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## DEVELOPMENTS IN ILLINOIS AND INDIANA IN 1946<sup>1</sup>

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### INTRODUCTION

This report covers the states of Illinois and Indiana. Most of the oil and gas drilling was confined to the southern part of Illinois and southwestern part of Indiana.

Drilling in the two states increased by 42 per cent in 1946 as compared with 1945 and production increased 2½ per cent. Wildcat completions in the two states increased from 575 in 1945 to 760 in 1946, an increase of 32 per cent. Thirty-nine new fields were discovered, all of which were within a few miles of previous production, so that no new regions were opened for production. There was little deep testing and no major discovery of deeper production.

The details of development are discussed separately for each state.

### ILLINOIS

By ALFRED H. BELL

Drilling for oil and gas in Illinois increased by 34 per cent when 2,362 wells were completed in 1946 as compared with 1,763 in 1945. Of the total completions 633<sup>4</sup> are classified as wildcat wells, an increase of 37 per cent over the 460 wildcat completions in 1945. Factors in this increase were: the expiration of many 10-year leases during 1946; greater availability of materials and manpower; and higher prices for crude oil. Of the 1,729 pool development wells completed in 1946, 298 were in the Mattoon pool, Coles County. Most of the drilling here took place in the first half of the year. Development drilling occurred in many pools of which some of the most active were: Clay City Consolidated, 128 completions; Stokes-

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<sup>4</sup> This figure does not include wells which tested additional producing zones in producing areas classified by Lahee as deeper-pool tests and shallower-pool tests.

Brownsville, 88 completions; Marine, 54; Herald, 51; and Calhoun Consolidated, 50.

Total oil production in Illinois in 1946 was 75,297,000 barrels, as compared with 75,094,000 barrels in 1945, an increase of about 0.3 per cent. Average daily production during 1946 was 206,000 barrels. Average daily production, by months, during the year varied between 197,000 barrels (December) and 212,000 barrels (May).

#### NEW POOLS DISCOVERED

Thirty-one new pools<sup>6</sup> were discovered in Illinois in 1946 (Table I, and Fig. 1), 58 extensions to pools were discovered by wildcat wells (Table II), and 33 wells, most of which can not be designated properly as exploratory wells, discovered additional producing zones in producing areas (Table III).

Most of the new pools discovered were located within a short distance of previous production. Those farthest away from previous production were Lillyville, Cumberland County (19, Table I, Fig. 1), Omega, Marion County (23, Table I, Fig. 1), and Waverly gas (30, Table I, Fig. 1), none of which is as much as 20 miles from previous production.

#### IMPORTANT EXPLORATORY WELLS

A list of some of the most noteworthy dry holes is given in Table IV. On the whole there was little deep testing in Illinois in 1946. Of the 14 wells listed in Table IV, all but two (Nos. 2 and 10) were located wholly or in part on the basis of subsurface geology. Number 2 was located by seismograph only, and numbers 1, 5, and 6 were located by a combination of subsurface geology and seismograph. Number 10, the Trempealeau test in McLean County, was located without a scientific basis.

The geographic pattern of exploratory drilling in Illinois and Indiana in 1946 followed that established in the last few years except for an increased relative amount in Coles and surrounding counties in Illinois resulting from the development of the Mattoon pool.

An analysis of the methods used in locating wildcat wells in Illinois is given in Table V.

The amount of geophysical exploration, by months, during 1946 in Illinois and Indiana is given in Table VI. The method used most is the reflection seismo-

<sup>6</sup> A strict distinction between the terms field and pool is difficult to maintain for the Illinois-Indiana area because of the large number of producing formations, several of which are confined to a relatively small stratigraphic section, and because of the large number of separate productive lenses in a single producing zone. The number of oil and gas pools (defined as separate reservoirs) is not accurately known but is undoubtedly more than a thousand for Illinois alone. If a field is defined as all of the pools on a single well defined structural feature, the Southeastern Illinois field located on the LaSalle anticlinal belt is a good example. But for many of the newer producing areas in the Illinois basin there is much room for difference of opinion as to a proper grouping into "fields." The word pool is used in this report to mean, in general, a separate producing area, but there are numerous exceptions where two or more separate producing areas are grouped together under a single pool name.

TABLE I  
DISCOVERY WELLS OF NEW POOLS IN ILLINOIS IN 1946

Pool	County	Company and Farm	Location	Total Depth (Feet)	Producing Formation	Depth to Top (Feet)	Initial Production (Barrels)
1. Beaver Creek South	Clinton	J. L. Garard, Vierge-Mablandt I	7-3N-2W	1,146	Bethel	1,131	17; 42
2. Boos East	Jasper	Secure Oil, C. L. Ireland I	11-6N-10E	2,673	Rosiclare; McClosky	2,657; 2,672	66; 4
3. Brownsburg	Wabash	Magnolia, W. J. Pfeiffer I	11-2S-14W	3,950	Cypress	1,759	15; 34
4. Clarksburg	Shelby	Sohio, Flenner I	17-10N-4E	1,788	Bethel	1,779	15; 16
5. Concord North	White	C. E. Brehm, Callicotte I	10-6S-10E	2,060	Aux Vases	2,016	248
6. Cooks Mills North	Coles	Nolan, Coombs Est. I	23-14N-7W	1,795	Rosiclare	1,771	73
7. Covington East	Wayne	K. & B. Drig, Smith I	21-1S-7E	3,323	Aux Vases	3,144	13
8. Crossville	White	Inland Prod., Rister I	15-4S-10E	3,164	McClosky	3,133	18; 10
9. Epworth East	White	Allen, Hanna I	28-5S-10E	2,743	Cypress	2,706	59
10. Flora South	Clay	Deep Rock, Given I	4-3N-6E	2,088	McClosky	2,078	180
11. Friendsville Central	Wabash	G. Engle, D. Wilkinson I	14-1N-13W	2,344	Bethel	2,321	40; 5
12. Friendsville North	Wabash	Heldt, Smith I	12-1N-13W	2,539	Biehl	1,644	15
13. Hidalgo North	Cumberland	Central Pipe Line, S. Meyers I	36-0N-9E	2,776	Rosiclare	2,648	145; 7
14. Hooser	Clay	N. V. Duncan, J. Leonard I-A	2-4N-7E	3,007	Cypress	2,550	30
15. Hooser North	Clay	Eason Oil, N. E. Gibson I	35-5N-7E	2,823	Aux Vases	2,803	8; 24
16. Junction North	Gallatin	J. Reznik, A. Valler I	3-9S-9E	2,749	Aux Vases	2,726	900
17. Lancaster Central	Wabash	S. Malis, W. Fite I	7-1N-13W	2,824	Rosiclare	2,813	160; 10
18. Lancaster South	Wabash	S. Malis, Litherland I	20-1N-13W	2,809	McClosky	2,720	140
19. Lillyville	Cumberland	Nat'l. Assoc. Pet. Krogmann I	31-0N-7E	2,454	McClosky	2,450	192
20. Massillon	Wayne	Texas, E. Hines, "C" I	1-4S-9E	3,262	Lower O'Hara	3,254	26; 26
21. Maud North	Wabash	Hayes & Wolfe, Smith I	17-1S-13W	2,806	Bethel	2,666	19
22. Omaha East	Gallatin	Deep Rock, Pioneer Trust Bk. I	2-8S-8E	2,080	McClosky	2,853	59
23. Omega	Marion	Doran & Delta, Milligan Est. I	16-3N-4E	2,499	McClosky	2,488	31
24. Richview	Washington	Nat'l. Consumers Oil Koelling-Pitchford I	10-2S-1W	1,532	Cypress	1,520	21
25. Ridgway	Gallatin	Wiser Oil, Mitsdarffer I	24-8S-8E	2,038	McClosky	2,842	22; 96
26. Sandoval West	Clinton	Doran, Thomas I	13-2N-1W	1,423	Cypress	1,417	2; 3
27. Shelbyville	Shelby	Britton, Kensil Heits I	21-1N-4E	1,355	Aux Vases	1,830	175
28. Stanford South	Clay	T. B. Dirckson, Howell I	9-2N-7E	3,205	Aux Vases	2,959	3,122
29. Wakefield	Jasper	J. W. Rudy, Dewhirst I	16-5N-9E	3,184	Rosiclare	3,122	1,700,000 cu. ft.
30. Waverly	Morgan	Ladet, Stenemeyer I	22-13N-8W	265	Pennsylvanian	256	100
31. Willow Hill East	Jasper	Pure & Carter, Dodd I	6-6N-11E	2,732	McClosky	2,642	

\* Oil and water.

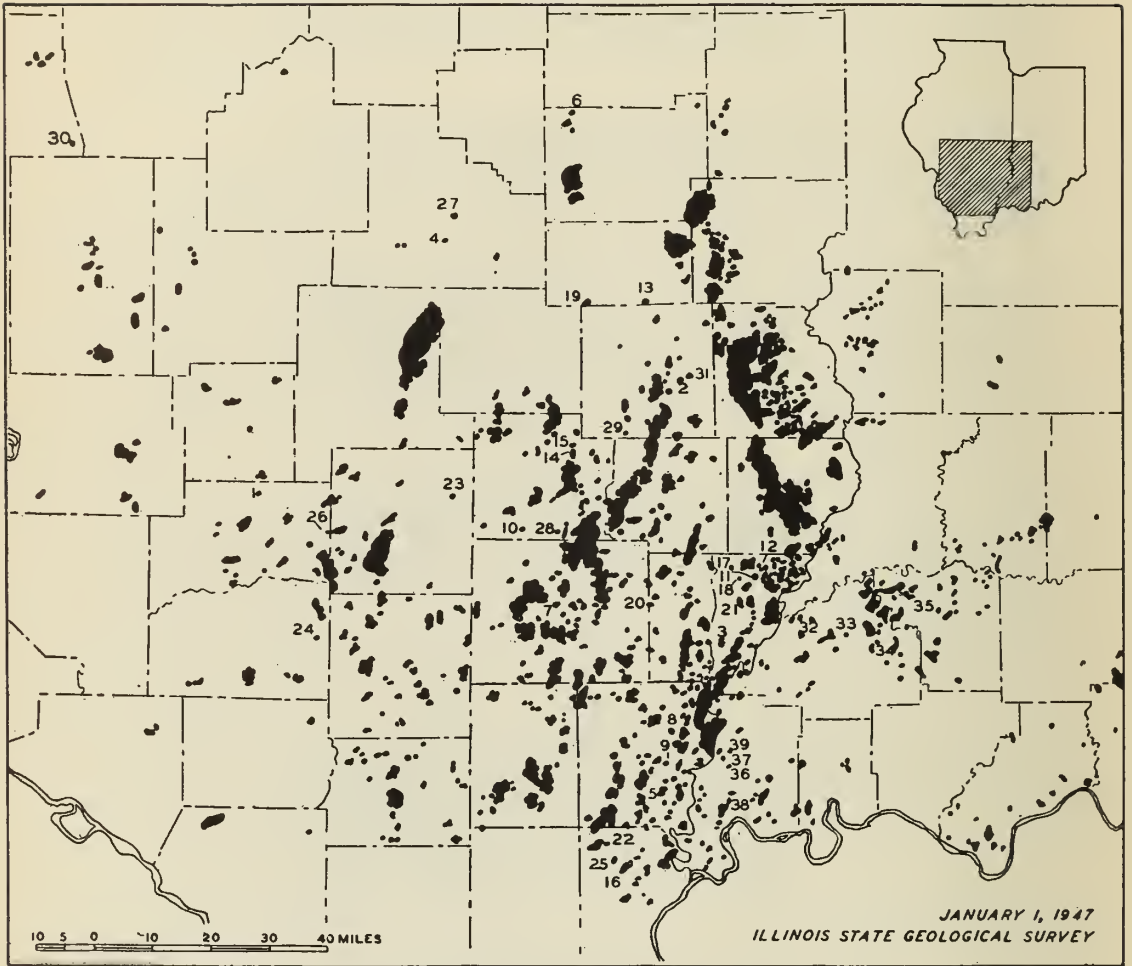


FIG. 1.—New pools discovered in 1946. All present and former oil and gas producing areas are shown in black. (See Tables I and VII for pool identification.)

TABLE II  
DISCOVERY WELLS OF EXTENSIONS TO POOLS IN ILLINOIS IN 1946

Pool	County	Company and Farm	Location	Total Depth (Feet)	Producing Formation	Depth to Top (Feet)	Initial Production (Barrels)*
1. Aden South	Hamilton	Weinert, Hall I	29-3S-7E,	3,446	Aux Vases, Rosiclare	3,249; 3,335	26; 80.
2. Bartleso West	Clinton	Goldschmidt, Loepker I	19-1N-3W,	963	Cypress	938	10; 15
3. Boos North	Jasper	Lynn, Houser-Sears I	21-6N-10E	2,812	McClosky	2,800	117
4. Browns	Wabash	Gilliam & Aspin, H. L. Herin I	27-1S-14W	2,971	Lower O'Hara	2,905	240
5. Browns East	Wabash	Magnolia, J. Hirschelmann Unit I	14-2S-14W	2,582	Cypress	2,575	300
6. Brownsville	White	McBride, Fryor I	32-3S-9E	3,186	Lower O'Hara	3,099	5; 20
7. Brownsville	White	Pure, Adams 'A'	6-6S-9E	3,176	Rosiclare	3,097	100; 118
8. Bungal Consol.	Hamilton	Magnolia, Rohrer I	23-4S-7E	3,290	Aux Vases	3,273	27; 3
9. Calhoun Consol.	Richland	Pure, Howard I	13-2N-9E	3,166	McClosky	3,147	1,305
10. Cisne	Wayne	Lynn, Dye I	2-4S-7E	3,035	Rosiclare	3,018	1,322
11. Clay City Consol.	Clay	Kobinson & Puckett, S. Bates I	14-2N-8E	3,216	Lower O'Hara	3,122	115
12. Clay City Consol.	Wayne	Redwine, C. E. Downer I	32-1N-8E	3,035	Aux Vases	3,054	277
13. Clay City Consol.	Wayne	Slagter, Chrisman I	32-1N-8E	3,153	McClosky	3,090	60; 7
14. Clay City Consol.	Wayne	Slagter, Trotter I	20-1N-8E	3,100	McClosky	3,039	432
15. Clay City Consol.	Wayne	Slagter, R. Pierce I	22-2N-8E	3,052	McClosky	3,168	39; 70
16. Clay City Consol.	Wayne	Jl. Mid-Cont., H. Miller I	13-1S-7E	3,148	Rosiclare	3,104	36
17. Clay City Consol.	Wayne	Slagter, Gray I	10-1N-8E	3,281	Aux Vases	3,059	8, 24
18. Clay City Consol.	Wayne	Redwine, M. A. Brown I	31-2N-9E	3,100	McClosky	3,040	40; 50
19. Clay City Consol.	Wayne	McCall and Clure, Atterberry I	14-1N-9E	3,230	McClosky	3,259	41; 36
20. Covington East	Wayne	Nation, Gallagher I	10-1S-7E	3,420	Bish Vases	3,602	44; 36
21. Epworth East	Wayne	Allen, Williams I	33-3S-16E	3,162	Bish Vases	1,667	86
22. Friendsville North	White	Peavitt, A. L. Oher I	1-1N-3W	1,981	McClosky	1,758	766
23. Gallagher	Richland	Pure, Gallagher I	12-2S-9E	3,181	McClosky	3,158	80; 85
24. Goldengate Consol.	Wayne	Ellis, L. B. Ellis I	49-2S-9E	3,867	Rosiclare	3,863	208; 2
25. Herald	White	Oil Management, Williams I	14-7S-9E	2,938	Rosiclare	2,923	263
26. Hoosier	Clay	Robinson & Puckett, Roley I	12-4N-7E	2,638	Cypress	2,623	265
27. Hoosier	Clay	R. B. Drig, Hasinger, Row 2	11-5N-7E	2,539	McClosky	1,535	765
28. Ingraham West	Clay	Gillett, Aspin, H. D. Lewis I	15-5N-7E	2,539	McClosky	2,870	15; 35
29. Johnsonville West	Wayne	McCall and Clure, Atterberry I	13-6S-8E	3,178	Tar Springs	2,338	82; 20
30. Iron	Wayne	Nat'l Assoc. Pet. Fisher I	20-1N-6E	3,178	McClosky	3,151	71
31. Johnsonville West	Wayne	Deep Rock, Ulysses I	25-1N-5E	3,086	McClosky	3,072	12
32. Johnsonville West	Wayne	Deep Rock, Spicer I	21-1S-5E	3,126	McClosky	3,118	20; 9
33. Kenneville	Wayne	McCall and Clure, Atterberry I	27-1S-5E	2,973	Aux Vases	2,900	175; 300
34. Lawrence	Lawrence	Mitchell, Cornstubble I	23-3N-11W	1,943	Silurian	1,863	80; 170
35. Marie	Madison	Lopez, M. Reding I	14-4N-6W	3,056	McClosky	1,730	228; 15
36. Markham City West	Jefferson	Gulf, Green I	10-3S-4E	3,092	McClosky	3,061	28; 1
37. Markham City West	Jefferson	Brehm, Modgin I	3-2N-2E	2,521	McClosky	2,430; 2,425	22; 27
38. Markham City West	Jefferson	Lynch, Wright I	3-2N-2E	1,962	Rosiclare	1,934	140
39. Mason South	Clay	Nat'l Consumers, Arthur I	12-2N-7E	2,578	Bethel	2,550	20
40. Mattcon	Coles	Haves & Wolfe, Meyer I	8-1S-13W	3,207	McClosky	3,102	31; 42
41. Maud North	White	Thompson, E. Bruggen I	13-5S-10E	1,896	Silurian	1,870	400
42. Maupin North	White	Wraether, Thompson I	15-15N-2W	3,007	McClosky	2,935	168
43. M. L. Auburn	Christian	Superior, H. C. Ford 27	8-5S-14W	2,943	Rosiclare	2,930	2,000,000 cu. ft.
44. New Harmony-Griffin	White	Menhall, J. Eaton I	13-6N-0E	753	Pennsylvanian	735	6; 60
45. Newton	Jasper	Bond Co. Gas, Harwood 2	36-7N-4W	3,195	McClosky	3,115	12; 36
46. Panama	Bond	Slagter, Fisher I	4-2N-14W	3,114	McClosky	3,018	10
47. Parkersburg Consol.	Richland	Sun Oil, Okerson I	9-7S-8E	1,852	Bethel	1,791	8; 25
48. Roland	White	Bauer, Brevoort I	10-2N-11W	3,080	Bethel	2,784	8; 25
49. St. Francisville East	Lawrence	K-B Drig, Patton I	21-3N-7E	2,940	Bethel	2,934	70; 8
50. Sailor Springs Consol.	Clay	Central Pipe Line, Tarpley 2	31-1N-14W	3,504	Bethel	3,270	8; 1
51. Samsville North	Edwards	Sohio, Thomas I	11-4S-7E	3,087	McClosky	3,080	11; 12
52. Springerton	Hamilton	Rudy, O. Tackett I	8-2N-7E	3,205	McClosky	2,555	169
53. Stanford South	Clay	Pure & Carter, E. S. Munsey I	12-6S-9E	3,141	Hardinsburg	2,320; 2,251	9; 20
54. Stokes	White	Sinclair and Ohio, Holderby 4	8-6S-9E	3,270	Rosiclare	3,260	146; 10
55. Storms	White	Lewis, Nibling I	7-5S-0E	3,173	Aux Vases	3,162	65; 144
56. Trumbull	White	Lewis, Bingham I	17-5S-9E	2,776	McClosky	2,668	60
57. Trumbull	White	Lynn, Hippler I	27-7N-10E				
58. Willow Hill	Jasper						

\* Oil and water.

TABLE III  
DISCOVERY WELLS OF ADDITIONAL PRODUCING ZONES IN POOLS IN ILLINOIS IN 1946

Pool	County	Company and Farm	Location	Total Depth (Feet)	Producing Formation	Depth to Top (Feet)	Initial Production (Barrels) <sup>a</sup>
1. Aden South	Hamilton	Weinert, Hall I	29-3S-7E	3,446	Aux Vases	3,249	26; 80 <sup>b</sup>
2. Aden South	Hamilton	Weinert, Hall I	29-3S-7E	3,446	Rosiclare	3,335	26; 80 <sup>b</sup>
3. Benton	Franklin	Shell, Doty I	25-6S-2E	2,162	Degonia	1,737	72; 146 <sup>b</sup>
4. Browns	Wayne	Gilliam & Aspin, H. L. Hering I	27-1S-4W	2,071	Lower O'Hara	2,065	240
5. Covington East	Wayne	Tex Harvey, Marshall Smith I	21-1S-7E	3,260	Lower O'Hara	3,208	66; 70 <sup>b</sup>
6. Cowling East	Edwards	G. H. Wickham, Schroeder 5	27-2S-4W	2,239	Tar Springs	2,229	50
7. Epworth East	White	W. O. Allen, J. Williams I	33-5S-10E	3,126	Aux Vases	3,002	24; 36
8. Geff	Wayne	Robinson & Puckett, Haymes I	1-1S-7E	3,188	Lower O'Hara	3,140	5 <sup>b</sup>
9. Herald	White	Oil Management, J. J. Harrell I	14-7S-9E	2,972	Lower O'Hara	2,962	243
10. Herald	White	Pure Oil, Austin Consol. "B" I	34-6S-9E	3,160	Rosiclare	3,005	37; 61
11. Hoosier	Clay	K-B Drig., Stanley I	11-4N-7E	3,003	Aux Vases	2,842	55; 125
12. Hoosier	Clay	N. V. Duncan, Gibson I	2-4N-7E	2,984	Rosiclare	2,894	264
13. Ingraham West	Clay	Cities Service, Wyatt 5	13-5N-7E	2,946	Aux Vases	2,762	150
14. Ingraham West	Clay	Kingwood, Wyatt I	14-5N-7E	2,938	Bethel	2,680	102; 94 <sup>b</sup>
15. Ingraham West	Clay	Cities Service, Wyatt I	13-5N-7E	2,950	Rosiclare	2,842	764
16. Keenville	Wayne	Wiser, Keen I	28-1S-2E	3,119	Rosiclare	3,000	150; 75
17. Markham City West	Jefferson	Brehm, Mo'glin I	34-2S-4E	3,092	Lower O'Hara	3,001	12; 50
18. Mt. Carmel	Wabash	First Nat'l Pet. Trust, Shaw-Courter 2-A	7-1S-12W	1,390	McClosky	1,368	13
19. Newton	Jasper	Menhall, James Eaton I	13-6N-9E	2,943	Rosiclare	2,939	168
20. Noble North	Richland	Pure Oil, L. A. Wasson 3	27-4N-9E	2,990	Rosiclare	2,958	66; 19
21. Olney East	Richland	Texas, R. Scherer 2	23-4N-10E	3,002	Rosiclare	3,048	10 <sup>b</sup>
22. Olney East	Richland	Texas, R. Scherer 2	23-4N-10E	3,002	Rosiclare	3,053	10 <sup>b</sup>
23. Stanlord South	Clay	Texas, E. Kitley, 2 S. Munsey I	16-2N-7E	3,109	McClosky	3,097	33
24. Stokes	White	Ture & Carter, E. S. Munsey I	6-8S-9E	3,109	Hardinsburg	2,555	169
25. Stokes-Brownsville	White	Winfrey Drig., Spence 2	17-6S-9E	2,168	Alestine	2,585	16; 40; 10 <sup>b</sup>
26. Storms	White	Sinclair & Ohio, Kiechen 2	1-6S-9E	3,030	Aux Vases	2,084	220; 10 <sup>b</sup>
27. Storms	White	Sinclair & Ohio, Aldrich I	1-6S-9E	2,366	Tar Springs	2,354	42
28. Thackeray	Hamilton	Ryford Oil, Johnson "A" I	10-5S-7E	3,586	Lower O'Hara	3,459	16; 16
29. Thackeray	Hamilton	Ryford Oil, V. Johnson "A" I	10-5S-7E	3,556	McClosky	3,533	128; 10
30. Trumbull	White	Pure Oil, W. Hall I	10-5S-9E	3,158	Aux Vases	3,160	57; 50
31. Trumbull	White	W. J. Lewis, Nibling I	7-5S-9E	3,270	Rosiclare	3,160	17; 10
32. Waverly	Morgan	L. M. Latzel, McMahon I	22-1N-8W	1,543	Desoriae	1,680	1; 270; 000 cu. ft.
33. Willow Hill	Jasper	Secure Oil, L. Mascher I	3-0N-10E	2,673	Rosiclare	2,661	255

<sup>a</sup> Oil and water.

<sup>b</sup> Dual completion.

<sup>c</sup> Triple completion.

graph and the number of crews increased from 4 in January to 8 in December. In Indiana only the magnetometer method was reported in use.

STRATIGRAPHY

The geologic system which produces most of the oil in Illinois and Indiana continues to be the Mississippian, and the bulk of the discoveries of new fields, extensions, and new producing formations were in the Mississippian.

TREND IN EXPLORATION, LEASING AND DRILLING

The trend in leasing and drilling was downward in the latter part of 1946 but this was partly seasonal. There will probably be less drilling, both wildcat and

TABLE IV  
SELECTED LIST OF DRY TESTS IN ILLINOIS IN 1946

Pool	County	Company and Farm	Location	Total Depth (Feet)	Deepest Formation	Depth to Top (Feet)
1.	Bond	Sohio, Mohme 1	14-6N-5W	2,668	Trenton	2,668
2.	Bond	Sohio, Long 1	26-6N-5W	2,768	Trenton	2,623
3. Mattoon	Coles	S. H. & K. Drlg., Strong 1	22-12N-7E	3,191	Devonian	3,111
4.	Coles	Obering, Biemer 1	26-14N-7E	2,888	Devonian	2,873
5.	Crawford	Nat'l. Assoc. Pet., Stifle 1	6-6N-11W	3,281	Devonian	2,878
6.	Cumberland	Nat'l. Assoc. Pet., Handley 1	26-10N-7E	3,815	Devonian	3,670
7. Lillyville <sup>a</sup>	Cumberland	Nat'l. Assoc. Pet., Krogman 3	31-9N-7E	4,000	Devonian	
8. Rural Hill	Hamilton	Shell, Nobava 4	13-6S-5E	5,481	Devonian	5,104
9. Boyd	Jefferson	Superior, Friedrich 10	19-1S-2E	3,870	Devonian	3,737
10.	McLean	Minnesota Prod., McGowan 1	33-24N-5E	3,510	Trempealeau	3,260
11.	Madison	Jarvis & Marcell, Hitz 1	8-5N-5W	2,797	Trenton	2,692
12. Tonti <sup>b</sup>	Marion	Harvey, Kagy 1	33-3N-2E	4,900	Trenton	4,769
13. Waverley <sup>c</sup>	Morgan	Ladet, McMahan 11	22-13N-8W	1,543	Trenton	1,400
14.	St. Clair	Young, McCurdy 6	29-3S-6W	2,368	Maquoketa	2,312

<sup>a</sup> Plugged back to McClosky oil.  
<sup>b</sup> Plugged back to Devonian oil.  
<sup>c</sup> Plugged back to Devonian gas.

pool development, in 1947 than in 1946. The expiration of additional 10-year leases, the higher prices for crude oil, and continued high demand, all favor continued activity in leasing and drilling, and it seems likely that total drilling will exceed that of 1945.

There is much interest in prospecting for Silurian reef production in the western marginal area of the Illinois basin. A considerable amount of leasing has been done and there will probably be exploratory drilling in this area in 1947. Plans have been announced for testing the pre-St. Peter Ordovician and Cambrian strata on the Pittsfield-Hadley anticline in western Illinois. If production should be found it would stimulate further testing of these strata.

INDIANA

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During the year 1946, drilling activity in the petroleum industry exceeded all expectations with an increase of 75 per cent in well completions and an increase of more than 200 per cent in the total initial production from new wells. A total of 508 wells were drilled during the year, of which 431 were pool wells and 127

TABLE V  
WILDCAT WELLS DRILLED IN ILLINOIS IN 1946, CLASSIFIED BY METHOD OF LOCATION

Method of Location	Wildcat Near <sup>a</sup>		Wildcat Far <sup>b</sup>		Total Wildcats	Total Producers	Percentage Successful
	Total	Producers	Total	Producers			
Geology	296	55	252	27	548	82	15.0
Seismograph	4	1	1	1	5	2	40.0
Geology and seismograph	11	2	28	3	39	5	12.8
Nonscientific	311	58	281	31	592	80	15.0
Unknown	2	0	35	0	37	0	0.0
	1	0	3	0	4	0	0.0
Total	314	58	319	31	633	80	14.0

<sup>a</sup> One half to 2 miles from production.

<sup>b</sup> More than 2 miles from production.

TABLE VI  
GEOPHYSICAL EXPLORATION, BY MONTHS, IN ILLINOIS AND INDIANA IN 1946

Period (1946)	Illinois				Indiana			
	Seis.	Grav.	Magnet.	Res.	Seis.	Grav.	Magnet.	Res.
Jan.	(a) (b)							
Feb.	4-16							
Mar.	5-18							
Apr.	5-21							
May	5-17							
June	5-20							
July	5-25		1-3				2-6	
Aug.	6-23		1-1	1-3			2-8	
Sept.	6-24			1-4			2-8	
Oct.	6-30			1-5			2-10	
Nov.	6-24			1-4			2-8	
Dec.	7-25	1-2		1-4				
	8-39	1-5		1-5				

<sup>a</sup> First figure indicates number of crews working.

<sup>b</sup> Second figure indicates number of working weeks completed.

TABLE VII  
DISCOVERY WELLS OF NEW POOLS IN SOUTHWESTERN INDIANA IN 1946

Pool	County	Company and Farm	Location	Total Depth (Feet)	Producing Formation
32. Grand Rapid	Gibson	Ill. Midcontinent, Parkinson 2	24-1S-12W	2,095	Bethel
33. Princeton N.E.	Gibson	Eldin Hayden, Creclius 2	5-2S-10W	2,080	McClosky
34. Francisco W.	Gibson	L. A. Plumb, Coleman Comm. 1	7-2S-9W	1,965	Ste. Genevieve
35. Union Bowman New	Pike	W. L. Litchlyter, A. Conley 1	3-1S-9W	1,058	Waltersburg
36. Springfield	Posey	H. E. Ledbetter, N. Utley 1	30-5S-13W	3,111	Ste. Genevieve
37. Springfield N.	Posey	Calvert et al., Fretageat 1	24-5S-14W	2,020	Palestine
38. Farmersville S.	Posey	Paul Rossi, Rippey 1	30-6S-13W	2,484	Pennsylvanian
39. New Harmony E.	Posey	Calvert & Willis, Fred Wiley 1	18-5S-13W	2,023	McClosky

TABLE VIII  
DISCOVERY WELLS OF EXTENSION TO POOLS IN SOUTHWESTERN INDIANA IN 1946

Pool	County	Company and Farm	Location	Total Depth (Feet)	Producing Formation
Dodds Bridge	Sullivan	Roy Myers and Ohio Oil Co., E. Hayden 1	10-8N-10W	1,483	Salem
Mt. Carmel	Knox	H. E. Ledbetter, Steckler 1	22-1S-12W	2,088	Bethel
Dodds Bridge	Sullivan	Roy Myers and Ohio Oil Co., O. Benson	10-8N-10W	1,458	Salem
Rich Valley	Wabash	J. Minneci, Ida Votaw 1	12-27N-5E	870	Trenton
Troy	Spencer	Stroble-Busick 1	11-6S-4W	723	Cypress




were wildcat wells. Seventeen discovery wells were drilled, 15 of them finding new oil fields or extensions, and 2 opening new gas fields or extensions. About 83 per cent of the pool wells were producers and 13 per cent of the wildcat wells encountered commercial production. Only a 10 per cent increase in wildcatting took place, but the stage in the development of the basin and the general industrial situation account for this figure. The total footage of new holes amounted to 985,743 feet, which increased the daily production of oil by 7,743 barrels.

The greatest activity took place in the pools along the Wabash River in Posey and Gibson counties. Seven of the new fields and most of the additional production were found in this area. However, many pool wells were drilled in central and western Gibson County, where the Princeton North field has been extended into the city limits of Princeton. Another town-lot "boom" may be in prospect. Two active areas in southern Knox County are creating unusual interest also, and more development is expected during the coming year.

Roy Myers and the Ohio Oil Company opened a new pool in Sullivan County where 6 wells have been completed in the Salem limestone at an average depth of 1,400 feet. This is an extension of the Dodds Bridge field. Production is reported as about 150 barrels daily per well. An extension of the Troy field in Spencer and Perry counties was made by C. A. Busick, who completed two wells in the lower Chester, reported as producing 75 barrels each.

Outside of the Eastern Interior basin, the Horton field in Hamilton County is the most active. As previously reported, it is an extension of the old Trenton pool, producing at 1,050-1,100 feet. The new wells vary in initial production from 25 to 75 barrels per day. New completions were reported in the Henderson field in Jay County, near the state line of Ohio. The wells were small, however, and did not add greatly to the production of the field. Some additional testing was done near the old Rich Valley field of Miami County, but the results were discouraging. Two small producers were completed which might be considered extensions, but it is doubtful if they prove commercial.

Some of the interesting deep tests were as follows: Continental Oil Company's Cooper Estate in Sec. 13, T. 3 S., R. 14 W., Griffin field, tested the Trenton; Duncan *et al.* Miller No. 1 in Sec. 18, T. 9 N., R. 5 W., Owen County, reached the Glenwood-St. Peter formation; J. Regan's Luther No. 1, Sec. 19, T. 10 N., R. 6 W., Clay County, tested the Glenwood-St. Peter horizon also; and the Kankakee Development Company's State Bank of Rensselaer No. 1 in Sec. 14, T. 30 N., R. 6 W., Jasper County, was abandoned in the Mt. Simon sandstone of Cambrian age.



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