# State inspector of coal mines reports

### Section 36, Pages 1051 - 1080

These reports of the Kansas State Mine Inspector mostly concern coal mining, though by 1929 the scope of the reports broadens to include metal mines. The content of individual reports will vary. The reports address mining laws and mining districts; industry production and earnings; fatal and non-fatal accidents; accident investigations and transcripts of oral interviews; labor strikes; mine locations; mining companies and operators; and proceedings of mining conventions. The reports document the political, economic, social, and environmental impacts of more than seventy years of mining in southeastern Kansas.

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**State inspector of coal mines reports**



CHEROKEE COUNTY COAL-MINES—CONCLUDED.

| Office No. | No. of kegs of powder used during the year | No. of days mine worked during the year | Av. price paid per ton for mining. Lump | Av. price paid per ton for mining. Mine run | Estimated value of fixtures | Estimated value of mine | Casualties. Killed | Casualties. Injured | Average selling price of coal at mine. Lump | Nut | Slack | Mine run | Av. wages paid day man underground | Av. wages paid day man over ground |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4,853 | 170 | ..... | $0 55 | $8,000 | $10,000 | .... | .... | $1 30 | $1 00 | $0 30 | $1 00 | $2 00 | $1 60 |
| 2 | 5,348 | 140 | ..... | 55 | 10,000 | 25,000 | .... | .... | 1 30 | 1 00 | 30 | 1 00 | 2 00 | 1 60 |
| 3 | 9,954 | 230 | ..... | 55 | 12,000 | 30,000 | .... | .... | 1 30 | 1 00 | 30 | 1 00 | 2 00 | 1 60 |
| 4 | 5,747 | 195½ | ..... | 55 | 9,000 | 6,000 | .... | .... | 1 30 | 1 00 | 30 | 1 00 | 2 00 | 1 60 |
| 5 | 3,121 | 220 | ..... | 55 | 10,000 | 25,000 | .... | 1 | 1 40 | 1 02 | 40 | 1 02 | 2 00 | 1 60 |
| 6 | 150 | 150 | ..... | 55 | 200 | 200 | .... | .... | 1 25 | 1 00 | 30 | 1 00 | 2 00 | 1 60 |
| 7 | 1,249 | 214 | ..... | 55 | 5,000 | 8,000 | .... | 1 | 1 30 | 1 02 | 30 | 1 02 | 2 00 | 1 60 |
| 8 | 1,512 | 100 | ..... | 55 | Mine worked out. | | .... | .... | 1 30 | 1 02 | 30 | 1 02 | 2 00 | 1 60 |
| 9 | 302½ | 60 | ..... | 55 | 4,000 | 3,000 | .... | .... | 1 30 | 1 02 | 30 | 1 02 | 2 00 | 1 60 |
| 10 | 1,472 | 89 | ..... | 55 | 4,000 | 30,000 | .... | .... | 1 35 | 1 02 | 35 | 1 02 | 2 00 | 1 60 |
| 11 | 1,000 | 220 | ..... | 55 | ..... | ..... | .... | 1 | 1 25 | 1 00 | 30 | 1 00 | 2 00 | 1 60 |
| 12 | 12,000 | 230 | ..... | 55 | ..... | ..... | 1 | .... | 1 25 | 1 00 | 30 | 1 00 | 2 00 | 1 60 |
| 13 | 375 | 220 | ..... | 55 | 5,000 | 25,000 | .... | .... | 1 25 | 1 00 | 30 | 1 00 | 2 00 | 1 60 |
| 14 | 110 | 110 | ..... | 55 | 300 | 1,000 | .... | .... | ..... | ..... | ..... | 1 00 | 2 00 | 1 60 |
| 15 | 360 | 189 | ..... | 55 | 350 | 1,500 | .... | .... | 1 37½ | 1 05 | 50 | 1 05 | 2 00 | 1 60 |
| 16 | ..... | ..... | ..... | ..... | ..... | ..... | .... | .... | ..... | ..... | ..... | ..... | ..... | ..... |
| 17 | 7,985 | 180 | ..... | 55 | 20,000 | 30,000 | .... | .... | ..... | ..... | ..... | 92 | 2 00 | 1 60 |
| 18 | 5,960 | 180 | ..... | 55 | 20,000 | 30,000 | .... | .... | ..... | ..... | ..... | 92 | 2 00 | 1 60 |
| 19 | 167 | 300 | $1 00 | ..... | 25,000 | 35,000 | .... | .... | 1 20 | ..... | ..... | ..... | 2 00 | 1 60 |
| 20 | ..... | ..... | ..... | ..... | ..... | ..... | .... | .... | ..... | ..... | ..... | ..... | ..... | 2 00 |
| 21 | 170 | 120 | ..... | 55 | 500 | 800 | .... | .... | 1 25 | 60 | ..... | 1 00 | 2 00 | 1 60 |
| 22 | 937 | 125 | ..... | 55 | 1,500 | 2,000 | .... | 1 | 1 50 | 1 00 | 40 | 1 00 | 2 00 | 1 75 |
| 23 | 170 | 200 | ..... | 55 | 300 | 500 | .... | .... | 1 50 | ..... | 50 | ..... | 2 00 | 1 60 |
| 24 | 2,952 | 153½ | ..... | 55 | 9,000 | 4,000 | .... | .... | 1 35 | 1 05 | 45 | 1 05 | 2 00 | 1 50 |
| 25 | ..... | ..... | ..... | ..... | ..... | ..... | .... | .... | ..... | ..... | ..... | ..... | ..... | ..... |
| 26 | ..... | ..... | ..... | ..... | ..... | ..... | .... | .... | ..... | ..... | ..... | ..... | ..... | ..... |
| 27 | ..... | ..... | ..... | ..... | ..... | ..... | .... | .... | ..... | ..... | ..... | ..... | ..... | ..... |
| 28 | ..... | ..... | ..... | ..... | ..... | ..... | .... | .... | ..... | ..... | ..... | ..... | ..... | ..... |
| 29 | ..... | 115 | ..... | ..... | ..... | ..... | .... | .... | 1 25 | 1 00 | 30 | 1 00 | ..... | ..... |
| | 65,894½ | 3,910 | ..... | ..... | 144,150 | 273,000 | 1 | 4 | ..... | ..... | ..... | ..... | ..... | ..... |

NOTE.—Number of mines leased by Commercial Coal Company, 3.

OSAGE COUNTY.

This county produced 181,857 tons of coal, valued at $300,974, and gave employment to 1462 employees for 124 days during the year. The different mine reports show a falling off of coal production in this county for the past few years, until now in the summer time the mines are practically shut down. The cause of this falling off may be attributed to three different causes: First, the coal-vein of Osage county is thin, averaging in thickness from 8 to 16 inches; the digging price is high as compared with other coal-fields in the state, and yet it is so low that the miner cannot make a decent livelihood by following mining. Second, the thicker coal-veins of southeastern Kansas come in large competition with the Osage coal-fields and all other small coal-fields in reach, as the cost of production is so much less and the quality of the coal is better. Third, the discriminations in favor of long hauls and against short hauls by the railway companies, from Missouri, Colorado, and southeastern Kansas, enables them to put coal on the market for less money than Osage county can. Nearly every operator that the Inspector talked with complained about freight-rates, and claimed that there were large discriminations. Many of the miners believed that all of their trouble was caused by the penitentiary coal coming in competition with Osage coal. This opinion was largely brought about by republican politicians and newspapers; they all joined in and claimed that the penitentiary coal-mine and its convict-produced coal was what was ailing the Osage county miner, and that the Osage county miner, according to the opinion furnished by these politicians, should vote against the administration and all of the reformed party. The republican politician had an eye to what he called business; the miner would soon have been forgotten. Now, if the penitentiary coal-mine was forever closed down, and these other evils existed, Osage county would gradually be falling off as a coal-producing county. If the miners will go back with the Inspector for about nine years, they will see that there were 130 openings of one kind and another in Osage county, and all worked about one-half time. The Mine Inspector's report for the year ending 1889, published in 1890, shows that Osage county produced 396,784 tons of coal, valued at $807,802; and for the year ending 1897 Osage county had about 40 openings and produced 181,857 tons of coal, valued at $300,974—showing a falling off in tons of 214,927, and in money value of $506,828. Also, the miner was paid, about nine years ago, 5½ and 6 cents per bushel for mining; now he is paid from 4 to 5 cents. This shows that Osage county has been gradually going back in the coal industry. Now, for the year ending 1889, and reported in 1890, the penitentiary coal-mine produced 62,728 tons of coal, valued

# State inspector of coal mines reports



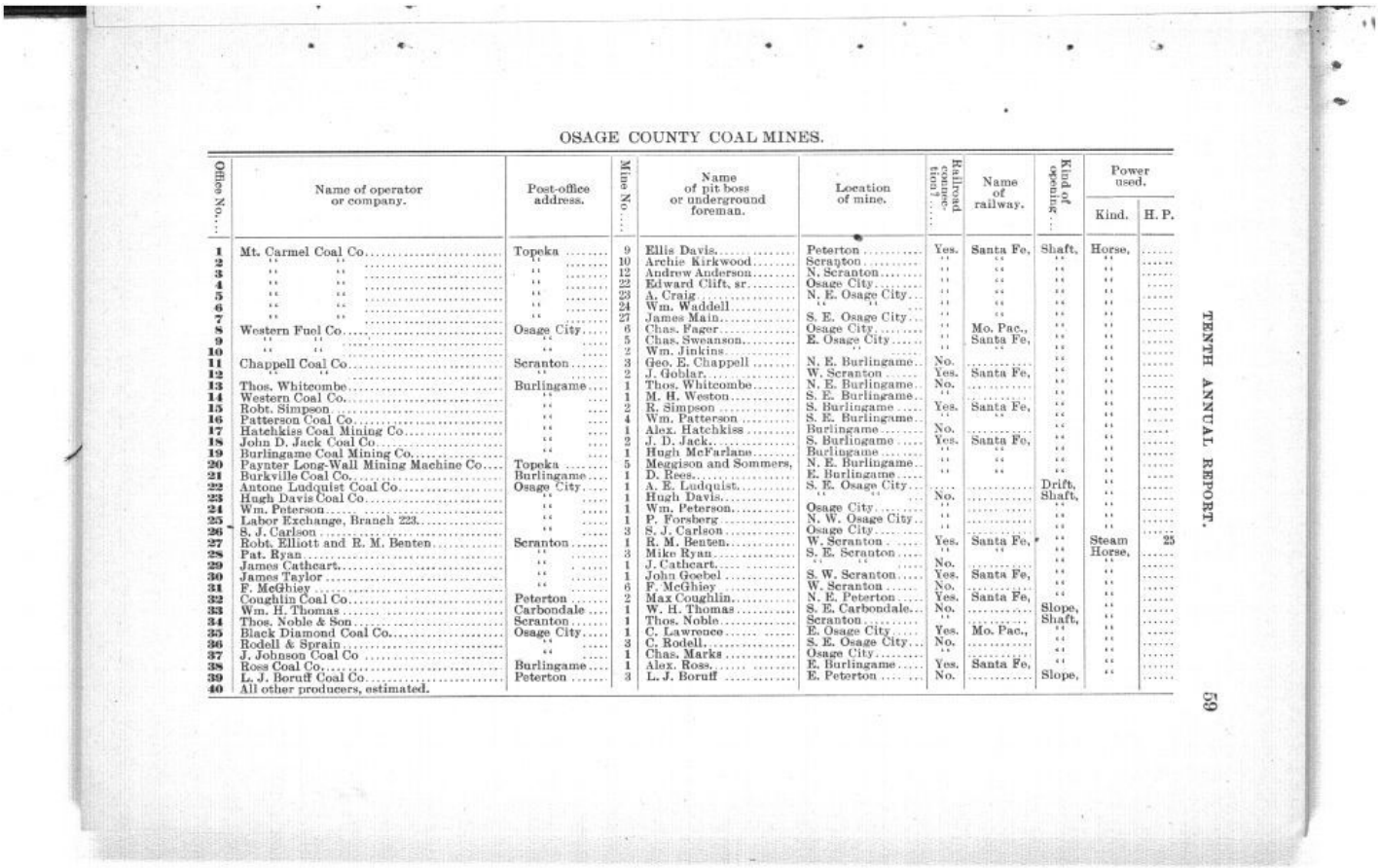
at $109,774; in 1897 the penitentiary produced 64,880 tons of coal, valued at the penitentiary mine at $82,928.40. The Inspector brings these figures into this report to show that had the penitentiary mine not placed one bushel of coal upon the market, the Osage county coal-field would have gone down just the same in the production of coal. Inspector thinks that he has made this matter plain for any reasonable and unprejudiced man; that the increased development of the thicker and cheaper veins of coal marks each year a falling off of the Osage county coal production. This is helped by favorable freight-rates for long haul against higher freight-rates for short hauls. This brings about the very results that are fast absorbing the Osage county coal-fields, and all other small coal-fields that come in competition. Now, the Inspector is not in favor of convict coal coming in competition with free-mined coal, and will recommend elsewhere in this report that not one ton of convict coal be allowed to go upon the market outside of state institutions; also, the Inspector finds that a majority of the mines in Osage county are worked by just a few men, and in many cases only a part of the mine is being worked, as they do not work enough to keep the mine all open; as all of the mines in this county are worked upon the long-wall system, when work is slow it is hard to keep the face all open, as the company does not get enough money out of the work to pay the expense of keeping everything in the shape it ought to be; therefore, they only work a part of the mine at one time; and in quite a number of other mines the miners and the company share alike in the sales of the coal, and among the miners they do all the dead work when they have no sale for the coal. It is a continual struggle with the coal companies and their men to keep their heads above water, and many have given it up and abandoned the work. Quite a number of the coal companies in and around Osage City have pooled their coal interest in a coöoperative way, for the purpose of reducing the expense and cost of selling coal by sending it all through one office, thereby saving a few cents on a ton of coal by reducing clerk hire and salesmen expenses. What success they will have will remain to be seen later. Also, another branch of good miners found that they could not make a living digging coal for the different companies; so they got together and discussed the matter of forming an exchange company, known as Osage City Labor Exchange, Branch No. 223, mine No. 1. This is a shaft opening, horse power, located one mile northwest of A. T. & S. F. railway depot, and worked upon the coöperative and exchange plan. The aims and intentions of the labor exchange are, a means to provide work for the unemployed, and also to have a just remuneration for their labor. About the beginning of May, 1897, these men got together and talked the

**State inspector of coal mines reports**



matter over of joining a general labor exchange, and in a few days they got together again and organized and asked for a charter, which was granted to this small company of men. They called it the Local Branch of Osage City, No. 223; they then secured the lease of 40 acres of coal land and went to work and sunk a shaft, and the results you will see by the report following. They had nothing financially when they started; all they had was their own muscle and determination; they have now arrived at a point which you might call success, by having as well-equipped a mine as there is in the county of the kind; and the following statement, which the Inspector received from this exchange will show progress each month: For the month of June, 1897, 8 tons, 360 lbs.; July, 224⅜ tons; August, 333 tons, 350 lbs.; September, 647 tons, 100 lbs.; October, 852 tons, 280 lbs.; November, 1012 tons, 1270 lbs.; December, 1096 tons, 440 lbs.—making a total of 4174 tons and 300 lbs. of coal for seven months' work after they had got to the coal. This was valued at $6887.55. The mine worked 157 days. They started work with 4 men, and in December had 30; giving 30 men full time from the start, they would have earned an average of $1.06 per day. This is an example of what a few men can do without a dollar in money, using their labor for capital. The average selling and exchange price for coal at mine was $1.65 per ton of 2000 pounds; the average price allowed the miner was $1.25 per ton. If this exchange mine continues to increase for the next year, they will be the best-paid miners that work in Osage county, and, in fact, in the state. Peter Forsborg, mine boss. Geo. L. Thompson, manager.

# State inspector of coal mines reports



OSAGE COUNTY COAL MINES.

| Office No. | Name of operator or company. | Post-office address. | Mine No. | Name of pit boss or underground foreman. | Location of mine. | Railroad connection? | Name of railway. | Kind of opening. | Power used. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Kind. | H. P. |
| 1 | Mt. Carmel Coal Co | Topeka | 9 | Ellis Davis | Peterton | Yes. | Santa Fe, | Shaft, | Horse, | |
| 2 | " " | " | 10 | Archie Kirkwood | Scranton | " | " | " | " | |
| 3 | " " | " | 12 | Andrew Anderson | N. Scranton | " | " | " | " | |
| 4 | " " | " | 22 | Edward Clift, sr | Osage City | " | " | " | " | |
| 5 | " " | " | 23 | A. Craig | N. E. Osage City | " | " | " | " | |
| 6 | " " | " | 24 | Wm. Waddell | " " | " | " | " | " | |
| 7 | " " | " | 27 | James Main | S. E. Osage City | " | " | " | " | |
| 8 | Western Fuel Co | Osage City | 6 | Chas. Fager | Osage City | " | Mo. Pac., | " | " | |
| 9 | " " | " | 5 | Chas. Sweanson | E. Osage City | " | Santa Fe, | " | " | |
| 10 | " " | " | 2 | Wm. Jinkins | " " | " | " | " | " | |
| 11 | Chappell Coal Co | Scranton | 3 | Geo. E. Chappell | N. E. Burlingame | No. | | " | " | |
| 12 | " " | " | 2 | J. Goblar | W. Scranton | Yes. | Santa Fe, | " | " | |
| 13 | Thos. Whitcombe | Burlingame | 1 | Thos. Whitcombe | N. E. Burlingame | No. | | " | " | |
| 14 | Western Coal Co | " | 1 | M. H. Weston | S. E. Burlingame | " | | " | " | |
| 15 | Robt. Simpson | " | 2 | R. Simpson | S. Burlingame | Yes. | Santa Fe, | " | " | |
| 16 | Patterson Coal Co | " | 4 | Wm. Patterson | S. E. Burlingame | " | " | " | " | |
| 17 | Hatchkiss Coal Mining Co | " | 1 | Alex. Hatchkiss | Burlingame | No. | | " | " | |
| 18 | John D. Jack Coal Co | " | 2 | J. D. Jack | S. Burlingame | Yes. | Santa Fe, | " | " | |
| 19 | Burlingame Coal Mining Co | " | 1 | Hugh McFarlane | Burlingame | " | " | " | " | |
| 20 | Paynter Long-Wall Mining Machine Co | Topeka | 5 | Meggison and Sommers, | N. E. Burlingame | " | " | " | " | |
| 21 | Burkville Coal Co | Burlingame | 1 | D. Rees | E. Burlingame | " | " | " | " | |
| 22 | Antone Ludquist Coal Co | Osage City | 1 | A. E. Ludquist | S. E. Osage City | | | Drift, | " | |
| 23 | Hugh Davis Coal Co | " | 1 | Hugh Davis | " " | No. | | Shaft, | " | |
| 24 | Wm. Peterson | " | 1 | Wm. Peterson | Osage City | " | | " | " | |
| 25 | Labor Exchange, Branch 223 | " | 1 | P. Forsberg | N. W. Osage City | " | | " | " | |
| 26 | S. J. Carlson | " | 3 | S. J. Carlson | Osage City | " | | " | " | |
| 27 | Robt. Elliott and R. M. Benten | Scranton | 1 | R. M. Benten | W. Scranton | Yes. | Santa Fe, | " | Steam | 25 |
| 28 | Pat. Ryan | " | 3 | Mike Ryan | S. E. Scranton | " | " | " | Horse, | |
| 29 | James Cathcart | " | 1 | J. Cathcart | " " | No. | | " | " | |
| 30 | James Taylor | " | 1 | John Goebel | S. W. Scranton | Yes. | Santa Fe, | " | " | |
| 31 | F. McGhiey | " | 6 | F. McGhiey | W. Scranton | No. | | " | " | |
| 32 | Coughlin Coal Co | Peterton | 2 | Max Coughlin | N. E. Peterton | Yes. | Santa Fe, | " | " | |
| 33 | Wm. H. Thomas | Carbondale | 1 | W. H. Thomas | S. E. Carbondale | No. | | Slope, | " | |
| 34 | Thos. Noble & Son | Scranton | 1 | Thos. Noble | Scranton | " | | Shaft, | " | |
| 35 | Black Diamond Coal Co | Osage City | 1 | C. Lawrence | E. Osage City | Yes. | Mo. Pac., | " | " | |
| 36 | Rodell & Sprain | " | 3 | C. Rodell | S. E. Osage City | No. | | " | " | |
| 37 | J. Johnson Coal Co | " | 1 | Chas. Marks | Osage City | " | | " | " | |
| 38 | Ross Coal Co | Burlingame | 1 | Alex. Ross | E. Burlingame | Yes. | Santa Fe, | " | " | |
| 39 | L. J. Boruff Coal Co | Peterton | 3 | L. J. Boruff | E. Peterton | No. | | Slope, | " | |
| 40 | All other producers, estimated. | | | | | | | | | |

TENTH ANNUAL REPORT. 59

**State inspector of coal mines reports**



OSAGE COUNTY COAL-MINES—CONTINUED.

| Office No. | Tons of Coal Produced. (2,000 pounds to the ton.) | | | Total number of tons of coal produced. | Employees. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Lump. | Nut and slack. | Mine run. | | Miners | Boys | Mule drivers and pushers | Cagers | Pit bosses, track-layers, roadmen | Engineers, firemen, and pump men | Weighmen and dumpers | Car trimmers and prop men | Blacksmiths and carpenters | Total |
| 1 | 1,541 | | | 1,541 | 42 | 5 | 2 | | 1 | | 1 | | | 51 |
| 2 | 19,969 | | | 19,969 | 84 | 4 | 2 | 1 | 2 | | 2 | | | 95 |
| 3 | 29,372 | | | 29,372 | 101 | 6 | 2 | 1 | 3 | | 2 | | | 115 |
| 4 | 1,999 | | | 1,999 | 73 | 4 | | | 1 | | 1 | | | 79 |
| 5 | 4,263 | | | 4,263 | 65 | 6 | | | 1 | | 1 | | | 73 |
| 6 | 6,099 | | | 6,099 | 79 | 4 | | | 1 | | 1 | | | 85 |
| 7 | 19,606 | | | 19,606 | 121 | 10 | | | 2 | | 2 | | | 135 |
| 8 | 3,369 | | | 3,369 | 30 | | | | 1 | | 1 | | | 32 |
| 9 | 884 | | | 884 | 56 | | | | 2 | | 1 | | | 59 |
| 10 | 1,752 | | | 1,752 | 10 | | | | 1 | | 1 | | | 12 |
| 11 | 4,110 | | | 4,110 | 17 | | 1 | | 1 | | 1 | | | 20 |
| 12 | 6,041 | | | 6,041 | 26 | | 2 | 1 | 1 | | 1 | | | 31 |
| 13 | 2,000 | | | 2,000 | 10 | | 1 | | | | 1 | | | 12 |
| 14 | 800 | | | 800 | 6 | | | | 1 | | 1 | | | 8 |
| 15 | 834 | | | 834 | 14 | | 1 | | | | 1 | | | 16 |
| 16 | 656 | | | 656 | 5 | | 1 | | | | 1 | | | 7 |
| 17 | 1,797 | | | 1,797 | 15 | 4 | 2 | 2 | | | 1 | | | 28 |
| 18 | 5,310 | | | 5,310 | 25 | 2 | 1 | 1 | | | 1 | | | 30 |
| 19 | 3,015 | | | 3,015 | 30 | | 2 | | 1 | | 1 | | | 24 |
| 20 | 3,000 | | | 3,000 | 25 | | | | 2 | | 1 | | | 28 |
| 21 | 420 | | | 420 | 10 | 2 | 1 | | 1 | | 1 | | | 15 |
| 22 | 2,650 | | | 2,650 | 9 | | | | 1 | | 1 | | | 11 |
| 23 | 25 | | | 25 | 3 | | | | 1 | | 1 | | | 5 |
| 24 | 331 | | | 331 | 2 | | | | 1 | | | | | 3 |
| 25 | 4,174 | | | 4,174 | 30 | | 3 | | 2 | | 1 | | | 36 |
| 26 | 2,026 | | | 2,026 | 23 | | | | | | 1 | | | 24 |
| 27 | 5,578 | | | 5,578 | 28 | | 2 | 1 | 1 | 1 | 1 | | | 34 |
| 28 | 8,242 | | | 8,242 | 28 | 3 | 1 | | 1 | | 1 | | | 34 |
| 29 | 700 | | | 700 | 4 | | 1 | | | | 1 | | | 6 |
| 30 | 3,000 | | | 3,000 | 15 | | 1 | | | | 1 | | | 17 |
| 31 | 200 | | | 200 | 3 | | | | | | 1 | | | 4 |
| 32 | 6,890 | | | 6,890 | 50 | 5 | 1 | | 1 | | 1 | | | 60 |
| 33 | 1,022 | | | 1,022 | 8 | 2 | | | 1 | | | | | 11 |
| 34 | 950 | | | 950 | 6 | 1 | | | 1 | | 1 | | | 9 |
| 35 | 2,271 | | | 2,271 | 30 | 3 | | | 1 | | 1 | | | 35 |
| 36 | 1,547 | | | 1,547 | 25 | | | | 1 | | 1 | | | 27 |
| 37 | 2,222 | | | 2,222 | 9 | | | | 1 | | | | | 10 |
| 38 | 1,682 | | | 1,682 | 15 | 4 | | | | | 1 | | | 20 |
| 39 | 3,510 | | | 3,510 | 6 | | | | 1 | | | | | 7 |
| 40 | 18,000 | | | 18,000 | 150 | | | | | | | | | 150 |
| | 181,857 | | | 181,857 | 1,288 | 65 | 27 | 7 | 36 | 1 | 38 | | | 1,463 |

# State inspector of coal mines reports



OSAGE COUNTY COAL MINES—CONCLUDED.

| Office No. | No. of kegs of powder used during the year | No. of days mine worked during the year | Av. price paid per ton for mining. Lump | Av. price paid per ton for mining. Mine run | Estimated value of fixtures | Estimated value of mine | Casualties. Killed | Casualties. Injured | Average selling price of coal at mine. Lump | Nut | Slack | Mine run | Av. wages paid day man underground | Av. wages paid day man over ground |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ..... | 20 | $1 15 | ..... | $800 | $2,000 | .... | .... | $1 75 | ..... | ..... | ..... | $2 00 | $1 75 |
| 2 | ..... | 144 | 1 00 | ..... | 600 | 2,000 | .... | 1 | 1 55 | ..... | ..... | ..... | 2 00 | 1 75 |
| 3 | ..... | 178 | 1 00 | ..... | 600 | 2,000 | .... | .... | 1 55 | ..... | ..... | ..... | 2 00 | 1 75 |
| 4 | ..... | 18 | 1 25 | ..... | 600 | 2,000 | .... | 1 | 1 80 | ..... | ..... | ..... | 2 00 | 1 75 |
| 5 | ..... | 42 | 1 25 | ..... | 600 | 2,000 | .... | 1 | 1 80 | ..... | ..... | ..... | 2 00 | 1 75 |
| 6 | ..... | 45 | 1 25 | ..... | 600 | 2,000 | .... | 1 | 1 80 | ..... | ..... | ..... | 2 00 | 1 75 |
| 7 | ..... | 120 | 1 25 | ..... | 600 | 2,000 | .... | .... | 1 80 | ..... | ..... | ..... | 2 00 | 1 75 |
| 8 | ..... | 96 | 1 25 | ..... | 1,000 | 2,000 | .... | .... | 1 80 | ..... | ..... | ..... | 2 00 | 1 75 |
| 9 | ..... | 141 | 1 25 | ..... | 1,000 | 1,500 | .... | .... | 1 90 | ..... | ..... | ..... | 2 00 | 1 75 |
| 10 | ..... | 71 | 1 25 | ..... | 1,000 | 2,000 | .... | .... | 1 90 | ..... | ..... | ..... | 2 00 | 1 75 |
| 11 | ..... | 153 | 1 10 | ..... | 1,000 | 1,000 | .... | 1 | 1 59 | ..... | ..... | ..... | 2 00 | 1 75 |
| 12 | ..... | 151 | 1 00 | ..... | 500 | 500 | .... | .... | 1 54 | ..... | ..... | ..... | 2 00 | 1 75 |
| 13 | ..... | 150 | 1 10 | ..... | 250 | 2,000 | .... | .... | 1 60 | ..... | ..... | ..... | 1 75 | 1 50 |
| 14 | 1 | 150 | 1 20 | ..... | 200 | 200 | .... | .... | 1 75 | ..... | ..... | ..... | 1 75 | 1 50 |
| 15 | 8 | 100 | 1 35 | ..... | 500 | 500 | .... | .... | 1 80 | ..... | ..... | ..... | 2 00 | 1 75 |
| 16 | ..... | 120 | 1 10 | ..... | 75 | 300 | .... | .... | 1 60 | ..... | ..... | ..... | 1 75 | 1 50 |
| 17 | 40 | 100 | 1 10 | ..... | 300 | 1,000 | .... | .... | 1 70 | ..... | ..... | ..... | 2 00 | 1 75 |
| 18 | 3 | 245 | 1 10 | ..... | 955 | 1,000 | .... | .... | 1 60 | ..... | ..... | ..... | 2 00 | 1 75 |
| 19 | 8 | 204 | 1 10 | ..... | 800 | 1,200 | .... | 1 | 1 65 | ..... | ..... | ..... | 2 00 | 1 75 |
| 20 | 5 | 175 | 1 10 | ..... | 500 | 2,500 | .... | .... | 1 65 | ..... | ..... | ..... | 2 00 | 1 75 |
| 21 | 3 | 30 | 1 10 | ..... | 300 | 1,000 | .... | .... | 1 65 | ..... | ..... | ..... | 2 00 | 1 75 |
| 22 | 6 | 250 | 1 25 | ..... | 100 | 1,000 | .... | .... | 1 60 | ..... | ..... | ..... | 1 75 | 1 50 |
| 23 | ..... | 30 | 1 62½ | ..... | 100 | 200 | .... | .... | 1 80 | ..... | ..... | ..... | 2 00 | 1 75 |
| 24 | ..... | 150 | 1 25 | ..... | 100 | 200 | .... | .... | 1 70 | ..... | ..... | ..... | 2 00 | 1 75 |
| 25 | 4 | 157 | 1 25 | ..... | 800 | 800 | .... | 1 | 1 65 | ..... | ..... | ..... | 2 00 | 1 75 |
| 26 | 1 | 75 | 1 25 | ..... | 250 | 1,000 | .... | .... | 1 78 | ..... | ..... | ..... | 2 00 | 1 75 |
| 27 | 1 | 150 | 1 00 | ..... | 1,000 | 2,000 | .... | .... | 1 60 | ..... | ..... | ..... | 2 00 | 1 75 |
| 28 | 1 | 183 | 1 00 | ..... | 400 | 2,000 | .... | .... | 1 50 | ..... | ..... | ..... | 2 00 | 1 75 |
| 29 | ..... | 200 | 1 00 | ..... | 250 | 250 | .... | .... | 1 50 | ..... | ..... | ..... | 2 00 | 1 75 |
| 30 | 1 | 150 | 1 10 | ..... | 600 | 1,000 | .... | .... | 1 50 | ..... | ..... | ..... | 2 00 | 1 75 |
| 31 | ..... | 50 | 1 10 | ..... | 100 | 250 | .... | .... | 1 50 | ..... | ..... | ..... | 2 00 | 1 75 |
| 32 | ..... | 200 | 1 25 | ..... | 1,000 | 2,000 | .... | .... | 1 75 | ..... | ..... | ..... | 2 00 | 1 75 |
| 33 | ..... | 68 | 1 10 | ..... | 100 | 200 | .... | .... | 1 50 | ..... | ..... | ..... | 2 00 | 1 75 |
| 34 | ..... | 150 | 1 15 | ..... | 2,000 | 2,000 | .... | .... | 1 70 | ..... | ..... | ..... | 2 00 | 1 75 |
| 35 | 2 | 150 | 1 25 | ..... | ..... | ..... | .... | .... | ..... | ..... | ..... | ..... | 2 00 | 1 75 |
| 36 | 2 | 80 | 1 25 | ..... | 500 | 1,000 | .... | .... | 1 70 | ..... | ..... | ..... | 2 00 | 1 75 |
| 37 | ..... | 175 | 1 25 | ..... | 500 | 500 | .... | .... | 1 75 | ..... | ..... | ..... | 2 00 | 1 75 |
| 38 | ..... | 65 | 1 10 | ..... | 500 | 1,500 | .... | .... | 1 50 | ..... | ..... | ..... | 2 00 | 1 75 |
| 39 | 5 | 180 | 1 15 | ..... | 100 | 200 | .... | .... | 1 50 | ..... | ..... | ..... | 2 00 | 1 75 |
| 40 | ..... | 100 | ..... | ..... | ..... | ..... | .... | .... | 1 75 | ..... | ..... | ..... | ..... | *2 25 |
| | 91 | 4,966 | ..... | ..... | $21,130 | $47,100 | .... | 7 | ..... | ..... | ..... | ..... | ..... | ..... |

* Man and team.

LEAVENWORTH COUNTY.

This county is at present gaining in its production of coal. In 1885 it stood in the fourth place upon the list of coal-producing counties, and produced 258,000 tons of coal. In 1886 it moved up to third place by producing 284,000 tons of coal. In 1897 it showed an increase of 83,141 tons over 1896, by producing 367,141 tons during the year, and gave employment to 570 free miners, 62 underground day men, 15 boys, 89 over-ground day men, making a total of 736 free employees. In addition, the penitentiary mine worked 192 convicts mining coal, 112 underground officers and day men, 32 officers and day men above ground, making a total of 336 employees in connection with the mine. The free miners produced 302,261 tons of coal; the penitentiary mine produced 64,880 tons of coal. The free mines worked an average of 183 days during the year, making a gross earning of $424.50 per miner per annum, or a net earning of $401.45; showing that the miners of Leavenworth county earned $129.25 more money than the miners of Crawford county, which is the largest coal-producing county in the state. The reason for this large difference is, that the Leavenworth miners work more days during the year.

*Mine No. 1* owned and operated by the Leavenworth Coal Company is located northeast of Leavenworth and connected with the Mo. Pac. and U. P. railways. It gave employment to 235 miners, 15 boys, 22 underground day men, and 29 over-ground day men; worked 194 days and produced 112,261 tons of coal during the year. This is a shaft opening, equipped with a large double hoisting engine of about 800 horse-power. The area of this mine worked out has been very extensive. In the last year they have abandoned more than half of the area, mostly on the north side of the shaft; they are now opening up on the east side, and getting ready to do very extensive work in that part of the mine. They have drawn back all of their machinery and rails out of the abandoned part of the mine. The nature of these mines is such that in a few years these old and abandoned works will be closed tight, all entries will gradually close together from side pressure, and bottom will heave up. This mine is equipped with the largest fan of any mine in the state; size of fan is 7 x 25 feet; speed of fan is 55 revolutions per minute; size of main shaft is 11 x 12 feet; size of air-shaft, 8 x 10 feet; depth of shaft is 710 feet to the vein of coal that is now being worked; a large and roomy run-around at bottom of shaft for men and cars to pass from one side to the other without going over or under the cage. This mine is worked upon what is known as the long-wall system; main entries east and west, but east side has not been worked very extensively; cross-entries north and south; cross-entries have been worked very extensively; main north over one

mile to face of workings, west and south about three-fourths of a mile. The buildings of this mine are old and somewhat worn. At the time of the Inspector's visit this company was building a new tower or pit head, out of large, heavy northern fir timber; when completed it will be one of the best in the state. This mine is also equipped with double-decked cages; four mining-cars of about 1800 pounds each when loaded can be placed upon the cage at one time; also the cages are equipped with safety catches and are attached to a large steel wire rope of about 15,000 pounds breaking strain. The screens in use at this mine are all gravity; machinery all in good condition; 12 boilers for furnishing steam, 6 with 44-inch heads, and 6 with 48-inch heads; two 16-inch flues in each boiler; lengths of boilers, 20 feet. No boys hired under twelve years of age; all boys over twelve and under sixteen years must furnish a certificate showing that they have attended school three months out of the year. At the time of the Inspector's visit there were 203 miners employed, 23 day men, 7 boys attending doors and other light day work, and 8 boys working on the coal-face with their fathers. This mine has three mine bosses, namely: John Dobson, east side; Grant Parker, south quarter of west side; and S. R. Lowerey (colored), west and north quarter. Each mine boss accompanied the Inspector through his division. Inspector finds sanitary condition of mine in good shape, except on east side; air upon that side light on account of just being opened up and connections for return air not made. Mr. Dobson stated to the Inspector that it would take about three or four months before these connections could be made, as their intention was to connect to the north and south part of the mine that was open; later Mr. Carr, superintendent, notified the Inspector that these connections were made, and that the air was as good upon the east side as any part of the mine. This mine is also equipped with mechanical haulage in the way of an endless rope operated by an electric power; this rope extends west 2200 feet; and they were making ready to put mechanical haulage in east side of the mine, operated by the same kind of power. The speed of the rope is very slow, but could not be otherwise with the style of cars in use, as an increase of speed would buck the cars off the track and cause no end of trouble and wreckage. Mr. Carr also informed the Inspector that they intended putting steamboats on the river, for the purpose of marketing their coal in Kansas City, Atchison, and other points. He complained greatly of transfer charges of railroad companies. For years it has been understood by the people of Leavenworth and other points over the state that this company was working under state land and mining state coal. The Inspector had a survey made of the same; elsewhere a copy of the Inspector's findings is given. John Dobson,

Grant Parker, and S. R. Lowerey, mine bosses. J. E. Carr, superintendent.

*Mines Nos. 1 and 2* belonging to the Home-Riverside Company are located southeast of Leavenworth and connected with U. P., Mo. Pac. and A. T. & S. F. railways. They gave employment to 335 miners, and 100 day men over- and underground, at both mines. Mines worked an average of 230 days; produced 190,000 tons of coal during the year. These mines are both equipped with large double hoisting engines; both shaft openings; mechanical ventilations; gravity screens in use at both mines; buildings in fair condition. At No. 1 mine, size of main shaft is 9 x 14 feet; size of air-shaft, 4 x 9 feet; air-shafts in both mines are bratticed off main shafts; depth of shaft, 712 feet; size of fan, 8 x 22 feet; speed fan operated, 50 revolutions per minute. Both of these mines are connected with a tunnel 3000 feet long. Should an accident occur from fire or other causes the employees could get out through the other mine. Both of these mines are opened up and worked upon what is called the long-wall system. Average thickness of coal-vein, 22 inches. There is also a 14-inch vein above the one now being worked, and 170 feet below the vein now being worked there is a 25-inch vein, and without doubt in due time this lower vein will be worked. Main entries east and west; slant entries from 60 to 65 degrees east and west of north and south; a large and roomy run-around for employees to pass from one side to the other without passing over or under the cages. Roads are all in good condition. No boys are allowed to work in the mine under twelve years of age, and all boys over twelve and under sixteen years must furnish a certificate showing that they have attended school three months out of the year. The Inspector found the sanitary condition of this mine in fair condition except upon the two last return entries; these were very smoky, and could be improved; otherwise the mine is practically in good condition.

*Mine No. 2* is practically the same as mine No. 1 except in size of shaft and fan, and two boilers less than No. 1. Four boilers 44 inches in diameter, length 22 feet; two 16-inch flues in each boiler. No. 1 has six boilers of the same dimensions and kind. Size of No. 2 main shaft is 10 x 14 feet; air-shaft, 4 x 10 feet; size of fan, 3½ x 12 feet; speed fan operated, 60 revolutions per minute. The Inspector was accompanied by mine boss, Mr. Thomas Graham, in going through mine No. 2. This gentleman stated to the Inspector that he wanted him to see every part of the mine, and that anything that was not right in connection with his ventilation he (Graham) would see that it was attended to at once. The Inspector found the sanitary condition good in all parts of the mine that were being worked, and all air-

**State inspector of coal mines reports**



courses along the parts of the mine that were not being worked were generally kept open. Inspector also noticed that not more than one-third of the timber was used upon entry roads in No. 2 that was used upon entry roads in No. 1; and the entry roads in No. 2 seemed to be in first-class condition and mine working full time at the time of Inspector's visit. John Patterson, pit boss mine No. 1; John Graham, pit boss mine No. 2. Geo. W. Keirstead, superintendent.

*Mine No. 1* known as the state penitentiary mine, located at Lansing, is connected with the U. P., Mo. Pac. and A. T. & S. F. railways. It worked 192 convicts mining coal, 112 convicts and officers at underground day work, and 32 officers and convicts at day work above ground in connection with the mine. Mine was in operation 310 days during the year, and produced 64,880 tons of coal. This mine is shaft opening; steam power; mechanical ventilation; equipped with two double hoisting engines, one upon each shaft. The horse-power of the engine on the main shaft is 750, and a first-motion engine; the horse-power upon the air-shaft is 150. Size of main shaft is 10 x 15 feet; size of air-shaft, 7 x 12 feet; depth of shaft, 715 feet; size of fan, 4½ x 16 feet; speed of fan, 55 revolutions per minute; 8 boilers with two 16-inch flues in each boiler to furnish steam for all machinery. Machinery all in first-class condition. Cages are connected with a heavy steel rope and fitted with safety catches. The mine is opened and worked upon the long-wall system. The Inspector traveled all over the mine, accompanied by Mr. John Gray, superintendent, and David Casselman, mine boss, and found the sanitary condition of the mine good; all roads and air-courses in good condition. Mr. Gray pointed out to the Inspector from time to time where a great amount of labor had been done since he came in charge in widening entry roadways and walling them up, and in the rebrushing and cleaning out of the air-courses. The circulating volume of air is very much increased, making the sanitary condition much better and more healthful for the men employed. Mr. Gray also makes the following statement, that in the Ninth Annual Report of the State Mine Inspector the statement was made that a new air-course was made in the penitentiary mine. This same air-course has been extended considerable, and now by actual measurements this air-course does not reach the number of feet in length that was given in that report. The main north entry has been widened and double track extended for a considerable distance, and this by actual measurement does not reach the figures reported by Mr. Gray's predecessor. Mr. Gray and all of his underground officers are using every means and spare no labor or time to bring the mine up to the best possible sanitary condition available; also they have done a lot of re-

pair work in timbering main shaft in weak places. The Inspector feels justified in recommending that the main shaft ought to be re-timbered with good, heavy timber, and asks that the next legislative body appropriate sufficient money to buy the timber and have the same done. Also, as this mine has two fire-clay veins between the coal-vein that is now being worked and the surface, one five feet thick and one three feet thick, and it is understood to be a good quality of fire-clay, and as the convicts must be worked, in order to take them from coal-mining and reduce the number engaged thereat to those necessary to produce the coal for state institutions that are in reach and for use at the penitentiary, that these clay veins or one of them be opened up and the clay be used for making fire-brick and tiles. As there are no fire-brick works in this state, there would be no one to find fault by the state using a part of its convicts making brick, and that would put an end to the howl that usually is made by politicians about penitentiary coal coming in competition with free-mined coal, as this argument was used largely in the Osage district last fall. The Inspector believes this clay can be utilized by dumping a few thousand tons of it on the ground for a few months, for it to air-slake, and then burn a part of it for use in mixing with the clay that is being made up into brick. In so doing I believe it will make good fire-brick and tile, as in its raw shape it would be too rich. If this can be done, it is one way to stop production of coal by convict labor to be sold against free-mined coal, in the absence of something better. Mr. Harry Landis, warden of the penitentiary, spoke to the Inspector about it some time ago, and is very anxious for something to be done along this line, and in all probability will recommend something of this kind for working the convicts in the summer time. Now, if this or something better cannot be done, the Inspector feels justified in asking the next legislature to amend the present law governing the disposition of the penitentiary coal so as not one ton of coal can be placed upon the market outside of state institutions and for use at the penitentiary. David Casselman, mine boss. John Gray, superintendent. Harry Landis, warden.

## BOURBON COUNTY.

This county produced 28,483 tons of coal, and gave employment to 200 men a part of the year. It is very hard to gather the coal statistics of this county, as the coal is produced from strip pits and drifts in and around Fort Scott. Many farmers open a strip pit to get coal for their own use, and then haul and trade the balance off to any one who will buy it at Fort Scott; and then some man will come along, and drift from the strip pit into the hill and produce a little coal, and sell

**State inspector of coal mines reports**



it to teamsters who will haul it to Fort Scott, and stand around the city scales until they find buyers. The miner pays one cent per bushel royalty for this privilege, and keeps no record of his coal, and in this way about 100 or more miners are producing some coal; farmers and teamsters haul it to Fort Scott. The Inspector was under obligations to the city clerk for the privilege of access to the city scale books, for the purpose of figuring the amount of coal that was sold; and after about three days' hard labor he found the following results: Copied from city market scales, 15,738 tons; east city scales, 960 tons; southeast city scales, 825 tons; Yeakel city scales, 960 tons; cement works belonging to C. A. Brockett, 2400 tons; George Lamping, coal dealer, estimated the amount that he bought up was 1000 tons; D. P. Thomas cement works, 3200 tons; all other outside production that was not hauled to the city and weighed, but was consumed by farmers and others outside and around Fort Scott, estimated at 3400 tons — making a total production of 28,483 tons, valued at $56,966. There is no practical method of mining. Every one is his own boss; it is a kind of go-as-you-please affair. Mines have no railroad connection. Average thickness of coal-vein now being worked is from 9 to 12 inches. Many who mine coal one month are doing something else the next, making it almost impossible to make a record of them. The average selling price is claimed to be about 8 cents per bushel.

## LINCOLN COUNTY.

This county produced 750 tons of the lignite coal, valued at $2250, and gave employment to 21 employees for about 98 days during the year. The kinds of openings are shafts and drifts; horse power is used. The mines are located northwest of Denmark, and nine miles south of Lincoln. The principal operators are A. T. Bureman and L. P. Nelson, who operate shafts northwest of Denmark, and C. McDanna and Mike Garity, who operate drifts south of Lincoln. Natural ventilation used; both long-wall and room-and-pillar systems. Depth of shaft, 45 feet; thickness of coal-vein, from 19 to 27 inches; price paid per ton for mining, $2; selling price of coal at mine, $3; size of main shafts, 4 x 10 feet; size of air-shafts, 2 x 4 feet. This coal is a very poor quality of lignite coal, and if it were in Cherokee or Crawford counties it would be thrown into the dirt dump. These mines are only worked in the fall and winter. The miners are usually their own bosses, and go and come when they please. The man who owns the ground and mine usually furnishes the horse and the necessary fixtures for hoisting the coal; he hoists the coal and sells it, and in the summer time works his farm. If the mine is not in good shape after standing idle during the summer, the next fall they sink another

hole in the ground and open up a new mine, and sometimes they tap into the old mine from the new one for an air-shaft. A small scale and a dugout constitute the improvements on top at the mine. The miners do very well for about three months and then they take to other work.

SHAWNEE COUNTY.

This county does not produce very much coal. Its mines are located west of Topeka. They produced 750 tons of coal, valued at $2146, and worked an average of 89 days during the year; gave employment to about 20 employees. The mines are all shaft openings and worked upon the long-wall system, and leased, owned and operated by W. A. Eaton & Son, D. L. Heaton, and W. E. Porter; these are the principal operators. They stated to the Inspector that no Inspector had paid them a visit since John Braidwood's time. The average depth of this coal is 35 feet; the thickness of coal-vein, 10 inches; local trade and no railroad connections. Some of the miners who work in these mines stated that in the summer time they work in the brick-yards. There are but very little improvements in connection with these mines—a small shanty, a wagon scale, air-shaft in one corner of main shaft. The area of the mine is usually small, just around the bottom of shaft; when their air gets a little bad they usually sink a new shaft, as they claim it is cheaper to sink a new shaft than to spend money trying to systematize their mines.

DOUGLAS COUNTY.

There was a mine sunk at Lawrence by the Black Diamond Coal Company. The Inspector, upon inquiring for the same, received the following communication:

LAWRENCE, KAN., January 31, 1898.

*Geo. T. McGrath, Weir City, Kan.:*

DEAR SIR—Yours of the 29th to the Deer Creek Coal and Mining Company has been handed to me. Will say that the work at mining coal which you have reference to was stopped some time ago, and in all probability will never have anything more done to it. There was a little coal taken out last fall, mostly by stripping; though a shaft was sunk 30 feet, it was found that the roof was not good enough to enable any work to be done in that way. No one is in charge there now, but as we sold some of the coal this was handed to us.

Yours truly, J. C. THOBURN.

FRANKLIN COUNTY.

This county produced 6452 tons of coal, valued at $12,097, and gave employment to 59 employees for 102 days. The openings are principally shafts and drifts, located in and around Ransomville. Horse power in use. The principal operators are as follows: Newt. Davall & Co., J. H. Ransom and James Simms Company, J. N. Dyer,

**State inspector of coal mines reports**



Geo. H. Capa, jr., and John Eddy. The price paid to the miners is from $1.15 to $1.25 per ton; the average selling price of coal at mine is $1.87½ per ton; average thickness of coal-vein, 14 to 16 inches; average depth of mine, 35 to 50 feet. Some of the old mines have been closed down, owners claiming that it did not pay to bother with coal-mining in that part of the country any more. Only one of these mines has railroad connections; principally local trade, in fall and winter.

LYON COUNTY.

This county produced 835 tons of coal, valued at $1878, and gave employment to 19 employees for 62 days during the year. Principal operators are: Geo. Hendrickson & Bro. Company, T. S. Kelley, and J. M. Fry. The mines are located in and around Neosho Rapids. They are shaft openings; natural ventilation; horse power used; no railroad connections. Local trade, fall and winter.

ELLSWORTH COUNTY.

This county produced 1427 tons of coal, valued at $4281, and gave employment to 27 employees for 110 days during the year. The openings are drifts, and worked upon the long-wall system. The average thickness of coal-vein is from 12 to 14 inches. The names of the principal operators are as follows: L. Conrad Coal Company, C. W. Kelley Coal Company, and F. M. Lingo & Co. These mines are located around Nelson. The miner is practically his own boss. He receives $2 per ton for all coal he mines and pushes out on the dump. The selling price of coal at mine is $3 per ton. These mines have no railroad connections, and their trade is principally local, in the fall and winter.

ELK COUNTY.

This county produced 320 tons of coal; gave employment to 5 men for 60 days during the year; coal valued at $800. The Inspector was only able to find one operator in this county, and that mine is owned and operated by C. P. Jenks; post-office address, Howard, and location of mine southwest of Howard. Shaft opening; horse power; no railroad connections; local trade. Price paid for mining, $1.75 per ton; average selling price, $2.50.

RUSSELL COUNTY.

This county produced 181 tons of coal, valued at $543, and gave employment to 12 employees 50 days during the year. The average price paid miner for mining coal is $2.37½; the average selling price of coal at mine is $3 per ton. This is a slope opening; horse power; and the mines that are in operation are located northeast of Bunker Hill. Two or three companies that formerly operated mines in this

county have gone out of the business. Mines have no railroad connections; trade is local, and only work a few days in the fall and winter. The average thickness of the coal-vein is 12 inches.

ATCHISON COUNTY.

This county produced 5152 tons of coal, valued at $12,880; gave employment to 49 employees for 205 days during the year. There are only two mines operated in this county, and they belong to the Geo. Jones Coal Company and W. T. F. Donald Coal Company; post-office, Atchison. They are worked upon the long-wall system, and both mines are drifts. Thickness of coal-vein, from 10 to 12 inches. The mines are located 2¼ miles south of Atchison depot. The miner receives $1.15 per ton in summer and $1.50 in the winter time. Selling price of coal at mine is from $2.25 to $3 per ton, summer and winter. At the time the Inspector visited this mine they were having some trouble with the water. It seems that Mr. Jones dumped a good deal of dirt into a cañon just below the mouth of his drift, and during a rainy spell a large volume of water came down this cañon; the dirt obstructed the water passage and dammed it back, causing the water to get into his mine; and as he had holed through into the Donald mine's old workings the result was it flooded both mines; and as the bottom is clay and the air-courses low the bottom heaved and closed them up, so when they got the water out of the mines they then had to make air-courses. The extra expense that both companies has been put to is sufficient to guard against the recurrence of the same accident. Mr. W. T. F. Donald has spent a lot of money and time trying to make his mine a success, by trying to work the Independent electric long-wall mining machine. Two of these machines were built by the Link-Belt Machine Company, of Chicago, but they were not able to do the work for which they were built, and had to be taken out. W. T. F. Donald, the operator, contends that the Independent electric machines were not constructed according to mechanical principles, or they would work. Wm. Donald is now at work, with J. M. Hendershot, an expert in that line, on a machine which they think and feel sure will be a great success. This new machine will not be ready for trial before spring. While Mr. Donald has spent $6000 or $7000 along this line of experimenting, the Inspector is satisfied from what he has already seen, not only there but in other places, that the coal is too low to be worked profitably with a machine. Also, I think Mr. Donald could have placed his money to better advantage had he sunk a shaft to the lower vein—the vein that is now being worked at Leavenworth and Lansing. Mr. Donald's mine is connected with the Mo. Pac. railway; in addition to that, he has good city trade for all of the coal that he is able to

mine, and could dispose of several hundred more tons of coal. James Maynard, mine boss for the Jones Coal Company; Alex. Ramage, mine boss for the Donald Coal Company.

LINN COUNTY.

This county produced 26,775 tons of coal, valued at $29,452, and gave employment to 95 employees 148 days during the year. There is actually only one *coal-mine* in this county, although there are four others. One mine produced 25,932 tons of coal; all of the others produced 843 tons. The Mine Creek Coal Company is located 2½ miles east of Pleasanton, on the Butler & Fort Madison branch of the Mo. Pac. railway. It is a shaft opening; steam power; mechanical ventilation; long-wall system of work; size of main shaft, 5 x 13 feet; size of air-shaft, 6 x 12 feet; depth of shaft, 90 feet; size of fan, 3 x 8 feet; speed fan operated, 60 revolutions per minute. This mine is equipped with gravity screens; only makes two grades of coal — lump and slack; 65 per cent. of the output of the mine is lump coal, 5 per cent. is slack. At the time of the Inspector's visit to this mine there was no manway in either shaft. In case of accident by fire or by machinery breaking there was no way for the miners to get out except by climbing the buntings, and as this was in violation of the mining law the Inspector notified Mr. Brown, the mine boss. that he would have to put in a manway. No boys allowed to work under twelve years of age, and all boys over twelve and under sixteen years have to furnish a certificate showing that they have attended school three months out of the year. All roads in good condition; all machinery in good condition; one double-flue boiler, 40 inches in diameter, 28 feet long; a light double hoisting engine of about 32 horse-power. Overcast upon north side of main shaft; size, 5 x 6 feet; southwest quarter of the mine has not been worked for the last four years; air-course in southeast quarter cut off by a break in roof at face of sixth room back from face of first east entry. Mr. Brown, mine boss, stated to the Inspector that he would have the same connected and opened up, as he had miners at work on both sides of the break pushing about a four-foot face around the break; otherwise the sanitary condition of the mine was good. Mr. Brown states that there are about 200 square miles of land in this county underlaid with two veins of coal, at from 60 to 90 feet deep. The quality of this coal is not quite as good as that in the southeastern part of the state. The price paid the miner is 75 cents per ton, mine run, and it costs as much to ship this coal to market as it does that from Cherokee and Crawford counties. Could this coal-field receive the benefit of a less freight-rate, which would give them about 15 cents per ton, it would only be a short time until this county would be an extensive coal-field, as the operators then could compete

with other coal-fields in this state and Missouri. During the last three years there have not been in operation, on account of the low price of coal, the Bradley-Vernon Coal Company's shaft, located at Boicourt, the Pleasanton Coal Company's shaft, the Gage Brothers' shaft, the Ben Good shaft, and some others that, while still existing, are as good as closed down indefinitely. Geo. S. Brown, mine boss.

CLOUD COUNTY.

This county produced 2800 tons of coal, valued at $6300, which gave employment to 27 employees for 106 days during the year. The mines are shaft openings; horse power; have no railroad connections; are located 4½ miles from Minersville. The mines are principally leased, and they pay as high as 20 cents per ton royalty. The digging price is $1.60 per ton; selling price is $2.25 per ton; local trade; and only work in fall and winter season. T. Struthers and — Woodward, mine bosses.

COFFEY COUNTY.

The mines in this county are strip pits, and located at Lebo. The principal stripper is P. G. Soper. Best information Inspector can get is that 10,000 tons of coal were stripped, valued at $22,500, and gave employment to 55 men 125 days during the year. These are local-trade strip pits, and the average selling price is $2.25 per ton. P. G. Soper, strip-pit operator.

## State inspector of coal mines reports



OTHER KANSAS COAL MINES.

| Office No. | Name of operator or company. | Post-office address. | Mine No. | Name of pit boss or underground foreman. | Location of mine. | Railroad connection? | Name of railway. | Kind of opening. | Power used. Kind. | Power used. H. P. |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Leavenworth county:** | | | | | | | | | |
| 1 | Leavenworth Coal Co | Leavenworth | 1 | John Dobson, Grant Parker, and S. K. Lowery | N. E. Leavenworth, | Yes. | § | Shaft, | Steam, | 800 |
| 2 | Home-Riverside Coal-Mining Co. | Leavenworth | † | John Patterson and Tom Graham | Leavenworth | Yes. | | Shaft, | Steam, | |
| 3 | Penitentiary mine | Lansing | 1 | D. Casselman | Lansing | " | ‖ | " | " | ¶ |
| | Brown county | White Cloud | | | | | | Strip, | | |
| | Chautauqua county | Leeds | | | | | | Slope, | | |
| | Labette county | Oswego | | | | | | Strip, | | |
| | Republic county | Minersville | | | | | | Shaft, | | |
| | **Bourbon county:** | | | | | | | | | |
| 1 | City market scales | Fort Scott | | | | | | | | |
| 2 | East city scale | " | | | | | | | | |
| 3 | " " | " | | | | | | | | |
| 4 | Yenkel city scale | " | | | | | | | | |
| 5 | C. A. Brockett Cement Works | " | | | | | | | | |
| 6 | Geo. Lamping, coal dealer | " | | | | | | | | |
| 7 | D. P. Thomas Cement Works | " | | | | | | Strip and drift. | | |
| 8 | Estimate of all other productions | " | | | | | | | | |
| | **Lincoln county:** | | | | | | | | | |
| 1 | A. T. Bureman Coal Co | Denmark | 1 | A. F. Bureman | N. W. Denmark | No. | | Shaft, | Horse, | |
| 2 | L. P. Nelson Coal Co | " | 1 | L. P. Nelson | " " | " | | " | " | |
| 3 | C. McDanna Coal Co | Lincoln | 1 | C. McDanna | S. Lincoln | " | | Drift, | " | |
| 4 | Mike Garity | " | 1 | Mike Garity | " | " | | " | " | |
| | **Shawnee county:** | | | | | | | | | |
| 1 | W. A. Eaton & Son | Topeka | 1 | Wm. Eaton | W. Topeka | No. | | Shaft, | Horse, | |
| 2 | D. L. Heaton | " | 4 | D. L. Heaton | " | " | | " | " | |
| 3 | W. E. Porter | Seabrook | 1 | W. E. Porter | " | " | | " | " | |
| 4 | Culbertson & Thoburn* | Lawrence | ‡ | | | | | | | |
| | **Franklin county:** | | | | | | | | | |
| 1 | Newt. Davall & Co | Ransomville | 1 | N. Davall | S. Ransomville | Yes. | Santa Fe, | Drift, | Horse, | |
| 2 | J. H. Ransom and James Simms | " | 1 | James Simms | Ransomville | " | " | Shaft, | " | |
| 3 | J. M. Dyer | Pomona | 1 | S. E. Richardson | S. Pomona | No. | | Drift, | | |
| 4 | Geo. H. Capa, jr | Ransomville | 1 | Geo. H. Capa | W. Ransomville | " | | " | | |
| 5 | John Eddy Coal Co.* | " | 1 | John Eddy. | | | | | | |
| 6 | Estimate of all other productions. | | | | | | | | | |

*Closed indefinitely. †1 and 2. ‡Name is Diamond. §U. P. and Mo. Pac. ‖U. P., Mo. Pac., and Santa Fe. ¶150 and 750.

**State inspector of coal mines reports**



OTHER KANSAS COAL-MINES—CONTINUED.

| Office No. | Tons of Coal Produced. (2,000 pounds to the ton.) | | | Total number of tons of coal produced. | Employees. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Lump. | Nut and slack. | Mine run. | | Miners | Boys | Mule drivers and pushers | Cagers | Pit bosses, track-layers, roadmen | Engineers, firemen, pump men | Weighmen and dumpers | Car trimmers and prop men | Blacksmiths and carpenters | Total |
| **LEAVENWORTH COUNTY.** | | | | | | | | | | | | | | |
| 1 | | | 112,261 | 112,261 | 235 | 15 | 13 | 2 | 7 | 8 | 13 | 4 | 4 | 301 |
| 2 | 160,000 | 30,000 | | 190,000 | 335 | | | | 40 | | | | 60 | 435 |
| 3 | 42,172 | 22,708 | | 64,880 | 192 | | 36 | 6 | 70 | 8 | 6 | 12 | 6 | 336 |
| | 202,172 | 52,708 | 112,261 | 367,141 | 762 | | 49 | | | | | | | 1,072 |
| | 2,300 | | | 2,300 | 15 | | | | | | | | | 15 |
| | 1,200 | | | 1,200 | 27 | | | | | | | | | 27 |
| | 2,000 | | | 2,000 | 30 | | | | | | | | | 30 |
| | 1,300 | | | 1,300 | 12 | | | | | | | | | 12 |
| **BOURBON COUNTY.** | | | | | | | | | | | | | | |
| 1 | 15,738 | | | 15,738 | | | | | | | | | | |
| 2 | 960 | | | 960 | | | | | | | | | | |
| 3 | 825 | | | 825 | | | | | | | | | | |
| 4 | 960 | | | 960 | | | | | | | | | | |
| 5 | 2,400 | | | 2,400 | | | | | | | | | | |
| 6 | 1,000 | | | 1,000 | | | | | | | | | | |
| 7 | 3,200 | | | 3,200 | | | | | | | | | | |
| 8 | 3,400 | | | 3,400 | 100 | | 100 | | | | | | | 200 |
| | 28,483 | | | 28,483 | 100 | | 100 | | | | | | | 200 |
| **LINCOLN COUNTY.** | | | | | | | | | | | | | | |
| 1 | | | 75 | 75 | 5 | | | | 1 | | 1 | | | 7 |
| 2 | | | 500 | 500 | 4 | | | | 1 | | 1 | | | 6 |
| 3 | | | 75 | 75 | 2 | | | | 1 | | 1 | | | 4 |
| 4 | | | 100 | 100 | 2 | | | | 1 | | 1 | | | 4 |
| | | | 750 | 750 | 13 | | | | 4 | | 4 | | | 21 |
| **SHAWNEE COUNTY.** | | | | | | | | | | | | | | |
| 1 | 140 | 30 | | 70 | 3 | | | | 1 | | 1 | | | 5 |
| 2 | 28 | | | 28 | 4 | | | | | | 1 | | | 5 |
| 3 | | | 706 | 706 | 8 | | | | 1 | | 1 | | | 10 |
| 4 | | | | | | | | | | | | | | |
| | 168 | 30 | 706 | 804 | 15 | | | | 2 | | 3 | | | 20 |
| **FRANKLIN COUNTY.** | | | | | | | | | | | | | | |
| 1 | | | 251 | 251 | 5 | | | | 1 | | | | | 6 |
| 2 | 3,700 | | | 3,700 | 24 | 3 | 2 | | 1 | | 1 | | | 31 |
| 3 | | | 1,224 | 1,224 | 14 | | | | 1 | | 1 | | | 16 |
| 4 | | | 277 | 277 | 5 | | | | 1 | | | | | 6 |
| 5 | | | | | | | | | | | | | | |
| 6 | | | | 1,000 | | | | | | | | | | |
| | 3,700 | | 1,752 | 6,542 | 48 | 3 | 2 | | 4 | | 2 | | | 59 |

# State inspector of coal mines reports



OTHER KANSAS COAL-MINES—CONTINUED.

| Office No. | No. of kegs of powder used during the year | No. of days mine worked during the year | Av. price paid per ton for mining. Lump | Av. price paid per ton for mining. Mine run | Estimated value of fixtures | Estimated value of mine | Average selling price of coal at mine. Lump | Nut | Slack | Mine run | Selling price to local trade at mine, per ton | Av. wages paid day man underground | Av. wages paid day man over ground |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LEAVENWORTH COUNTY.** | | | | | | | | | | | | | |
| 1 | 25 | 194 | ..... | $0 80 | $35,000 | $25,000 | $1 25 | $0 90 | $0 50 | $1 00 | $2 00 | $2 00 | $1 75 |
| 2 | 50 | 230 | ..... | 80 | 30,000 | 40,000 | 1 33 | 1 20 | 50 | 1 25 | 2 00 | 2 00 | 1 75 |
| 3 | 1,000 | 310 | ..... | ..... | ..... | 150,000 | 1 40 | 1 25 | ..... | 1 32½ | 2 00 | ..... | ..... |
| | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | ..... | 160 | $1 50 | ..... | $100 | $200 | 2 00 | ..... | ..... | ..... | 2 00 | ..... | ..... |
| | ..... | 75 | 2 00 | ..... | 200 | 300 | 2 50 | ..... | ..... | ..... | 2 50 | ..... | ..... |
| | ..... | 100 | 2 00 | ..... | 200 | 300 | 3 00 | ..... | ..... | ..... | 3 00 | ..... | ..... |
| | ..... | 100 | 1 50 | ..... | 100 | 200 | 2 25 | ..... | ..... | ..... | 2 25 | ..... | ..... |
| **BOURBON COUNTY.** | | | | | | | | | | | | | |
| 1 | ..... | ..... | ..... | ..... | ..... | ..... | $2 00 | .... | ..... | ..... | ..... | ..... | ..... |
| 2 | ..... | ..... | ..... | ..... | ..... | ..... | 2 00 | .... | ..... | ..... | ..... | ..... | ..... |
| 3 | ..... | ..... | ..... | ..... | ..... | ..... | 2 00 | ..... | ..... | ..... | ..... | ..... | ..... |
| 4 | ..... | ..... | ..... | ..... | ..... | ..... | 2 00 | ..... | ..... | ..... | ..... | ..... | ..... |
| 5 | ..... | ..... | ..... | ..... | ..... | ..... | 2 00 | ..... | ..... | ..... | ..... | ..... | ..... |
| 6 | ..... | ..... | ..... | ..... | ..... | ..... | 2 00 | ..... | ..... | ..... | ..... | ..... | ..... |
| 7 | ..... | ..... | ..... | ..... | ..... | ..... | 2 00 | ..... | ..... | ..... | ..... | ..... | ..... |
| 8 | ..... | 150 | $1 25 | ..... | ..... | ..... | 2 00 | .... | ..... | ..... | ..... | ..... | ..... |
| | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| **LINCOLN COUNTY.** | | | | | | | | | | | | | |
| 1 | ..... | 125 | ..... | $2 00 | $50 | $300 | $3 00 | ..... | ..... | ..... | ..... | $2 00 | $1 50 |
| 2 | ..... | 140 | ..... | 2 00 | 300 | 1,000 | 3 00 | ..... | ..... | ..... | .... | 2 00 | 1 50 |
| 3 | ..... | 60 | ..... | 2 00 | 50 | 100 | 3 00 | ..... | ..... | ..... | ..... | 1 75 | 1 50 |
| 4 | ..... | 70 | ..... | 2 00 | 50 | 150 | 3 00 | ..... | ..... | ..... | ..... | 1 75 | 1 50 |
| | ..... | 395 | ..... | ..... | $450 | $1,550 | .... | ..... | ..... | ..... | ..... | ..... | ..... |
| **SHAWNEE COUNTY.** | | | | | | | | | | | | | |
| 1 | 2 | 110 | ..... | $1 62½ | $75 | $125 | $2 50 | ..... | ..... | ..... | ..... | $1 75 | $1 50 |
| 2 | ..... | 20 | ..... | 1 75 | 125 | 150 | 2 75 | ..... | ..... | ..... | ..... | 1 75 | 1 50 |
| 3 | ..... | 227 | ..... | 1 75 | 125 | 300 | 2 75 | ..... | ..... | ..... | ..... | 1 75 | 1 50 |
| 4 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | 2 | 357 | ..... | ..... | $325 | $575 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| **FRANKLIN COUNTY.** | | | | | | | | | | | | | |
| 1 | ..... | 120 | .... | $1 25 | $100 | $150 | $2 00 | ..... | ..... | ..... | ..... | $1 75 | $1 50 |
| 2 | 25 | 250 | ..... | 1 25 | 300 | 1,500 | 2 00 | ..... | ..... | ..... | ..... | 1 75 | 1 50 |
| 3 | ..... | 125 | ..... | 1 25 | 100 | 3,000 | ..... | ..... | ..... | $1 75 | ..... | 1 75 | 1 50 |
| 4 | ..... | 122 | ..... | 1 25 | 25 | 75 | ..... | ..... | ..... | 1 75 | ..... | 1 75 | 1 50 |
| 5 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 6 | ..... | ..... | ..... | ..... | ..... | .... | ..... | ..... | ..... | 1 75 | ..... | ..... | ..... |
| | 25 | 617 | ..... | ..... | $525 | $4,725 | ..... | ..... | ..... | ..... | ..... | .... | ..... |

CASUALTIES.—Killed: At Leavenworth Coal Company's mine, 1. Injured: At Home-Riverside mine, 1; at penitentiary mine, 6.

# State inspector of coal mines reports



OTHER KANSAS COAL-MINES—CONTINUED.

| Office No. | Name of operator or company. | Post-office address. | Mine No. | Name of pit boss or underground foreman. | Location of mine. | Railroad connection? | Name of railway. | Kind of opening. | Power used. Kind. | Power used. H. P. |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Lyon county:** | | | | | | | | | |
| 1 | Geo. Hendrickson & Bros. | Neosho Rapids | 1 | Walter Hendrickson. | S. E. Neosho Rapids, | No. | | Shaft, | Horse, | |
| 2 | T. S. Kelley. | " | 1 | T. S. Kelley | E. Neosho Rapids. | " | | " | " | |
| 3 | J. M. Fry | " | 1 | J. M. Fry | E. Neosho Rapids. | " | | " | | |
| | **Ellsworth county:** | | | | | | | | | |
| 1 | L. Conrad Coal Co. | Wilson | 1 | L. Conrad | S. Wilson. | No. | | Drift, | | |
| 2 | C. W. Kelley | " | 1 | Lee Taylor | S. W. Wilson. | " | | " | | |
| 3 | F. M. Lingo & Co. | " | 1 | Geo. Lingo. | S. Wilson. | " | | " | | |
| | **Elk county:** | | | | | | | | | |
| 1 | C. P. Jenks. | Howard | 1 | C. P. Jenks. | S. W. Howard | No. | | Slope, | Horse, | |
| | **Russell county:** | | | | | | | | | |
| 1 | N. E. Warner. | Bunker Hill | 1 | Gilbert Warner | N. E. Bunker Hill. | No. | | Slope, | Horse, | |
| 2 | W. F. Cushing Coal Co | " | 1 | W. F. Cushing | N. E. Bunker Hill. | " | | " | " | |
| | Joseph Menzie | " | 1 | Mine abandoned. | | | | | | |
| | All other productions. | | | | | | | | | |
| | **Atchison county:** | | | | | | | | | |
| 1 | George Jones | Atchison | 1 | James Maynard. | S. Atchison. | No. | | Drift, | | |
| 2 | W. T. F. Donald Coal Co. | " | 1 | Alex. Ramage | S. Atchison. | Yes. | Mo. Pac., | " | | |
| | **Linn county:** | | | | | | | | | |
| 1 | Mine Creek Coal Co | Pleasanton | 1 | Geo. S. Brown. | E. Pleasanton. | Yes. | Mo. Pac., | Shaft, | Steam, | 32 |
| 2 | Seright & Swanson | " | 1 | Ed. Swanson | " | No. | | " | Horse, | |
| 3 | A. F. Seright | " | 1 | A. F. Seright. | " | " | | " | " | |
| | **Cloud county:** | | | | | | | | | |
| 1 | Thos. Struthers. | Minersville. | 1 | T. Struthers. | Minersville. | No. | | Shaft, | Horse, | |
| 2 | Smith & Woodward | " | 1 | —. Woodward. | E. Minersville. | " | | " | " | |
| | All other productions. | | | | | | | | | |
| | **Coffey county:** | | | | | | | | | |
| 1 | P. G. Soper Coal Co. | Lebo | | P. G. Soper. | Lebo | No. | | Strip, | | |
| | All other productions. | | | | | | | | | |

**State inspector of coal mines reports**



OTHER KANSAS COAL-MINES—CONTINUED.

| Office No. | Tons of Coal Produced. (2,000 pounds to the ton.) Lump. | Nut and slack. | Mine run. | Total number of tons of coal produced. | Employees. Miners | Boys. | Mule drivers and pushers | Cagers. | Pit bosses, track-layers, roadmen. | Engineers, firemen, and pumpmen. | Weighman and dumpers. | Car trimmers and prop men. | Blacksmiths and carpenters. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LYON COUNTY.** | | | | | | | | | | | | | | |
| 1 | 181 | | | 181 | 5 | .... | .... | .... | 1 | .... | 1 | .... | .... | 7 |
| 2 | 334 | | | 334 | 5 | .... | .... | .... | 1 | .... | 1 | .... | .... | 7 |
| 3 | 320 | | | 320 | 4 | .... | .... | .... | 1 | .... | .... | .... | .... | 5 |
| | 835 | | | 835 | 14 | .... | .... | .... | 3 | .. | 2 | .... | .... | 19 |
| **ELLSWORTH COUNTY.** | | | | | | | | | | | | | | |
| 1 | 225 | | | 225 | 4 | .... | .... | .... | 1 | .... | .... | .... | .... | 5 |
| 2 | 954 | | | 954 | 13 | 1 | .... | .... | 1 | .... | 1 | .... | .... | 16 |
| 3 | 248 | | | 248 | 5 | .... | .... | .... | 1 | .... | .... | .... | .... | 6 |
| | 1,427 | | | 1,427 | 22 | 1 | .... | .... | 3 | .... | 1 | .... | .... | 27 |
| **ELK COUNTY.** | | | | | | | | | | | | | | |
| 1 | 320 | | | 320 | 4 | .... | .... | .... | 1 | .... | .... | .... | .... | 5 |
| **RUSSELL COUNTY.** | | | | | | | | | | | | | | |
| 1 | 101 | | | 101 | 7 | .... | .... | .... | 1 | .... | 1 | .... | .... | 9 |
| 2 | 30 | | | 30 | 2 | 1 | .... | .... | .... | .... | .... | .... | .... | 3 |
| | 50 | | | 50 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| | 181 | | | 181 | 9 | 1 | .... | .... | 1 | .... | 1 | .... | .... | 12 |
| **ATCHISON COUNTY.** | | | | | | | | | | | | | | |
| 1 | 1,652 | | | 1,652 | 15 | .... | .... | .... | 1 | .... | .... | .... | .. | 16 |
| 2 | 3,500 | | | 3,500 | 30 | .... | 1 | .... | 1 | .... | 1 | .... | .... | 33 |
| | 5,152 | | | 5,152 | 45 | .... | 1 | .... | 2 | .... | 1 | .. | .. | 49 |
| **LINN COUNTY.** | | | | | | | | | | | | | | |
| 1 | 25,932 | | | 25,932 | 75 | .... | 3 | 1 | 1 | 2 | 1 | 1 | 1 | 85 |
| 2 | 803 | | | 803 | 4 | .... | 1 | .... | 1 | .... | 1 | .... | .... | 7 |
| 3 | 40 | | | 40 | 2 | .. | .... | .. | 1 | .... | .... | .... | .... | 3 |
| | 26,775 | | | 26,775 | 81 | ... | 4 | 1 | 3 | 2 | 2 | 1 | 1 | 95 |
| **CLOUD COUNTY.** | | | | | | | | | | | | | | |
| 1 | 1,000 | | | 1,000 | 8 | 2 | .... | .... | 1 | .... | .... | .... | 1 | 12 |
| 2 | 800 | | | 800 | 4 | .... | .... | .... | .... | .... | 1 | .... | .... | 5 |
| | 1,000 | | | 1,000 | 10 | .... | .... | .... | .... | .... | .... | .... | .... | 10 |
| | 2,800 | | | 2,800 | 22 | 2 | .... | .... | 1 | .... | 1 | .. | 1 | 27 |
| **COFFEY COUNTY.** | | | | | | | | | | | | | | |
| 1 | 8,000 | | | 8,000 | .... | .... | .... | .... | .... | .. | .... | .... | .... | .... |
| | 2,000 | | | 2,000 | 35 | .... | .... | .... | .. | .... | 20 | .... | .... | 55 |
| | 10,000 | | | 10,000 | 35 | .... | .... | .... | .. | .. | 20 | .... | .... | 55 |

OTHER KANSAS COAL-MINES—CONCLUDED.

| Office No. | No. of kegs of powder used during the year | No. of days mine worked during the year | Av. price paid per ton for mining. Lump | Av. price paid per ton for mining. Mine run | Estimated value of fixtures | Estimated value of mine | Casualties. Killed | Casualties. Injured | Average selling price of coal at mine. Lump | Nut | Slack | Mine run | Av. wages paid day man underground | Av. wages paid day man over ground |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LYON COUNTY.** | | | | | | | | | | | | | | |
| 1 | ..... | 65 | $1 75 | ..... | $200 | $800 | .... | .... | $2 25 | ..... | ..... | ..... | $1 75 | $1 50 |
| 2 | ..... | 55 | 1 71½ | ..... | 300 | 1,000 | .... | .... | 2 25 | ..... | ..... | ..... | 1 75 | 1 50 |
| 3 | 3 | 65 | 1 75 | ..... | 300 | 1,000 | .... | .... | 2 25 | ..... | ..... | ..... | 1 75 | 1 50 |
| | 3 | 185 | ..... | ..... | $800 | $2,800 | .... | .... | ..... | ..... | ..... | ..... | ..... | ..... |
| **ELLSWORTH COUNTY.** | | | | | | | | | | | | | | |
| 1 | ..... | 40 | $2 00 | ..... | $40 | $300 | .... | .... | $3 00 | ..... | ..... | ..... | $1 75 | $1 50 |
| 2 | 2 | 196 | 2 00 | ..... | 150 | 1,000 | .... | .... | 3 00 | ..... | ..... | ..... | 1 75 | 1 50 |
| 3 | ..... | 95 | 2 00 | ..... | 50 | 300 | .... | .... | 3 00 | ..... | ..... | ..... | 1 75 | 1 50 |
| | 2 | 331 | ..... | ..... | $240 | $1,600 | .... | .... | ..... | ..... | ..... | ..... | ..... | ..... |
| **ELK COUNTY.** | | | | | | | | | | | | | | |
| 1 | 1 | 60 | $1 75 | ..... | $200 | $1,000 | .... | .... | $2 50 | ..... | ..... | ..... | $1 75 | $1 50 |
| **RUSSELL COUNTY.** | | | | | | | | | | | | | | |
| 1 | ..... | 50 | $2 25 | ..... | $50 | $300 | .... | .... | $3 00 | ..... | ..... | ..... | $1 75 | $1 50 |
| 2 | ..... | 40 | 2 50 | ..... | 50 | 200 | .... | .... | 3 00 | ..... | ..... | ..... | 1 75 | 1 50 |
| | ..... | ..... | ..... | ..... | ..... | ..... | .... | .... | 3 00 | ..... | ..... | ..... | ..... | ..... |
| | ..... | 90 | ..... | ..... | $100 | $500 | .... | .... | ..... | ..... | ..... | ..... | ..... | ..... |
| **ATCHISON COUNTY.** | | | | | | | | | | | | | | |
| 1 | 10 | 160 | $1 25 | ..... | $100 | $500 | .... | .... | $2 50 | ..... | ..... | ..... | $1 75 | $1 50 |
| 2 | 3 | 250 | 1 25 | ..... | 1,000 | 1,000 | .... | .... | 2 50 | ..... | ..... | ..... | 1 75 | 1 50 |
| | 13 | 410 | ..... | ..... | $1,100 | $1,500 | .... | .... | ..... | ..... | ..... | ..... | ..... | ..... |
| **LINN COUNTY.** | | | | | | | | | | | | | | |
| 1 | 15 | 220 | $0 75 | ..... | $1,500 | $25,000 | .... | .... | $1 10 | ..... | ..... | $1 00 | $1 75 | $1 50 |
| 2 | 2 | 200 | 75 | ..... | 500 | 1,000 | .... | .... | 1 00 | ..... | $0 25 | 1 00 | 1 75 | 1 50 |
| 3 | 1 | 25 | 75 | ..... | 500 | 2,000 | .... | .... | 1 00 | ..... | 25 | ..... | 1 75 | 1 50 |
| | 18 | 445 | ..... | ..... | $2,500 | $28,000 | .... | .... | ..... | ..... | ..... | ..... | ..... | ..... |
| **CLOUD COUNTY.** | | | | | | | | | | | | | | |
| 1 | ..... | 120 | $1 30 | ..... | $500 | $1,000 | .... | .... | $2 25 | ..... | ..... | ..... | $1 75 | $1 50 |
| 2 | ..... | 200 | 1 30 | ..... | 100 | 500 | .... | .... | 2 25 | ..... | ..... | ..... | 1 75 | 1 50 |
| | ..... | ..... | ..... | ..... | ..... | ..... | .... | .... | 2 25 | ..... | ..... | ..... | ..... | ..... |
| | ..... | 320 | ..... | ..... | $600 | $1,500 | .... | .... | ..... | ..... | ..... | ..... | ..... | ..... |
| **COFFEY COUNTY.** | | | | | | | | | | | | | | |
| 1 | ..... | ..... | ..... | ..... | ..... | ..... | .... | .... | $2 25 | ..... | ..... | ..... | ..... | ..... |
| | 2 | 250 | $1 25 | ..... | $200 | $2,800 | .... | .... | 2 25 | ..... | ..... | ..... | ..... | ..... |
| | 2 | 250 | ..... | ..... | $200 | $2,800 | .... | .... | ..... | ..... | ..... | ..... | ..... | ..... |

## A MINE EXPLOSION.

On the evening of January 8, at mine No. 5 belonging to the Mt. Carmel Coal Company,* located four and one-half miles southwest of Pittsburg, there was an explosion, in which three shot-firers lost their lives, one being burned to death, and the other two asphyxiated from the after-damp caused by the explosion. Their names are as follows: John Possing, Charles Winters, and Antone Weinberger. There has been a great deal said as to the cause of the explosion by men who never were inside of the mine, but claim to know more about the explosion than the men who made a careful examination, and worked in the same. In order that the miners and the public may know the truth, the Inspector gives the testimony of all the parties who testified before the coroner's jury, and among the same is the testimony of the Inspector. The Inspector will recommend elsewhere an amendment to the mining law relating to shot-firing in mines, which he believes ought to be enacted into law for the better protection of the shot-firers. The present shot-firing law is not strong enough. It allows the shot-firer to fire too many shots at one time, and he is usually in too big a hurry to notice whether the shots he is firing are lawful shots or not. The shot-firer does his work in from two to three hours and is paid for ten hours' work. In order to do this, he goes back to missed shots to fire them sooner than he ought to do, and in more than one instance has been caught in the gases from burnt powder, and shots have gone off which the shot-firer thought had missed; and in more than one case the shot-firer has lost his life from going back too soon.

At an inquest holden upon the bodies of John Possing, Antone Weinberger, and Charles Winters, of Chicopee, Kan., January 8–10, 1898, EDWARD FLYNN, testified in substance as follows:

At the time of the explosion at No. 5 I was mine foreman at that shaft. Soon after the explosion I went down, and saw rubbish and cars piled up. I climbed down the bunting. I met Serat climbing out. I went to work at once putting up curtains where doors were out. There was no smoke in the mine and no gases that I could smell. There seemed to be some damp. I saw no signs of fire at the bottom nor in the stable. Searching parties started at once. The first body in the mine was reached between eleven and twelve o'clock. The body of Winters was found a good while afterward, toward morning. I do not know what caused the death of the deceased. It was a custom with the miners for each one to take down 12½ pounds of powder. I do not weigh the powder. There was no gas to speak of in that mine. It was common to find a little gas in drill holes. I never

*See map of this mine, opposite page 16.

regarded that amount of gas as dangerous. I noticed that the hay at the stable was scattered about but not burned. The fan was in motion when I got to the pit after the explosion. These men in the mine at the time of the explosion were shot-firers; all but one regular shot firers. One was a substitute. I do not know where the explosion originated. These shot-firers were all experienced men. Number 5 is a dry mine. I have seen drier mines. I cannot tell whether coal-dust is explosive or whether an explosion can be generated by it. There are about 200 men to a shift and they average two shots each a day.

The above is a synopsis of Edward Flynn's testimony. Inspector did not have it in detail.

JAMES ZIMMERMAN, being duly sworn, testified as follows:

Ans. I was shot-firer at the time of the explosion at No. 5. I went down about five o'clock on the evening of Saturday, January 8, by myself. My work was in the first and second north entries on the east side of the mine. After I had fired about an hour and a half I heard a windy shot coming. I started to get out, but could not. I stayed in the pit until nearly morning. Once when I started to go out I fell on account of the damp. The rescue party came and got me. I had been asleep. I saw no other men while I was in the mine. I guess I know the law of shot-firing. The company does not instruct us to fire singly and get through as quickly as possible. I could tell it was a windy shot by the loose things flying around my head. I tried to go out to the shaft, and tried to go out to look where the wind from shot came from, but the smoke and damp was too thick for me. I think when I fell I did n't know anything for a while.

Ques. (by jury). You fell there and lay unconscious?

A. Yes.

Q. What was the condition of the mine when you was in there; was it all right?

A. Yes, everything was all right.

Q. There was no difference between the condition of the mine then and the condition of it the day before?

A. All the same.

Q. Had the mine been sprinkled that evening?

A. Where I was it was sprinkled—in my entry.

Q. When do they sprinkle? Before you go in there; that is, before you fire or after?

A. It is pretty wet all the time.

Q. Had there ever been any indications of an explosion previous to this time?

A. No.

Q. You say you heard this windy shot coming and you say you saw fire?

A. No; I had my face turned the other way in the room.

Q. Have you any idea how far you was from that shot when it was fired?

A. I was about 500 feet away.

Q. Did you make any effort to get out of the mine?

A. Yes.

Q. Whose fault was it? the man who fired the shot, or the man who put it in?

A. That is more than I can tell, whose fault it was.

Q. Were windy shots frequent? Do you have them frequently in the mine, or only once in a great while?

A. Once in a great while.

Q. Do you or do you not as a shot-firer exercise your own judgment in regard to setting off a shot? It is left to your own judgment, is it not?

A. Yes.

Q. Suppose you thought a shot was dangerous to fire, would you fire it?
A. No; nobody can make me fire it.
Q. What are your instructions from the company in that particular? What does the company tell you to do? Do they tell you not to fire a shot if it is dangerous? What does the pit boss tell you? not to fire dangerous shots?
A. He never said anything to me.
Q. How do you know, then, that you don't need to fire dangerous shots?
A. They told me in No. 2 in Frontenac not to fire them when they was dangerous.
Q. (by Coroner Porter). Then it seems to be a rule of the company not to fire dangerous shots?
A. Looks that way. He told me three or four years ago. If I think it dangerous, I leave it stay.
Q. (by jury). Has the pit boss ever complained to you about not firing off certain shots because, in your judgment, you thought it was dangerous?
A. He never said anything to me.
Q. (by Coroner Porter). You said that two or three years ago you were not required to fire dangerous shots. Who told you that?
A. Henry Wilson, of Frontenac.
Q. Was he with the same company?
A. Yes, I guess so.
Q. Did you ever talk to any of the other shot-firers about leaving shots that were dangerous?
A. No.
Q. Did you ever leave a shot because you thought it dangerous?
A. No, I never did; but I heard John Possing say he done it.
Q. Then you think Possing, who fired this windy shot, understood that there was danger in those shots? I don't mean this shot; but that generally those windy shots were dangerous? You have heard Possing say that?
A. Yes.
Q. (by jury). Do you think that the ventilation of the mine was such that it could have been better, so that this shot would not have produced this effect?
A. I could not say, because I never fired the shot.
Q. Have you always had good air, and did you have good air Saturday night?
A. No.
Q. I mean before the explosion?
A. Yes.
Q. Have you ever seen it worse than that night?
A. No.
Q. I mean before the explosion?
A. It was all right before the explosion.
Q. (by Coroner Porter). How was it the night before the explosion?
A. It was good.
Q. It was always good in the entry before that night?
A. Yes.
Q. (by jury). Has any other shot-firer ever said anything to you about the air being bad in that part of the mine?
A. Never said anything to me.
Q. Has ever a windy shot gone off before?
A. Once in a while they do.
Q. You know of several since you have been firing there?
A. Yes.

Q. What do you understand as a windy shot? What is it?
A. I call it a windy shot if it goes off and takes the cars and other things and throws them around in the shaft. I call that a windy shot.
Q. They do not occur very often, do they?
A. No.
Q. Do they make a blaze? [Man interrupts, saying, "Oh, Jim, don't talk too much. You can talk to-morrow or some other day." And when told to keep quiet, or he would be put out, he said, "That is my buddy." Name of man interrupting, Jacob Ditman.]
Q. How long have you been a shot-firer?
A. Five or six years.
Q. (by Coroner Porter.) Was Possing a regular shot-firer?
A. Yes.
Q. (by jury). About how far from where you laid down was Mr. Possing found?
A. I expect about 500 feet.
Q. Did you feel the air of that windy shot?
A. Yes.
Q. Was it hot?
A. Yes.
Q. Did it smell like powder smoke?
A. Yes.
Q. Why couldn't you escape if it was powder smoke?
A. It was not the powder smoke; it was the after-damp that kept me from coming out. The smoke was standing in one place.
Q. Did you feel the effect of the explosion—hear the noise?
A. I heard the windy shot passing me.
Q. Did you hear the cars tumbling around?
A. No, sir.
Q. When did the after-damp come? When do you generally have after-damp air?
A. That is the first time I have felt that.
Q. Were you ever in an explosion before?
A. No.
Q. (by Coroner Porter). Do you know whose room this was in where this windy shot was fired?
A. No.
Q. You don't know who put in the shot?
A. No.
Q. (by John Randolph). After you heard that windy shot you tried to get out?
A. Yes.
Q. How far did you go before you met the bad air?
A. I walked about 300 feet out to the bottom before I got into bad air.
Q. Then you went back and you were all right?
A. Yes.
Q. Then you were not hurt?
A. No.
Q. You tried to go out another time and got into bad air again?
A. Yes.
Q. There was no bad air where you were?
A. No, there was smoke.
Q. You lay down and went to sleep after a while?

**State inspector of coal mines reports**



A. It was after midnight when I went to sleep.
Q. They woke you up when they came in, did n't they?
A. Yes.

THOMAS FLYNN, being duly sworn, testified as follows:

Q. What is your occupation?
A. Engaged in mining at No. 5 shaft, Chicopee, Kan.
Q. (by Coroner Porter). Were you acquainted with deceased, John Possing?
A. I was acquainted with John Possing.
Q. Was the air good where you worked?
A. I have heard no complaint of bad air from any one.
Q. (by jury). Have you been down in the shaft since the explosion?
A. Yes.
Q. When?
A. Saturday night.
Q. Have you been in to where this man Possing was burned, in his room or near there?
A. I started in there. The other men went ahead and brought him out and we carried him out.
Q. You have not been back since then?
A. No.
Q. How have they kept the dust down, so far as you know?
A. By sprinkling the entry where I am working.
Q. Have you looked upon this mine as dangerous?
A. No, sir.
Q. Did you notice any dust in the room — I mean in the room where you work?
A. No, sir.
Q. Have you ever seen any indication of danger in this mine?
A. No, sir.
Q. Never heard of any?
A. No, sir.
Q. How did it compare with any other shafts where you have worked?
A. Good.
Q. What experience have you had as a miner — how many years?
A. Thirty years.
Q. Have you any idea as to the cause of this explosion?
A. No, sir.
Q. Did you notice any indication of gas?
A. No, sir.
Q. Was it understood among the men that dust would explode?
A. I do n't know. I never read any on the question.
Q. (by Coroner Porter). How far was Possing's body found from the main shaft?
A. It was 700 or 800 feet.
Q. Will you show the location on that board?
A. He was in the fourth north [makes diagram on the board].
Q. The air on the north side goes which way?
A. It travels [pointing to diagram] up and then goes back. I do n't know much about the east side.
Q. (by jury). Did you notice any indication of fire while in the mine?

**State inspector of coal mines reports**



A. No, sir.
Q. Did you notice any mules that were injured?
A. Two were standing up and one was lying down.
Q. Did the hair look as if it was singed or burned?
A. I could not see whether they were dusty or burned; did n't pay much attention; had other things in view.
Q. Did you hear the explosion that evening?
A. No, sir.
Q. Did you see any indication of fire around the woodwork?
A. Yes, sir.
Q. Where was that?
A. On top.
Q. Was you ever a shot-firer?
A. No, sir.
Q. Windy shots are quite common in the mines, are they not?
A. Sometimes they are.
Q. Did you think the air was bad?
A. No, sir; it was all right.
Q. (by Coroner Boaz). What do you do — dig?
A. Yes, sir.
Q. You are not over the mine very much?
A. Just in the room where I work.
Q. You do n't know much about the condition of the east side?
A. No, sir.
Q. (by jury). Would this mine be considered a dry mine?
A. Yes, sir.
Q. Is a dry mine any more dangerous to an explosion than a damp mine?
A. It would be a little, I think.
Q. (by Coroner Boaz). You say a dry mine is more dangerous than a wet mine?
A. I believe it is a little.
Q. Would a dry mine be any more dangerous than a wet mine, if there was gas in the mine?
A. How do you mean?
Q. If there was gas in the mine, would it explode quicker in a dry mine than in a wet mine?
A. I could n't tell.
Q. (by jury). Was you ever in a mine where there was a gas explosion?
A. No, sir.
Q. Do you know where the company secures their water here?
A. No, sir; at the pond is all I know.
Q. (by John Randolph). So far as you know, before this explosion this mine No. 5 was in good condition for safety and work, was it?
A. Yes, sir.
Q. Is it a fact that some windy shots, as they are called, are very different from some others?
A. I have seen windy shots that did n't do any damage, and others that do damage.
Q. Some cause a good deal more fire and disturbance than others, do they not?
A. Yes, sir.
Q. You found some of the mules in the pit that night?
A. Yes.