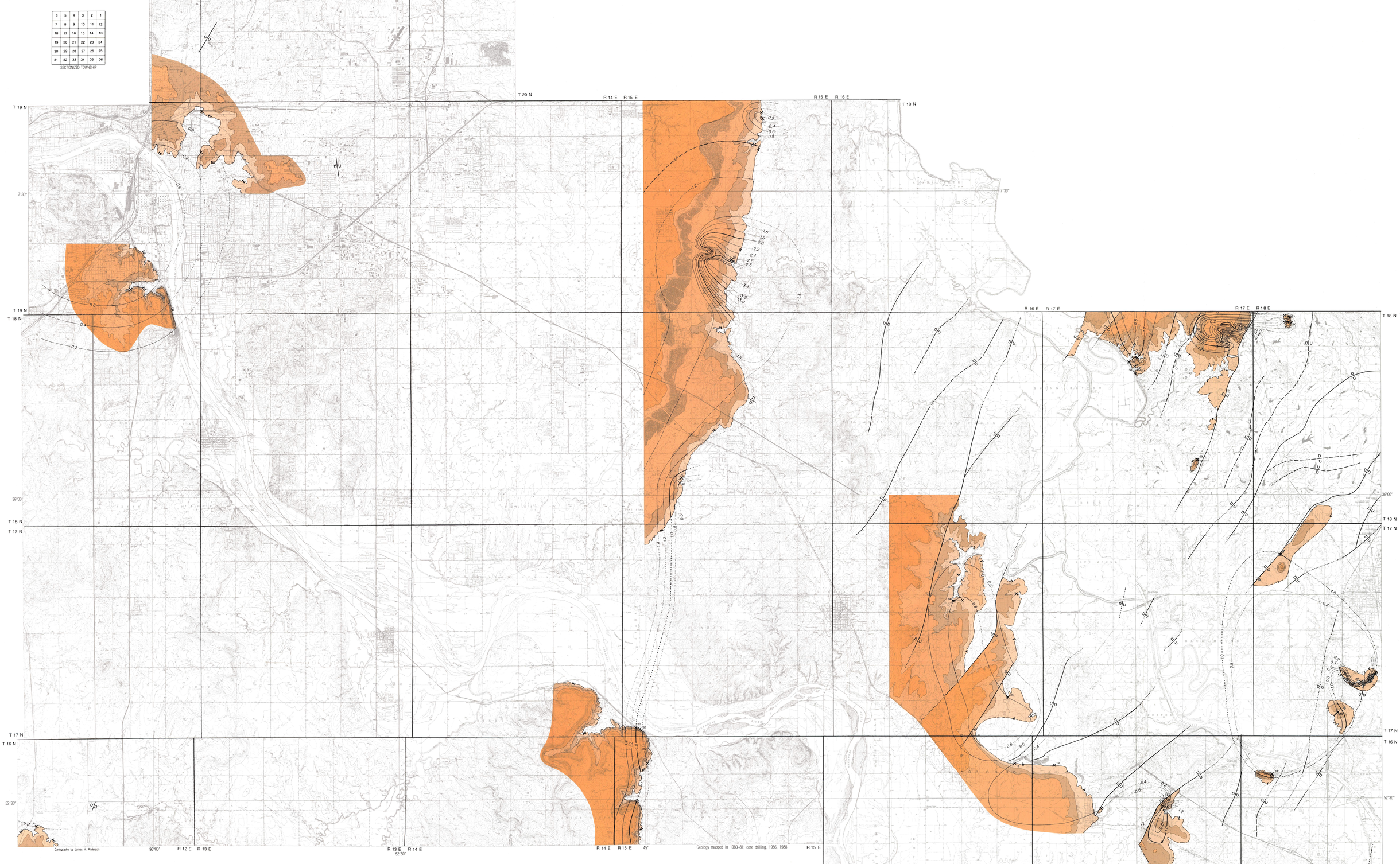
TABLE 2.—COAL RESOURCES AND RESERVES IN TULSA, WAGONER, CREEK, AND WASHINGTON COUNTIES BY COUNTY AND COAL BED*
(thousands of short tons)

Coal	Total Remaining Resources Acres	Tons	Mined or Lost in Mining Acres	Tons	Original Resources Acres	Tons	Reserves Acres	Tons
Tulsa County:								
Cedar Bluff	2,539	4,343	1	2	2,540	4,345	566	1,054
Tulsa	1,772	2,550	—	—	1,772	2,550	188	216
Dawson	40,809	136,616	2,253	8,761	43,062	145,377	8,316	23,109
Jenks	3,404	10,559	—	—	3,404	10,559	1,025	2,727
Croweburg	4,788	12,296	314	847	5,102	13,143	66	141
Mineral	1,461	3,610	—	—	1,461	3,610	109	220
Total	54,773	169,974	2,568	9,610	57,341	179,584	10,270	27,467
Wagoner County:								
Iron Post	1,012	1,802	—	—	1,012	1,802	484	717
Croweburg	10,516	28,240	3,081	9,579	13,597	37,819	498	1,266
Mineral	16,605	42,562	—	—	16,605	42,562	2,390	6,028
Tebo	2,493	3,685	1	1	2,494	3,686	243	284
Weir-Pittsburg	2,889	5,197	5	10	2,894	5,207	781	762
Bluejacket	3,034	5,121	—	—	3,034	5,121	1,350	1,843
Secor	10,799	28,398	807	2,310	11,606	30,708	1,790	4,004
Drywood	368	570	5	7	373	577	199	248
Rowe	4,242	8,804	46	79	4,288	8,883	3,015	5,578
Tullahassee	2,827	4,576	1	1	2,828	4,577	291	377
Total	54,785	128,955	3,946	11,987	58,731	140,942	11,041	21,107
Creek County:								
Dawson	5,602	15,573	—	—	5,602	15,573	365	770
Total	5,602	15,573	—	—	5,602	15,573	365	770
Washington County:								
Cedar Bluff	2,915	5,814	—	—	2,915	5,814	787	1,276
Dawson	6,175	17,636	—	—	6,175	17,636	—	—
Total	9,090	23,450	—	—	9,090	23,450	787	1,276
Grand Total	124,250	337,952	6,514	21,597	130,764	359,549	22,463	50,620

*See Appendix 1 for details.

For the reader's convenience Tables 1 and 2 are shown on both Plates 1 and 3.

Appendixes 1-4 in accompanying booklet.



MAP OF ROWE, BLUEJACKET, MINERAL, AND TULSA COAL BEDS IN TULSA, WAGONER, AND CREEK COUNTIES, OKLAHOMA

By
LeRoy A. Hemish
1990

SCALE 1:63 360

1 ½ 0 1 2 3 4 MILES

1 .5 0 1 2 3 4 KILOMETERS

CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL