

State inspector of coal mines reports

Section 82, Pages 2431 - 2460

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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LETTER OF ACKNOWLEDGMENT.

On May 1, 1915, the former mine inspection department, headed by Hon. Francis Keegan, assistant commissioner of labor, in charge of mine inspection department, and Joseph Clark, John Halliday, Gus Dwyer, Francis Fern and Robert Morris, deputy mine inspectors, were succeeded by myself and the following deputy mine inspectors: James Sherwood, Charles Paisley, Martin Kotzman, Fred Green and Thomas Turvey.

I desire to express my appreciation for the courteous treatment accorded to myself and all of the members of the mine inspection department of the state of Kansas by Hon. Francis Keegan, assistant commissioner of labor, and the members of the former mine inspection department.

I can not speak too highly for the hearty coöperation that I received from the new force of deputy mine inspectors for their assistance in compiling this report, for during the months of May and June, 1915, every mine in operation in the state was inspected by this department.

JOHN PELLEGRINO,

*Assistant Commissioner of Labor,
In Charge of Mine Inspection Department.*

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Twenty-third Report of the Kansas Coal Mine Inspection Department.

SUMMARY OF THIS REPORT.

This report covers the coal production of the state of Kansas for the fiscal year ending June 30, 1915, and for the six months ending December 31, 1915, showing the production of coal in each mine of the state; the number of tons of coal produced by counties; the locations of mines in the state; the distance to the Crawford and Cherokee county mines by wagon road from Fourth and Broadway, Pittsburg, Kan.; addresses of coal companies and mine superintendents; number of men employed at each mine, county and state; the number of fatal and nonfatal accidents; a complete detailed report of fatal accidents in the mines of the state from the year 1900 until the present time; also all records available of accidents from 1884 until the present time, and the average number of tons of coal produced for each fatal accident; the price paid per ton for mining, number of kegs of powder used by each mine, and number of days worked at each mine; record of inspection of the mines; also the increase of coal produced by steam shovels over the previous year, and number of shovels and their location in this field at the present time.

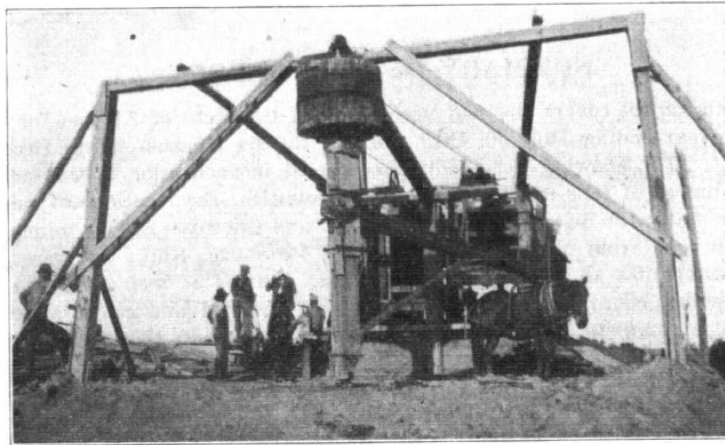
INTRODUCTION.

A convention of state mine inspectors and representatives of industrial compensation commissions, by invitation issued by the Secretary of the Interior to the governors of the various states, met in Washington, D. C., on February 24 and 25, 1916, and the delegates present pledged themselves to do everything in their power to report by the calendar year in all states, to the end that the reports of state mine inspectors and bureaus of mines may be uniform, and to combine all information from the state mine inspectors, industrial compensation commissions and federal bureaus.

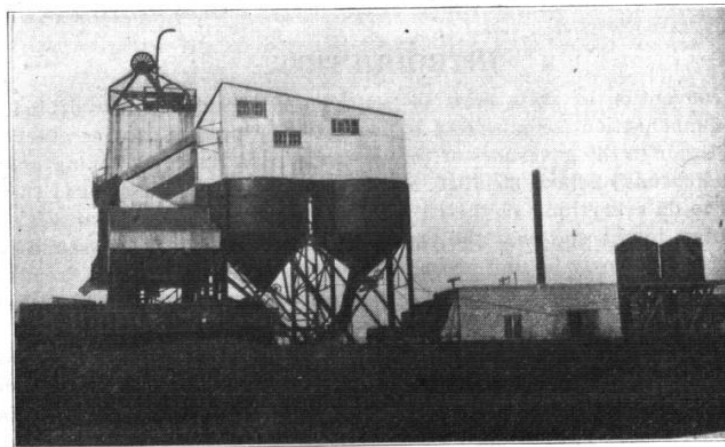
As there is no law compelling the mine inspector of the state of Kansas to make a fiscal report, I was requested by Hon. P. J. McBride, commissioner of labor, to change this report from the fiscal to the calendar year.

This report covers the coal production of the state of Kansas for the last half of the calendar year 1915, beginning July 1, 1915, and ending January 1, 1916, showing the production of coal by each mine in the state; number of tons of coal produced by counties; location of mines; addresses of coal companies and mine superintendents; number of men employed at each mine, county and state; the number of fatal and non-fatal accidents; a complete detailed report of fatal accidents in the mines

of the state from the year 1900 to the present time; all records available of accidents from 1884 until the present time; the average number of tons produced for each fatal accident; the price paid per ton for mining; number of kegs of powder used by each mine; number of days worked at each mine, and record of mine inspections.



Mine No. 1 of the Thirwell Coal Co., located near Pleasanton, Kan., where a horse is used to hoist the coal to the surface.



Mine No. 2 of the Katy Coal Co., located southeast of Radley, Crawford county, Kansas. This is the most up-to-date mining tipple in Kansas, being fireproof and built out of steel and concrete, and all electric engines are used, including electric shotfiring device.

The majority of fatal accidents in the state of Kansas from July 1, 1915, to January 1, 1916, were caused by men firing shots in the coal mines. Out of fifteen fatal accidents which occurred in the mines seven occurred to

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shot firers. The accidents to shot firers could be eliminated by installing a device of some kind which fires the shots from the surface, making it unnecessary for any one to be in the mine while the shots are going off. Two miners were killed by a powder and gas explosion, and one man who was employed as regular gas man was killed on an idle day by igniting an accumulation of gas. Five fatal accidents were caused by falls of rock, some of which could have been prevented if the working places had been examined daily by the foreman or assistant foreman. If faulty conditions are found the foreman or assistant should not be allowed to leave the place until that danger is removed. There is a great increase in non-fatal accidents in the mines of Kansas, as shown by report of accidents to the mine-inspection department. A good many accidents are reported where the men do not lose any time at all, and others where they lose only from two to ten days.

The coal mines in Crawford and Cherokee counties generate more fire damp now than ever before. Additional precautions should be taken, the mining laws revised, and a better system of ventilation adopted to prevent disasters in the mines. At different times men have been permitted to go in the mines where fire damp generates before the gas men or fire bosses had the mine carefully examined, and at other times men have been permitted to go into mines where fire damp generates without even any one attempting to examine the mine for noxious gases. A law should be enacted penalizing the mine foreman where this occurs, as a disaster may occur by men being allowed to go into mines before an examination has been made. No one should be allowed to go into such places until the fire damp is removed, and the men removing such fire damp, and every one else on that current of air, should be equipped with up-to-date safety lamps. This state has been spared serious mine disasters for some time, but this should not be accepted as a guarantee for the future.

If the operators would employ safety inspectors it would decrease these accidents to a great extent, but the objection is the additional expense of his salary. I believe he would save the cost of his salary two-fold by reducing the accidents. This would be the means of a greater output, decrease the cost of the coal, insure safer working conditions in the mines, protect human health and life, and benefit operators and employees alike.

From all appearances some of the operators in this field do not favor "safety-first" methods, for at some of these mines no bandages or other material are available for use in case of accidents. A law should be enacted forcing the operators to have a certain amount of first-aid material and mine-rescue appliances at each and every mine in the state, and the first-aid teams should be kept well trained.

Our mining laws certainly need revising, for they have been amended at different times to such an extent that they conflict with each other, and a person does not know which law is in effect. A mining commission should be created to revise and codify our mining laws and recommend such amendments as it may deem necessary.



COAL PRODUCTION.

COAL PRODUCTION IN THE STATE OF KANSAS FOR THE FISCAL YEAR ENDING JUNE 30, 1915.

COUNTIES.	Tons produced by deep mines.	Tons produced by strip pits.	Tons of 2000 lbs.	Per cent of state's production.	Number of employees.		Number of kegs of powder used.	
					Deep mines.	Strip mines.	Deep mines.	Strip mines.
Crawford.....	4,167,254	428,955	4,596,209	68.75	6,978	455	337,825	8,583
Cherokee.....	1,587,997	195,297	1,783,294	26.66	2,485	234	101,783	3,913
Leavenworth.....	184,227		184,227	2.75	645			
Osage.....	102,006		102,006	1.54	553			
Linn.....	18,785		18,785	.26	65		520	
Franklin.....	3,000		3,000	.04	36			
Totals.....	6,063,269	624,252	6,687,521	100.00	10,762	639	440,128	12,496

Total number of employees, 11,451.
Total number of kegs of powder used, 452,624.

During the fiscal year ending June 30, 1915, there were 6,687,521 tons of coal produced in the state of Kansas. During that time twenty-seven fatal accidents occurred in and around the coal mines, being one fatal accident for every 247,686 tons of coal produced. The coal production of the state of Kansas decreased 499,397 tons during the fiscal year, on account of labor troubles and some of the coal companies closing part of their mines for not having a market for their coal.

A great percentage of accidents that occur in these mines could be avoided or eliminated if necessary precautions were taken by the employees when they are at work in their respective working places. It happens very often that a miner loads a car of coal first, intending to prop his place to make it safe to work in as soon as he gets the car loaded; but time and time again the miner has been injured by a fall of rock before he got his car loaded. He should at all times prop his working place first and make it safe before he commences to load coal.

During this year there were 702 nonfatal accidents reported to the mine inspection department. This great increase in nonfatal accidents over the former years is due to the fact that the law requires that all accidents, no matter how trivial, be reported to the mine inspection department. A great percentage of these accidents were reported to the mine inspection department when the injured did not lose any time at all. The time that the injured party is off from work should be reported to the mine inspection department, and then these accidents can be classified.

IDLE MEN.

During the fiscal year ending June 30, 1915, there were a good many idle miners in this state. On October 29, 1914, the executive board of district No. 14 ordered all of the miners of the Cherokee and Pittsburg Coal and Mining Company on strike until such time as said company would comply with the agreement reached under the contract, wherein disputes were settled and also due consideration given to squeally and

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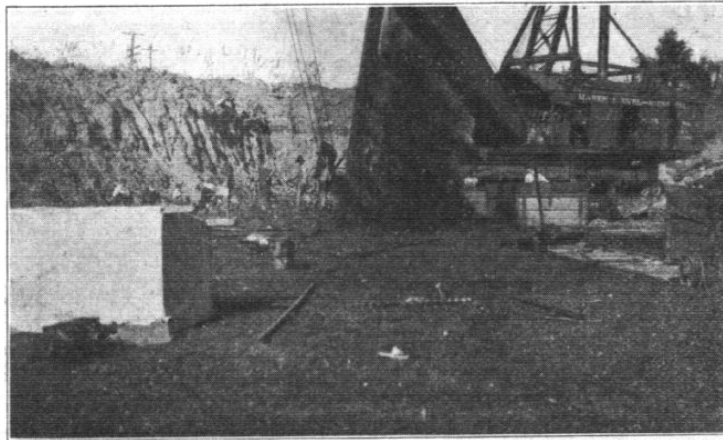
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frozen coal. There were 600 men employed by the Cherokee and Pittsburg Coal and Mining Company, and they were out on strike until December 23, 1914; then in February and March, 1915. Every one of the largest coal companies in this state shut some of their mines down during the balance of the fiscal year, throwing about 3000 miners out of work from March 1, 1915, to July 1, 1915.

The officials of the United Mine Workers of America paid \$142,785 out of the defense fund to men without employment, which means that they paid 2642 miners the sum of \$6 per week for a period of nine weeks. This enormous number of idle men and the strike of the Cherokee and Pittsburg Coal and Mining Company reduced the production of coal in the state to a considerable extent.

COAL STRIPPING BY STEAM SHOVELS.

Strip mining by steam shovels in the state of Kansas is cutting the deep mining to a great extent, because they can produce a better grade of coal for less cost than the deep mines can produce. There are quite a few



Shot being fired in the Patton Coal Company strip mine, located northwest of Frontenac, Kan., showing empty cars ready to be loaded with coal.

steam shovels located on the Missouri line, and the coal produced there is sold in the Kansas market, consequently taking the place of coal that was formerly produced in the state of Kansas.

During the fiscal year ending June 30, 1914, Crawford county produced 223,013 tons of strip coal, and Cherokee county 160,842 tons, making a total of 383,855 tons. Crawford county produced 428,955 tons of strip coal and Cherokee county 195,297 tons during the fiscal year ending June 30, 1915, making a total of 624,252 tons of strip coal. The production of strip coal was increased by 232,780 tons during the year ended June 30, 1915, in the two counties, which is 9767 tons more than Crawford county produced alone in the previous year.

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At the present time there are 22 steam shovels in the state of Kansas, and each shovel averaged 28,375 tons of coal during the year. The dip-pers on the steam shovels in this state have a capacity of from 2½ to 9 cubic yards. An overburden of from 7 to 38 feet is taken off the coal. The vein of coal that is being stripped in the state runs in thickness from 2 feet 4 inches to 3 feet 10 inches, and is of good quality.

For the sixteen years, or rather for fifteen, since a detailed report for 1911 is lacking, 234 of the 461 deaths were caused by falls of roof or slate, 105 were deaths of shot firers, while powder explosions claimed 28 victims and cage accidents 23. Twelve men were killed by falling down shafts and an equal number by mine cars.

The most disastrous accident in the history of Kansas coal mining was that at mine No. 2 of the Mount Carmel Coal Company at Frontenac, on November 9, 1888, in which 40 men were killed. According to the records of the inquest held by C. A. Fisher, coroner, on the 11th, 12th, 13th, 14th and 15th of November, 1888, and the verdict of the jury, the explosion would not have been so violent if the company had kept the entries well sprinkled and paid more attention to the gas.



Showing the Whitmer Contracting Company strip mine inundated by water.
This steam shovel is located west of Frontenac, Kan.

There are no records available of fatal accidents prior to the year 1884. The records available from 1884 until 1900 do not state the causes of fatal accidents. There are no records of fatal accidents in the years 1886, 1888 and 1892. In 1911 the records were destroyed by fire and the mine inspector was unable to make a report. It is known that there were at least forty lives lost in one explosion in 1888. For the following years there is no cause nor the date of accidents given: 1884, 3 fatal accidents; 1885, 9; 1886, no record; 1887, 7; 1888, no record; 1889, 12; 1890, 8; 1891, 13; 1892, no record; 1893, 15; 1894, 26; 1895, 10; 1896, 12; 1897, 6; 1898, 17; 1899, 16; making a total of 154 fatal accidents recorded during this period. For four years during this time we have no records of fatal

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accidents at all. The records available show that there were 154 fatal accidents from January 1, 1884, until June 30, 1900, and from June 30, 1900, until June 30, 1915, there were 461 fatal accidents recorded, making a total of 615 fatal accidents in the above period, excepting the years for which we have no record. There is also the year 1888, in which the above-mentioned catastrophe occurred at mine No. 2 of the Mount Carmel Coal Company, in which at least 40 lives were lost.

The average number of tons produced for each fatal accident from 1884 to 1915 follows:

1884.....	366,666	1900.....	213,845
1885.....	160,006	1901.....	479,612
1886.....	—	1902.....	174,347
1887.....	224,297	1903.....	153,907
1888.....	—	1904.....	170,781
1889.....	176,013	1905.....	176,322
1890.....	314,506	1906.....	191,820
1891.....	211,824	1907.....	126,750
1892.....	—	1908.....	180,258
1893.....	192,128	1909.....	150,728
1894.....	138,893	1910.....	205,415
1895.....	319,084	1911.....	—
1896.....	265,979	1912.....	171,578
1897.....	549,468	1913.....	253,235
1898.....	227,095	1914.....	211,380
1899.....	256,056	1915.....	238,840

FIRST AID AND MINE RESCUE.

First-aid and mine-rescue work in Kansas is yet in its infancy, and there is only a very small supply of rescue apparatus around the mines in the state that can be obtained in case of an accident. The state of Kansas has a mine-rescue station, located on West Fourth street, Pittsburg, Kan., and rescue car No. 4 of the United States Bureau of Mines, which has the supervision over the station. Owing to the lack of funds for carrying on this work, when car No. 4 is out on one of its instruction trips there is nobody left at the station.

The station should be provided with sufficient help, so one man could be left at the station and at all times be available in case of accident. Mine-rescue work and first aid should be encouraged in every possible way, as no better deed can be performed than to relieve the suffering of the injured in an accident.

The second annual first-aid and mine-rescue field-meet demonstration by the miners and operators was held in Pittsburg, Kan., on May 29, 1915, under the auspices of the United States Bureau of Mines, on the State Normal School grounds. Nine teams contested for various prizes that were donated by the Coal Operators' Association, labor unions and the merchants of the city of Pittsburg. Team No. 7, of Frontenac, Kan., received the first prize, and was selected to represent the state of Kansas in an interstate meet which was held in Kansas City, Mo., on July 10, 1915, for the purpose of selecting one team to attend the national first-aid and mine-rescue meet in San Francisco, Cal. The different teams that demonstrated first-aid and mine-rescue work in Pittsburg showed

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considerable skill in the performance of this work, and they should be encouraged to keep up the good work. At the interstate meet held in Kansas City, the following states were represented by teams: Oklahoma, Kansas, Arkansas and Iowa. The Oklahoma team, of Lehigh, received the first prize and was selected to go to San Francisco to represent these states in a national demonstration held there on September 23 and 24. The Home-Stake Mining Company team, of Lead, S. Dak., won the first prize in first aid, and team No. 2, of the Utah Fuel Company, of Sunnyside, Utah, won the first prize in mine-rescue work.

MECHANICAL SHOTFIRING IN THE KANSAS COAL FIELD.

At present there are four mines in this coal field equipped with mechanical shotfiring devices, which are operated from the surface, making it unnecessary for anyone to be in the mine while the shots are being fired, and are giving satisfaction to all concerned. This method of firing shots is yet in its infancy, and it will be only a question of time when all of the mines in the state will be equipped with some mechanical shotfiring device.

Mine No. 7 of the McCormack Coal Company, operated by the Sheridan Coal Company, is located one and one-half miles southeast of Arma, and is equipped with the Schietzel shotfiring apparatus.

Mine No. 8 of the Hamilton Coal & Mercantile Company is located at Arma, Kan., and is equipped with the Schietzel shotfiring apparatus.

Mine No. 2 of the Katy Coal Company is located about one and one-half miles southeast of Radley, and is equipped with an electric shotfiring device patented by George Griffith.

At the mines which are equipped with the above shotfiring devices a safety switch box is located at each set of entries which allows all entries to be fired separately.

Mine No. 49 of the Central Coal and Coke Company, located at Nelson, is equipped with the Cornelius Knowles pneumatic shotfiring device, and each room or working place is equipped with a separate firing box which generates sufficient electricity to fire about four shots, and all the shots are fired simultaneously.

In the mines which are equipped with mechanical shotfiring devices the miners tamp all their shots, and electric detonators or fuses are used to fire the shots.

VENTILATION.

Proper ventilation is an absolute necessity in a coal mine, and all mine foremen should be qualified in ventilation before they be allowed to take charge of mines. It is absolutely necessary that they know all the up-to-date methods and all about ventilation, for they are responsible for the health, lives and limbs of the men employed by them. The mine foremen should see to it that all the crosscuts be made of lawful size and kept cleaned out, so the air will have sufficient room to travel, and it will not be necessary then to force the air through a crosscut that is inadequate. We find crosscuts half full of rock, trash, props and tool boxes, and when you find a crosscut partly choked, or not made large enough in the first

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RECORD OF ACCIDENTS FOR SIXTEEN YEARS IN KANSAS COAL MINES.

CAUSE OF ACCIDENT.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.	1914.	1915.	Totals
Falls of roof or slate.....	11	4	12	19	6	22	16	22	16	14	22	19	13	17	11	234	
Shot fires killed.....	6	3	6	7	6	11	9	9	8	5	7	10	6	5	7	105	
Killed by powder explosions.....			1	1	2	1	1	12			1	2	2	2	1	28	
Killed by cage accident.....	2	2		1		4		1	2					1	9	1	23
Falling down shaft.....		1	3					2	1	2	1		2	1		1	12
Killed by mine cars.....			2		2		2	1		1			2	1		1	8
Died in mine, heart disease.....			1			1		1	1		1			1		1	7
Killed by railway cars.....										2	2			2	1	1	6
Killed by explosion of gas.....									1						1	1	3
Killed by machinery.....																	4
Killed by fall of tip.....								1	1		1						3
Objects falling down mine, striking employees.....			2			1		1									3
Drowned in mine.....													2				2
Suffocated by gas.....			1									1		1		1	3
Killed by mules.....																	2
Electrocuted.....													1				1
Killed by fight in mine.....			1	2								3					4
Killed while acting as rescue party.....							1										1
Killed by dynamite cap explosion.....				1									1				1
Unknown cause.....	1	1			1												4
Dynamite explosion.....																	1
Construction work.....			1											1			2
Scalded by steam.....																1	1
Totals for years.....	20	11	30	36	16	41	31	52	31	25	38	3	37	28	34	28	461

* Records for this year were destroyed in Kirkwood fire.

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place, you can not expect to get sufficient air to the working faces for the men. It is absolutely necessary that these crosscuts be kept clean at all times, and at no time should a miner be allowed to go over forty feet without a crosscut.

To ventilate a mine properly the air must be carried to the working faces, and any mine foreman who has the appliances on hand and knows how a mine should be ventilated, and then neglects to get pure air for the men employed in his mine, is nothing less than a criminal, for he is the cause of the ruin of the health of a large majority of the miners employed in the mines.

Every mine foreman should be provided with an anemometer, so he can observe where it is necessary to increase the volume of air, thus making working conditions more healthful. To help the mine foreman in his duty of getting good fresh air in a mine, each fan should be equipped with a gauge indicating the speed traveled during the day or night. The chart of the gauge will show what amount of air traveled in the mine during any specified time. By observing the gauge he can better judge whether or not there is sufficient air supplied by the fan to the men working in the mine.

All the fans at the mines of Crawford and Cherokee counties should be carefully attended to and kept running continuously during the night to clear the working places of carbonic oxide gas (white damp), and carbonic acid gas (black damp), which is generated from the enormous amount of explosives used in these two counties to loosen the coal in the mines.

The natural impurities and offal discharged by men and beasts in the mine should not be allowed to remain in the air course, for it will poison the air to a great extent and injure the health of the men who are forced to breathe the air.

RECOMMENDATIONS.

1. A law should be enacted that would provide for a mechanical shot firer at all of the mines in the state of Kansas, or a mechanical device by which shots may be fired from the surface, making it unnecessary for any one to be in the mine while the shots are being fired.

2. I would recommend that the legislature appropriate sufficient funds to complete the mine-rescue station at Pittsburg, Kan., and to supply the mine inspection department with a mine-rescue truck and sufficient first-aid material and mine-rescue apparatus to be used in case of an accident in and around the coal mines.

3. The present office for the mine inspection department is inadequate. I would recommend that the legislature appropriate more funds to get suitable offices for this department, or enlarge the mine-rescue building to such an extent that the offices of the inspector of mines can be kept in that building. It would be an ideal location for this office on account of the mine-rescue apparatus, mine-rescue car and other supplies being kept in that building.

4. I would recommend that the legislature appropriate sufficient funds to buy all necessary up-to-date appliances to be used in mine-inspection work.



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5. I would recommend that an office of sealer of weights and measures for the coal mines of the state be provided by law.

6. I would also recommend that a commission be appointed to revise the entire mining laws of the state of Kansas.

COAL PRODUCTION FROM 1869 TO 1915 IN SHORT TONS, AVERAGE NUMBER OF EMPLOYEES, AVERAGE NUMBER OF DAYS WORKED, NUMBER OF TONS PRODUCED FOR EACH FATAL ACCIDENT, AND NUMBER OF FATAL ACCIDENTS.

YEAR.	Number of fatal accidents.	Name of mine inspector.	Total short tons produced.	Average number of men employed.	Average number of days worked.	Number of tons produced for each fatal accident.
1869*			36,891			
1870*			32,938			
1871*			41,000			
1872*			44,800			
1873*			56,000			
1874*			85,000			
1875*			150,000			
1876*			225,000			
1877*			300,000			
1878*			375,000			
1879*			460,000			
1880*			771,000			
1881*			840,000			
1882*			750,000			
1883*			900,000			
1884	3	E. A. Scammon	1,100,000			366,666
1885†	9	J. R. Braidwood	1,440,057	4,175		160,006
1886†			1,350,000			
1887†	7	G. W. Findlay	1,570,079			224,297
1888†	††	J. T. Stewart	1,700,000			
1889†	12	J. T. Stewart	2,112,166	5,956		176,013
1890†	8		2,516,054	4,523	210	314,506
1891†	13		2,753,722	6,201	222	211,824
1892†			3,007,276	6,559	208	
1893	15	A. C. Gallagher	2,881,931	9,851	147	192,128
1894	26	A. C. Gallagher	3,611,214	10,088	164	138,893
1895	10	Bennet Brown	3,190,843	9,021	161	319,084
1896	12	Bennet Brown	3,191,748	8,807	170	265,979
1897	6	George T. McGrath	3,291,806	8,699	152½	549,467½
1898	17	George T. McGrath	3,860,405	8,122	170¾	227,094
1899	16	Edward Keegan	4,096,895	10,198	186¼	256,056
1900	20	Edward Keegan	4,269,716	10,673	193	213,845
1901	10	Edward Keegan	4,896,121	9,506	180	479,612
1902	30	D. R. Casselman	5,230,433	9,315	170	174,347
1903	36	D. R. Casselman	5,540,647	9,972	186	153,907
1904**	16	James A. Orr	2,732,499	10,347	92	170,781
1905	36	James A. Orr	6,374,671	12,109	183	176,322
1906	30	Frank Gilday	5,754,616	10,175	166	191,820
1907	52	Frank Gilday	6,591,013	11,957	204	126,750
1908	31	Frank Gilday	5,588,016	11,334	179	180,258
1909	38	Frank Gilday	5,727,653	10,542	190	150,728
1910	25	Frank Gilday	5,135,391	10,619	165	205,415
1911*	††	Leon Besson	6,254,228	10,918	††	††
1912	37	Leon Besson	6,350,396	11,264	197	171,578
1913	28	Francis Keegan	7,090,579½	12,506	196	253,235
1914	34	Francis Keegan	7,186,918	12,498	200	211,380
1915	28	Jno. Pellegrino	6,687,521	11,451		238,840

*Production of coal from 1869 to 1884 and for 1911, taken from the United States Geological Survey.

†One report made for two years.

†† No report made; statistics for that year taken from the United States Geological Survey.

** One-half year's report. Reports changed from the calendar year-ending December 31 to fiscal year ending June 30.

†† Explosion at mine No. 2 Frontenac. No record was made of loss of life, but it is known that forty-five lives were lost.

†† Records destroyed.



MINE INSPECTIONS.

CRAWFORD COUNTY.

Crawford county is still the largest coal-producing county in the state. During the fiscal year ending June 30, 1915, the deep mines produced 4,167,254 tons of coal, and the strip mines 428,955 tons, making a total of 4,596,209 tons, or 68.75 per cent of the total production of the state. To produce this amount of coal 346,408 25-pound kegs of powder were used, valued at \$692,816. An average of one 25-pound keg of powder was used to produce every 13½ tons of coal. The production of coal in Crawford county has decreased 171,755 tons during the fiscal year, owing to several mines being worked out and abandoned and the companies closing some of their mines during the months of May and June, on account of not having a market for their coal.

The following mines were not operating during the last two months of this fiscal year: No. 14, Cherokee and Pittsburg Coal and Mining Company; mines Nos. 14, 18 and 19 of the Western Coal and Mining Company; mine No. 21 of the Wear Coal Company; mine No. 48 of the Central Coal and Coke Company; mines Nos. 3 and 8 of the Sheridan Coal Company; mine No. 16 of the Crowe Coal and Mining Company; mine No. 7 of the Hamilton Coal and Mercantile Company, and mine No. 8 of the Pittsburg Northern Coal Company.

There were eighteen fatal mine accidents in Crawford county during the year. The mines are worked on the room-and-pillar system, and the seam of coal runs from two feet four inches to three feet four inches.

During this year the following five new mines were sunk in Crawford county, which will add considerably to the next year's production: Mine No. 7 of the McCormick Coal Company; mine No. 2 of the Katy Coal Company; mines Nos. 15 and 16 of the Clemens Coal Company, and mine No. 49 of the Central Coal and Coke Company.

There were also numerous other small mines sunk in Crawford county during the year, which will employ from five to twenty men each.

Mines of the Cherokee and Pittsburg Coal and Mining Company.

Mine No. 9 of the Cherokee and Pittsburg Coal and Mining Company is located one mile northeast of Frontenac, on a switch off the Santa Fe railway. This is one of the largest coal-producing mines in the state of Kansas. During the fiscal year ending June 30, 1915, it produced 160,529 tons of coal. This mine gave employment to 222 men, who worked 242 days during the year.

Deputy Inspector Charles Paisley inspected this mine on May 26, 1915, and recommended that more air be put into the mine and taken to the working faces, that numerous places in the mine be timbered or the loose rock pulled down, and more manholes be put in on eleventh west. Abe Tennant, mine foreman.

Mine No. 11 of the Cherokee and Pittsburg Coal and Mining Company is located five miles north of Pittsburg, on a switch off the Santa Fe railway, and is one of the largest coal-producing mines in the state. During the fiscal year ending June 30, 1915, this mine employed 257 men and five boys, who produced 155,105 tons of coal and worked 240 days during the year.

Deputy Inspector Charles Paisley inspected this mine on May 7, 1915, and found conditions fair. He returned to the mine on May 20 and 21 to

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make a more thorough examination of the mine and made the following recommendations: Bad rocks in first north entry to be taken down or timbered; water to be taken off fifth west off first north roadway; motor road be cleaned and sprinkled, as it was too dusty; bathhouse sprays to be repaired. Peter McCall, mine foreman.

Mine No. 14 of the Cherokee and Pittsburg Coal and Mining Company, located at Capaldo, on a switch off the Santa Fe railway, gave employment to 45 men, who worked 139 days and produced 24,836 tons of coal during the year.

This mine was not in operation during the months of May and June, 1915, hence no report of inspection.

Mine No. 15 of the Cherokee and Pittsburg Coal and Mining Company is located two and one-half miles southwest of Frontenac, on a switch off the Santa Fe. This mine is 65 feet deep and is equipped with a 15-foot fan. There were 85 men employed at this mine during the year, who worked 239 days, and produced 92,511 tons of coal.

Deputy Inspector James Sherwood inspected this mine on May 7, 1915, and found it in good condition, with the exception of one entry, which was a little short of air. He ordered doors put up which will remedy this defect. He also found a good modern, clean and sanitary washhouse at this mine. Pete Bickell, mine foreman.

Mines of the Western Coal and Mining Company.

Mine No. 10 of the Western Coal and Mining Company, located one mile east of Cherokee, on a switch off the Missouri Pacific railway, gave employment to 84 men, who worked 223 days and produced 48,722 tons of coal during the year. This mine is 100 feet deep and is equipped with a 14-foot fan.

Deputy Inspector Martin Kotzman visited this mine on June 4, 1915, and found the mine in poor condition with regard to air. He recommended that a general overhauling of all the air courses be made, phones be repaired, and that the fan be speeded up and kept running at about 78 revolutions per minute. Robert Haig, mine foreman.

Mine No. 13 of the Western Coal and Mining Company, connected by switch to the Missouri Pacific railway, is located one and one-half miles west of Yale. This mine gave employment to 146 men, worked 184 days and produced 76,106 tons of coal. This mine is 82 feet deep and is equipped with a 14-foot fan.

Deputy Mine Inspector Martin Kotzman inspected this mine on June 2, 1915, and found considerable loose rock all over the mine that he ordered taken down or timbered. He ordered same to be done at once. The north side of the bottom was in bad condition; ordered same to be timbered at once. He also ordered that all the phones in the mine be repaired. Frank Gardner, mine foreman.

Mine No. 14 of the Western Coal and Mining Company, located one mile northwest of Fleming, on a switch off the Missouri Pacific, produced 156,970 tons of coal, employed 237 men and worked 186 days during the year. This mine is about 100 feet deep.

This mine was not in operation during the last quarter; therefore no inspection was made by the present department.

Mine No. 15 of the Western Coal and Mining Company, located one mile northeast of Franklin, on a switch off the Missouri Pacific railway, is 203 feet deep and is equipped with a 16-foot fan. This mine gave employment to 237 men, worked 186 days and produced 156,970 tons of coal during the year.

Deputy Inspectors Sherwood and Paisley visited this mine on May 10, 1915, and recommended that loose rock all over the mine be timbered or



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taken down; that more air be put up to the working places of the miners; telephones to be put in working condition; manholes to be put in in various places; washhouse to be kept in lawful condition. Frank Price, mine foreman.

Mine No. 16 of the Western Coal and Mining Company, located one-fourth mile west of Franklin, on a switch off the Missouri Pacific railway, gave employment to 206 men, worked 193 days and produced 131,978 tons of coal during the year. The mine is 200 feet deep and is equipped with a 14-foot fan.

Deputy Inspector Martin Kotzman visited this mine on May 11, 1915, and found it in fair condition. He recommended that loose rock in several places in the mine be timbered or taken down; doors to be put up in various places in the mine. William Beveridge, mine foreman.

Mine No. 18 of the Western Coal and Mining Company, located at Franklin, on a switch off the Frisco railway, gave employment to 230 men, worked 127 days and produced 92,069 tons of coal during the year. This mine is 163 feet deep.

This mine was not in operation during last quarter; therefore no inspection was made of this mine by this department.

Mine No. 19 of the Western Coal and Mining Company, located at Franklin, on a switch off the Missouri Pacific railway, gave employment to 142 men, worked 129 days and produced 79,007 tons of coal during the year. This mine is 207 feet deep.

It was not in operation during last quarter; hence no inspection was made by this department.

Mines of the Wear Coal Company.

Mine No. 17 of the Wear Coal Company, located seven miles northwest of Pittsburg, on a switch off the Missouri Pacific and Santa Fe railroads, produced 109,081 tons of coal, employed 183 men and worked 183 days during the year. This mine is 187 feet deep and is equipped with a 16-foot fan.

Deputy Inspector Sherwood inspected this mine on May 13, 1915, and found the mine in poor condition with regard to air and loose rock. There was not sufficient air going down the mine, and it was not conducted to the working faces. He ordered all loose rock taken down or timbered; manholes put in; fan house and fan repaired and more air put into the mine. He gave the foreman ten days in which to comply with recommendations made. He again returned to the mine on June 2 and found that the company was making the improvements as ordered, and requested that they continue to improve the mine until it is put in lawful condition. On June 28 Mr. Sherwood again visited the mine and found his recommendations had been carried out and the conditions of the mine greatly improved since his first visit. Upon arriving at the mine he found a man in the state of intoxication, who was going on the cage to be lowered into the mine. Mr. Sherwood immediately stopped him from getting on the cage and would not allow him to descend into the mine. Gus Lindbourg, mine foreman.

Mine No. 19 of the Wear Coal Company, located one and one-half miles north of Dunkirk, on a switch off the Missouri Pacific railway, gave employment to 205 men, worked 189 days and produced 134,160 tons of coal during the year. This mine is 196 feet deep and is equipped with a 16-foot fan.

Deputy Inspector James Sherwood visited this mine on May 12, 1915, and found it a little short of air at the working faces. He ordered that more air be taken to the working faces at once. Found the roadways dry and dusty; ordered the same cleaned and sprinkled. Phones not in working condition; ordered them repaired at once; manholes to be put in on main entries; also ordered that the washhouse be kept in clean and

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sanitary condition, as it was kept in poor condition. On June 4, 1915, he again returned to the mine and found that the company had failed to get the air to the working faces. He ordered the same done at once, and returned again on June 7 to see whether or not his instructions had been carried out, making the third inspection of the mine in a little more than a month and found the conditions improved considerably. James Delaney, mine foreman.

Mine No. 20 of the Wear Coal Company, located three miles northwest of Pittsburg, on a switch off the Frisco railway, worked 191 days, employed 66 men and produced 41,557 tons of coal during the year.

Deputy Inspector Kotzman visited this mine and found air conditions not as good as they should be. He recommended that a general overhauling of all air courses be made, which will make conditions better.

Mine No. 21 of the Wear Coal Company, located at Edison, on a switch off the Frisco railway, produced 99,083 tons of coal, employed 177 men and worked 110 days during the year. This mine is 201 feet deep.

This mine was not operating during the last quarter; therefore no inspection was made by this department.

Mines of the Central Coal and Coke Company.

Mine No. 38 of the Central Coal and Coke Company, operated under lease by John Italiani, is located two miles southwest of Fuller, on a switch off the Kansas City Southern railway. This mine is 62 feet deep, and gave employment to 99 men, who produced 62,741 tons of coal, working an average of 230 days during the fiscal year. This mine will be worked out and abandoned before the end of the next fiscal year.

Deputy Inspector Martin Kotzman visited this mine on June 23, 1915, and made the following recommendations: Water to be drained and kept off first east on south side, straight north and eighth west off north roadways. He stopped a room in the second south on account of it being driven ahead of the air. He examined the cages and recommended that the bolts be tightened; steps to be repaired in manway; new washhouse to be built, as old one had burned down, and sufficient lockers be put in. Wm. Lozzolli, mine foreman.

Mine No. 41 of the Central Coal and Coke Company, operated under lease by the Reda Coal Company, is located three miles northwest of Weir City, on a switch off the Frisco railway. This mine produced 29,835 tons of coal, gave employment to 62 men, who worked 168 days during the fiscal year. This mine is 65 feet deep, has a 14-foot fan, which runs at 60 revolutions per minute.

Deputy Mine Inspector James Sherwood inspected this mine on June 14, 1915, and found the airway in first south off east partially closed and some water on airway. He ordered the water removed and airway widened to lawful width. He found the air not good in the second east off south on east side, and entry running on single-entry system. He ordered this system discontinued and air brought to the working faces. He ordered all the curtains in the mine doubled, as they were leaking. If these recommendations are carried out conditions will be better in the mine. It is an old mine and will be worked out before the end of the next fiscal year. Mike Reda, mine foreman.

Mine No. 45 of the Central Coal and Coke Company, located at Ringo, on a switch off the Frisco railway, produced 141,173 tons of coal, employed 252 men and worked 177 days during the year. This mine is 223 feet deep and is equipped with a 16-foot fan.

Immediately after the present inspection department assumed the duties of this office, complaints were made to Governor Capper and to this office regarding the conditions of mine No. 45 of this company.

Deputy Inspector Martin Kotzman inspected this mine on May 19, 1915, and found the air supply inadequate. He ordered that doors be

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put up in various places in the mine, manholes to be made wherever necessary, and the washhouse to be kept in clean and sanitary condition.

Deputy Inspector Charles Paisley inspected this mine on June 6 and found numerous places driven a good distance ahead of the air. He ordered those places stopped until the crosscuts were made according to law. He also requested that the washhouse be kept in more clean and sanitary condition.

Complaints were again being made about mine No. 45 on or about the 17th of June, and I detailed Deputy Inspector James Sherwood to the mine to make a thorough examination of the same. Accordingly Deputy Inspector Sherwood inspected the mine on June 18 and 19, examining every entry and air course in the mine. He got a register of air in almost every entry in the mine. He recommended that all unnecessary crosscuts be closed. Found the washhouse in unsanitary condition; steam pipes were leaking and washhouse was poorly ventilated. He ordered that the washhouse be put in lawful condition or the company would be prosecuted for violation of the mine bathhouse law. The air in the mine has improved considerably, and the company officials have agreed to comply with all recommendations made by the inspectors. John Dunn, mine foreman.

Mine No. 46 of the Central Coal and Coke Company is located three miles west of Pittsburg, and connected by switch to the Frisco railway. There were 179 men employed, who worked 179 days and produced 98,699 tons of coal during the year. This mine is about 100 feet deep.

Deputy Inspector James Sherwood inspected this mine on May 18, 1915, and found it in fair condition. He recommended that the water on fourth south roadway be taken off and numerous sumps dug. He examined the washhouse and recommended that the windows and the north wall of the dressing room be repaired; also that the washhouse be scrubbed out whenever necessary. Lester Hollingsworth, mine foreman.

Mine No. 47 of the Central Coal and Coke Company, located two miles northeast of Frontenac, on a switch off the Frisco railway, gave employment to 63 men, worked 155 days and produced 42,075 tons of coal during the year.

This mine was worked out and abandoned during the last quarter and no inspection of the mine was made by this department. Ross Thomas, mine foreman.

Mine No. 48 of the Central Coal and Coke Company, located one mile north of Ringo, on a switch off the Frisco railway, worked 115 days, gave employment to 161 men and produced 84,897 tons of coal during the year. This mine is 223 feet deep.

This mine was not operating during the last two months of this year; therefore no inspection was made by the present department.

Mine No. 3 of the Sheridan Coal Company, located one-half mile east of Breezy Hill, is connected by switch to the Frisco railway. This mine produced 67,107 tons of coal, worked 147 days and employed 149 men during the year.

This mine was not operating during the last quarter of this year, and no inspection was made by this department.

Mine No. 4½ of the Sheridan Coal Company, located three and one-half miles northeast of Mulberry, on a switch off the Frisco railway, worked 248 days, employed 82 men and produced 51,670 tons of coal during the year. This mine is 31 feet deep and is equipped with a 14-foot fan.

Deputy Inspector Sherwood visited this mine on May 17, 1915, and found the mine in fair condition. He ordered some timbering done, telephones put in working condition, and recommended that safety catches be put on the cages. Ed Schooley, mine foreman.

Mine No. 5 of the Sheridan Coal Company, located one and one-half miles south of Mulberry, on a switch off the Kansas City Southern rail-

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way, produced 59,415 tons of coal, employed 95 men and worked 244 days during the year.

This is an old mine, nearly worked out, and will be abandoned before the end of next year.

Mine No. 6 of the Dickinson Coal Company, operated by the Sheridan Coal Company, located one-fourth mile west of Breezy Hill, on a switch off the Kansas City Southern railway, gave employment to 182 men, worked 220 days and produced 111,173 tons of coal during the year. This mine is 226 feet deep.

Deputy Inspector Kotzman visited this mine on May 25, 1915, and found it in fair condition. He recommended that doors be stationed in several places in the mine to increase the current of air. Ed. Soloman, mine foreman.

Mine No. 7 of the McCormick Coal Company, operated by the Sheridan Coal Company, is located one and one-fourth miles west of Breezy Hill, on a switch off the Missouri Pacific and Kansas City Southern railways, employed fifty-one men, worked sixty-four days and produced 9,010 tons of coal. This is a new mine and started to produce coal on or about the 1st of May, 1915. This mine is equipped with an electric shotfiring device, which fires the shots from the surface, making it unnecessary for anyone being in the mine while the shots are being fired, thereby eliminating loss of life to shotfirers. From all appearances it will be one of the best coal producers in the state.

Mine No. 8 of the Sheridan Coal Company, located two miles northwest of Fuller, on a switch off the Kansas City Southern railway, employed 129 men, worked 121 days and produced 58,463 tons of coal during the year.

This mine was idle during the last quarter, and no inspection was made.

Mine No. 9 of the Howe Coal Company, operated by the Sheridan Coal Company, located one mile north of Mulberry, on a switch off the Kansas City Southern railway, gave employment to 164 men, worked 214 days and produced 106,951 tons of coal during the year. This mine is 38 feet deep and is equipped with a sixteen-foot fan.

Deputy Mine Inspector Martin Kotzman visited the mine on May 4, 1915, and recommended that the telephones in the mine be repaired, and in various places in the mine bad rock be timbered or loose rock pulled down. He also recommended that more sprays be put in the bathroom of washhouse and that it be kept in a clean and sanitary condition. George Ginther, mine foreman.

Mine No. 10 of the Sheridan Coal Company, located one mile west of Mulberry, is connected with the Kansas City Southern railroad. This mine produced 81,565 tons of coal, employed 178 men, and worked 175 days during the year. This mine is 128 feet deep and is equipped with a sixteen-foot fan.

Deputy Inspector James Sherwood visited this mine on May 28, 1915, and ordered that loose rock all over the mine be taken down or timbered; manholes to be made for the safety of the men; ordered washhouse to be put in lawful condition. He also ordered new ropes put on as the ones in use seemed to be in bad condition. John Yokum, mine foreman.

Mine No. 11 of the Sheridan Coal Company, located one-half mile northeast of Gross, on a switch off the Kansas City Southern railway, gave employment to 175 men, worked 217 days and produced 103,519 tons of coal during the year.

This mine was inspected and a general overhauling of all air courses was ordered by the inspector. Waste Geslein, mine foreman.

Mine No. 12 of the Faulkner Coal Company is located at Gross, and is connected by switch to the Frisco railway. This mine is very faulty,



only producing 26,054 tons of coal, employing 43 men, and working 221 days during the year. This mine is 108 feet deep and is equipped with a 14-foot fan.

Deputy Inspector Sherwood inspected this mine on May 24, 1915, and found it in fair condition. In the first west on the south side of the mine he found a horseback running straight up the entry, and ordered timbers put in. He also ordered considerable loose rock all over the mine timbered or taken down. Clement Ducobie, mine foreman.

Mine No. 14 of the Faulkner Coal Company is located at Gross, and connected by switch to the Frisco railway. There were 48 men employed, who worked 254 days and produced 29,211 tons of coal during this fiscal year. This mine is 157 feet deep and is equipped with a 16-foot fan.

Deputy Inspector Sherwood visited this mine on May 24, 1915, and found the mine in general in fair condition. The rim of the sheave wheel was broken, and he ordered that no more men be hoisted or lowered until the same was repaired. Walter Casselman, mine foreman.

Mines of the Clemens Coal Company.

Mine No. 4 of the Clemens Coal Company, located one-half mile west of Mulberry, on a switch off the Frisco railway, gave employment to 143 men and produced 116,155 tons of coal in 266 days during the fiscal year. This mine is 64 feet deep and is equipped with a 14-foot fan.

Deputy Inspector James Sherwood visited this mine on June 25, 1915, and made the following recommendations: All bolts and iron work on the cages to be tightened; loose rock all over the mine to be taken down or timbered; water to be taken off roadways; that all unnecessary cross-cuts be closed, to allow a better circulation of the air to the working faces. He found the mine in general in fair condition. William Rae, mine foreman.

Mine No. 10 of the Clemens Coal Company, located three miles northeast of Pittsburg, on a switch off the Frisco railway, gave employment to 62 men who worked 273 days and produced 64,304 tons of coal during this year. This mine is 60 feet deep and is equipped with a 14-foot fan.

Deputy Inspector Kotzman visited this mine on May 7, 1915, and found the mine in general in good condition. Frank Samples, mine foreman.

Mine No. 11 of the Clemens Coal Company, located at Mulberry, on a switch off the Frisco railway, gave employment to 117 men, who worked 215 days and produced 99,845 tons of coal during the year. This mine is 61 feet deep and is equipped with a 14-foot fan.

Deputy Inspector Sherwood visited this mine on May 19, 1915, and found the mine in general in good condition. Jack Davidson, mine foreman.

Mines of the Crowe Coal Company.

Mine No. 14 of the J. R. Crowe Coal and Mining Company is located at Croweburg, on a switch off the Frisco railway. This mine produced 87,540 tons of coal during this fiscal year and employed 139 men and worked 182 days during the year.

Deputy Inspector Kotzman visited this mine on May 13, 1915, and found it in pretty fair condition. He recommended that an addition to the spray room of the washhouse be made to accommodate the men using the same. He returned to the mine again on May 20, 1915, and found it in pretty fair condition. Kotzman and I again went to the mine on May 26, in answer to a complaint about the ropes and cages. We examined the ropes and found them to be in pretty good condition. We also examined the safety catches on the cages and found them in pretty good condition, with the exception of one spring on the east cage which we ordered renewed. John Richardson, mine foreman.

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Mine No. 15 of the J. R. Crowe Coal and Mining Company is located at Croweburg, on a switch off the Frisco railway. This mine worked 179 days, employed 96 men and produced 58,394 tons of coal during the fiscal year.

Deputy Inspector Martin Kotzman visited this mine on May 20, 1915, and found the mine a little short of air; he recommended that doors be put up, which will make air conditions much better. He also recommended that the steam pipes in the spray room be boxed, so there will be no danger of anybody getting burned by them. Jim McVickers, mine foreman.

Mine No. 16 of the J. R. Crowe Coal and Mining Company is located at Croweburg, on a switch off the Frisco railway. This mine produced 67,542 tons of coal, employed 110 men and worked 141 days during the year.

This mine was closed down during the last quarter of this year, and no inspection was made by the present department.

Mines of the Hamilton Coal Company.

Mine No. 6 of the Hamilton Coal and Mercantile Company, located one-fourth mile northeast of Cherokee, on a switch off the Frisco railway, employed 79 men, worked 229 days, and produced 41,879 tons of coal during the year. This mine is 140 feet deep and is equipped with a 15-foot fan.

Deputy Inspector Kotzman visited this mine on June 9, 1915, and found it in fair condition. A gasoline motor is used at this mine. He found the mine had considerable loose rock, which he ordered taken down or timbered. Gus Champ, mine foreman.

Mine No. 7 of the Hamilton Coal and Mercantile Company, located at Radley, is connected by switch to the Santa Fe railway. This mine produced 67,202 tons of coal, employed 114 men and worked 146 days during the year.

This mine was idle during the last quarter of this year, and no report of inspection was made by the present department. James Monahan, mine foreman.

Mine No. 8 of the Hamilton Coal and Mercantile Company, located one and one-half miles northeast of Arma, on a switch off the Missouri Pacific railway, gave employment to 160 men, worked 190 days and produced 96,235 tons of coal during the year. This mine is 240 feet deep and is equipped with a 14-foot fan.

Deputy Inspector Paisley visited this mine on May 7, 1915, and found the general conditions of the mine poor. He requested that numerous doors be put up in the mine and manholes made on the traveling ways. He also recommended that the washhouse sprays be repaired. John Fulton, mine foreman.

Mine No. 7 of the Girard Coal Company is located at Radley, on a switch off the Santa Fe railway. The mine gave employment to 172 men, who worked 195 days and produced 93,555 tons of coal during the year. This mine is 184 feet deep.

Deputy Inspector Sherwood inspected this mine on May 11, 1915, and found conditions with regard to air good. He ordered three new sets of timbers put in on bottom and phones in the mine to be repaired. The mine has a new concrete washhouse and it is kept in clean and sanitary condition. William Hudson, mine foreman.

Mine No. 8 of the Pittsburg Northern Coal Company is located one mile east of Franklin, and is connected by switch to the Missouri Pacific railway. This mine produced 57,013 tons of coal, employed 129 men and worked 104 days during the year.



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This mine was not operated during the last quarter and no inspection was made by this department during that time. Frank Scovell, mine foreman.

Mine No. 9 of the Girard Fuel Company, located one and one-half miles northeast of Arma, Kan., is connected by switch to the Missouri Pacific railway. The mine gave employment to 78 men, worked 122 days, and produced 46,157 tons of coal during the fiscal year. The mine is 239 feet deep and is equipped with a 16-foot fan.

Deputy Inspector Kotzman inspected this mine on May 18, 1915, and found the mine in fair condition. He ordered loose rock all over the mine to be taken down or timbered; doors in various places in the mine to be hung and some repaired; the manway on south side of the air shaft to be cleaned. Joe Ruchaber, mine foreman.

Mine No. 5 of the Chapman Coal Company, located one and one-half miles north of Croweburg, is connected by a switch to the Frisco railway. The mine produced 136,281 tons of coal, worked 216 days and employed 242 men.

This mine was inspected and found in fair condition. Frank Wolfe, mine foreman.

Mine No. 1 of the Nevius Coal Company, located two miles west of Pittsburg, is connected by switch to the Frisco railway. The mine produced 39,488 tons of coal, employed 68 men and worked 200 days during the year.

Deputy Inspector Paisley inspected this mine and found it in fair condition. This is an old mine and will probably be worked out in the near future.

Mine No. 6 of the Nevius Coulter Coal Company, located one-half mile south of Radley, on a switch off the Santa Fe, produced 120,903 tons of coal, employed 159 men and worked 250 days. This mine is equipped with a 14-foot fan.

Deputy Inspector Kotzman visited this mine on May 7, 1915, and found it in general in good condition. He ordered timbers put up in numerous places and the telephone system put in and kept in good working condition. John O'Leary, mine foreman.

Mine No. 1 of the J. R. Burnett Coal Company, located one and one-fourth miles south of Curranville, on a switch off the Missouri Pacific railway. This mine is 125 feet deep and gave employment to 135 men, who worked an average of 200 days and produced 50,127 tons of coal. This is an old mine and will be abandoned before the end of the next fiscal year.

Deputy Inspector James Sherwood visited this mine on May 4, 1915, and found it in a deplorable condition with regard to air, and recommended that all unnecessary crosscuts must be closed so that a better current of air can be forced to the working faces of the mine.

On May 27 Deputy Inspector Kotzman visited the mine and found it in fair condition. He found the phones in the mine in bad condition, and ordered them repaired. He also ordered handholes put on the west cage and the washhouse repaired.

On June 23 Deputy Inspector Kotzman again returned to the mine and found the repairs that he had recommended on his former visits were made. This mine has given us more trouble than any other twelve mines in the state. Thomas Price, mine foreman.

Mine No. 6 of the F. E. Doubleday Coal Company, located at Coalvale, is connected by a switch to the Frisco railway. The mine gave employment to 101 men, worked 270 days and produced 78,830 tons of coal during the year. This mine is 65 feet deep and is equipped with a 14-foot fan.

Deputy Inspector James Sherwood inspected this mine on May 26, 1915, and recommended that the timbers on the east side of the bottom, which



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were in an unsafe condition, be renewed at once. This mine is in good condition. Charles Spensberger, mine foreman.

Mine No. 7 of the Spencer Newland Coal Company, located one mile south of Mulberry, is connected by a switch to the Frisco railway. The mine produced 70,768 tons of coal, employed 131 men and worked 188 days during the year. It is 130 feet deep and is equipped with a 10-foot fan.

Deputy Inspector James Sherwood inspected this mine on May 20, 1915, and found it in poor condition with regard to air. He could not get a reading in many parts of the mine. He ordered that doors be hung in place of curtains in many places; ordered that an overcast be built to change the air. He also ordered that the washhouse be put in lawful condition.

Deputy Inspector Sherwood again returned to the mine, in company with Deputy Inspector Thomas Turvey, of Scranton, on June 1, 1915, and found the mine greatly improved with regard to air, and that all of his recommendations made on his former visit had been carried out. Herman Haymont, mine foreman.

Mine No. 1 of the George T. McGrath Coal Company, located four miles southwest of Pittsburg, is connected by switch to the Frisco railway. The mine produced 32,463 tons of coal, employed 55 men and worked 197 days during the year. Geo. T. McGrath, mine foreman.

The remaining mines of Crawford county are small ones and supply coal for local trade.

CHEROKEE COUNTY.

During the fiscal year ending June 30, 1915, the deep mines in Cherokee county produced 1,587,997 tons of coal and the strip mines produced 195,297 tons, making a total of 1,783,294 tons, or 26.66 per cent of the total state's production. This is a decrease of 287,347 tons from the former year. The coal is shot off the solid, and to produce 1,783,294 tons of coal the miners used 105,696 25-pound kegs of powder, valued at \$210,392. One 25-pound keg of powder was used to produce every 16¾ tons of coal.

During this year seven fatal accidents occurred in and around the mines of this county. The mines in Cherokee county were in a deplorable condition, on account of water on roadways and not having sufficient air at the working places. The mines are worked by the room-and-pillar system and the coal is shot off the solid.

Mine No. 39 of the Central Coal and Coke Company, located three miles northwest of Weir, is on a switch off the Frisco railway. The mine produced 18,701 tons of coal, employed 112 men and worked 81 days during the year. This mine was abandoned December 31, 1914. Thomas Graham, mine foreman.

Mine No. 42 of the Central Coal and Coke Company is located three miles southwest of Scammon and connected by switch off the Frisco railway. This mine gave employment to 229 men, who produced 124,418 tons of coal and worked 173 days during the fiscal year.

Deputy Inspector Fred Green inspected this mine on May 18, 1915, and found it in poor condition. He could not get a register of air in any of the entries in the mine, for want of doors and stoppings. He ordered doors and stoppings put in at once, which will better working conditions in this mine to a considerable extent and put it in lawful condition. Bob Murry, mine foreman.

Mine No. 43 of the Central Coal and Coke Company is located one-half mile west of Turk, on a switch off the Frisco railway. This mine produced 81,426 tons of coal during the fiscal year and gave employment to 171 men, who worked 172 days during the year.



Deputy Inspector Fred Green visited this mine on May 13, 1915, and found the mine well ventilated. The mine in general is wet on account of cave holes and water seeping in from the surface. The company was requested by this department to fill these holes up at once. Camile Deprall, mine foreman.

Mine No. 44 of the Central Coal and Coke Company, operated under lease by John M. Young, is located three miles west of Weir, on a switch off the Frisco railway. The mine employed 99 men, worked 224 days and produced 44,053 tons of coal during the year.

Deputy Inspector Kotzman inspected this mine on June 8, 1915, and found the air in the mine in general in fair condition. He recommended timbering be done or rock pulled down in several places in the mine. He also ordered the phones to be repaired. John M. Young, mine foreman.

Mine No. 18 of the J. R. Crowe Coal and Mining Company is located three miles south of Scammon, on a switch off the Frisco railway. There were 99 men employed, producing 61,013 tons of coal, working 155 days during the year.

Deputy Inspector Fred Green inspected this mine on May 25, 1915, and found the mine with regard to air in bad condition. He recommended that doors be put up and air brought to the working faces. He again returned to the mine on June 14, 1915, and found that the recommendations made on his former visit were carried out. John Bruce, mine foreman.

Mine No. 19 of the J. R. Crowe Coal and Mining Company is located three miles southwest of Scammon, on a switch off the Frisco railway. This mine worked 35 days, employed 28 men and produced 6115 tons of coal during the year. This mine was idle during the first and last quarters. Wm. Williams, mine foreman.

Mine No. 20 of the J. R. Crowe Coal and Mining Company is located four miles southwest of Scammon, on a switch off the Frisco railway. This mine produced 209,382 tons of coal during the year, making it the largest coal-producing mine in the state of Kansas. It gave employment to 240 men, who worked 209 days during the year. It is 55 feet deep and is equipped with a 12-foot fan.

Deputy Inspector Fred Green visited this mine on May 6, 1915, and found the mine in many places in poor condition with regard to ventilation. He ordered doors and stoppings put in, which will make the air conditions considerably better. Thomas Humes, mine foreman.

Mine No. 1 of the Mayer Coal Company, located one and one-half miles southwest of Mineral on a switch off the M. K. & T. railway, produced 12,895 tons of coal, employed 22 men and worked 137 days during the year.

This mine was closed down and abandoned during the last quarter.

Mine No. 4 of the Mayer Coal Company, located four miles north of Scammon on a switch off the Missouri Pacific and Frisco railroads, produced 62,453 tons of coal, employed 126 men and worked 230 days during the year. This mine is 95 feet deep and is equipped with a 12-foot fan.

Deputy Inspector Fred Green inspected this mine on May 5, 1915, and found it in poor condition with regard to ventilation. He could not get a register of air in any place in the mine, and requested that doors and stoppings be put in at once, which will remedy this condition. Thomas Scott, mine foreman.

Mine No. 5 of the Mayer Coal Company, located three miles northwest of Mineral on a switch off the Frisco railway, gave employment to 43 men, worked 214 days and produced 45,287 tons of coal during the year.

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This mine was inspected by Deputy Inspector Fred Green and found in fair condition. Joseph Ryan, mine foreman.

Mine No. 6 of the Mayer Coal Company, located three miles northwest of Mineral, on a switch off the M. K. & T. railway, produced 187,535 tons of coal, employed 157 men and worked 255 days during the year.

This mine was inspected by Deputy Inspector Fred Green and found in fairly good condition. Ed Ryan, mine foreman.

Mine No. 7 of the Fidelity Coal and Mining Company is located two and one-half miles northwest of Scammon and connected with the Missouri Pacific railway. It gave employment to 156 men, worked 220 days and produced 79,488 tons of coal during the year.

Deputy Inspector Fred Green inspected this mine on June 16 and found many entries short of air. He recommended that the air be brought to the working faces at once. He also examined the ropes and found them in bad condition; ordered them taken off and new ropes put on. Jack Humble, mine foreman.

Mine No. 8 of the Fidelity Coal and Mining Company is located two miles north of Mineral, on a switch of the M. K. & T. railway. The mine produced 2669 tons of coal, employed 34 men and worked 27 days.

This mine was leased to the Carsini Coal Company on May 1, 1915. R. Carsini, mine foreman.

Mine No. 9 of the Fidelity Coal and Mining Company, located at Stone City, on a switch off the M. K. & T. railway, produced 96,760 tons of coal and employed 142 men and worked 242 days during the year.

Deputy Inspector Fred Green inspected this mine on June 7, 1915, and found it in poor condition with regard to air. He ordered doors and curtains put up at once to drive the air to the working faces. Alex Lindsay, mine foreman.

Mine No. 11 of the Fidelity Coal and Mining Company, located three and one-half miles northeast of Mineral, on a switch off the M. K. & T. railway, is a new mine in course of construction, and from all appearances will be a large coal producer. Mike Wagner, mine foreman.

Mine No. 8 of the M. K. & T. Coal Department, located one-half mile southeast of West Mineral, is connected by a switch to the M. K. & T. railway. The mine produced 20,241 tons of coal, employed 34 men and worked 194 days during the year.

This mine was worked out and abandoned on April 9, 1915.

Mine No. 15 of the M. K. & T. Coal Department, located one mile northeast of East Mineral, on a switch off the M. K. & T. railway, gave employment to 81 men, worked 265 days and produced 68,961 tons of coal during the year.

Deputy Inspector Fred Green inspected this mine on May 25, 1915, and found the mine in poor condition with regard to air. He ordered doors and stoppings put in right away, which will make the air conditions better. John Reed, mine foreman.

Mine No. 16 of the M. K. & T. Coal Department is located one and one-half miles southeast of Mineral, on a switch off the M. K. & T. railway. This mine produced 25,831 tons of coal, employed 26 men and worked 260 days during the year.

This is an old mine and is nearly worked out. Mr. Green, deputy inspector, visited this mine on May 31, 1915, and found it in pretty good condition. T. Reedy, mine foreman.

Mine No. 9 of the Clemens Coal Company, located three and one-half miles southwest of Scammon, is connected by switch to the Frisco railroad. The mine gave employment to 143 men, worked 199 days and produced 134,734 tons of coal during the fiscal year.



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Deputy Inspector Fred Green inspected this mine on May 17, 1915, and found it in poor condition with regard to air. He could not get a reading in many of the entries in the mine. He demanded that the air be forced to the working faces at once. Sam Boone, mine foreman.

Mine No. 2 of the Cherokee Crescent Coal Company, known as the Star mine, is located one and one-fourth miles northeast of Carona and is connected by switch with the Missouri Pacific railway.

Deputy inspector Fred Green inspected this mine and found it in fair condition. Wm. Green, mine foreman.

Mine C of the George K. Mackie Fuel Company is located two miles southwest of Scammon, and is connected by switch to the Frisco and M. K. & T. railways. This mine produced 4764 tons of coal, employed 41 men, worked 36 days. It was abandoned during the second quarter of this fiscal year.

Mine F of the George K. Mackie Fuel Company, located two and one-half miles southwest of Scammon, is connected with the Frisco and M. K. & T. railroads. This mine gave employment to 213 men, worked 199 days and produced 164,889 tons of coal during the year.

Deputy Inspector Fred Green inspected this mine on June 2, 1915, and found the mine well ventilated. Jack Morton, mine foreman.

Mine No. 8 of the Columbus Coal Company, located two and one-half miles southwest of Turk, is connected with the Frisco railroad. This mine produced 17,233 tons of coal, employed 32 men and worked 215 days during the year.

This mine is worked out and abandoned, but there is a small area of coal still there, which is taken out by a slope called No. 8½ Columbus Coal Company.

Deputy Inspector Green inspected this slope and found that it had just started to operate. John Newland, mine foreman.

Mine No. 12 of the Western Coal and Mining Company is located at Carona, on a switch off the Missouri Pacific railway. This mine produced 17,096 tons of coal, employed 30 men and worked 136 days during the year.

This mine was worked out and abandoned during the last quarter of this year. Wm. Caldwell, mine foreman.

Mine No. 1 of the Elliott Coal Company, located at Roseland on a switch off the Missouri Pacific railway, produced 12,947 tons of coal, employed 23 men, and worked 175 days during the year.

Deputy Inspector Fred Green inspected this mine on May 27, 1915, and found the mine poorly ventilated for want of doors and stoppings. He ordered them put up at once. George Elliott, mine foreman.

The remaining mines are small and are operated only when the coal trade is good. They supply coal for local use only.

LEAVENWORTH COUNTY.

Leavenworth county still remains the third largest coal producing county in the state. During the fiscal year ending June 30, 1915, it produced 184,227 tons of coal, or 2.75 per cent of the total production of the state. There are at present only two mines outside of the Kansas State Penitentiary mine operating in this county, namely, the Carr mine, operated by the Carr Coal and Mining Company; Home-Riverside mine No. 2, operated by the Home-Riverside Coal Company. Mine No. 1 of the Home-Riverside Coal Company was not in operation during the year. The coal at these mines is dug on the long-wall system, and there is no black powder used, but there were 1463 pounds of dynamite used.

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Mine No. 2 of the Home-Riverside Coal Company, located south of Leavenworth, is connected by switch to the Union Pacific railway, and gave employment to 232 men, worked 218 days and produced 88,113 tons of coal during the year.

Deputy Inspector Sherwood inspected this mine and found the air conditions good. He recommended that some timbers on the bottom be replaced by new timbers at once; also demanded that the telephones be repaired. C. N. Fish, mine superintendent.

Carr Coal and Mining Company mine is located south of Leavenworth, and is connected by a switch with the Santa Fe railroad. This mine produced 52,161 tons of coal, employed 199 men and worked 179 days during the fiscal year ending June 30, 1915.

This mine was inspected by Deputy Inspectors Kotzman and Turvey on June 16, 1915, who made the following report: They arrived at the mine before the men were lowered into the mine and noticed that from eight to ten men got on the cage to be lowered at one time. They ordered this practice stopped and that the company live up to the law, which would not allow more than six men to be lowered into the mine on one cage at one time. They examined the mine and found considerable water on the roadways and found the mine lacking in air. They recommended that the water be taken off and doors hung in various places to get sufficient air to the working faces. Phones were ordered to be repaired. Examined the steam boiler at the escapement shaft and ordered it to be repaired and provided with a steam and water gauge to show respectively the pressure of steam and height of water in boiler, and to be also provided with proper safety valve. J. J. Glynn, mine superintendent.

The Kansas State Penitentiary mine is located at Lansing, and is connected with the Union Pacific, Missouri Pacific and the Santa Fe railways. This mine produced 43,953 tons of coal, employed 214 convicts and worked 299 days during the year ending June 30, 1915. The mine is 720 feet deep.

In a thorough inspection made on June 14 and 15, 1915, by Deputy Inspectors Kotzman and Turvey and myself, we found the mine considerably short of air. In numerous places in the mine we could not get a register of air at the working faces. We also found considerable loose rock all over the mine. I requested that these conditions be remedied at once.

OSAGE COUNTY.

Osage county produced 102,006 tons of coal, or 1.54 per cent of the production of the state. This is a decrease of 13,548 tons from the former year. The mines in this county are worked by the long-wall system. There are two mines in this county equipped with steam hoists, two electric, and seventeen with horse hoists. There are 533 men employed in and around the mines of the county, and they worked an average of 144 days during the year.

LINN COUNTY.

There are seven mines operating in this county. We could not get an accurate report of the production of the county, but estimated it to be about the same as the year ending June 30, 1914, which was 18,785 tons of coal.

FRANKLIN COUNTY.

The mines of this county are all drift openings, with the exception of one shaft opening, which is operated by William Gliddon. We estimate the production of this county at about 3000 tons of coal. There are but thirty-six men working in and around the drifts of this county.

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COAL-MINING INDUSTRY IN CRAWFORD COUNTY FOR THE FISCAL YEAR ENDING JUNE 30, 1915.

Office No.	NAME OF OPERATOR.	Postoffice address.	Name or number of mine.	Name of superintendent.	Location of mine.
1	Cherokee-Pittsburg Coal & Mining Co.	Frontenac.	9.	Joseph Fletcher.	1 mile northeast of Frontenac.
2	Cherokee-Pittsburg Coal & Mining Co.	Frontenac.	11.	Joseph Fletcher.	3 miles north of Pittsburg.
3	Cherokee-Pittsburg Coal & Mining Co.	Frontenac.	14.	Joseph Fletcher.	Capaldo.
4	Cherokee-Pittsburg Coal & Mining Co.	Frontenac.	15.	Joseph Fletcher.	2½ miles southwest of Frontenac.
5	Western Coal & Mining Co.	Pittsburg.	10.	Phil Roesser.	1 mile east of Cherokee.
6	Western Coal & Mining Co.	Pittsburg.	13.	Phil Roesser.	1½ miles west of Yale.
7	Western Coal & Mining Co.	Pittsburg.	14.	Phil Roesser.	1 mile northwest of Fleming.
8	Western Coal & Mining Co.	Pittsburg.	15.	Phil Roesser.	1 mile northeast of Franklin.
9	Western Coal & Mining Co.	Pittsburg.	16.	Phil Roesser.	¼ mile west of Franklin.
10	Western Coal & Mining Co.	Pittsburg.	18.	Phil Roesser.	Franklin.
11	Western Coal & Mining Co.	Pittsburg.	19.	Phil Roesser.	Franklin.
12	Wear Coal Co.	Pittsburg.	17.	Chas. Davis.	7 miles northwest of Pittsburg.
13	Wear Coal Co.	Pittsburg.	19.	Chas. Davis.	1½ miles north of Dunkirk.
14	Wear Coal Co.	Pittsburg.	20.	Chas. Davis.	3 miles northwest of Pittsburg.
15	Wear Coal Co.	Pittsburg.	21.	Chas. Davis.	Edison.
16	Central Coal & Coke Co.	Kansas City.	38.	Wm. Harkes.	2 miles southwest of Fuller.
17	Central Coal & Coke Co.	Kansas City.	41.	Wm. Harkes.	3 miles northwest of Weir.
18	Central Coal & Coke Co.	Kansas City.	45.	Wm. Harkes.	Ringo.
19	Central Coal & Coke Co.	Kansas City.	46.	Wm. Harkes.	3 miles west of Pittsburg.
20	Central Coal & Coke Co.	Kansas City.	47.	Wm. Harkes.	2 miles northeast of Frontenac.
21	Central Coal & Coke Co.	Kansas City.	48.	Wm. Harkes.	1 mile north of Ringo.
22	Sheridan Coal Co.	Mulberry.	3.	E. M. Roberts.	¼ mile east of Breezy Hill.
23	Sheridan Coal Co.	Mulberry.	5.	E. M. Roberts.	1½ miles south of Mulberry.
24	Sheridan Coal Co.	Mulberry.	8.	E. M. Roberts.	2 miles northwest of Fuller.
25	Sheridan Coal Co.	Mulberry.	10.	E. M. Roberts.	1 mile west of Mulberry.
26	Sheridan Coal Co.	Mulberry.	11.	E. M. Roberts.	¼ mile northeast of Gross.
27	Home Coal Co.	Mulberry.	9.	E. M. Roberts.	1 mile north of Mulberry.
28	McCormick Coal Co.	Mulberry.	4.	E. M. Roberts.	3½ miles northwest of Mulberry.
29	McCormick Coal Co.	Mulberry.	7.	E. M. Roberts.	1½ miles west of Breezy Hill.
30	Dickinson Coal Co.	Mulberry.	6.	E. M. Roberts.	¼ mile west of Breezy Hill.
31	Faulkner Coal Co.	Mulberry.	12.	E. M. Roberts.	Gross.
32	Faulkner Coal Co.	Mulberry.	14.	E. M. Roberts.	Gross.
33	J. R. Crowe Coal & Mining Co.	Weir.	14.	R. A. Gray.	Croweburg.
34	J. R. Crowe Coal & Mining Co.	Weir.	15.	R. A. Gray.	Croweburg.
35	J. R. Crowe Coal & Mining Co.	Weir.	16.	R. A. Gray.	Croweburg.
36	Clemens Coal Co.	Pittsburg.	4.	Frank Thomas.	¼ mile west of Mulberry.
37	Clemens Coal Co.	Pittsburg.	7.	Frank Thomas.	1 mile northwest of Pittsburg.
38	Clemens Coal Co.	Pittsburg.	10.	Frank Thomas.	3 miles northeast of Pittsburg.
39	Clemens Coal Co.	Pittsburg.	11.	Frank Thomas.	Mulberry.

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40	Hamilton Coal & Mercantile Co.	Weir.	6	Stewart Hamilton	1 1/4 mile north of Cherokee.
41	Hamilton Coal & Mercantile Co.	Weir.	7	Stewart Hamilton	Radley.
42	Hamilton Coal & Mercantile Co.	Weir.	8	Stewart Hamilton	1 1/2 miles northeast of Arma.
43	Girard Coal Co.	Pittsburg.	7	Geo. Mack	1/4 mile west of Radley.
44	Girard Fuel Co.	Pittsburg.	9	Geo. Mack	1 1/2 miles northeast of Arma.
45	Pittsburg Northern Coal Co.	Pittsburg.	8	Geo. Mack	1 mile east of Franklin.
46	Chapman Coal Co.	Mulberry.	5	Joseph H. Hazen	1 1/2 miles northeast of Croweburg.
47	Nevius Coal Co.	Pittsburg.	1	J. H. Price	2 miles west of Pittsburg.
48	Nevius Coulter Coal Co.	Pittsburg.	6	J. H. Price	1/2 mile south of Radley.
49	J. H. Price & Sons Coal Co.	Pittsburg.	1	J. H. Price	1/4 mile south of Curranville.
50	F. E. Doubleday Coal Co.	Pittsburg.	6	F. E. Doubleday	Coalvale.
51	Spencer-Newland Coal Co.	Pittsburg.	7	C. F. Spencer	1 mile south of Mulberry.
52	Geo. T. McGrath Coal Co.	Pittsburg.	1	Geo. T. McGrath	4 miles southwest of Pittsburg.
53	Shipman Bros. Coal Co.	Pittsburg.	1	C. Shipman	2 miles north of Pittsburg.
54	Geo. Meris Coal Co.	Pittsburg.	3	Geo. Meris	4 1/2 miles southwest of Pittsburg.
55	Wilson Bros. Coal Co.	Pittsburg.	5	Geo. Wilson	24th and Jonlin streets, Pittsburg.
56	Whetstone & Feiden Coal Co.	Pittsburg.	1		2 1/2 miles northeast of Pittsburg.
57	Broadhurst & Coughnour.	Pittsburg.	1	E. Broadhurst	Kirkwood.
58	Union Coal Co.	Pittsburg.	1	E. Grabe	2 1/4 miles northeast of Pittsburg.
59	Brown Bros. Coal Co.	Pittsburg.	1	John Brown	City limits, Pittsburg.
60	Kirkwood Coal Co.	Pittsburg.	1	Wm. C. Kirkwood	City limits, Pittsburg.
61	Lafayette Dupire Coal Co.	Pittsburg.	1	Joe Lafayette	2 miles north of Pittsburg.
62	Sinclair Coal Co.	Weir.	1	Jas. Ellwood	Weir Junction.
63	Superior Coal Co.	Pittsburg.	1	Aug. Denasper	City limits, Pittsburg.
64	D. S. Willey Coal Co.	Mulberry.	1	D. S. Willey	3 miles north of Mulberry.
65	C. B. Jenkins Coal Co.	Chambers.	4	C. B. Jenkins	Chambers.
66	Canal Fuel Co.	Pittsburg.	14	John Thomas	1/4 mile north of Cherokee.
67	Clemens Coal Co.	Pittsburg.	1	Jno. Cunningham	1 1/2 miles northeast of Pittsburg.
68	Anderson Coal Co.	Pittsburg.	1	W. Anderson	3 1/2 miles northeast of Pittsburg.
69	Ellsworth Klaner Construction Co.	Pittsburg.	111	S. P. Darrow	2 miles south of Cherokee.
70	Patton Coal & Mining Co.	Frontenac.	1	Chas. Fletcher	1 1/2 miles northwest of Frontenac.
71	Smith, Scott & White Coal Co.	Pittsburg.	109	Geo. Wickware	2 miles south of Cherokee.
72	Nesch Coal Co.	Pittsburg.	1	J. J. Nesch	1 1/4 miles northwest of Pittsburg.
73	Whitmer Constructing Co.	Pittsburg.	1	D. H. Whitmer	2 miles northwest of Frontenac.
74	J. J. Stephenson Coal Co.	Pittsburg.	1	Edgar Carter	East 23d street, Pittsburg.
75	J. J. Stephenson Coal Co.	Pittsburg.	2	W. H. Stephenson	Midway.

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COAL-MINING INDUSTRY IN CRAWFORD COUNTY FOR THE FISCAL YEAR ENDING JUNE 30, 1915—Continued.

Office No.	Railroad connections.	Kind of opening.	Kind of power.	Tons of coal produced.				Average number of employees.					
				Lump.	Nut and slack.	Mine run.	Total output.	Miners.	Boys.	Under-ground day men.	Total under-ground.	Top men.	Grand total.
1	Santa Fe.....	Shaft.....	Steam.....			160,529	160,529	155	6	46	207	15	222
2	Santa Fe.....	Shaft.....	Steam.....			155,105	155,105	173	5	65	243	18	261
3	Santa Fe.....	Shaft.....	Steam.....			24,836	24,836	30	1	9	40	5	45
4	Santa Fe.....	Shaft.....	Steam.....			92,511	92,511	61	1	15	77	9	85
5	Mo. Pacific.....	Shaft.....	Steam.....	13,337	35,385		48,722	62		15	77	7	84
6	Mo. Pacific.....	Shaft.....	Steam.....	54,329	21,738	39	76,106	110		26	136	10	146
7	Mo. Pacific.....	Shaft.....	Steam.....	22,686	51,998		74,684	110		26	136	7	142
8	Mo. Pacific.....	Shaft.....	Steam.....	86,674	41,629	28,067	156,370	182		44	226	11	237
9	Mo. Pacific.....	Shaft.....	Steam.....	34,105	61,713	36,160	131,978	157		38	195	11	206
10	Mo. Pacific.....	Shaft.....	Steam.....	35,368	26,138	30,563	92,069	107		16	123	7	130
11	Mo. Pacific.....	Shaft.....	Steam.....	37,755	40,960	292	79,007	117		18	135	7	142
12	Mo. Pacific and Santa Fe.....	Shaft.....	Steam.....	28,602	78,390	2,089	109,081	151		23	174	9	183
13	Mo. Pacific.....	Shaft.....	Steam.....	49,069	62,328	22,763	134,160	198		28	196	9	205
14	Frisco.....	Shaft.....	Steam.....	28,183	19,374		47,557	52		9	61	5	66
15	Frisco.....	Shaft.....	Steam.....	28,776	16,678	58,629	99,083	152		19	171	6	177
16	Frisco.....	Shaft.....	Steam.....	28,429	10,130	24,182	62,741	66	5	21	92	7	99
17	K. C. S.....	Shaft.....	Steam.....	20,614	8,903	318	29,835	41	2	10	53	9	62
18	Frisco.....	Shaft.....	Steam.....	43,896	81,366	15,911	141,173	193	13	29	237	15	232
19	Frisco.....	Shaft.....	Steam.....	39,682	55,280	3,737	98,699	123	14	29	166	13	179
20	Frisco.....	Shaft.....	Steam.....	25,108	18,363		43,471	42	4	11	57	6	63
21	Frisco.....	Shaft.....	Steam.....	10,816	33,079	41,002	84,897	121	5	25	161	10	161
22	K. C. S.....	Shaft.....	Steam.....	33,967	33,140		67,107	121		21	142	7	149
23	K. C. S.....	Shaft.....	Steam.....	37,090	22,189	136	59,415	74		14	88	7	95
24	K. C. S.....	Shaft.....	Steam.....	14,632	43,811		58,463	108		14	122	7	129
25	K. C. S.....	Shaft.....	Steam.....	37,061	44,378	126	81,565	150		19	169	9	178
26	K. C. S.....	Shaft.....	Steam.....	57,394	46,081	44	103,519	146		20	166	9	175
27	K. C. S.....	Shaft.....	Steam.....	67,255	39,696		106,951	135		20	155	9	164
28	Frisco.....	Shaft.....	Steam.....	11,699	39,971		51,670	66		9	75	7	82
29	K. C. S. and Mo. Pacific.....	Shaft.....	Steam.....	3,218	5,792		9,010	42		5	47	4	51
30	K. C. S.....	Shaft.....	Steam.....	33,091	75,774	2,308	111,173	148		25	173	9	182
31	Frisco.....	Shaft.....	Steam.....	14,634	11,420		26,054	34		5	39	4	43
32	Frisco.....	Shaft.....	Steam.....	16,851	12,350		29,211	38		6	44	4	48
33	Frisco.....	Shaft.....	Steam.....	43,696	43,794	50	87,540	104	1	25	130	9	139
34	Frisco.....	Shaft.....	Steam.....	32,703	25,545	146	58,394	73	1	16	90	6	96
35	Frisco.....	Shaft.....	Steam.....	41,330	17,078	8,514	67,542	83	1	20	104	6	110
36	Frisco.....	Shaft.....	Steam.....	44,456	70,705	994	116,155	108	2	24	134	9	143
37	Frisco.....	Shaft.....	Steam.....	10,443	37,474		47,917	49	1	13	63	7	70
38	Frisco.....	Shaft.....	Steam.....			64,304	64,304	43	1	13	57	5	62
39	Frisco.....	Shaft.....	Steam.....	23,459	75,067	1,319	99,845	95	1	15	109	8	117



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40	Frisco	Shaft	Steam			41,879	41,879	56	14	70	9	79			
41	Santa Fe	Shaft	Steam			67,202	67,202	86	18	104	10	114			
42	Mo. Pacific	Shaft	Steam			96,235	96,235	130	18	148	12	160			
43	Santa Fe	Shaft	Steam	15,438	47,778	30,339	93,555	140	21	181	11	172			
44	Mo. Pacific	Shaft	Steam	18,373	27,662	132	46,157	70	21	71	7	78			
45	Mo. Pacific	Shaft	Steam	22,441	34,311	261	57,015	100	21	121	8	129			
46	Mo. Pacific	Shaft	Steam	40,028	95,550	703	136,281	190	2	37	229	13	242		
47	Frisco	Shaft	Steam			39,488	39,488	40	19	59	9	68			
48	Frisco	Shaft	Steam	120,903	120,903	120	903	120	29	149	10	159			
49	Santa Fe	Shaft	Steam			50,127	50,127	100	29	6	135	6	135		
50	Mo. Pacific	Shaft	Steam			78,830	78,830	81	15	96	5	101	5	101	
51	Frisco	Shaft	Steam			70,768	70,768	99	24	123	8	131	8	131	
52	Frisco	Shaft	Steam			32,463	32,463	40	1	9	50	5	55	5	55
53	None	Shaft	Horse	1,200	1,200	4		4		3	1	4	3	1	4
54	None	Shaft	Horse	750	750	3		3		3	1	4	3	1	4
55	None	Shaft	Horse	3,000	3,000	5		5		5	1	6	5	1	6
56	None	Shaft	Steam	790	790	3		3		3	1	4	3	1	4
57	J. & P.	Shaft	Horse	6,943	6,943	6		6	2	8	2	10	8	2	10
58	None	Shaft	Horse	350	350	2		2		4	1	5	4	1	5
59	None	Shaft	Horse	1,200	1,200	4		4		9	3	12	9	3	12
60	None	Shaft	Horse	1,596	1,596	8		8	5	40	2	42	40	2	42
61	J. & P.	Shaft	Steam	21,951	21,951	35		35		2	22	3	25	2	25
62	Frisco	Shaft	Steam	10,200	10,200	20		20		2	2		2		2
63	None	Slope	Horse	520	520	2		2		10	4	14	10	4	14
64	Frisco	Slope	Horse	3,500	3,500	10		10	2	18	2	20	18	2	20
65	Frisco	Slope	Horse	2,700	2,700	16		16				39	39		39
66	Santa Fe	Strip pit	Steam	6,607	6,607							26	26		26
67	Frisco	Strip pit	Steam	13,455	10,914	5,237	20,606					22	22		22
68	Frisco	Strip pit	Horse	3,081	3,081										
69	Frisco	Strip pit	Steam	34,593	39,480	43,555	117,628					105	105		105
70	Frisco	Strip pit	Steam	12,514	14,771	10,862	38,447					41	41		41
71	Santa Fe	Strip pit	Steam	28,667	30,219	28,667	96,327					86	86		86
72	Frisco	Strip pit	Steam	37,441	30,219	33,682	33,682					32	32		32
73	Santa Fe	Strip pit	Steam			16,611	16,611					32	32		32
74	Santa Fe	Strip pit	Steam	7,818	26,396	8,064	42,278					32	32		32
75	Frisco	Strip pit	Steam	14,179	18,048	12,461	44,688					40	40		40
Totals						1,320,028	1,647,446	1,628,735	4,596,209	5,362	67	1,092	6,521	912	7,433

Report Ending December 31, 1915.