Report of State Natural Gas Supervisor.

OFFICE OF STATE NATURAL GAS SUPERVISOR,
FORTVILLE, INDIANA.

Hon. Edward Barrett, State Geologist, Indianapolis, Indiana:

SIR—I hereby transmit to you the twentieth annual report of this department. I began the duties of this office January 1, 1911. Since that time, for reasons explained in this report, it has not been possible for me to give much time to either collecting material for report, or compiling data. However, I will endeavor to report to you conditions found in the field at the time of taking the office, and such data regarding the field as should concern those who are interested in the natural gas industry.

In closing this, my first year's work, I am pleased to acknowledge the very cordial support and valuable suggestions that I have received from you from the beginning.

Very respectfully,

W. E. MORSE,
State Natural Gas Supervisor.

Report of State Natural Gas Supervisor for the Year 1911.

Under the law, it is the duty of the State Natural Gas Supervisor to make a personal inspection of all gas and oil wells so far as it is practical, and see that every precaution is taken to insure the health and safety of all workmen engaged in the work of opening gas wells and laying mains and pipes, and of all those who in any manner use natural gas either for mechanical, manufacturing, domestic or other purposes. I have inspected all wells and lines possible while attending to more important duties, at least enough in the different sections of the field to give me accurate ideas of the condition of the gas supply and of the safety of all workmen engaged in the gas industry. However, I find that the contractors of gas companies and manufactories employ the most skilled workmen possible, men who understand the dangers attending the handling of natural gas.

My especial attention has been paid to the husbanding of gas and the plugging of abandoned wells which, up to this time, have bettered the condition of the field to a great extent.

In my visits over the field during the months of January, February and March, I found the following conditions in the southern field where there are about one hundred twenty-five (125) wells that are producing both oil and gas. In the greater number of those wells where there was a surplus of gas, there had been no arrangements made for husbanding the extra gas which could not be used in operating the machinery in pumping oil. I found wells that were making from five (5) to forty (40) barrels of oil per day and wasting from five thousand (5,000) to three million (3,000,000) feet of gas per day. When these conditions were discovered, I proceeded at once to have these wells closed in. I found that the law is inadequate to reach the purpose for which it was intended, the penalty for violations being omitted, but by keeping after violators and using the laws that were good I have accomplished the following: There are no wells standing open and but very little gas being wasted. The operators are now piping the gas to small villages, and farmers are utilizing it for domestic purposes.

GREENE COUNTY.

I found the same conditions in Greene County as in Pike County with not so *much* waste of gas, but more in proportion. One well on Moses Kaufman's farm, which had been standing open for four years, making about one million feet of gas and flowing about sixty barrels of salt water, I proceeded to plug and close in, as nearly as could be done under the conditions which the well was left in, using four yards of gravel, two wooden plugs and two lead plugs.

OLD FIELDS.

In the old fields where there are but a few oil operators I have not had one single complaint of waste of gas, and leases are now being closed down that would pay a good royalty if there was gas with which to operate their machinery. In opening up a new field for oil, one of the principal things which is looked for is the gas, without which it is very expensive to operate.

The thing which I have most to look after in the old fields is the plugging of the abandoned wells and those which are standing open and allowing the fresh water to leak down into the oil and gas-bearing rock. It has often been said that forty acres of farm ground could be drained into one abandoned gas well and by such methods as were used years ago and continued until this date (implying both gas and oil wells), both lime and gravel water would have been ruined for use. Also the water would have been lowered to such an extent that the average man would not have been able to have wells of his own. Statistics show the water has been lowered now twenty-six (26) feet by the old method of plugging gas wells.

NEW DEVELOPMENT.

There is no great attraction at any point of the State at this time and less work is in progress now than for some time, mainly for two reasons. The oil market has been too low to justify investments, and when oil is found there has been a great amount of gas for which there has been no market until within the last few months. There have been several deep tests made. One in Howard County, another in Owen County. The Howard County well was drilled to more than four thousand feet, where two different pays of gas were struck, the first at about sixteen hundred feet, and another at about twenty-nine hundred feet, with a great amount of water. The Owen County well was drilled to thirty-three hundred feet. At this point an obstruction was encountered and further

drilling stopped. At two thousand eight hundred feet, sand was struck, which produced some oil and gas with a pressure of three hundred fifty pounds. This sand was drilled through and water raised in the well twenty-four hundred feet.

In Daviess County, near Alfordsville, the Graham Brothers of Loogootee have drilled six wells, which range in depth from four hundred sixty to four hundred eighty feet. They produce six million feet of gas per day.

In Sullivan County there have been some new developments. About seven miles southwest of Sullivan there has been some oil found which promises that there will be some very early drilling done there. At this time there are seven wells which are producing about seventy barrels daily, and north and east of the oil wells some very good gas wells are being found.

In Knox County there seems to be some excitement which promises some very deep drilling.

In the old field there has been some drilling which has been profitable to the investors, both in gas and oil wells.

Value of Natural Gas Produced in Indiana, 1886 to 1909.

Year.	Value.
1886	$300,000
1887	600,000
1888	1,320,000
1889	2,075,702
1890	2,302,500
1891	3,942,500
1892	4,716,000
1893	5,718,000
1894	5,437,000
1895	5,203,200
1896	5,043,635
1897	5,009,208
1898	5,060,969
1899	6,680,370
1900	7,254,539
1901	6,954,566
1902	7,081,344
1903	6,098,364
1904	4,542,409
1905	3,094,134
1906	1,750,715
1907	1,572,605
1908	1,312,507
1909	1,616,903
1910	1,702,243

Production of Oil.

Year.	Barrels.
1889	33,375
1890	63,496
1891	136,634
1892	698,068
1893	2,335,293
1894	3,688,666
1895	4,386,132
1896	4,680,732
1897	4,122,356
1898	3,730,907
1899	3,848,182
1900	4,874,392
1901	5,757,086
1902	7,480,896
1903	9,186,411
1904	11,339,124
1905	10,964,247
1906	7,673,477
1907	5,128,037
1908	3,283,629
1909	2,296,086
1910	2,159,725
	97,866,951

Number of producers, 1,010.

Number of wells closed in, ranging from ten pounds to five hundred pound pressure, 89.

Number of wells in use, 2,643; with an average pressure of 79½ pounds.

The average price of gas is 28½ cents per thousand.

Number of wells abandoned, both oil and gas, 2,032; of which some were dusters.

EXPENSES OF MAINTAINING AND FEES COLLECTED BY THIS DEPARTMENT.

Appropriated by the State—		
For salary Supervisor of Natural Gas per year	$1,800 00	
For expenses Supervisor of Natural Gas	1,500 00	
For Assistant Supervisors of Natural Gas	1,000 00	
Fees collected	10,150 00	
Total		$14,450 00
Expenses—		
For salary Supervisor of Natural Gas per year	$1,800 00	
For expenses Supervisor of Natural Gas	466 34	
For Assistant Supervisors of Natural Gas	518 85	
Paid to assistants from fees collected	10,135 00	
Total		$12,920 19
Summary—		
Amount returned to State from appropriation for assistants.		$481 15
Amount returned to State from appropriation for traveling expenses		1,033 66
Amount returned to State from fees collected		15 00
Total returned to State		$1,529 81
Total cost to State to maintain office for one year		$2,770 19

REPORTS OF FRANK W. BOREN, OWENSVILLE, AND W. J. RICHARDSON, WINSLOW, ASSISTANTS, WHO ARE IN THE SOUTHERN FIELD EVERY WEEK.

The first of the year the condition of the Oakland City oil field was bad. Gas was wasted by the millions of feet in various ways. Gas lines were leaking, and in many instances on fire. Flambeau lights were numerous and oil wells that produced gas, the gas was allowed to escape into the air. One well was not pumped, and gas was often used to force oil in tanks, then blown into the air.

The field at this time shows great improvement. All gas lines are in good condition. No lights and little waste in any other way. Oil and gas producing wells are either shut in or piped to gas mains and used for leases and small towns adjoining the field.

There is no decrease in the gas, and with proper care will be plentiful for several years.

W. J. RICHARDSON,
Assistant Supervisor of Natural Gas.

THE SOUTHERN INDIANA FIELD.

Contrary to expectations, the year 1911 has been a discouraging one for the operators in the Southern Indiana field. The Oakland City or Pike County territory, which a year ago showed prospects of developing into the greatest oil and gas field in the State, has proved a disappointment, despite every effort of the operators and an enormous outlay of money.

On account of the uncertainty of finding oil or gas in tested territory, the great expense of drilling coupled with the gradual decline in oil production of the older wells (many of which have been plugged the past season), there has been a general exodus of contractors and workers. Experienced oil operators are of the opinion that so far as the production of oil is concerned the territory has spent itself, and present conditions therein bear them out in the idea. Another serious detriment which confronts the oil operator in this field is the finding of wells producing both oil and gas.

In conforming with the present gas laws, it is impossible to operate a mixed well without a market for the gas. Until recently there has been very little effort to market the apparent inexhaustible supply of gas found in this field; however, they are at present taking steps to overcome this difficulty by laying pipe lines to neighboring towns in all directions. While it is true that there are perhaps one hundred gas wells (some of the strongest in the State) capped, waiting for a market, the manufacturing interests are slow to invest their money in that locality, fearing a repetition of conditions which occurred in the upstate fields.

In the Princeton or Gibson County field which was opened up in 1903-1904, the supply of gas is practically exhaused and the oil supply greatly diminished. The Ohio Oil Company is making an effort to increase its production here by shooting and cleaning its wells. At this time we are unable to determine the result of this experiment. In noting the difference in conditions in the southern territory during the past year, we find the year opened with perhaps no less than fifty or sixty strings of tools in operation, while today they will not exceed six or eight.

This office has experienced very little trouble in its dealings with the operators in this territory, as they not only show a willingness to conform with the State laws governing operations, but manifest a great interest in the preservation and development of the territory in general.

FRANK W. BOREN,
Assistant Supervisor of Natural Gas.