

## SEVENTH INSPECTION DISTRICT—1906.

## FIRST ANNUAL REPORT.

\* Counties—Calhoun, Christian, Greene, Jersey, Macoupin, Montgomery, Morgan, Scott, Shelby.

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HON. DAVID ROSS,

*Secretary, State Bureau of Labor Statistics, Springfield, Illinois:*

SIR—In compliance with the law of the State of Illinois defining the duties of the State inspectors of mines, I have the honor to herewith submit the first annual report of the coal mines in the seventh inspection district. The tabular statements in this report contain the different items called for in the schedules.

The following is a summary of the items contained in the report:

Number of mines.....	71
Number of new mines.....	6
Number of mines abandoned.....	24
Number of shipping mines.....	36
Number of local mines.....	35
Tons of mine run coal.....	880,762
Tons of lump coal.....	2,639,885
Tons of egg coal.....	74,771
Tons of nut coal.....	236,809
Tons of pea or screenings coal.....	937,447
Tons of slack or waste coal.....	108,418
Total tons of all grades of coal.....	4,878,092
Average value of coal per ton, mine run, shipping mines.....	\$0.959
Average value of lump coal per ton, shipping mines.....	\$1.189
Average value of egg coal per ton, shipping mines.....	\$1.236
Average value of nut coal per ton, shipping mines.....	\$1.060
Average value of pea or screenings coal per ton, shipping mines.....	\$0.468
Average value per ton of slack and waste, shipping mines.....	\$0.31
Aggregate value of total product, all mines.....	\$4,845,349
Tons loaded on cars for shipment.....	4,313,683
Tons supplied to locomotives at mines.....	143,892
Tons sold to local trade.....	213,411
Tons consumed or wasted at the mines.....	207,106
Average number of days of active operation, shipping mines.....	175
Tons mined by hand.....	1,912,157
Tons mined by machine.....	2,965,935
Number of mines using machines.....	21
Number of machines in use.....	286
Number of miners.....	4,594
Number of other employes underground.....	1,366
Number of boys underground.....	216
Number of employes above ground.....	719
Total number of all employes.....	6,895
Number of kegs of powder consumed.....	74,007
Number of pounds of dynamite used.....	9,914
Number of fatal accidents.....	25
Number of non-fatal accidents.....	84
Number of wives made widows.....	13
Number of children left fatherless.....	32
Number of employes to each fatal accident.....	276
Number of tons of coal to each fatal accident.....	195,124
Ratio of fatal accidents per 1,000 persons employed.....	3.6
Number of employes to each non-fatal accident.....	82
Number of tons of coal to each non-fatal accident.....	58,073

The Act of the 44th General Assembly creating ten inspection districts in place of seven, gave to this district an entire new list of counties. The counties of Calhoun, Green, Jersey, Macoupin, Montgomery, Morgan and Scott were transferred from the old fifth district, Christian and Shelby from the old fourth.

The following comparative table shows the tonnage of each county with the increase or decrease for the years 1905 and 1906:

COUNTIES.	TOTAL OUTPUT OF ALL GRADES OF COAL—IN TONS.		Increase.	Decrease.
	1905	1906		
Calhoun.....	2,880	3,000	120	
Christian.....	857,890	826,500		31,390
Greene.....	14,659	8,016		6,643
Jersey.....	3,141			
Macoupin.....	2,530,840	3,241,087	710,247	
Montgomery.....	468,198	649,839	181,641	
Morgan.....	4,702	3,048		1,654
Scott.....	14,876	19,938	5,062	
Shelby.....	121,212	126,664	5,452	
Totals.....	4,018,398	4,878,092	902,522	39,687
Net increase.....			862,835	

The increase in tonnage this year over 1905 comes mainly from the increase in the output of Macoupin and Montgomery counties.

## NEW MINES.

J. McLaughlin & Co. have sunk a shaft at Alsey, Scott county, to the No. 1 seam, which is 30 inches thick at that place. This seam has four feet of fire clay lying directly under the coal, and under the clay is about four feet of hard limestone, then 20 feet of good potter's clay. There is a good roof over the whole. The shaft is 8 by 14 feet, 100 feet to the coal. The tower is 56 feet high. The hoisting engines are a pair of 10 by 20 inches geared about five to one; one 50-inch tubular boiler. The boiler and engine house is a substantial building. A 10-foot Crawford & McCrimmon fan is ready to be put in as soon as the air shaft is down. A 6 by 6 inch steam pump, also a feed pump, is ready for use. The coal mined here is expected to be used to convert clay into pottery, brick, tiling, etc., for which purpose the Alsey Tile & Brick Company are now building a plant near the mine.

The Superior Coal Co. has put in operation their No. 3 mine near Gillespie, Macoupin county. The equipment of this mine excels somewhat those of its Nos. 1 and 2 mines.

The Clover Leaf Coal Mining Co., Coffeen, Montgomery county, has put in operation their No. 2 mine, a shaft 11 by 22 feet, 515 feet deep. The shaft is timbered with 8 by 8 inch frames, 4 feet apart, and lagged with 3 inch timber. The coal seam is 7½ feet thick. The tower is built of wood covered with corrugated iron and is 90 feet high. The cages are self-dumping, made by Wm. Elison, St. Louis, Mo. The capacity of pit cars is 3 tons. The track gauge is 42 inches, the hoisting engines are 36 by 24 inches, also two 150 H. P. boilers. The company is now driving entries to connect with the No. 1 mine for an escapeway and will soon have it completed.

The Shoal Creek Coal Co. of Chicago, have put in operation a mine at Panama, situated on the Clover Leaf railroad about three miles southwest of

Donnellson, Montgomery county. The shafts are 380 feet deep as finished to the bottom of the coal. The hoisting shaft has two hoisting compartments 6 by 9 feet 6 inches in the clear. The buntons are 8 by 8 inches, with an 8-inch partition and 8 by 8-inch guides. A water ring catches the water from the drift from where it is taken by a pipe into the sump. The air shaft has two compartments, one for air 9 by 9 feet 4 inches in the clear; the other is intended for an escapement which is 5 by 9 feet 4 inches in the clear. There is a solid 8-inch partition between these compartments. In the escapement there is a stairway of oak lumber with handrails; the upper part of the air and escapement shaft is surrounded by concrete re-enforced with corrugated iron bars to keep back the water; a pump lodgement is made behind this concrete dam and the water is pumped up for use in the boilers. The concrete lining makes the shaft dry. Both shafts are heavily timbered from top to bottom.

The ventilating fan is a 7 by 12½-foot Capell, guaranteed to furnish 300,000 cubic feet of air per minute with a 5-inch gauge; the fan casing is of brick and steel plate; the fan is nominally a blowing fan, but it is arranged to quick reverse.

The roof of the tunnels and side drift are of re-enforced concrete to avoid all woodwork; the doors are made of heavy steel plate. There is an explosion door immediately over the airway.

The tipple building is a steel tower erected by the Wisconsin Bridge and Iron Company. It is an end wind with shearer 8 feet in diameter. Self-dumping cages are used, the coal being dumped into a larger hopper. The shaking screens, designed by the general superintendent, George R. Rice, were furnished by the Duncan Foundry & Machine Works. They are 8 feet wide and 40 feet long, loading the coal on four tracks. A box car loader will be installed soon, and a washery is now being erected. The raw coal to be washed will be taken from the shaking screens by belt to the top of the washery.

The hoisting engines are 22 by 36 inches. The drum is 8 feet in diameter, and is furnished with two post brakes and a winding device which automatically shuts off the steam and sets the brakes. This, together with the detaching hooks, makes as near a perfect device to prevent over-winding as is possible. In mining the coal is cut entirely by punching machines, of which the company has 20 Sullivan now in operation; also one Sullivan and one Norwalk air compressor. The compressor room is large enough for another compressor, and is built of brick with iron roof trusses, with gravel roofing. The boiler room, immediately adjacent but separated by a brick wall, is also of brick with iron trusses and gravel roofing. It now contains four internally fired boilers and two horizontal tubular boilers, all giving about 700 H. P. The feed water is heated by a Stillwell heater, all of the exhaust from engines and pumps passing through the heater. A generator in the power room furnishes light for the top works, and in the mine immediately near the bottom. The intention is to mine the coal on the panel system of 1,000 foot blocks. When the mine is fully opened out it is expected to produce 2,500 tons per day.

#### PROSPECTIVE MINES.

The Peabody Coal Co. is sinking a new mine, two miles north of Nokomis, Montgomery county. The escapement shaft is 10 by 15 feet and 630 feet deep, and is now down to the coal, a seam 8½ feet thick. The main shaft is 10 by 26 feet and 8 inches in the clear, and is now down 500 feet. The company intends to make this a model mine. The head frame and guides will be of steel. Two self-dumping cages 9½ by 12 feet will hoist two cars side by side, each car having a capacity of 3½ tons. Ropes will be fastened to the cages with self-detaching hooks. The hoisting engines are 34 by 60 inches with conical drums 7 to 10 feet. There are six boilers 6 by 18 feet having 70 4-inch flues, and a steel smoke stack. The boiler house will be brick, 74 by 48 feet; the engine room, also brick, 48 by 40 feet, with composition roofing and tile coping. The other buildings, such as office, shops, barns, powder house, etc., will be built on the same order. Four 100-ton

scales will be put in, with ten-foot shaker screen and four bar screens; also four weigh baskets. There will be four dead chutes, one receiving chute and one loading apron. Three steel chutes and one engine, necessary for driving the machinery will handle the coal from the cages to the railroad cars. A drag will be put in to convey coal to the boiler house. A Capell fan, having a capacity of 300,000 cubic feet of air per minute, will be the ventilator. Everything about the plant will be equipped with the latest and best machinery and material, all of which will require an expenditure of at least \$175,000. When the mine is fully opened out it expects to produce 3,500 tons of coal per day.

The Burnwell Coal Company is sinking a new mine one mile north of Witt, Montgomery county. The company expect to reach the coal at 600 feet. This mine will also be of large capacity.

The White Hall Railway Company, White Hall, Greene county, expect to operate two small coal and clay mines. One shaft is now down, and they are working on the other. It is expected to use the coal to convert the clay into sewer pipe and stoneware.

The Lovington Coal Mining Company, Lovington, Moultrie county, is making slow progress with its shaft on account of the water and sand with which it has to contend.

#### IMPROVEMENTS.

The following improvements have been made during the year:

All of the mines in this district, where signals are required, have been equipped with either pneumatic or electric signals. Very few, however, have encased the bell wires.

The Royal Colliery Co., Virden, Macoupin county, has made extensive improvements and are still adding more. It has installed an improved Christy box car loader; built a shed 50 by 100 feet over the scales and railroad tracks, framed and covered with galvanized iron; and has also put in a pump so arranged that it can be used both for a boiler feed and fire extinguisher, pipes are laid around the plant for that purpose. In addition to the Robinson fan already in use, a 20-foot Crawford & McCrimmon fan has been erected, so arranged that either or both can be used at the same time. This will insure good ventilation for a long time to come. The fans are built on and are encased in brick and cement. A fire proof building 48 by 30 feet has been built to be used for carpenter and blacksmith shops; also a granary 40 by 20 feet, with a capacity for 1,000 bushels of corn, 500 bushels of oats, 30 tons of baled hay, with two stalls, harness and feeding space. The company is now erecting a 1,500-ton Stewart washer, and installing two new boilers of 300 H. P. each, especially made for this plant, with smoke stacks and building complete, all painted. In all \$70,000 will be spent on improvements. This will place it among the first class mines of the State.

The O'Gara Coal Co., at its Green Ridge mine, is installing an electric and coal cutting plant, consisting of two 6 by 18 feet Erie boilers, having 70 4-inch flues, one 19 by 18-inch Erie automatic engine, one Morgan-Gardner generator, 150 K. W., 250 volts; one 8-ton traction motor. The engine room has been enlarged, and new boiler house, blacksmith and machine repair shops have been built. Heavy steel rails have been laid in the mine for the motor road. The mine has been wired to run the motor and the Morgan-Gardner chain machine.

The Dering, now the Burnwell Coal Co., Witt, Montgomery county, has installed two new 72-inch boilers, having 70 4-inch flues, 18 feet long, 150 H. P. each. A brick dynamo house has been built, adjoining the engine room on the west, 12 by 24 feet, with one Atlas engine 9 by 14 inches; one 75 Amp., 250 volts, Kester electric dynamo; one fan house frame, concrete foundation; one 20-foot Crawford & McCrimmon fan; one fan engine 12 by 24 inches connected direct to the fan shaft. A blacksmith shop 30 by 50 feet has been built, constructed with clay building blocks; one engine 7 by 10 inches, one roof blower, one Ottumwa box car loader, one pair of hoisting engines 24 by 36 inches, and two conical drums 7 to 9 feet.