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Ill. STATE GEOLOGICAL SURVEY.

Governor C. S. Deneen, T. C. Chamberlin, E. J. James, Commissioners,  
H. Foster Bain, Director.

CIRCULAR NO. 2.

# The Mineral Production of Illinois in 1906

BY

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URBANA:  
University of Illinois,  
1907

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[By F. B. VAN HORN.]

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In 1905 an attempt was made to get figures showing the mineral output of Illinois for the year. In coöperation with the U. S. Geological Survey reports were obtained from a majority of the producers in the State, and the results were published in pamphlet form. Since it was advisable to publish this report somewhat in advance of the U. S. Geological Survey publication, some incomplete and inaccurate returns were unavoidably incorporated. These errors have been noted in the present report, and the figures for 1906, also collected in coöperation with the U. S. Survey, will be found to be accurate, and in agreement with its figures.

The year 1906, as was expected, showed a large increase in mineral production over 1905. Although owing to various reasons, some important products were omitted from the tables of 1905, the total value of the mineral output reported was \$58,858,296.00. Some of those products omitted in 1905 are included in the present report, and the total value for 1906 is \$68,296,908.00, a gain of \$9,444,930.00, or 16.3 per cent.

### COAL.

During the year 1906 Illinois showed an increase in coal production over 1905 of 3,045,741 short tons, representing an increase in value of \$4,185,470.00. In spite of this increase West Virginia displaced Illinois as second among the coal-producing states for the year. The great increase in production in West Virginia was probably due to the coal strike in the other states. The Illinois mines, however, were operated to their fullest capacity for some time before the strike in order to meet the demands later on. While under ordinary conditions the increase in Illinois might have been greater, it is very likely that the increase was a normal one for the year.

In West Virginia the strike affected only a very small proportion of the mines, and those only for about thirty days, while in Illinois practically all the mines were completely shut down for a period of about sixty days. In the course of the increased production in West Virginia much new development work was done, and it seems fair to suppose that that state will retain its lead over Illinois for at least another year.

The total production of coal in Illinois during 1906 as reported by 531 producers, was 41,480,104 short tons, valued at \$44,763,062. The production by inspection districts is given below in the order of tonnage:

District.	Tons.
Sixth .....	9,920,655
Seventh .....	8,952,370
Fifth .....	8,922,276
Fourth .....	4,483,803
Third .....	3,165,302
First .....	3,097,976
Second .....	2,858,426

St. Clair county, of the sixth district, was the largest producer in the State, with 4,578,372 tons. Sangamon county, of the fifth district, was next, with 4,543,849 tons. Williamson county, of the seventh district, produced 4,417,987 tons; Madison county, of the sixth district, produced 3,651,296 tons; Macoupin county, of the fifth district, mined 3,637,827 tons; Vermilion county, of the fourth district, 2,389,285 tons; while Grundy and LaSalle, of the first district, Bureau of the second, Fulton of the third, Marion of the sixth, and Perry of the seventh were counties which produced over 1,000,000 tons.

In 1905 Sangamon county was first in production, with Williamson county second, and St. Clair county third. In 1906 St. Clair county increased its production over 1905 by nearly 1,000,000 tons, and consequently moved up to first place.

The following table gives the tonnage and value, by counties, of Illinois coal mined in 1906, with the figures for 1905 given for sake of comparison. A number of mines were consolidated under one management during the year, and on this account the number of producers reporting is considerably reduced.

It has been thought best not to give the production in counties where less than three operators reported, and a production of a number of small local banks has been combined with the figures for such counties.

The table shows the production in 1905 as published by the State Survey for that year, but later U. S. returns showed the 1905 production to have been 38,434,363 tons, valued at \$40,577,592.00.

# Tonnage and Value of Coal Mined in 1906.

COUNTIES.	1905.		1906.		Number of producers reporting.
	Tons.	Value.	Tons.	Value.	
Bond.....					2
Bureau.....	1,699,269	\$2,416,807	1,580,085	\$2,399,498	8
Calhoun.....					1
Christian.....	679,360	970,859	931,452	1,015,419	7
Clinton.....	579,281	516,268	515,706	510,351	4
Franklin.....	225,480	222,829	569,200	607,831	5
Fulton.....	1,519,049	1,761,246	1,579,221	1,909,349	27
Gallatin.....	77,010	76,473	92,731	93,953	6
Greene.....					2
Grundy.....	1,311,542	2,097,952	1,162,019	1,764,597	16
Hancock.....					2
Henry.....	147,095	231,230	149,188	238,653	14
Jackson.....	818,841	1,004,875	646,196	819,174	15
Jefferson.....					1
Jersey.....					1
Kankakee.....					1
Knox.....	60,330	70,901	61,651	85,393	14
LaSalle.....	1,780,438	2,655,098	1,467,672	2,366,626	18
Livingston.....	272,418	378,783	273,831	408,255	7
Logan.....	445,546	470,523	435,559	440,058	4
Macon.....	231,235	359,225			3
Macoupin.....	3,214,473	2,982,855	3,637,827	3,372,863	10
Madison.....	3,179,762	2,748,435	3,651,296	3,283,826	23
Marion.....	1,093,759	906,656	1,042,866	1,077,333	8
Marshall.....	439,672	703,607	418,904	663,812	5
McDonough.....	22,290	36,861	43,774	81,262	7
McLean.....	159,921	216,552			2
Menard.....	415,266	414,490	429,971	477,547	13
Merced.....	532,854	647,559	412,165	540,704	10
Montgomery.....	598,061	571,522	720,415	736,011	5
Morgan.....					2
Peoria.....	825,264	942,130	914,863	1,066,034	38
Perry.....	1,385,291	1,241,685	1,509,716	1,408,789	23
Putnam.....					2
Randolph.....	439,623	306,631	634,270	552,580	11
Rock Island.....	54,582	94,110	62,321	102,333	8
Saline.....	281,461	268,083	980,864	997,015	4
Sangamon.....	4,696,363	4,306,002	4,543,849	4,568,143	28
Schuyler.....	3,355	5,343			2
Scott.....	13,423	21,195	12,437	21,797	4
Shelby.....	104,216	173,619	138,237	193,207	8
Stark.....	19,013	33,745	17,661	29,372	4
St. Clair.....	3,611,161	3,022,669	4,576,372	3,975,717	52
Tazewell.....	225,574	256,546	189,682	234,123	10
Vermilion.....	2,291,266	2,205,622	2,389,285	2,430,586	42
Warren.....	9,339	19,253			3
Washington.....					3
White.....					1
Will.....	137,977	236,256	154,955	247,917	6
Williamson.....	3,927,910	3,629,968	4,417,987	4,341,788	37
Woodford.....					2
*Other counties and small mines.....	377,323	437,412	1,120,560	1,640,983	.....
Total.....	38,081,674	\$39,755,071	41,480,104	\$44,763,062	531

\*Including Bond, Calhoun, Greene, Hancock, Jefferson, Jersey, Kankakee, McLean, Macon, Morgan, Putnam, Schuyler, Warren, Washington, White and Woodford counties.

## CLAY AND CLAY PRODUCTS.

During 1906 the clay working industries of Illinois showed an increase in value of only \$391,713.00 over 1905, as compared with an increase of \$1,614,653.00 in 1905 over 1904. The total production in 1906 was valued at \$12,783,813.00, while in 1905 it was \$12,392,100.01.\* The following table gives, by counties, the value of the different varieties of clay products.

\* U. S. Geol. Survey figures for 1905 are \$12,361,786.

*Value of Clay and Clay Products in 1906.*

Counties.	Brick.	Sewer pipe and drain tile.	Pottery.	Raw clay.	Number of producers reporting.
Adams.....	\$ 64,124				9
Alexander.....					2
Bond.....					1
Boone.....					2
Brown.....					1
Bureau.....	16,080	\$ 21,340			9
Calhoun.....	37,731			\$ 3,350	4
Carroll.....					2
Cass.....	15,655	3,500			6
Champaign.....	59,970	12,100			6
Christian.....	30,875	18,700			11
Clark.....	19,100	1,000			5
Clay.....	3,975				5
Clinton.....	6,610	120			5
Coles.....	11,000	14,500			4
Cook.....	4,874,682	143,505	\$ 29,469	15	34
Crawford.....	11,212	4,188			3
Cumberland.....					1
DeKalb.....	13,854	22,717			7
DeWitt.....					1
Edgar.....	69,779	18,439			15
Fayette.....	119,184	14,913			23
Ford.....					1
Fulton.....					2
Gallatin.....	7,090	171,828			9
Greene.....			170,500	46,350	6
Grundy.....					2
Hamilton.....	59,187	12,923			17
Henry.....					1
Iroquois.....	8,554	45,778			10
Jackson.....	52,735	874			11
Kankakee.....	1,109,998	156,280			13
Lake.....					2
LaSalle.....	740,706	229,998	6,000	39,332	36
Macon.....	52,894	6,250			4
Macoupin.....	15,258	509			5
Madison.....	399,442	45,400			16
Marion.....	12,750	200			1
Marshall.....					1
Massac.....	4,400		24,300	1,215	4
McDonough.....	25,290	215,254	356,300	26,524	16
McHenry.....					2
McLean.....	54,350	12,450			5
Menard.....	14,319	5,670			5
Mercer.....	9,100	55,820			3
Monroe.....					1
Montgomery.....	30,654	15,315			8
Morgan.....	9,700	18,750			4
Moultrie.....	5,150	14,800			4
Ozle.....					2
Peoria.....	76,938	1,000			10
Perry.....					1
Piatt.....	2,240	17,110			4
Pike.....	8,630	270			3
Pulaski.....					1
Randolph.....	22,553				4
Richland.....					2
*Rock Island.....	127,447	18,650		2,425	16
Saline.....	18,890	3,000			5
Sanramon.....	208,732	10,194			13
Schuyler.....	8,480	9,744			4
Scott.....	2,800		200	1,020	3
Shelby.....	12,950	13,180			7
Stark.....	5,900	2,000			3
St. Clair.....	404,175		2,154		9
Stephenson.....					2
Tazewell.....	64,377	25,950	28,000		7
Union.....	1,232			7,561	3
Vermillion.....	423,273	23,300			10
Wabash.....					2
Warren.....	20,855	253,751	333,280		7
Washington.....					2
Wayne.....	2,601	4,700			4
White.....	10,982	17,543			6
Whiteside.....					1

*Value of Clay and Clay Products in 1906—Concluded.*

Counties.	Brick.	Sewer pipe and drain tile.	Pottery.	Raw clay.	Number of producers reporting.
Will .....	\$ 42,799	\$54,069	.....	.....	7
Williamson .....	26,826	.....	\$10,000	\$ 362	4
Winnebago .....	16,342	.....	.....	.....	5
Woodford .....	12,817	9,619	.....	.....	3
Other counties .....	411,104	45,646	22,700	3,088	.....
Total .....	\$9,896,840	\$1,772,798	\$982,903	\$131,272	498

\* Includes sand-lime brick.

† Including Alexander, Bond, Boone, Brown, Carroll, Cumberland, DeWitt, Ford, Fulton, Grundy, Henry, Lake, Marshall, McHenry, Monroe, Ogle, Perry, Pulaski, Richland, Stephenson, Wabash, Washington, Whiteside.

The most marked increase was in the production of brick, although the raw clay values was more than doubled.

The increase or decrease in value of each of the products over 1905 is shown below:

	1905.	1906.
* Brick .....	\$9,320,984	\$9,896,840
Sewer pipe and drain tile .....	2,069,926	1,772,798
Pottery .....	941,057	982,903
Raw clay .....	60,123	131,272
Total .....	\$12,392,100	\$12,783,813

\*Including architectural terra cotta.

### STONE.

*Limestone*—Limestone was produced in 1905 by 130 firms who reported a total value of \$3,476,449.00. Compared with figures for 1905 this shows a decrease of \$165,000.00 in value. Cook county produced more than half the stone, with a value of \$1,934,618.00. The following

table shows the production by counties, and the uses for which it was quarried for the year 1906:

*Value of Limestone Output in 1906.*

Counties.	Dimension stone.	Stone for road work.	Stone for lime.	Broken stone.	Stone for flux.	No. of Producers reporting.
Adams.....	2,900	2,340	113,917	24,223	75	9
Boone.....	1,900	8,800	.....	3,200	.....	3
Carroll.....	4,700	250	2,100	250	.....	4
Coles.....	.....	.....	.....	.....	.....	1
Cook.....	157,997	458,756	332,873	923,770	61,222	21
DuPage.....	.....	.....	.....	.....	.....	2
Greene.....	.....	.....	.....	.....	.....	1
Hancock.....	.....	.....	.....	.....	.....	2
Henderson.....	.....	.....	.....	.....	.....	1
Jersey.....	.....	.....	.....	.....	.....	1
Jo Daviess.....	2,018	770	1,000	1,250	.....	4
Kane.....	2,200	6,327	.....	12,620	.....	3
Kankakee.....	5,715	19,754	7,816	65,778	130	11
Kendall.....	.....	.....	.....	.....	.....	1
LaSalle.....	.....	.....	.....	.....	.....	2
Lee.....	5,005	12,810	.....	.....	.....	5
Madison.....	6,100	20,069	27,000	64,059	21,354	11
McHenry.....	.....	.....	.....	.....	.....	1
Monroe.....	.....	.....	.....	.....	.....	2
Ogle.....	.....	.....	.....	.....	.....	1
Pike.....	.....	.....	.....	.....	.....	2
Randolph.....	.....	.....	.....	.....	.....	2
Rock Island.....	9,324	18,522	16,000	21,985	886	3
St. Clair.....	.....	28,647	25	59,388	6,570	5
Union.....	.....	.....	.....	.....	.....	1
Vermilion.....	.....	.....	.....	.....	.....	1
Whiteside.....	1,475	1,438	9,000	162	.....	6
Will.....	68,931	57,279	4,809	258,714	79,164	15
Winnebago.....	31,866	11,376	15,976	4,676	60	9
*Other counties.....	18,367	20,147	3,611	132,106	214,836	130
Total.....	318,528	667,195	534,118	1,572,251	384,357	260

\*Including Coles, DuPage, Greene, Hancock, Henderson, Jersey, Kendall, LaSalle, Monroe, McHenry, Ogle, Pike, Randolph, Union and Vermilion.

There was an increase in production in dimension stone, stone for road work, and stone for lime, but a decrease in broken stone and stone for flux. For purposes of comparison the following table is given, showing the value of the production of 1905 and 1906:

	1905	1906
Dimension stone.....	\$ 226,491	\$ 318,528
Stone for road work.....	533,917	667,195
Stone for lime.....	395,194	534,118
*Broken stone.....	1,904,350	1,572,251
Stone for flux.....	581,497	384,357
Total.....	\$3,611,441	\$3,476,449

\*Including stone for concrete, railroad ballast, rubble, riprap and cement.

**Sandstone**—The output of sandstone in 1906 was valued at \$19,-125.00, as compared with \$29,153.00 in 1905. Comparative figures for the years 1905 and 1906 are given below:

### Sandstone Output in 1905 and 1906.

	1905	1906
Dimension stone .....	\$23, 198	\$15, 220
Road work .....	2, 568	200
Crushed stone .....	3, 397	3, 705
<b>Total .....</b>	<b>\$29, 153</b>	<b>\$19, 126</b>

### SAND AND GRAVEL.

The sand and gravel produced in Illinois in 1906 was valued at \$1,043,041.00, as compared with \$693,772.00 for 1905, an increase of over 50 per cent. Following is a table showing the values of the sand output, and its various uses:

#### Value of Sand and Gravel Output in 1906.

COUNTIES.	Glass sand.	Moulding sand.	Engine sand.	Furnace sand.	Other sand.	Gravel.	No. of producers reporting
Bond .....							1
Bureau .....		\$11, 446			\$28, 000	\$22, 731	8
Cook .....	\$700				76, 296	23, 333	4
Fayette .....							1
Fulton .....							1
Hancock .....							1
Henderson .....							2
Jo Daviess .....							2
Kane .....		25, 686			63, 973	36, 239	9
Kendall .....							2
Lake .....			\$ 2, 400		40, 961	47, 897	4
LaSalle .....	155, 984	99, 286		\$37, 675	27, 446	2, 500	14
Madison .....		30, 250	25, 000		6, 000		3
Meffery .....		13, 885			54, 995	24, 619	5
Peoria .....		105			7, 311	7, 415	7
Rock Island .....							2
St. Clair .....							1
Stephenson .....							1
Tazewell .....							1
Whiteside .....							1
Will .....		1, 080			1, 300	67, 515	7
Winnebago .....		2, 248		363	20, 112	21, 652	3
*Other counties .....		31, 951			20, 443	4, 164	..
<b>Total .....</b>	<b>\$156, 684</b>	<b>\$215, 937</b>	<b>\$27, 400</b>	<b>\$38, 039</b>	<b>\$346, 837</b>	<b>\$258, 145</b>	<b>80</b>

\*Including Bond, Fayette, Fulton, Henderson, Hancock, Jo Daviess, Kendall, Rock Island, St. Clair, Stephenson, Tazewell and Whiteside.

### OIL AND GAS.

The year 1906 showed a remarkable increase in the production of petroleum in Illinois. Up to June, 1905, the amount of oil from this State was very small, running from 200 to 500 barrels annually, and Montgomery county was the only producer. In 1906 Clark, Cumberland and Crawford counties were shipping oil, and wild catting was being carried on in the adjacent counties. The total production for 1906 was 4,397,050 barrels, with a value of \$3,275,802.00.



In 1865 tests for oil were drilled near Casey, in Clark county, but nothing like systematic search was begun until 1905, when a great number of holes were sunk in that vicinity with good success. In August, 1906, the development had been such as to warrant a report on the area, which was made by W. S. Blatchley, state geologist of Indiana, and published as Bulletin 2 of the Illinois State Survey. Since that time developments have been rapid. Pipe lines have been built connecting up the different parts of the field, and in May, 1907, the runs averaged 67,555 barrels daily. In June, 1907, it is estimated that the daily production averaged 112,000 barrels from 5,214 wells.

Following is a table showing the production from June to December, 1905, and the production for the year 1906:

*Production of Oil in 1905-1906.*

1905.		1906.	
June.....	5,489	January.....	55,680
July.....	9,208	February.....	65,209
August.....	15,092	March.....	19,352
September.....	19,591	April.....	102,872
October.....	26,443	May.....	137,746
November.....	34,766	June.....	110,654
December.....	45,913	July.....	610,401
		August.....	778,463
Total.....	156,502	September.....	722,168
		October.....	463,819
		November.....	150,985
		December.....	549,711
		Total.....	4,337,050

**GAS.**

Considerable quantities of gas have been encountered in the oil district, but it has not yet been utilized as fuel.

**CEMENT.**

The Portland cement output for 1906 increased considerably over that for 1905. In 1906 the production was 1,858,403 barrels, valued at \$2,461,494, as compared with 1,545,000 barrels, with a value of \$1,741,150.00 in 1905. The output of natural rock cement was valued at \$188,262.00, while in 1905 it was \$166,555.00. During the year four Portland and three natural rock cement plants were in operation with one of the Portland manufactories also making slag cement. A new plant is building at Dixon and the land is reported to have been bought near Port Byron for another, so next year should see a good increase over the present output.

**FLUORSPAR.**

Mr. J. M. Boutwell of the U. S. Geological Survey reports a production of fluorspar in 1906 of 25,742 tons, valued at \$128,813.00. This is a considerable decrease from 1905 when 33,275 tons with a value of \$220,206.00 were produced.

## II

### MINERAL WATER.

In 1906, fifteen producers report a total value of mineral waters from Illinois of \$77,287.00, as compared with \$44,905.00 in 1905. The increase is probably accounted for by the greater consumption of bottled waters brought about by doubts as to the purity of the city supplies.

### ZINC.

Illinois produced 46,270 short tons of spelter in 1906, a decrease of 336 tons from the output of 1905. Only a small part of this came from ore mined in the State. The plants building at Depue and Danville did not operate during the year, but there should be a considerable increase in production when they commence operations.

### LEAD.

Lead is produced in northwestern Illinois and 572 short tons were mined during 1906. The average value was about \$80.00 per ton.

### SUMMARY.

The following summary table shows the value of the mineral output of the State in 1906. It is believed that the total value is fairly correct, natural gas being the only product omitted, and this because it is not being utilized. Only the value of the raw materials produced in the State in the first stage of manufacture is here included. As is well known, there are large iron and steel, as well as a considerable number of miscellaneous metallurgical industries. Since, however, these are dependent upon ores from other states, their output is not included here.

#### TOTAL VALUES OF MINERAL OUTPUT IN 1905-1906.

	1906.
Coal .....	\$44,763,062
Clay .....	12,783,813
Limestone .....	3,476,449
Oil .....	3,275,802
Portland cement .....	2,461,494
Sand and gravel .....	1,043,041
Natural and slag cement .....	188,262
Fluorspar .....	128,813
Mineral water .....	77,287
Lead ore .....	45,760
Spelter (estimated) .....	34,000
Sandstone .....	19,125
<b>Total .....</b>	<b>\$68,296,908</b>