

FIFTH INSPECTION DISTRICT—1912.

ANNUAL REPORT.

Counties—Christian, Macon, Moultrie, Shelby, Vermilion.

W. S. BURRIS, *Inspector*, Danville.*Hon. Martin Bolt, Chief Clerk, State Mining Board, Springfield:*

SIR—Complying with section 5 of the general mining law of Illinois, I submit herewith the annual report of the coal producing counties of Christian, Macon, Moultrie, Shelby and Vermilion.

SUMMARY OF THE ITEMS SHOWN IN THE REPORT.

Number of counties producing coal	5
Number of shipping mines	34
Number of local mines	37
Number of new or reopened mines	14
Number of closed or abandoned mines	10
Number of miners	4,337
Others underground, men	1,994
Boys underground	121
Boys above ground	4
Others above ground	562
Total number of employees	7,018
Total tons of coal produced	5,174,966
Days of active operation, all mines	178
Kegs of powder used for blasting coal	157,000
Tons of coal shipped	4,397,168
Tons supplied to locomotives	471,537
Tons sold to local trade	71,712
Tons consumed and wasted at the mines	234,549
Number of fatal accidents	21
Number of non-fatal accidents	92
Number of employees to each fatal accident	334
Number of employees to each non-fatal accident	76
Tons of coal produced to each fatal accident	246,427
Tons of coal produced to each non-fatal accident	56,250
Ratio of fatal accidents per 1,000 employees	2.99

The table gives the total tonnage by counties for the years 1911 and 1912, with the increase or decrease in each county:

Counties.	Total output—tons.		Increase.	Decrease.
	1911.	1912.		
Christian	1,206,467	1,346,191	139,724	
Macon	255,764	271,626	15,862	
Moultrie	11,573	54,162	42,589	
Shelby	92,281	128,544	36,263	
Vermilion	3,270,380	3,374,443	104,063	
Total	4,836,465	5,174,966	338,501	
Net increase			338,501	

NEW MINES.

The Mission Mining Company has opened a new mine adjoining the strip pit. This mine is known as No. 2, is a drift, and the coal is handled over the tippie of the No. 1 mine. The company has also sunk another slope, known as No. 3. This mine is fireproof, having concrete walls on side of entry, 6 in. x 12 in. steel beams, placed four feet apart, and between beams, concrete. This includes the slope and cage room. They have an electric hoist, pulling one car up the incline and dumping into Shaker screen where the coal is graded as follows: Six inch lump, two inch lump, from six to two inch egg, two inch and one inch screenings, two and one inch nut. The electric power is furnished by the Danville Electric Light Company.

In addition to the above one shipping and eleven locals are reported this year as new mines.

ABANDONED MINES.

The Tilton Coal Company, Tilton, Vermillion County, abandoned its Star mine. The Oakwood Coal Company, Oakwood, has abandoned its No. 1 mine for the present time. This mine may be reopened in the future. Two other shipping and six local mines have been abandoned, or not operated during the year.

IMPROVEMENTS IN MINES.

The Assumption Coal Mining Company, Assumption, Christian Co., has made some good and permanent improvements.

The bottom of the main or hoisting shaft has been timbered with steel I-beams 6x15 inches, from 14 to 18 feet in length, twenty feet on each side of shaft, doing away with any timbers or center props, leaving a clear way on each side of shaft eighteen feet.

There has been installed a new Deming Triplex electric driven pump for raising water to the surface, a distance of 1,000 feet. The motor driving the pump is a continuous generator, compound wound, with a speed of 800 revolutions per minute.

The escape shaft is equipped with a pair of Litchfield hoisting engines, twin connected, cylinder 18 inches bore, 24 inches stroke and two drives 4 feet in diameter, 2 feet by 4 inches face, with flanges 7 inches high to hoist 1,000 feet, with three layers of $\frac{7}{8}$ wire rope. One drive keyed to shaft and the other loose on the shaft being engaged by a toothed clutch so as to be thrown out of gear when desired for changing the effective length of rope for hoisting to or from different levels. Each drive has a break housing turned smooth in boring mill. The shifting arrangement for the toothed clutch consists of a hand lever similar to the reversing lever, acting on a notched quadrant. Everything connected with these engines are first-class in every particular.

The engine room at escape is fireproof except the roof. The escape shaft has been retimbered with 6x8 timbers for a distance of 25 feet from top. Surface arrangements have been remodeled along the line of safety and convenience, making it possible to hoist men if necessary without interfering with the ventilation while hoisting them. This we think is very important in a gaseous mine.

There have been quite a lot of improvements made on the bottom of the escape shaft. Thus we think this mine is the best equipped at the escape shaft for getting men to the surface of any mine in Christian county, and, perhaps, in the State.

The Christian County Coal Company has made considerable improvements. The most important among them is a new Sirocca fan. The fan is 7 feet long and has 64 blades 70 inches long. It is run by a new Ridgway engine, cylinder 13 inches, length of stroke 14 inches. Under good conditions at 225 revolutions it will produce 125,000 cubic feet of air per minute.