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STATE OF ILLINOIS

DEPARTMENT OF REGISTRATION AND EDUCATION

OIL AND GAS PAY MAPS OF ILLINOIS

Richard H. Howard

ILLINOIS PETROLEUM 84

ILLINOIS STATE GEOLOGICAL SURVEY

1967

URBANA, ILLINOIS

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RICHARD H. HOWARD

CONTENTS

	Page
Abstract	3
Introduction	3
Pay Map Preparation	3
Data Sources	3
Pay Zones Mapped	3
Mapping Procedure	6
Limitations of the Pay Maps	6

TABLES

Table	Page
1 - Oil and gas development areas shown in figure 1	7

ILLUSTRATIONS

Figure	Page
1 - Oil and gas fields in Illinois. Development map areas are named in table 1	4
2 - Generalized geologic column of southern Illinois	5
3 - Pennsylvanian oil and gas productive area	8
4 - Degonia - Clore oil and gas productive area	12
5 - Palestine oil and gas productive area	13
6 - Waltersburg oil and gas productive area	14
7 - Tar Springs oil and gas productive area	15
8 - Hardinsburg oil and gas productive area	16
9 - Golconda oil and gas productive area	17
10 - Cypress oil and gas productive area	18
11 - Paint Creek - Bethel oil and gas productive area	24
12 - Yankeetown (Benoist) oil and gas productive area	28
13 - Renault oil and gas productive area	31
14 - Aux Vases oil and gas productive area	33
15 - Ste. Genevieve [exclusive of Spar Mountain ("Rosiclare") Ss.] oil and gas productive area	38
16 - Spar Mountain ("Rosiclare") oil and gas productive area	43
17 - St. Louis oil and gas productive area	46
18 - Salem oil and gas productive area	50
19 - Harrodsburg (Warsaw) oil and gas productive area	53
20 - Borden oil and gas productive area	55
21 - Devonian oil and gas productive area	57
22 - Silurian oil and gas productive area	60
23 - Galena (Trenton) oil and gas productive area	63

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OIL AND GAS PAY MAPS OF ILLINOIS

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ABSTRACT

Twenty-one reasonably well-recognized zones in the Illinois geologic column, ranging in age from Pennsylvanian to Ordovician, have produced oil and/or gas during the last 80 years. The oil and gas paymaps in this report show the approximate areal extent of production from these zones.

INTRODUCTION

During its 80 year history, the Illinois oil and gas industry has discovered and produced hydrocarbons from the areas shown in figure 1. A generalized geologic column, figure 2, shows that the pay zones range in age from Pennsylvanian to Ordovician. The purpose of this report is to show the areas in which individual pay zones have been productive before January 1, 1966. All corrections and additional information received from industry and the general public will be greatly appreciated.

PAY MAP PREPARATION

Data Sources

The primary source of well information used in compiling the pay maps is the Survey Oil and Gas Section's scout tickets. Most of these are well records reported at meetings of the Illinois Basin Oil Scouts Association from its

beginning in 1937 through October 1961 and recorded by scouts of the Illinois State Geological Survey. A few comparable records of holes drilled before 1937 are included, as are commercial scouting service tickets from November 1961 to the present. Survey publications on the "old" (pre-1937) fields, the Survey Mineral Resource Records Section, consultations with D. H. Swann, W. F. Meents, E. Atherton, and L. L. Whiting of the Survey, and J. H. Buehner of Marathon Oil Company comprise the balance of data sources.

Pay Zones Mapped

Fifty-seven oil and gas pay zones are indicated on the generalized geologic column of southern Illinois (fig. 2). For the purpose of this report, many zones have been grouped together, giving a total of 21 pay zones for which paymaps were constructed. They are as follows:

1. Pennsylvanian: undifferentiated



Figure 1 - Oil and gas fields in Illinois. Development map areas are named in table 1.

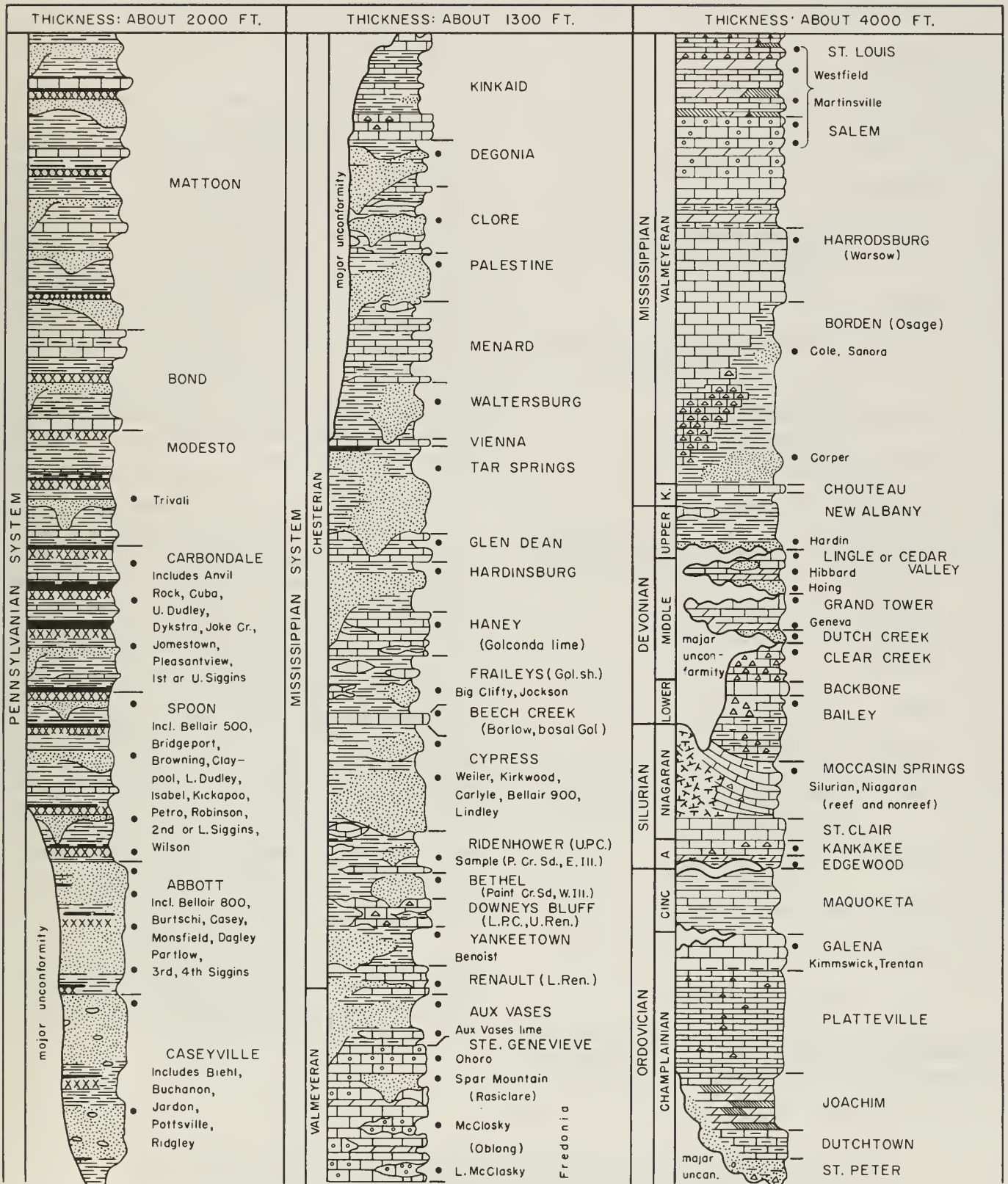


Figure 2 - Generalized geologic column of southern Illinois. Black dots indicate oil and gas pay zones. Formation names are in capitals; other pay zones are not. About 4,000 feet of lower Ordovician and upper Cambrian rocks under the St. Peter are not shown. Kinderhookian (K), Alexandrian (A), and Cincinnati (Cinc.) Series are abbreviated. Variable vertical scale. (Prepared by David H. Swann.)

2. Degonia-Clore
3. Palestine
4. Waltersburg
5. Tar Springs
6. Hardinsburg
7. Golconda: Jackson, Haney, and Barlow areas differentiated
8. Cypress
9. Paint Creek-Bethel: Ridenhower and Bethel undifferentiated
10. Yankeetown (Benoist)
11. Renault
12. Aux Vases
13. Ste. Genevieve: exclusive of Spar Mountain ("Rosiclare") Ss.
14. Spar Mountain ("Rosiclare")
15. St. Louis
16. Salem
17. Harrodsburg (Warsaw)
18. Borden: Carper, Sonora, and Cole areas differentiated
19. Devonian: undifferentiated
20. Silurian: undifferentiated
21. Galena (Trenton)

Mapping Procedure

Pay zones in individual oil wells were indicated in color on 59 (fig. 1) oil and gas development map (OGDM) ozalids at the scale of 2

inches to 1 mile. These maps, named in Table 1, are kept current as far as pays are concerned and are available for public inspection at the State Geological Survey.

The base map used in preparation of the oil and gas fields of Illinois map in Illinois Petroleum 80 and preceding numbers has a scale of 1/4 inch to 1 mile. Therefore, the 59 OGDM linen bases were photographically reduced to this scale. One print was made for each pay zone shown on a given OGDM ozalid described in the preceding paragraph (e. g., OGDM 21 has 16 pay zones). Individual well spots could still be identified on these prints, facilitating the generalization of the producing areas of pay zones. These prints were then grouped by pay zone and their producing areas transferred to ozalids of the 1/4 inch to 1 mile base. The resulting 21 pay maps were then cut to page size (figs. 3 through 23). Producing areas of individual pays are shown in black on a gray oil and gas fields base.

Limitations of the Pay Maps

The individual pay areas shown in black and the oil and gas fields shown in gray were generalized by different people and, consequently, in different manners. In general, a single producing well of a given pay is indicated by a black dot covering 30 to 40 acres. Individual wells on the oil and gas fields base are indicated by gray dots covering 20 acres and less. There are some inconsistencies plus certain errors and over generalizations in the oil and gas fields base (e. g., in the "old fields" in Clark, Crawford, and Lawrence Counties) which could not be rectified short of making an entirely new base. This was not done because the base is considered of secondary importance. Main emphasis was placed instead on accurate and reasonable representation of pay areas, except in the "old fields" where it was impractical if not impossible.

A great deal of work-over information, such as up-the-hole completions in pay zones months or years subsequent to the original completion, is not recorded at the Survey; and, therefore, not included on the maps.

Single ozalid maps showing the entire productive area in Illinois of each of the 21 pay zones, at a scale of approximately 1 inch to 6 miles, may be obtained from the Illinois State Geological Survey at a cost of 60¢ per map.

TABLE 1 — OIL AND GAS DEVELOPMENT MAP AREAS SHOWN IN FIGURE 1

16. Murphysboro	57. Robinson
17. Carbondale	58. Greenup
18. Thompsonville	59. Effingham
19. Eldorado	60. Beecher City
20. Shawneetown	61. Ramsey
21. Carmi	62. Hillsboro
22. McLeansboro	63. Litchfield
23. Benton	68. Carlinville
24. Duquoin	69. Raymond
25. Pinckneyville	70. Pana
26. Sparta	71. Shelbyville
31. Marissa	72. Mattoon
32. Nashville	73. Charleston
33. Roaches	74. Marshall
34. Mt. Vernon	75. Paris
35. Fairfield	76. Oakland
36. Albion	77. Arcola
37. Mt. Carmel	78. Sullivan
39. Allendale	79. Moweaqua
40. Noble	80. Taylorville
41. Clay City	81. Glenarm
42. Xenia	87. Mt. Pulaski
43. Centralia	88. Decatur
44. Carlyle	89. Cerro Gordo
45. Lebanon	90. Sadorus
49. Worden	96. DeWitt
50. Greenville	97. Clinton
51. Patoka	104. Leroy
52. Kinmundy	F. Fishhook
53. Louisville	I. Rushville
54. Olney	J. Clayton
55. Flat Rock	M. Colmar Plymouth

Pennsylvanian
Productive Area

Oil Gas

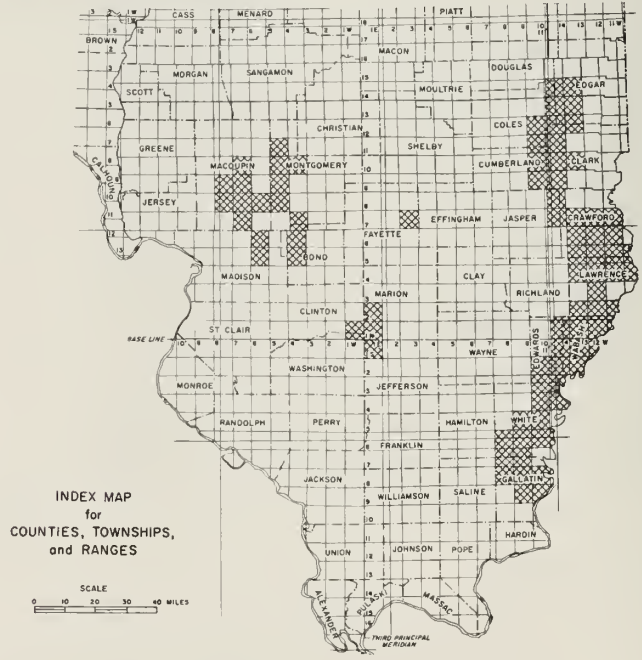
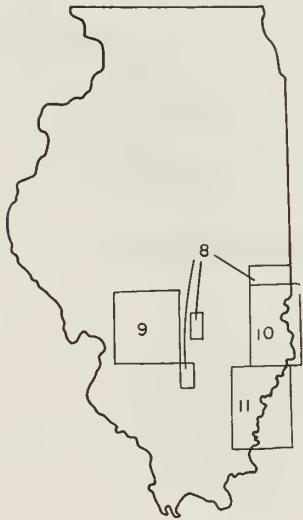
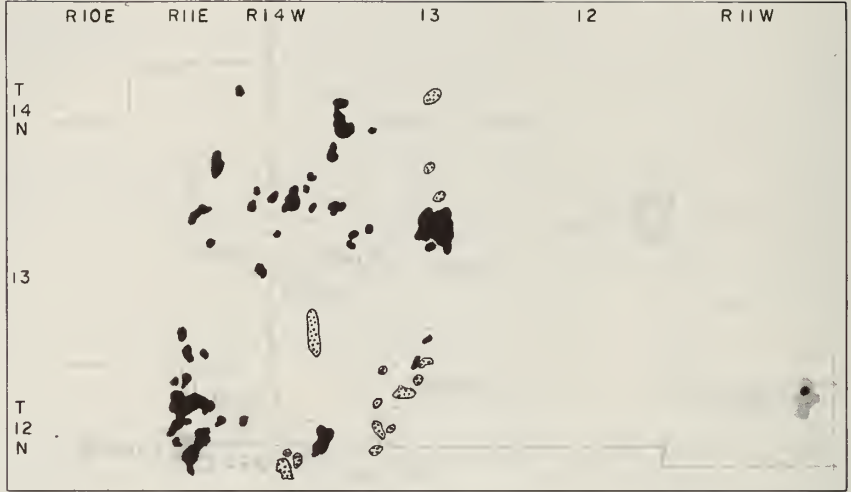
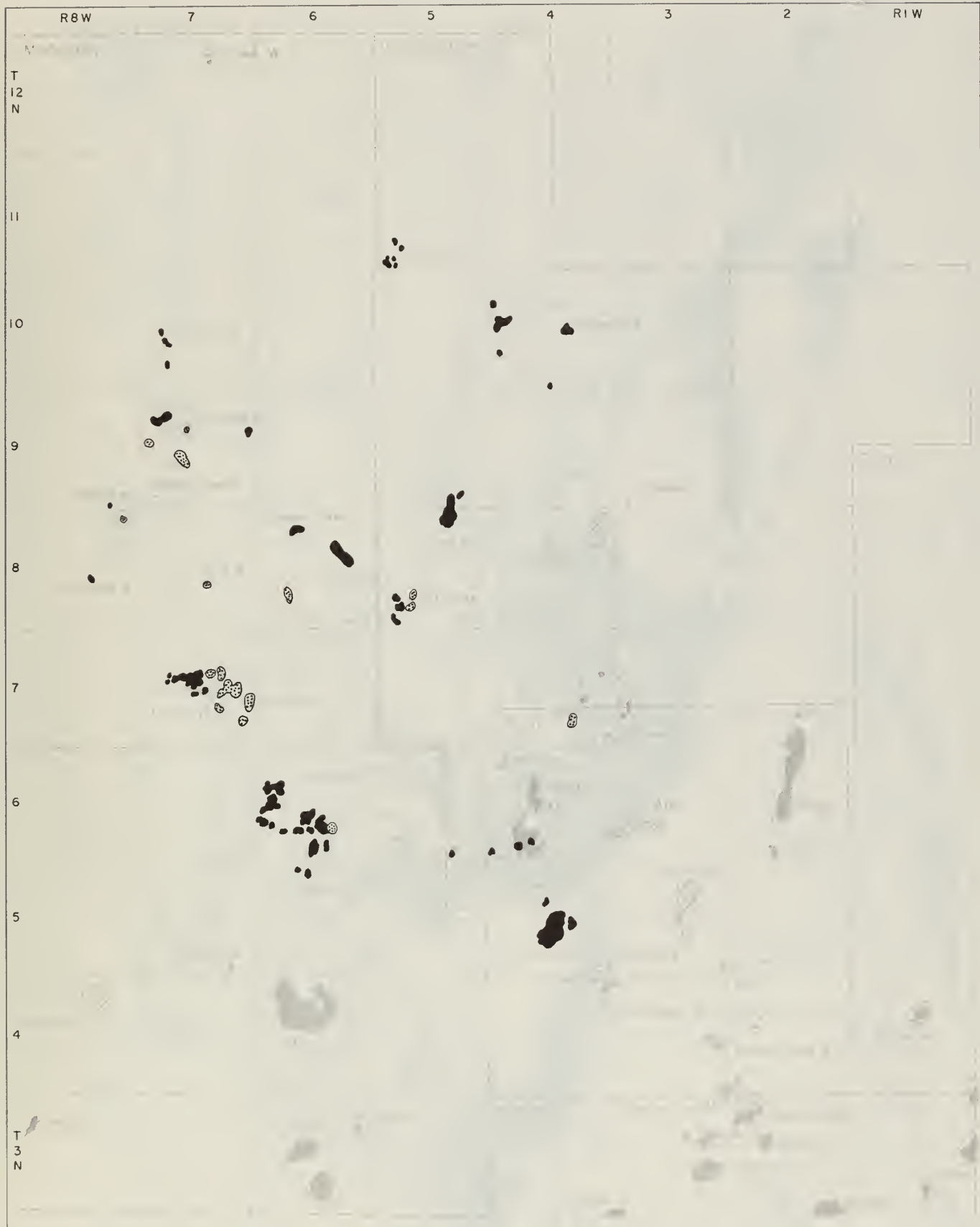
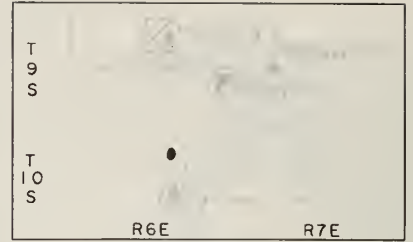


Figure 3 - Pennsylvanian oil and gas productive area in Illinois, pages 8 through 11









**Degonia-Clore
Productive Area**

- Oil
- Gas
- Producing fields
- Abandoned fields

**INDEX MAP
for
COUNTIES,
TOWNSHIPS,
and RANGES**

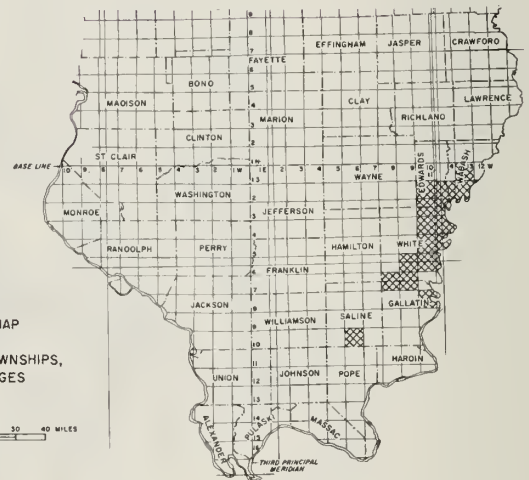
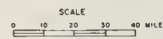


Figure 4 - Degonia-Clore oil and gas productive area in Illinois, page 12.

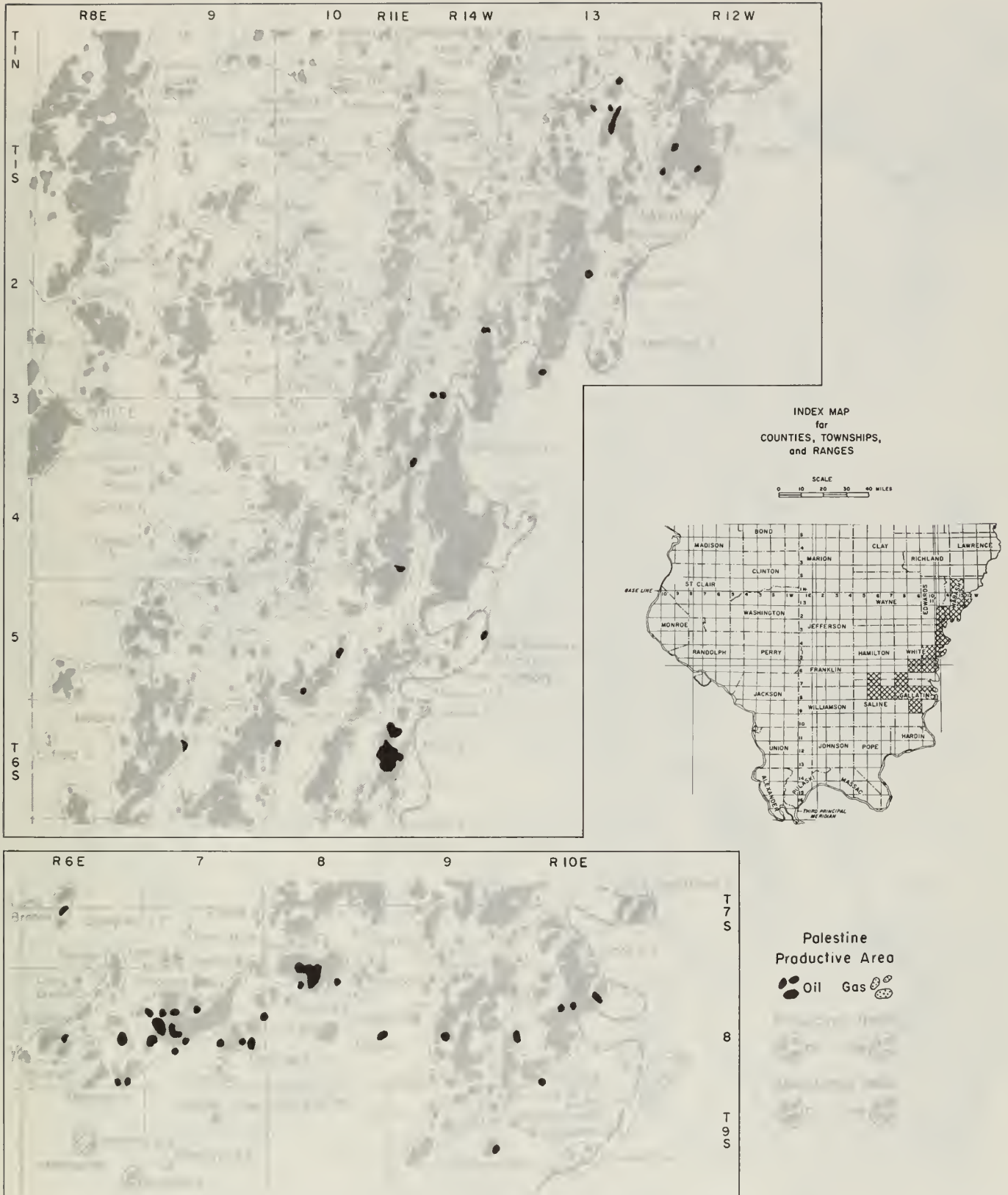


Figure 5 - Palestine oil and gas productive area in Illinois, page 13.

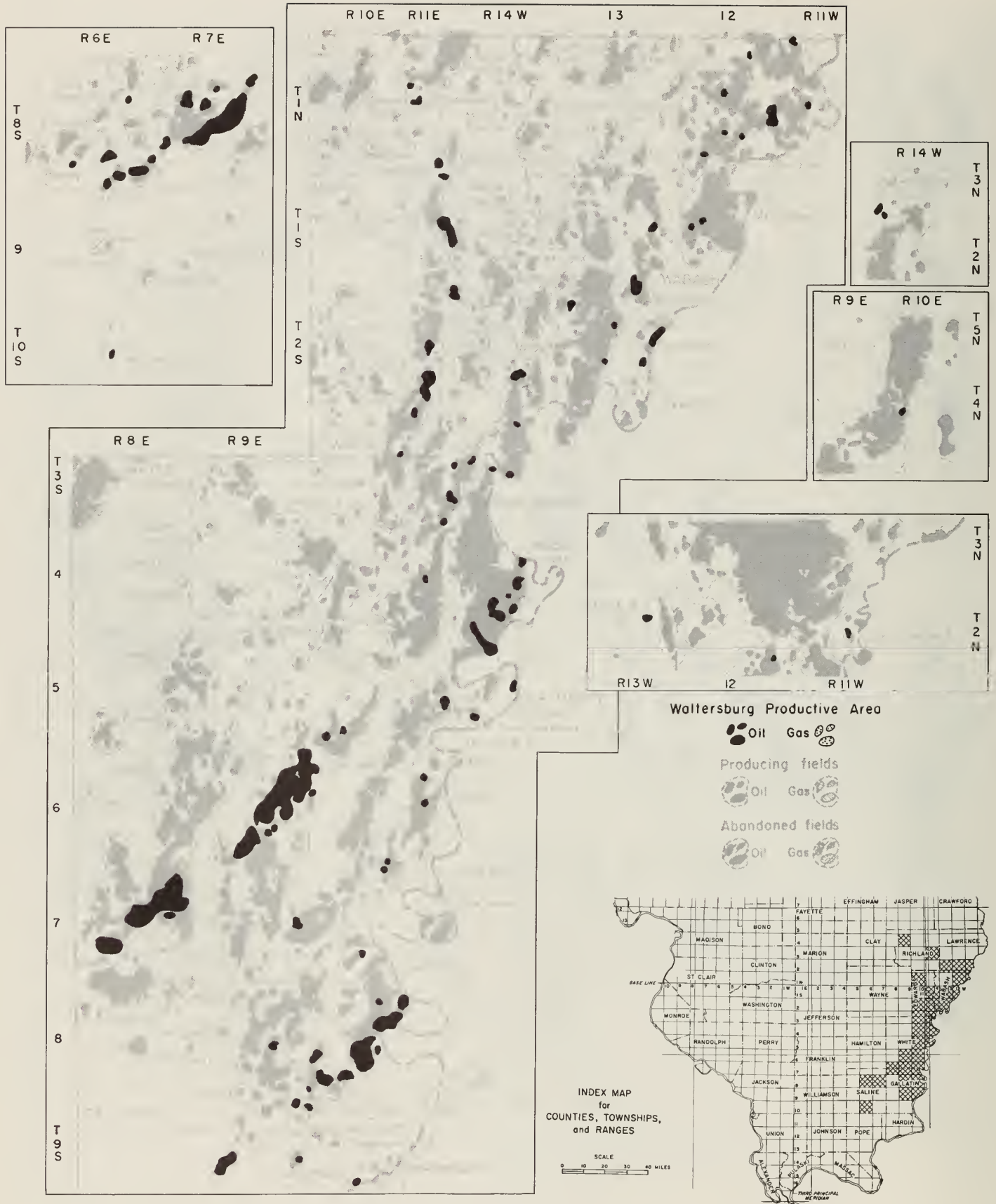


Figure 6 - Waltersburg oil and gas productive area in Illinois, page 14.

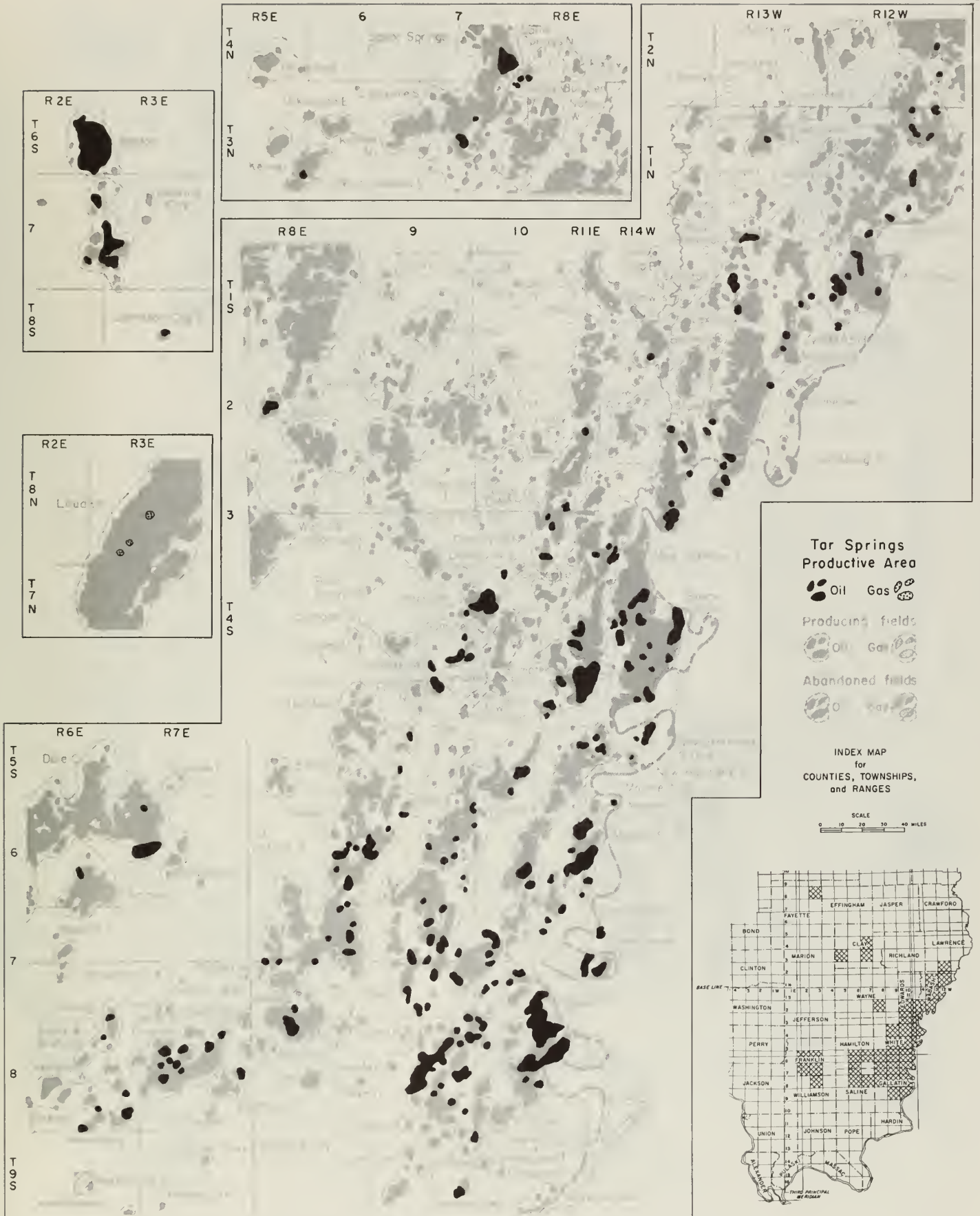
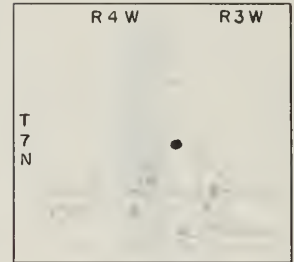
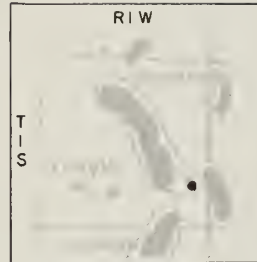
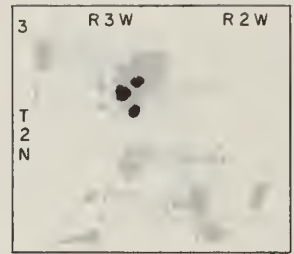
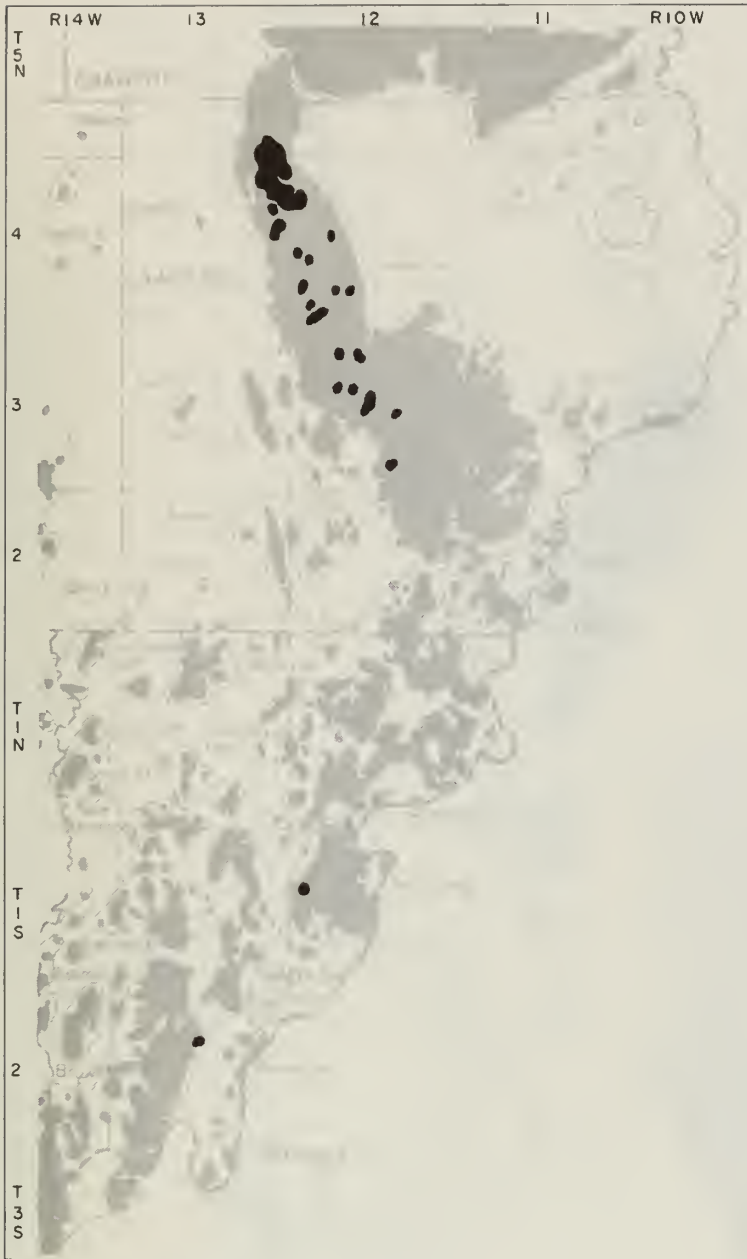


Figure 7 - Tar Springs oil and gas productive area in Illinois, page 15.



Figure 8 - Hardinsburg oil and gas productive area in Illinois, page 16.



**Golconda
Productive Area**

- Oil Gas
- Primary field Gas
- Abandoned fields Gas

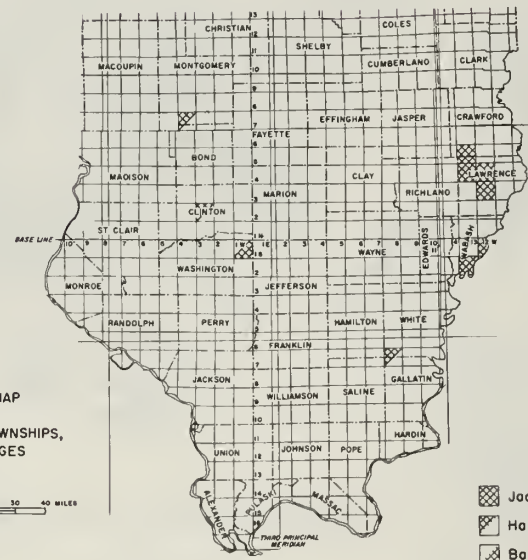
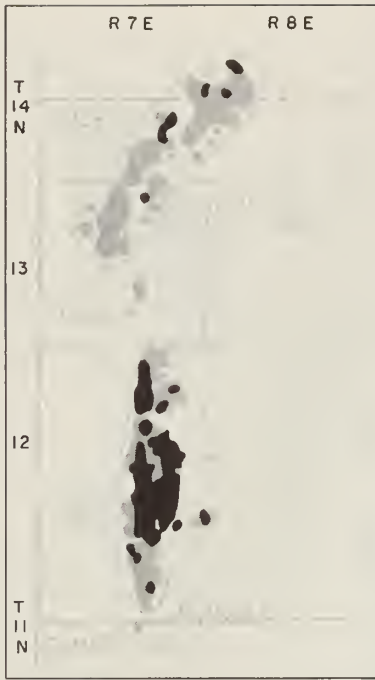


Figure 9 - Golconda oil and gas productive area in Illinois, page 17.



Cypress
Productive Area

Oil Gas

Commoning fields

Oil Gas

Abundant field

Oil Gas

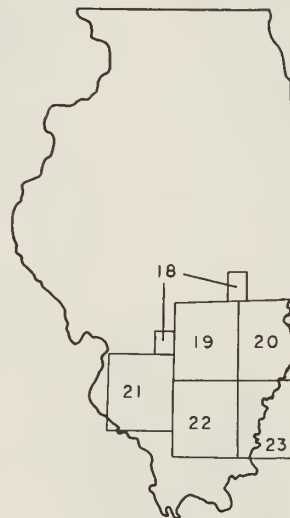
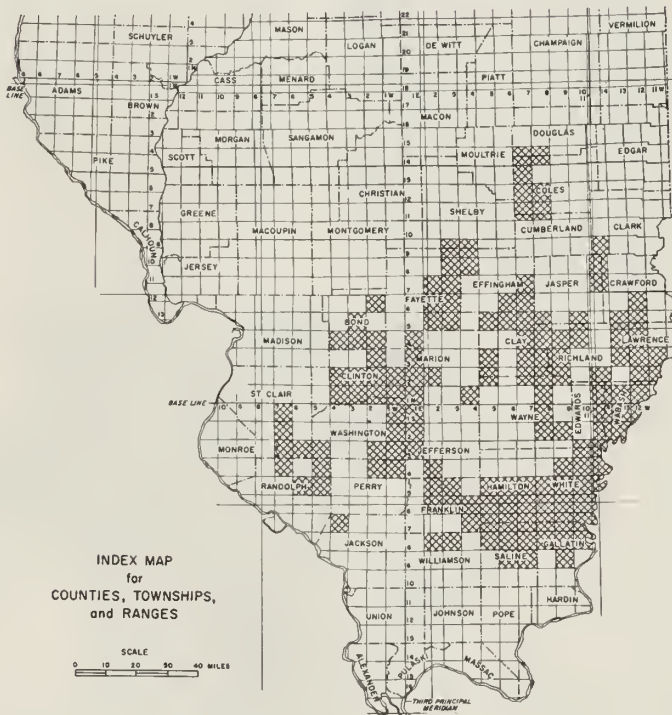
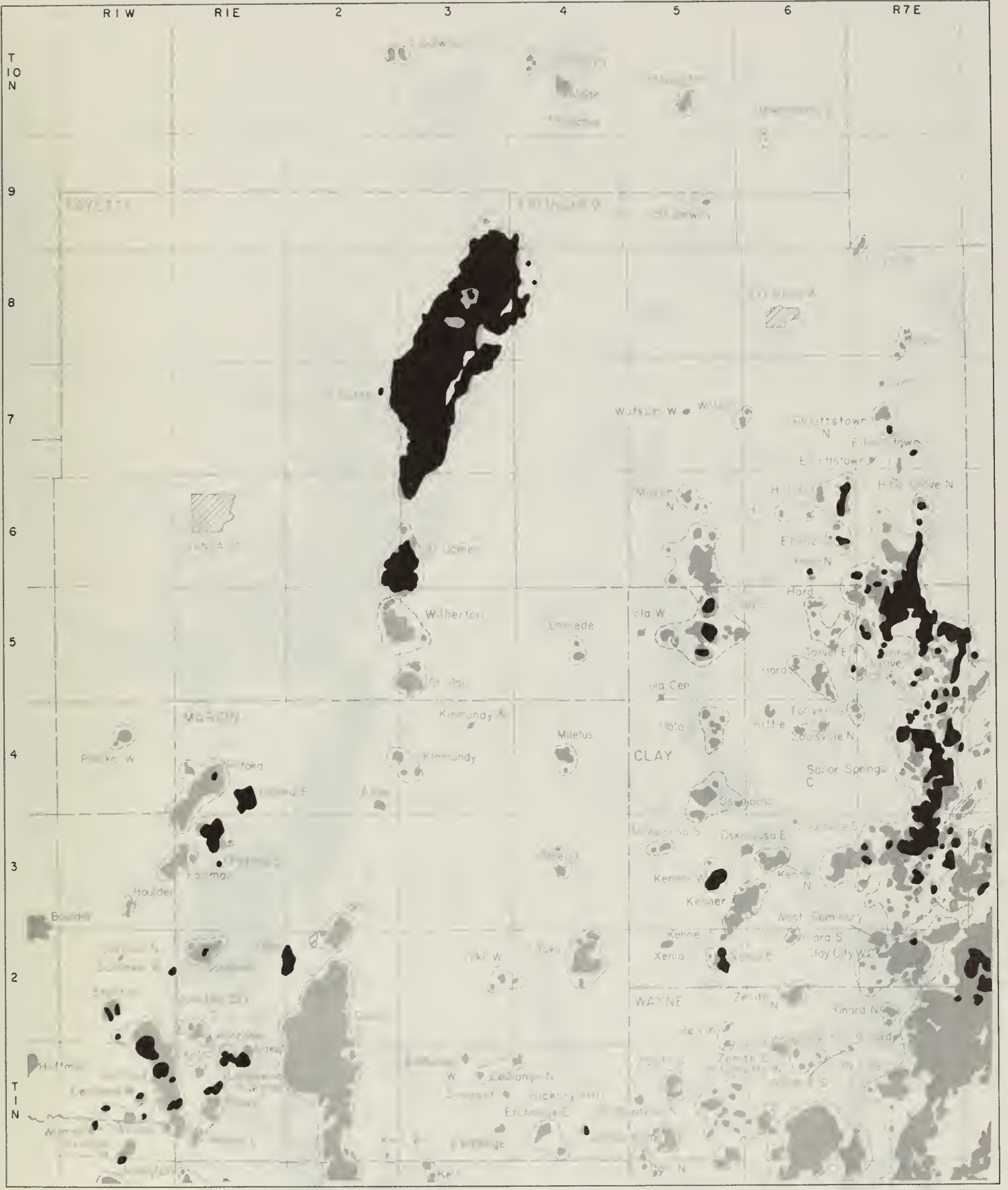
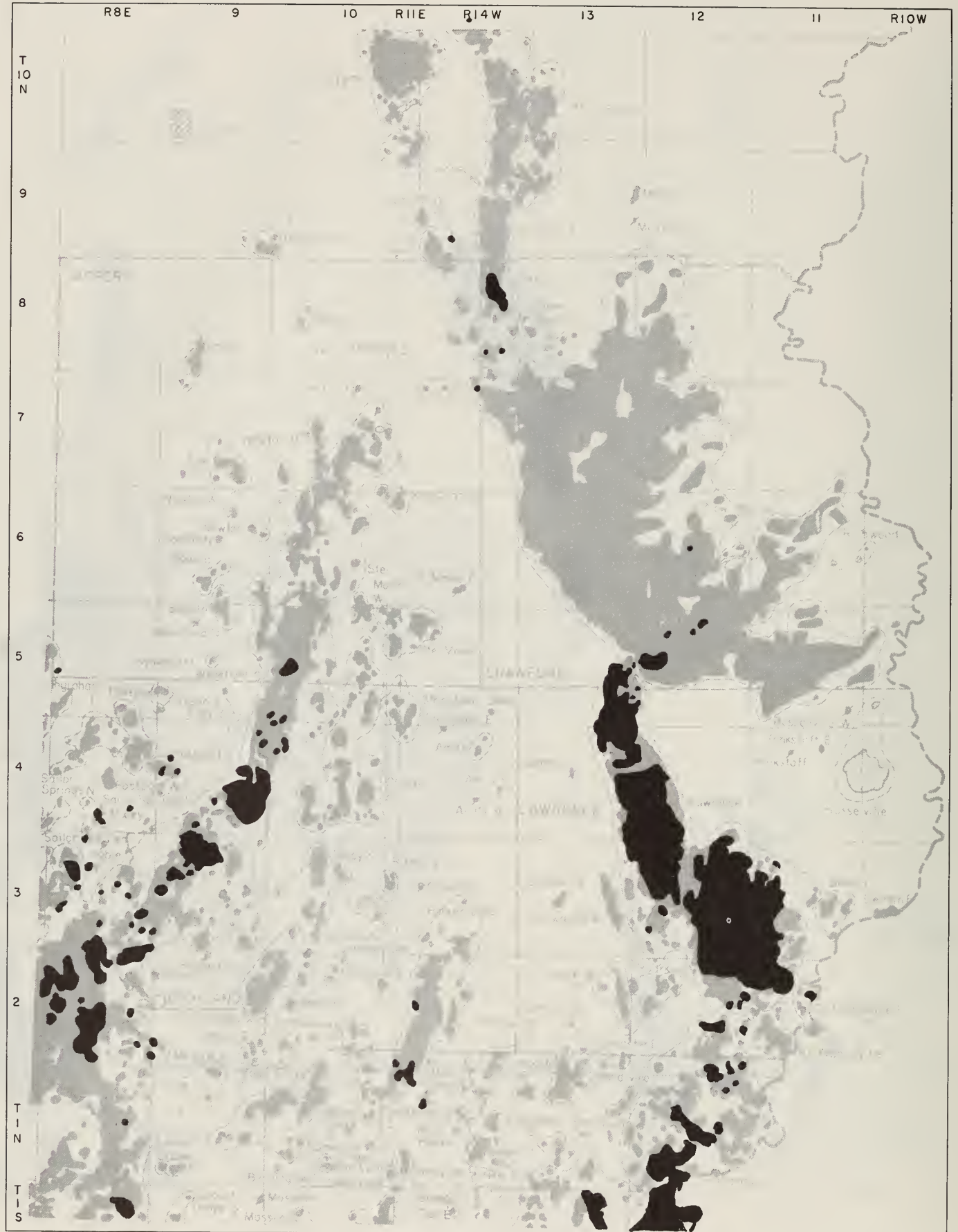
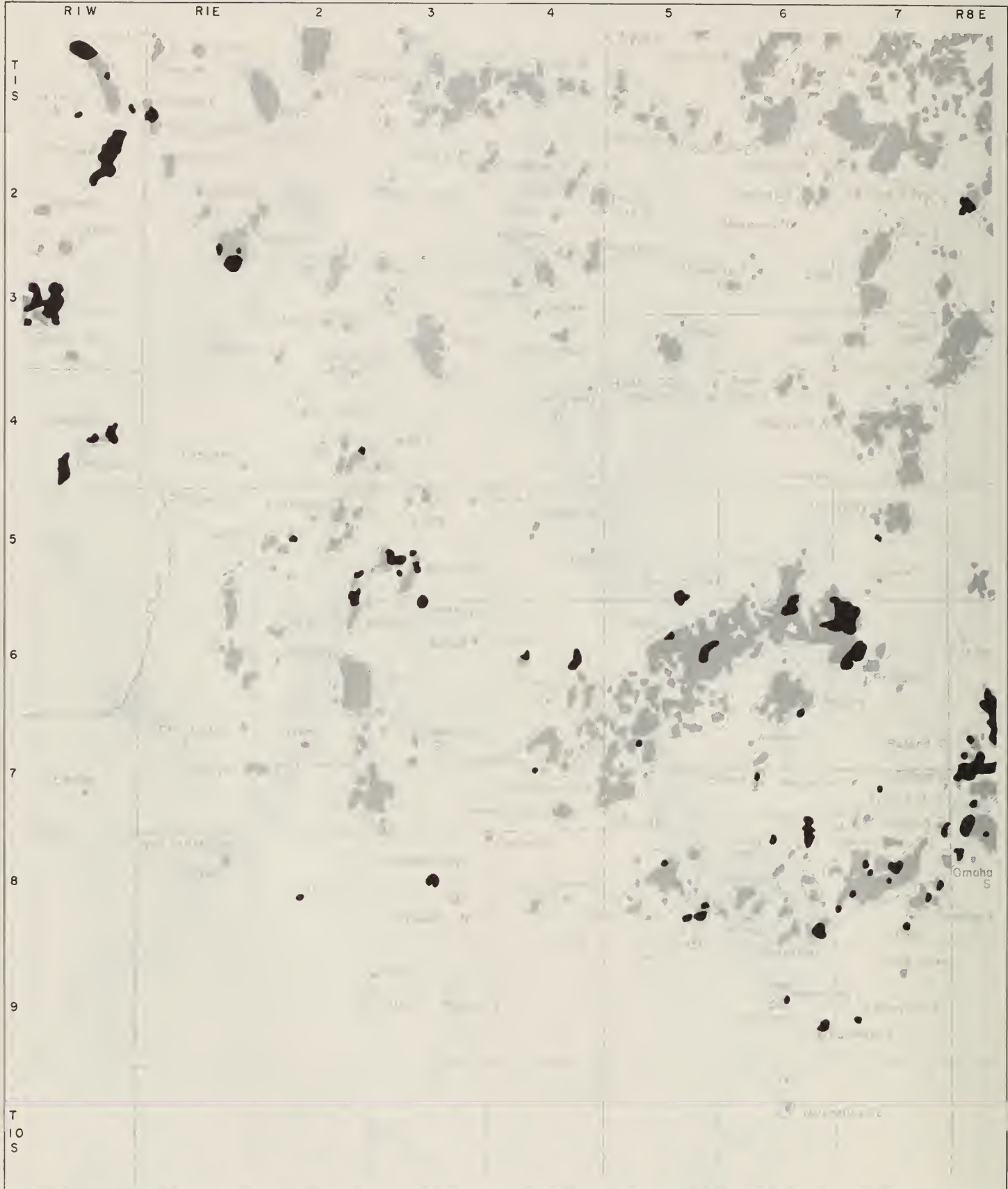


Figure 10 - Cypress oil and gas productive area in Illinois, pages 18 through 23.









Paint Creek - Bethel
Productive Area

Oil Gas

Oil Gas

Oil Gas

Oil Gas

Oil Gas

Oil Gas

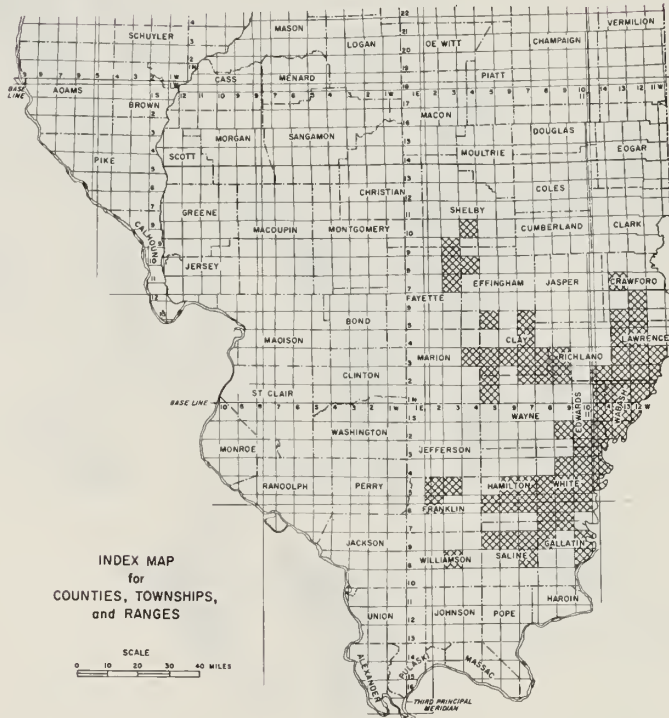
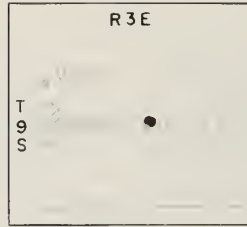
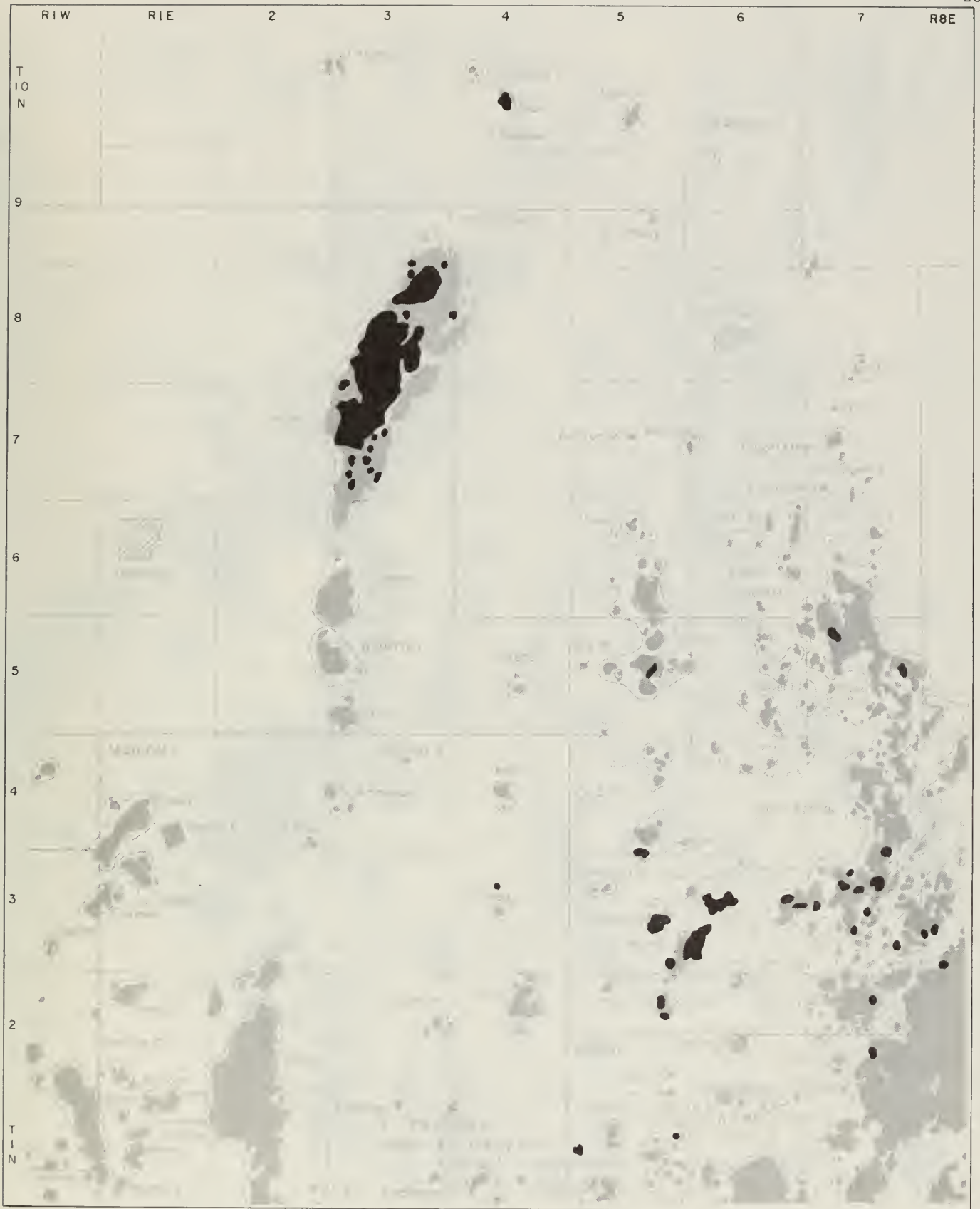
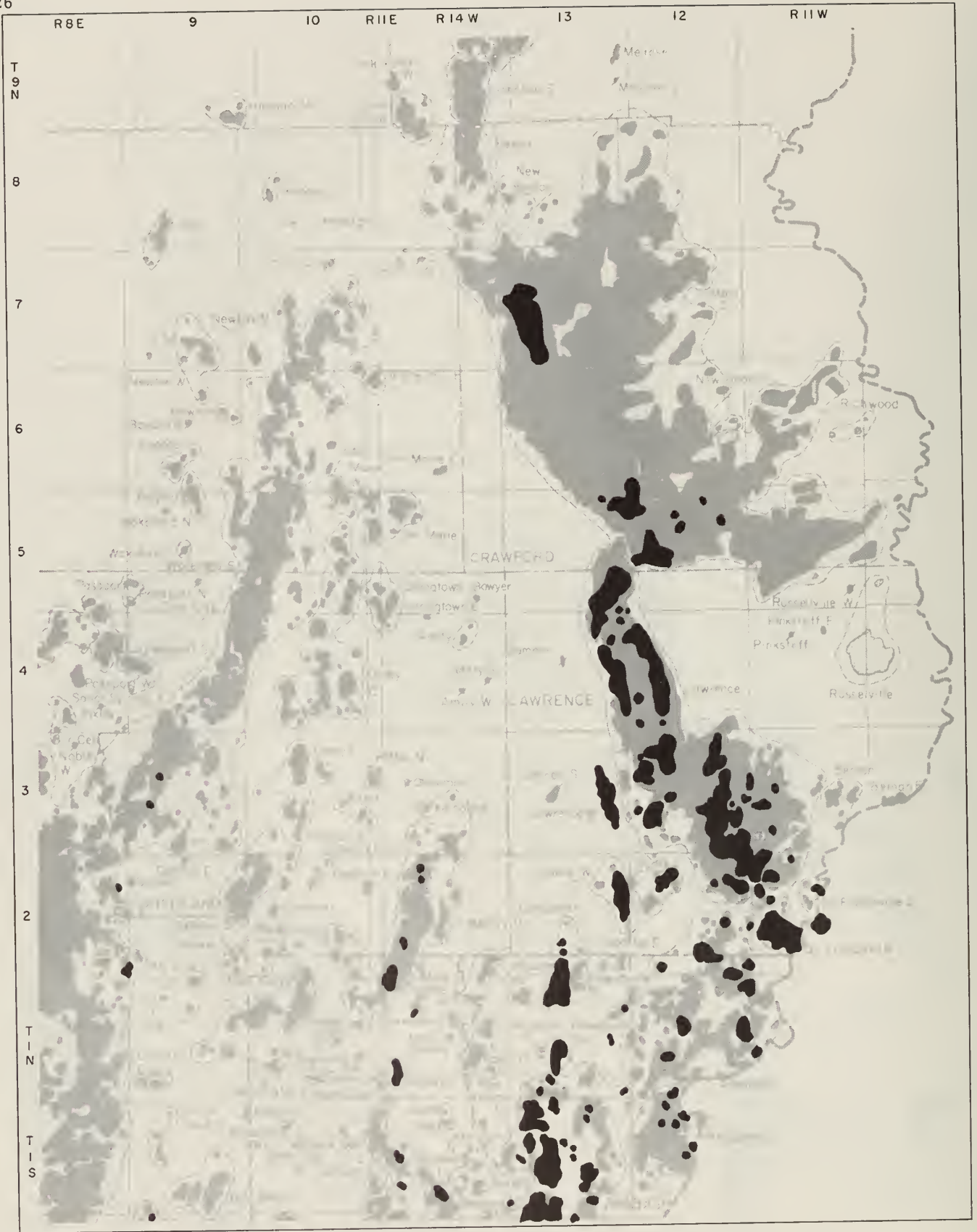
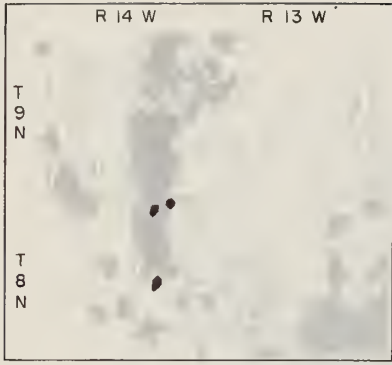


Figure 11 - Paint Creek-Bethel oil and gas productive area in Illinois, pages 24 through 27.









Yankeetown (Benoist)

Productive Area

Oil Gas

Productive Area

Productive Area

Productive Area

Productive Area

Productive Area

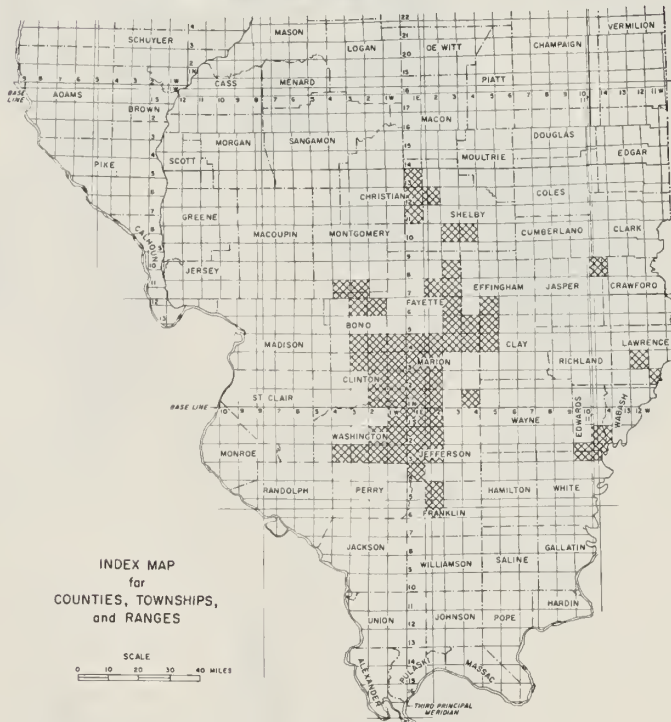
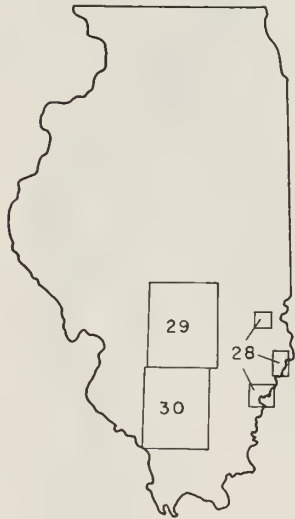
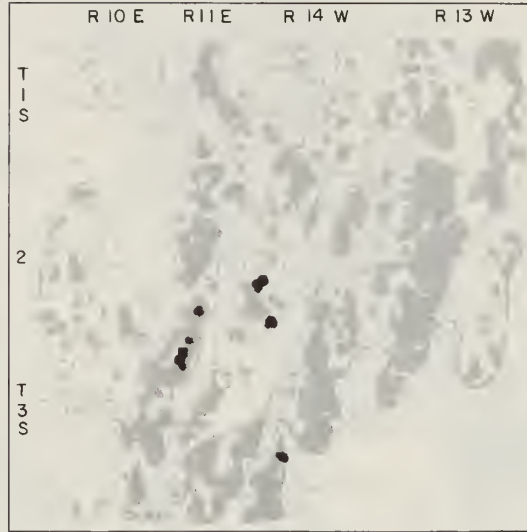
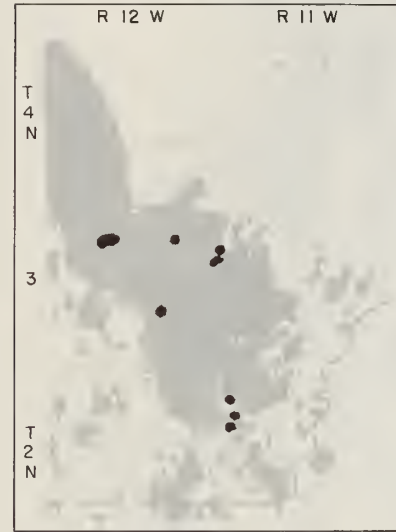
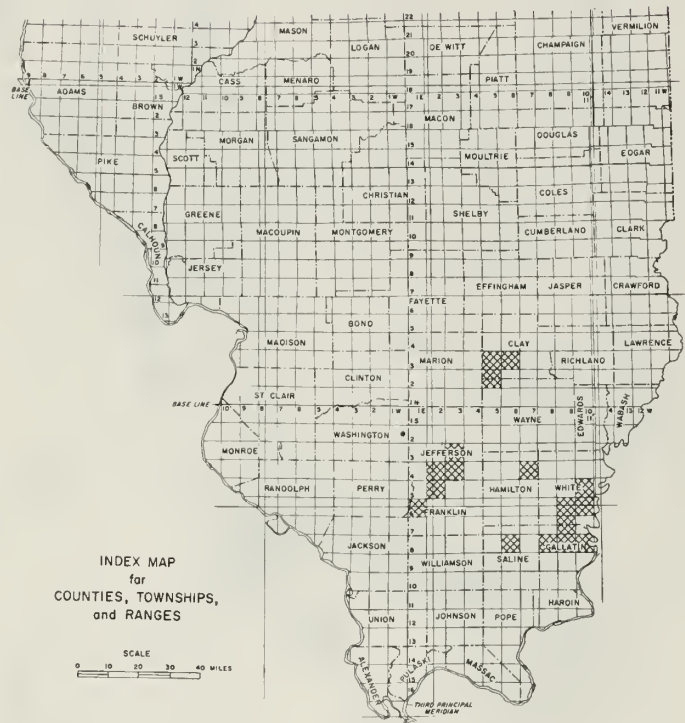


Figure 12 - Yankeetown (Benoist) oil and gas productive area in Illinois, pages 28 through 30.







Renault
Productive Area

Oil Gas

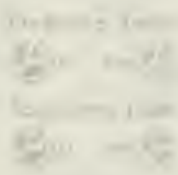
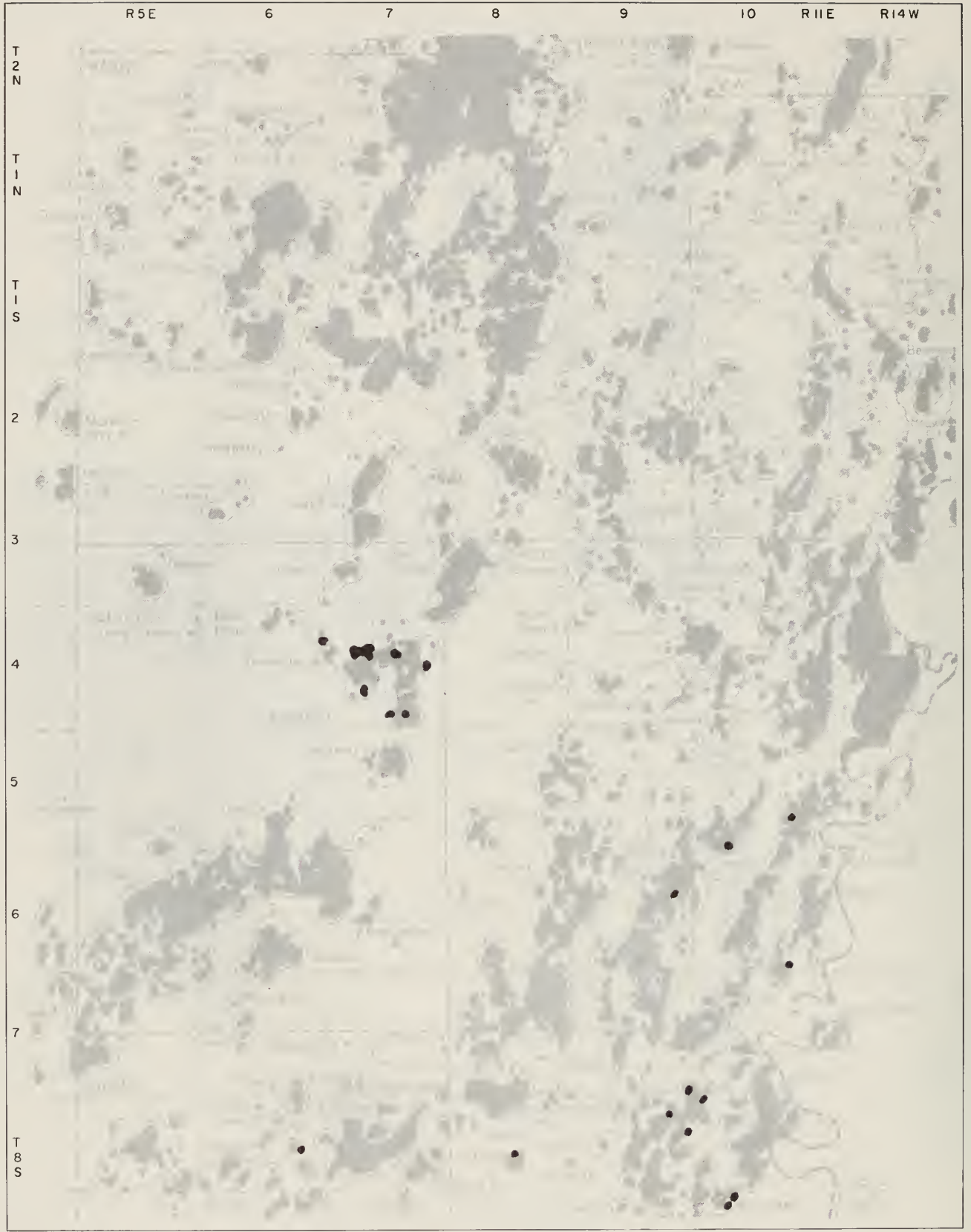
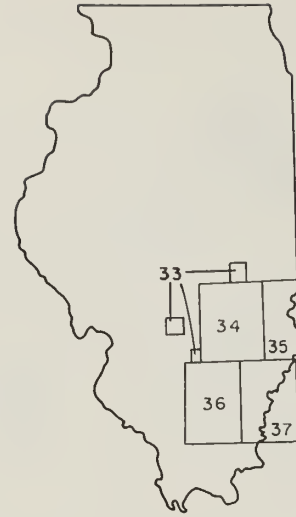
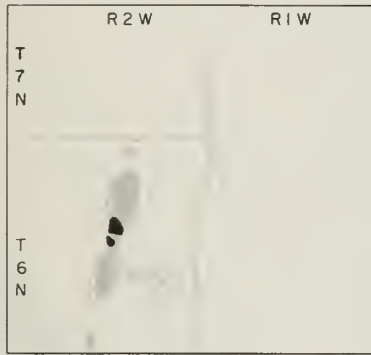
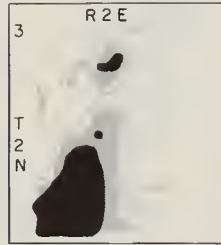
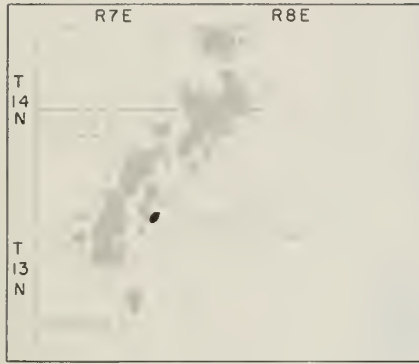


Figure 13 - Renault oil and gas productive area in Illinois, pages 31 and 32.





Aux Vases
Productive Area

Oil Gas

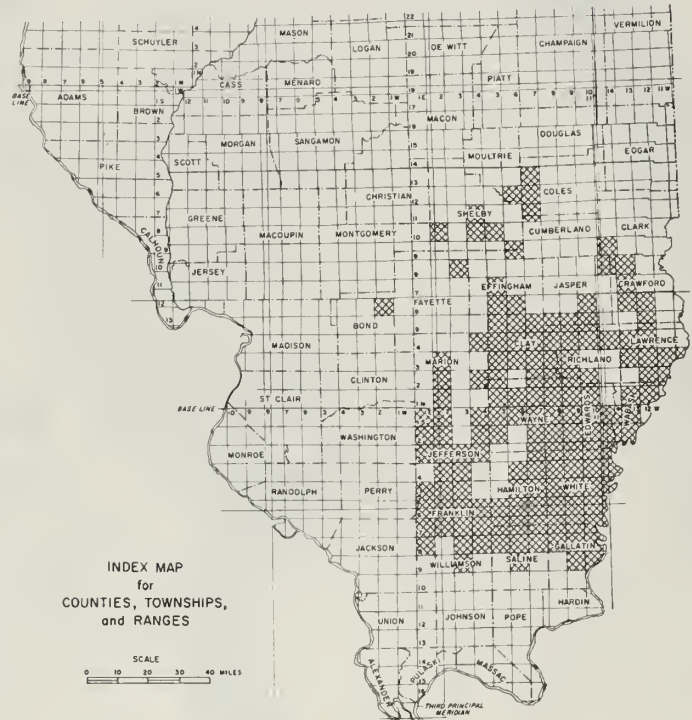
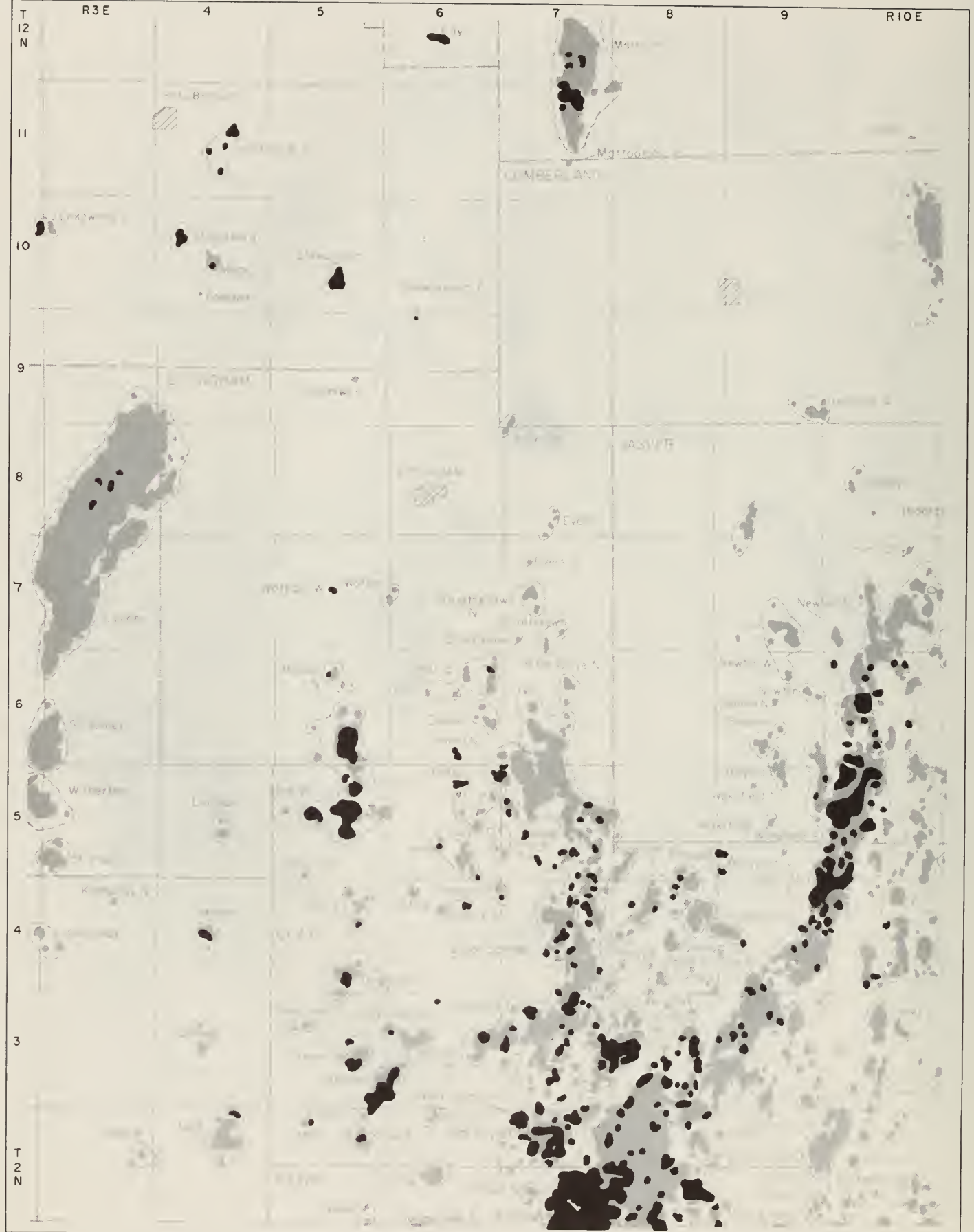
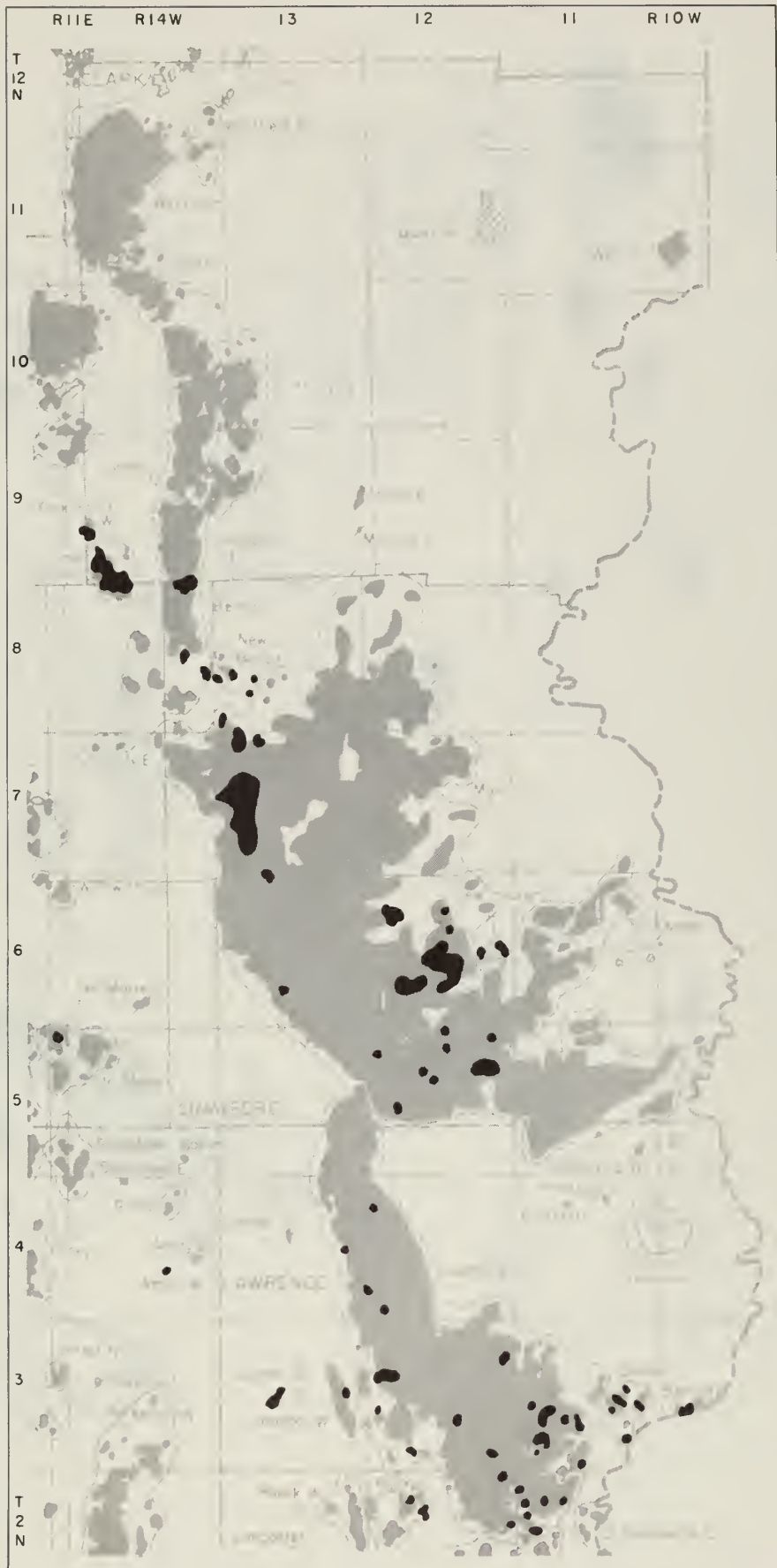


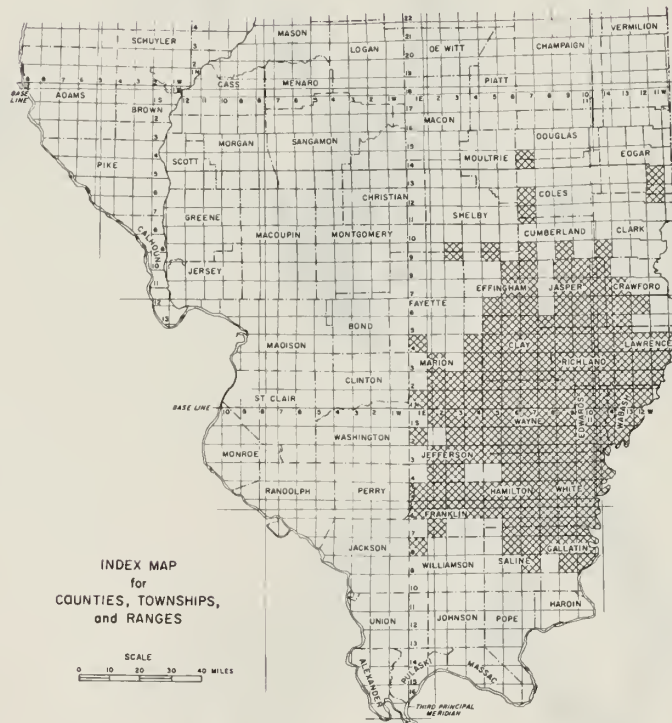
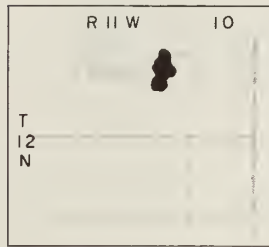
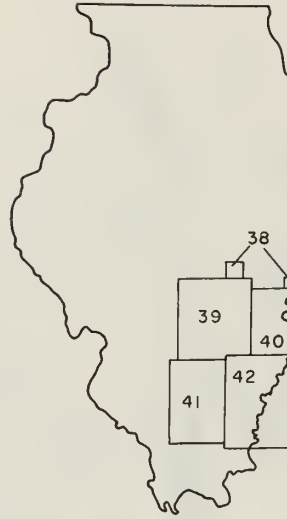
Figure 14 - Aux Vases oil and gas productive area in Illinois, pages 33 through 37.











Ste. Genevieve
(exclusive of Spar Mountain Ss.)
Productive Area

Oil Gas

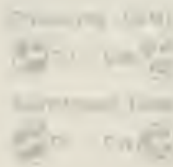
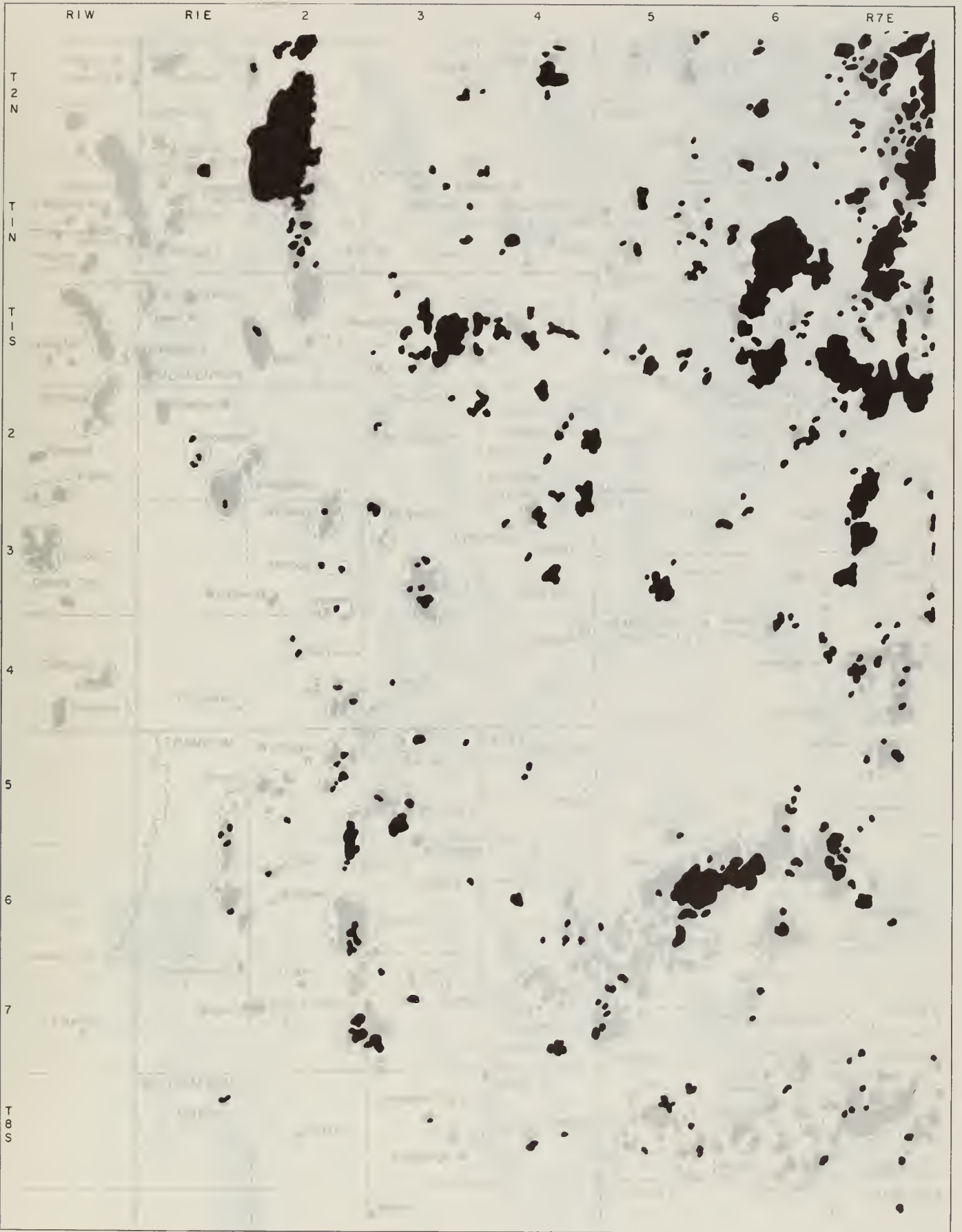
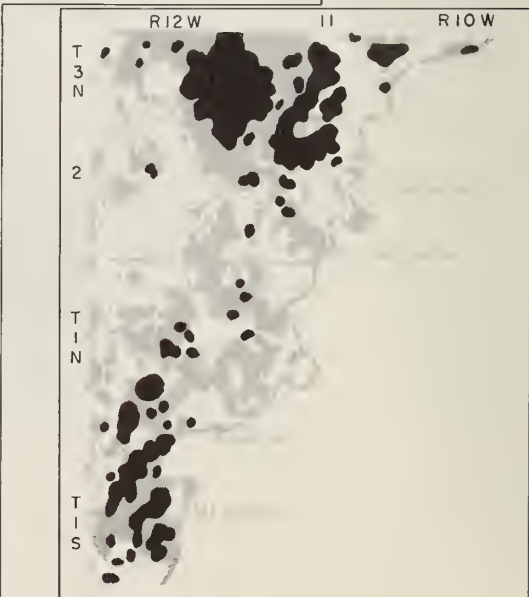


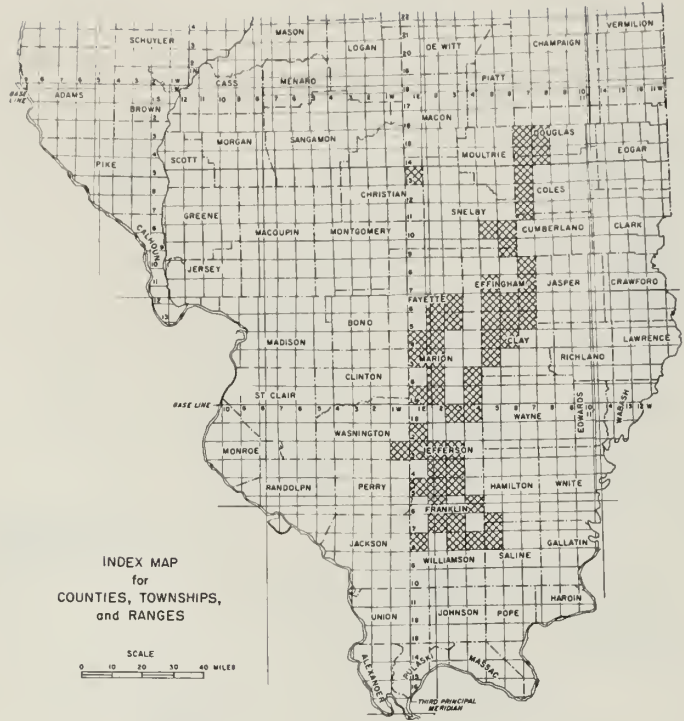
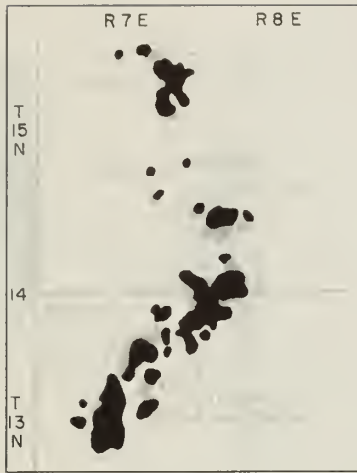
Figure 15 - Ste. Genevieve [exclusive of Spar Mountain ("Rosiclare") Ss.] oil and gas productive area in Illinois, pages 38 through 42.











Spar Mountain ("Rosiclare")
Productive Area

Oil Gas

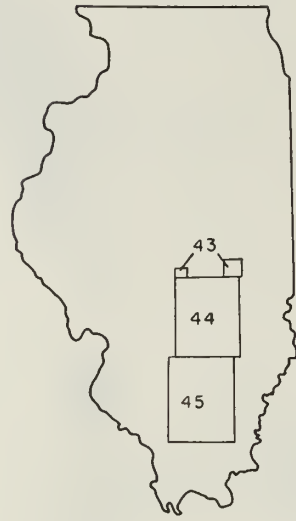
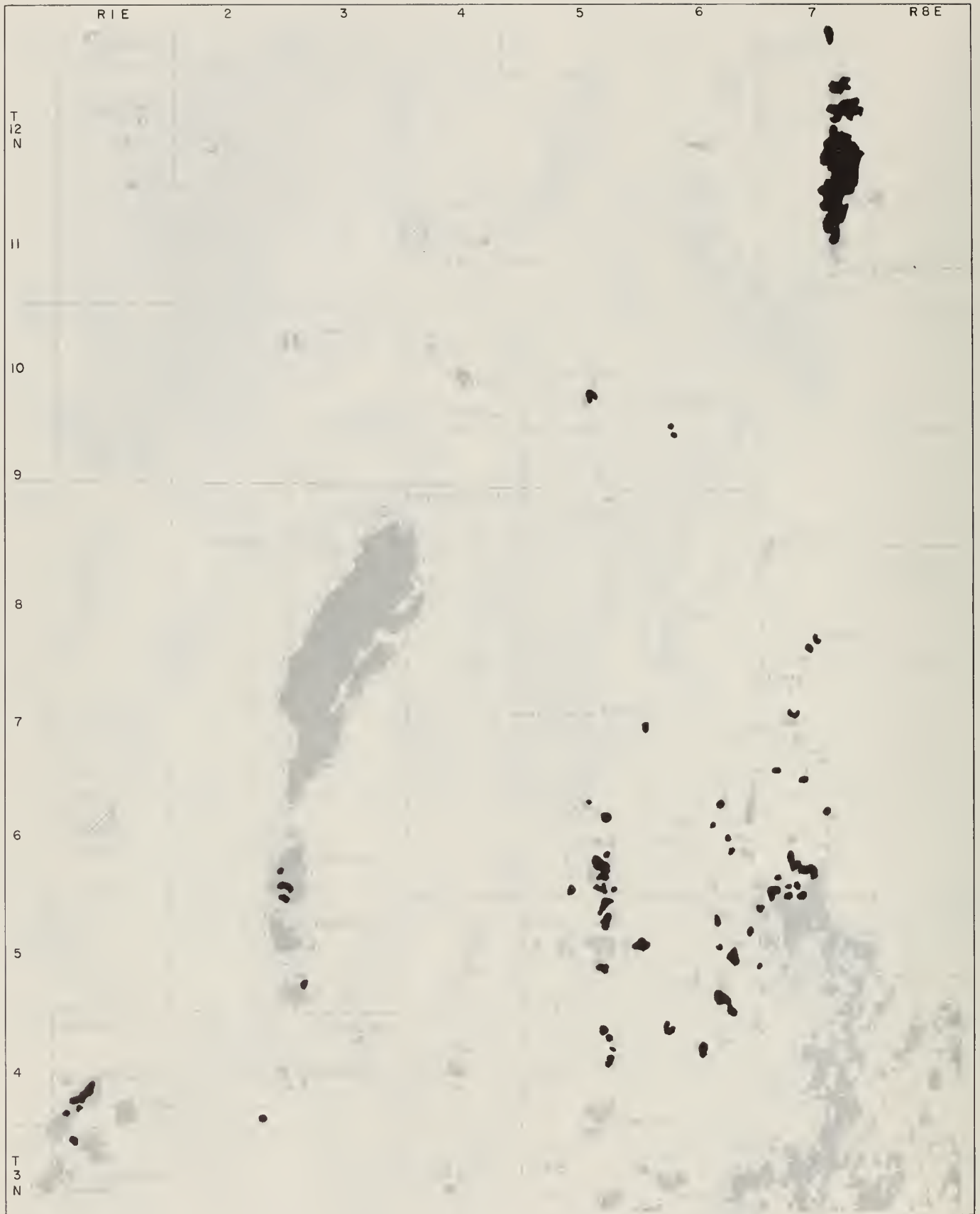
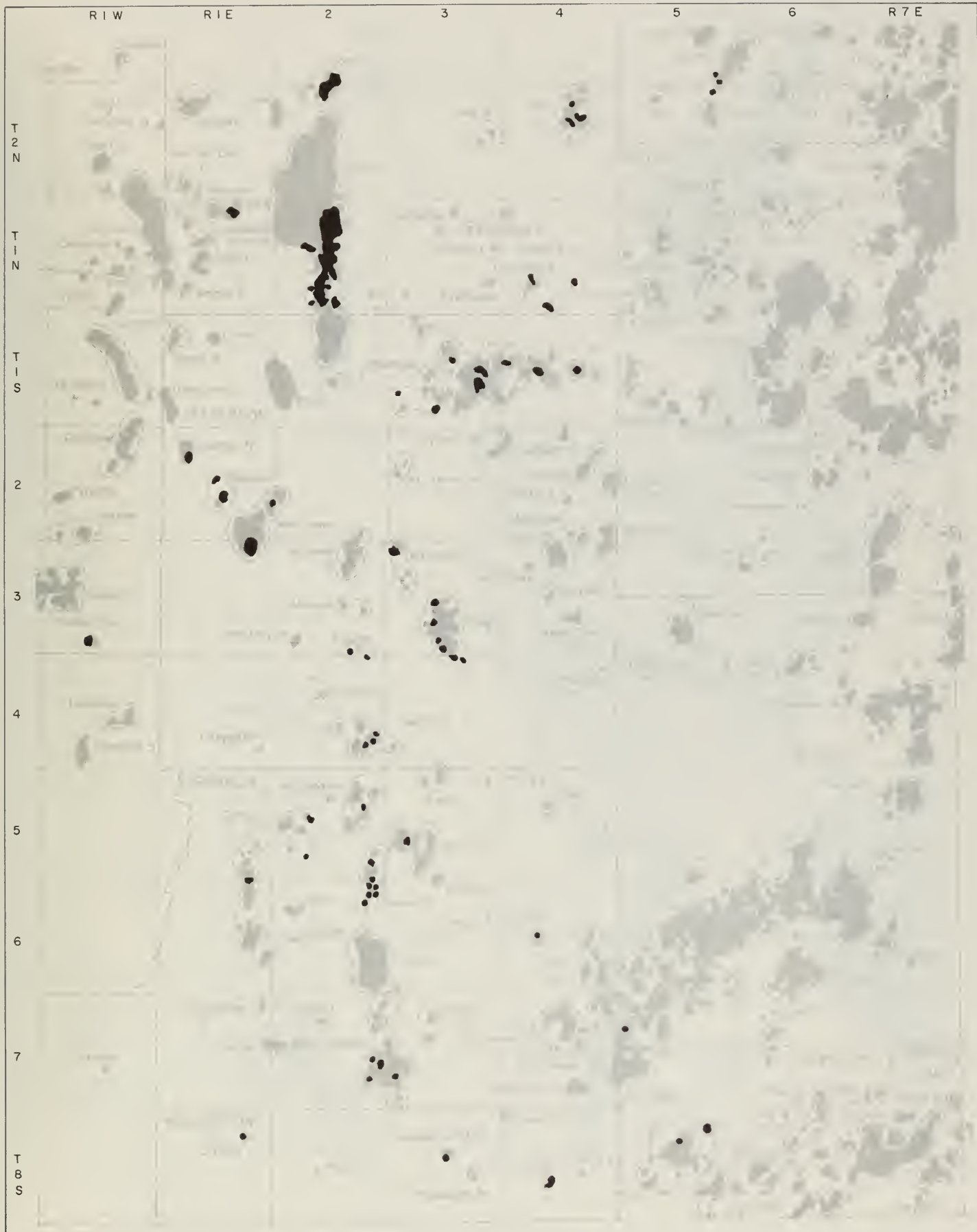
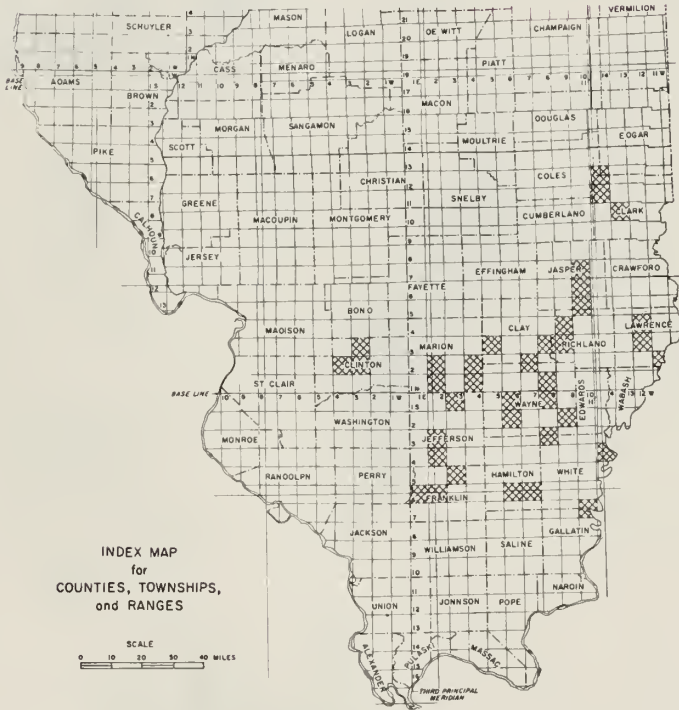
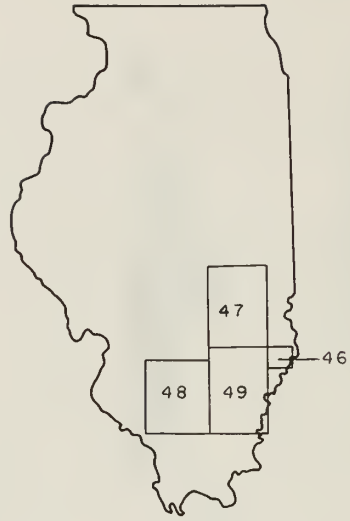
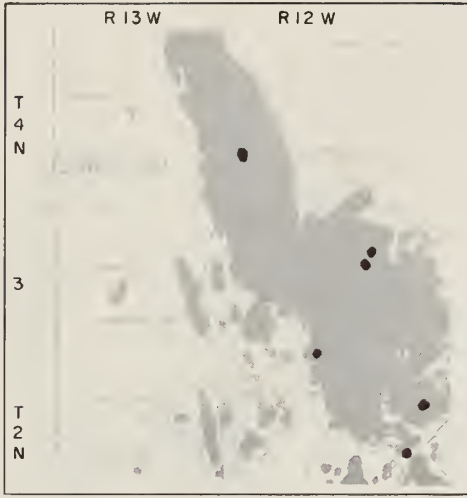


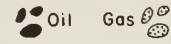
Figure 16 - Spar Mountain ("Rosiclare") oil and gas productive area in Illinois, pages 43 through 45.







St. Louis
Productive Area



Producing Wells

Oil Wells

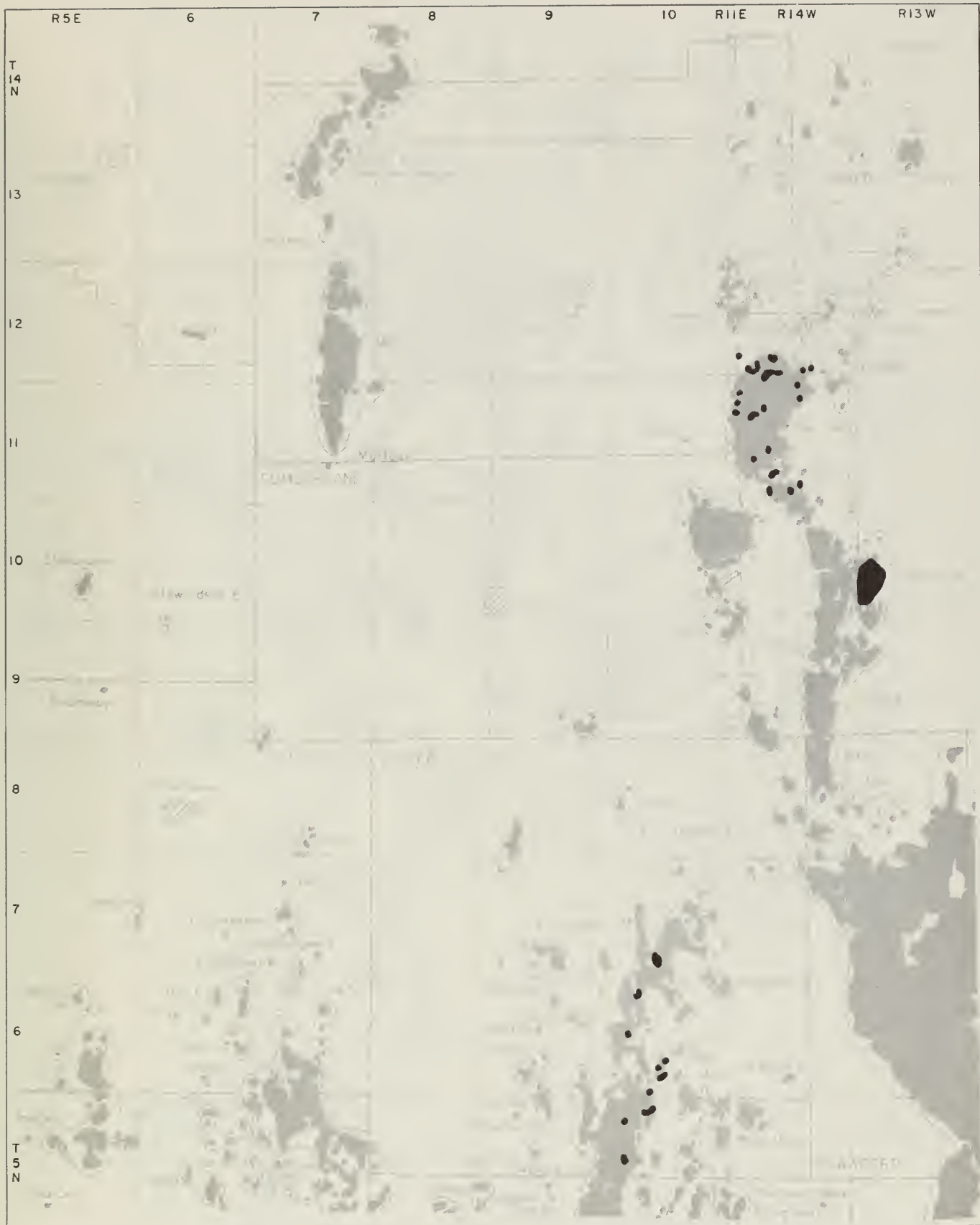
Gas Wells

Producing Pools

Oil Pools

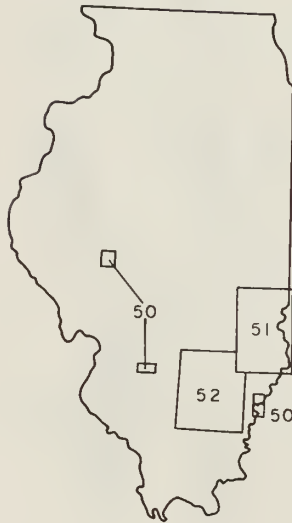
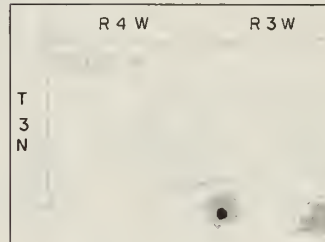
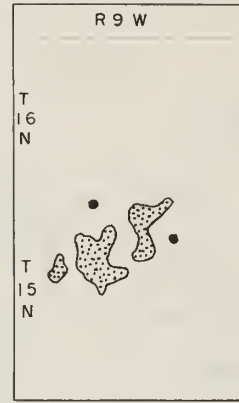
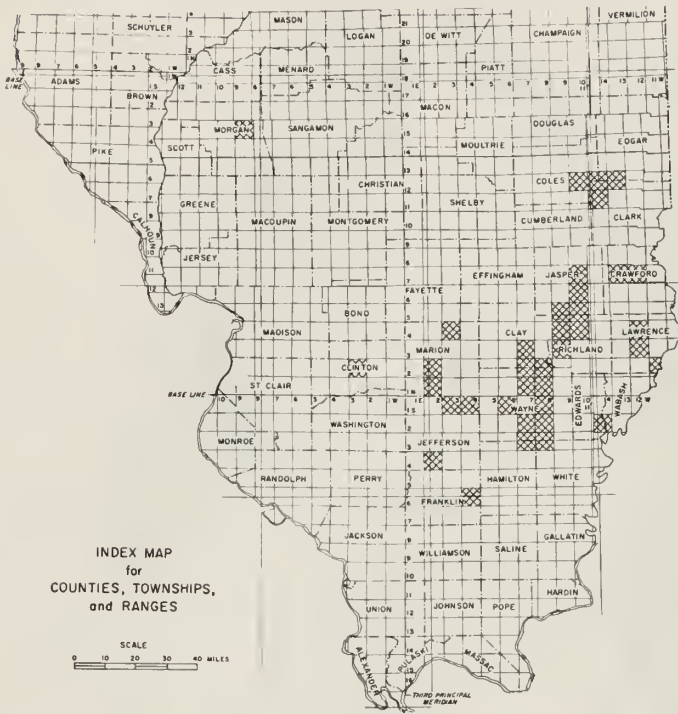
Gas Pools

Figure 17 - St. Louis oil and gas productive area in Illinois, pages 46 through 49.







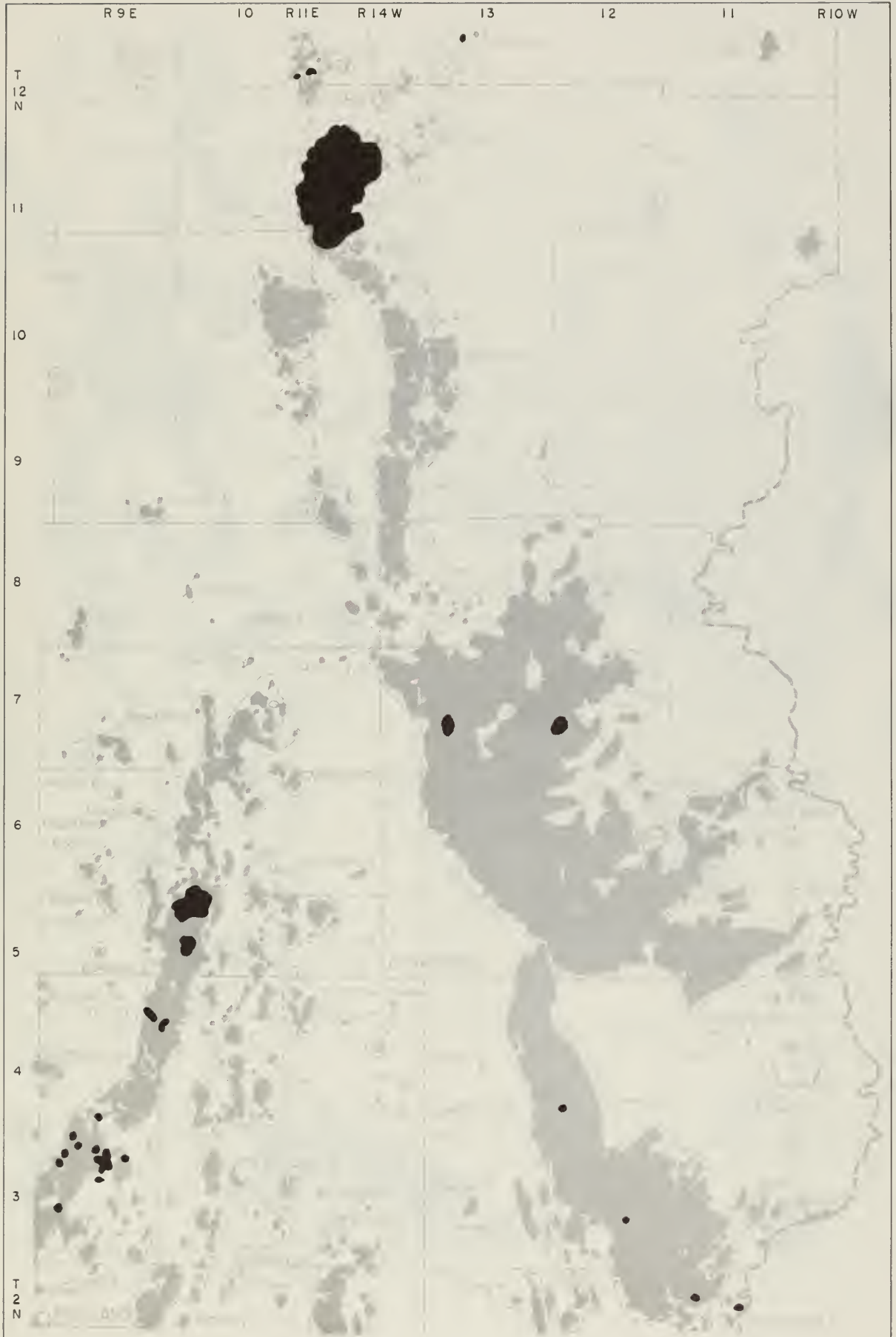


Salem
Productive Area

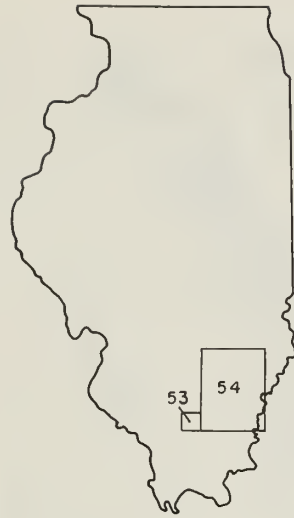
Oil Gas



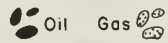
Figure 18 - Salem oil and gas productive area in Illinois, pages 50 through 52.







Harrodsburg (Warsaw)
Productive Area



INDEX MAP
for
COUNTIES, TOWNSHIPS,
and RANGES

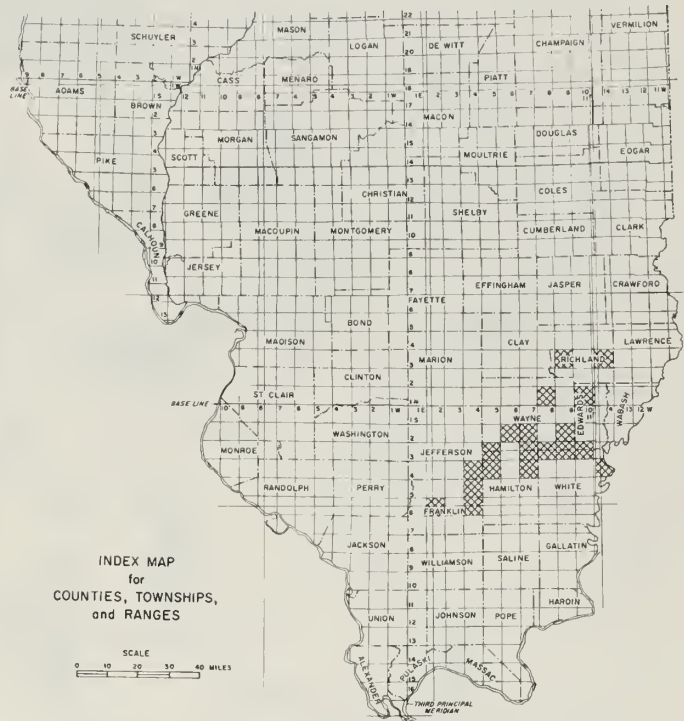
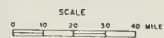
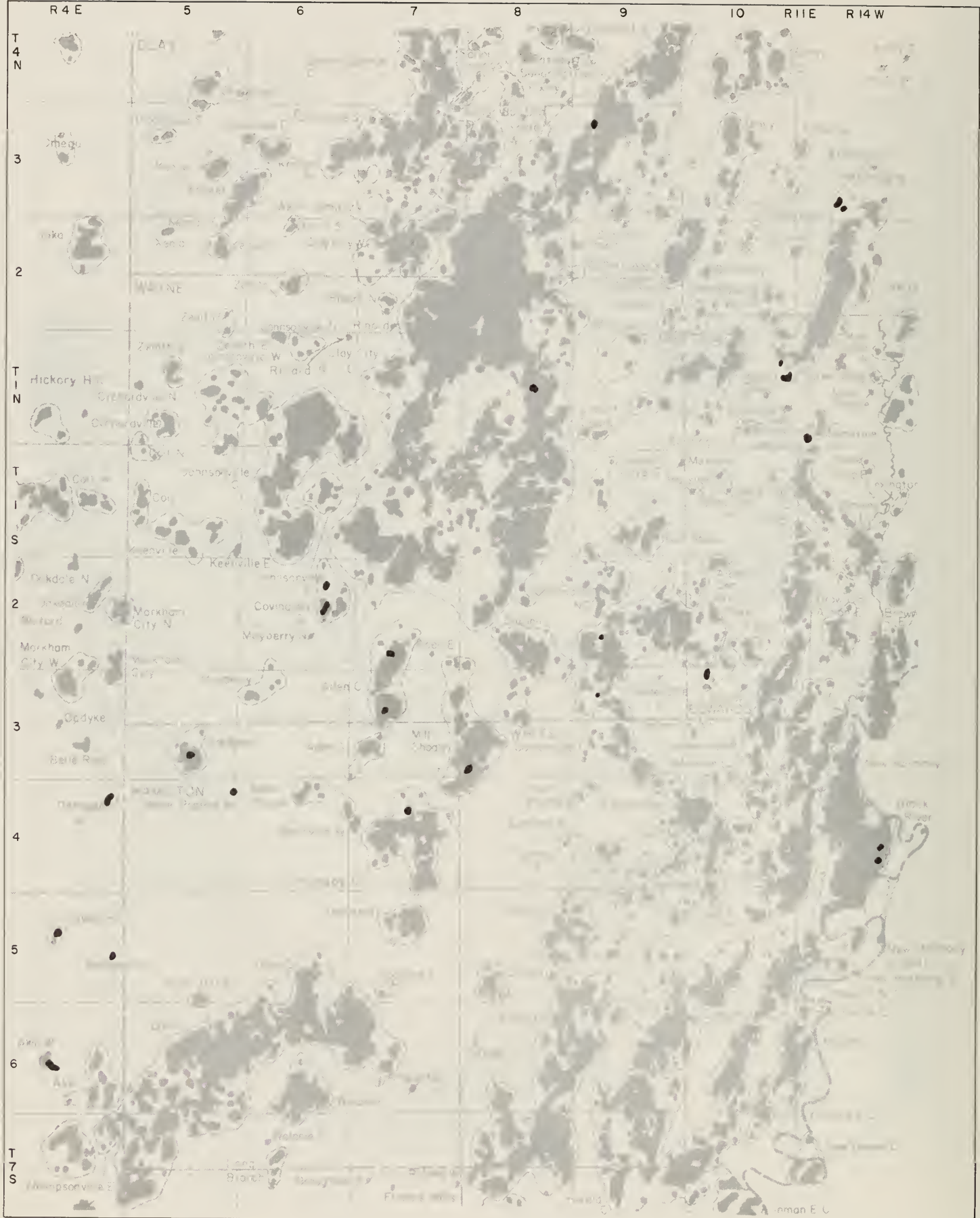


Figure 19 - Harrodsburg (Warsaw) oil and gas productive area in Illinois, pages 53 and 54.



Borden
Productive Area

Oil Gas

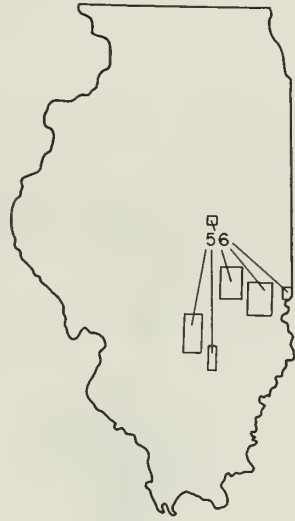
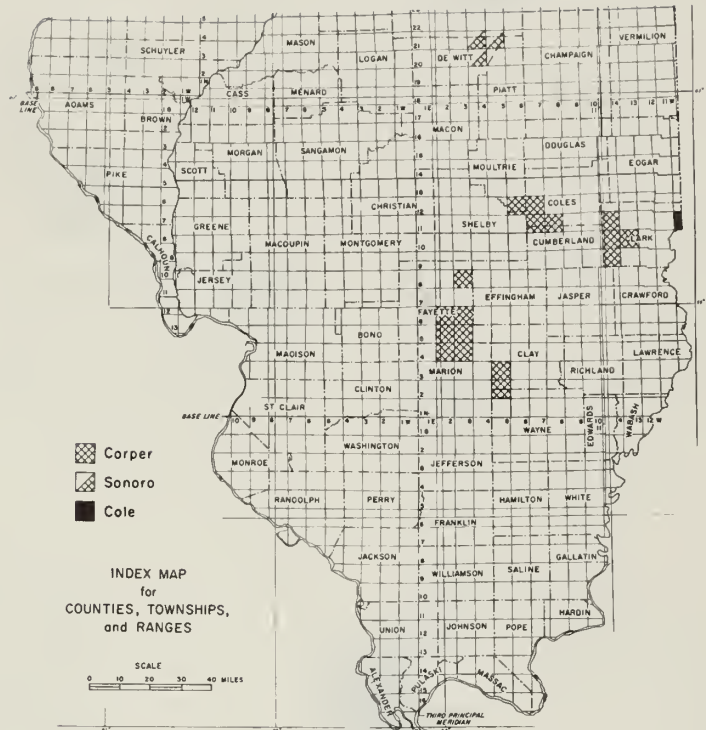
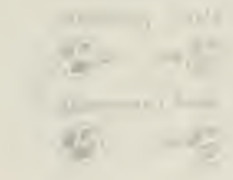
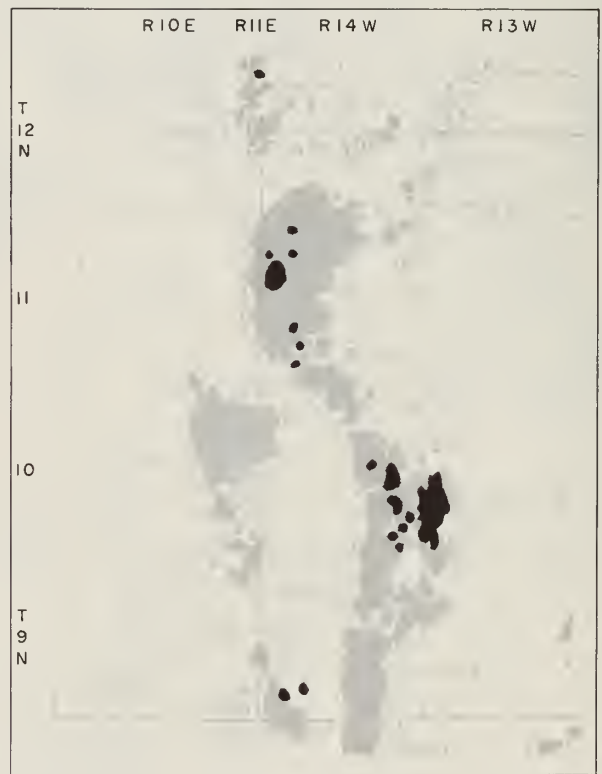
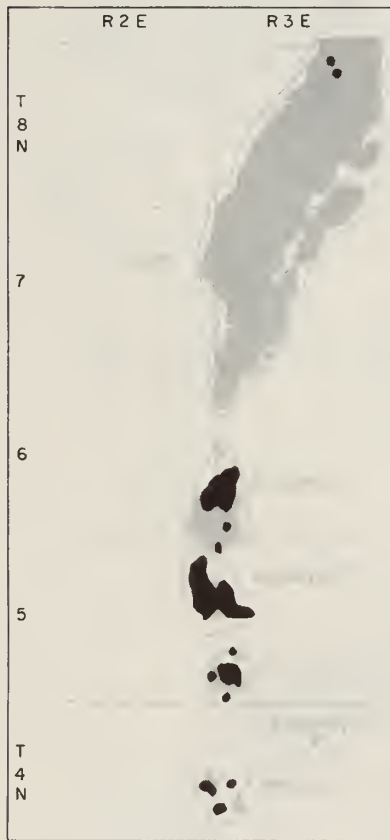
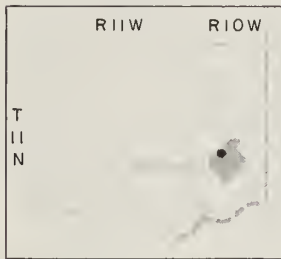
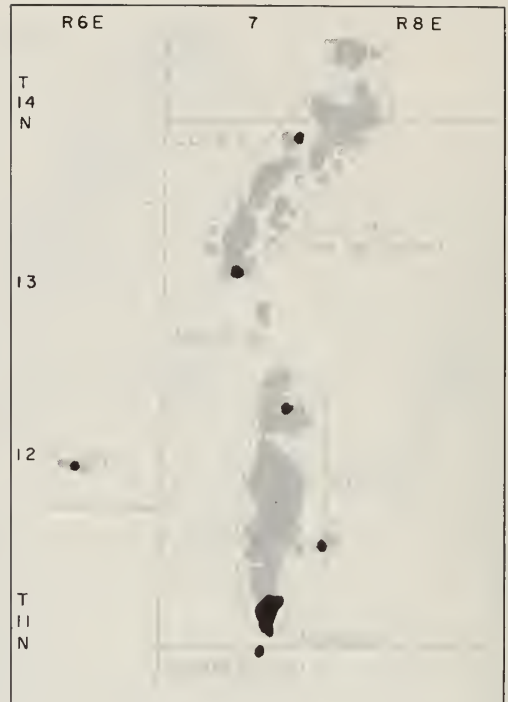
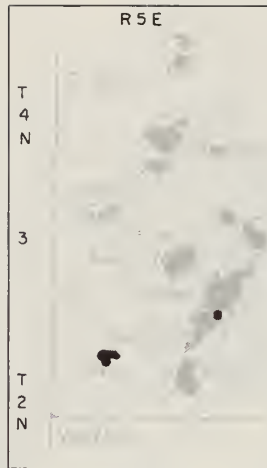
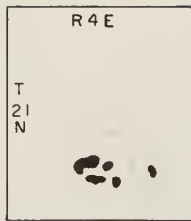
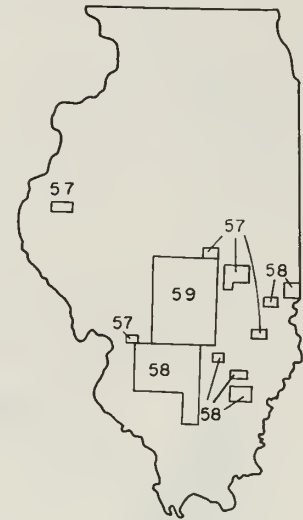
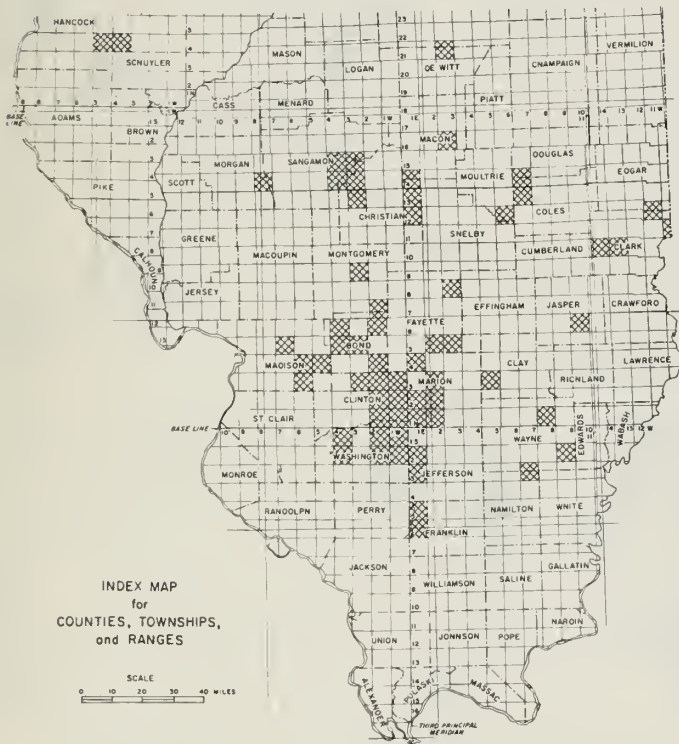


Figure 20 - Borden oil and gas productive area in Illinois, pages 55 and 56.

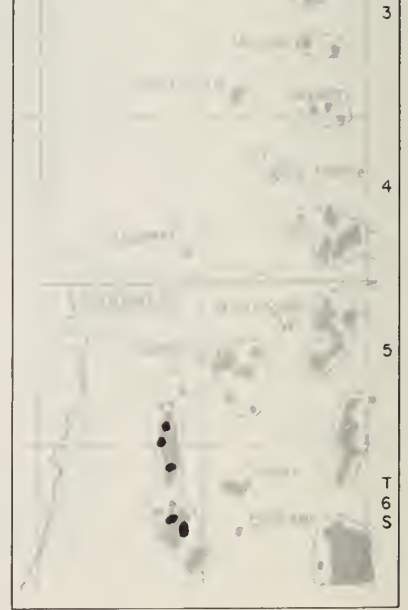
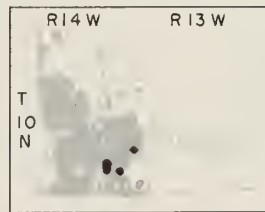
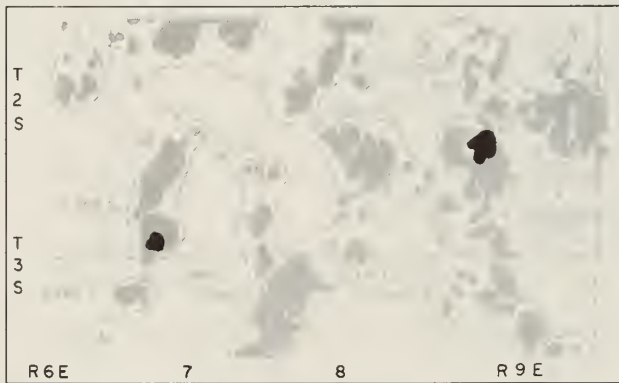




Devonian
Productive Area



Figure 21 - Devonian oil and gas productive area in Illinois, pages 57 through 59.





Silurian
Productive Area

Oil Gas

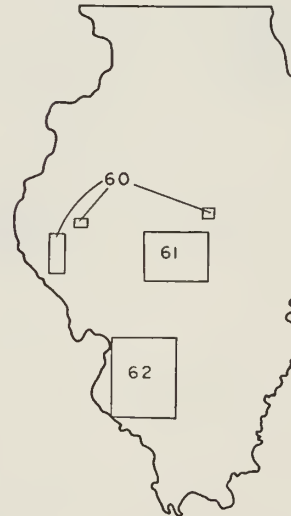
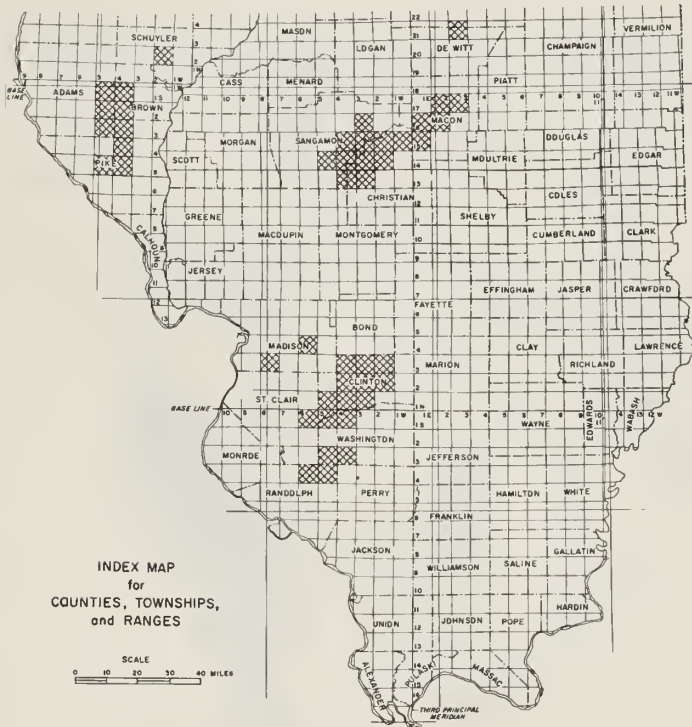
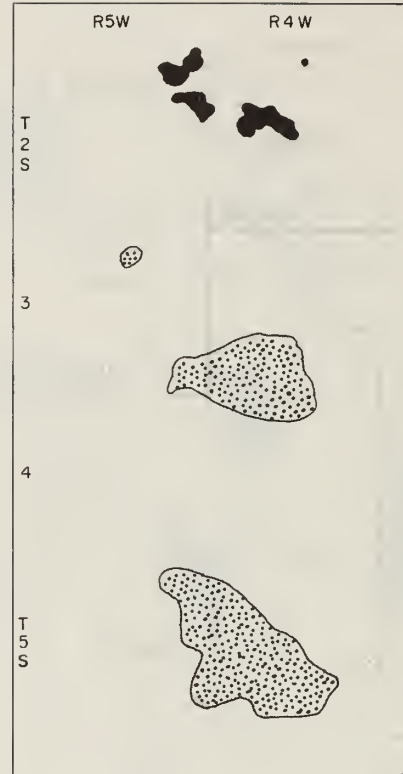
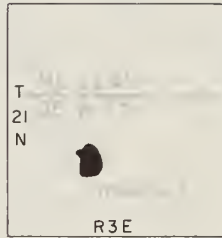
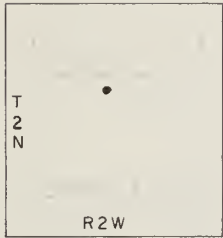
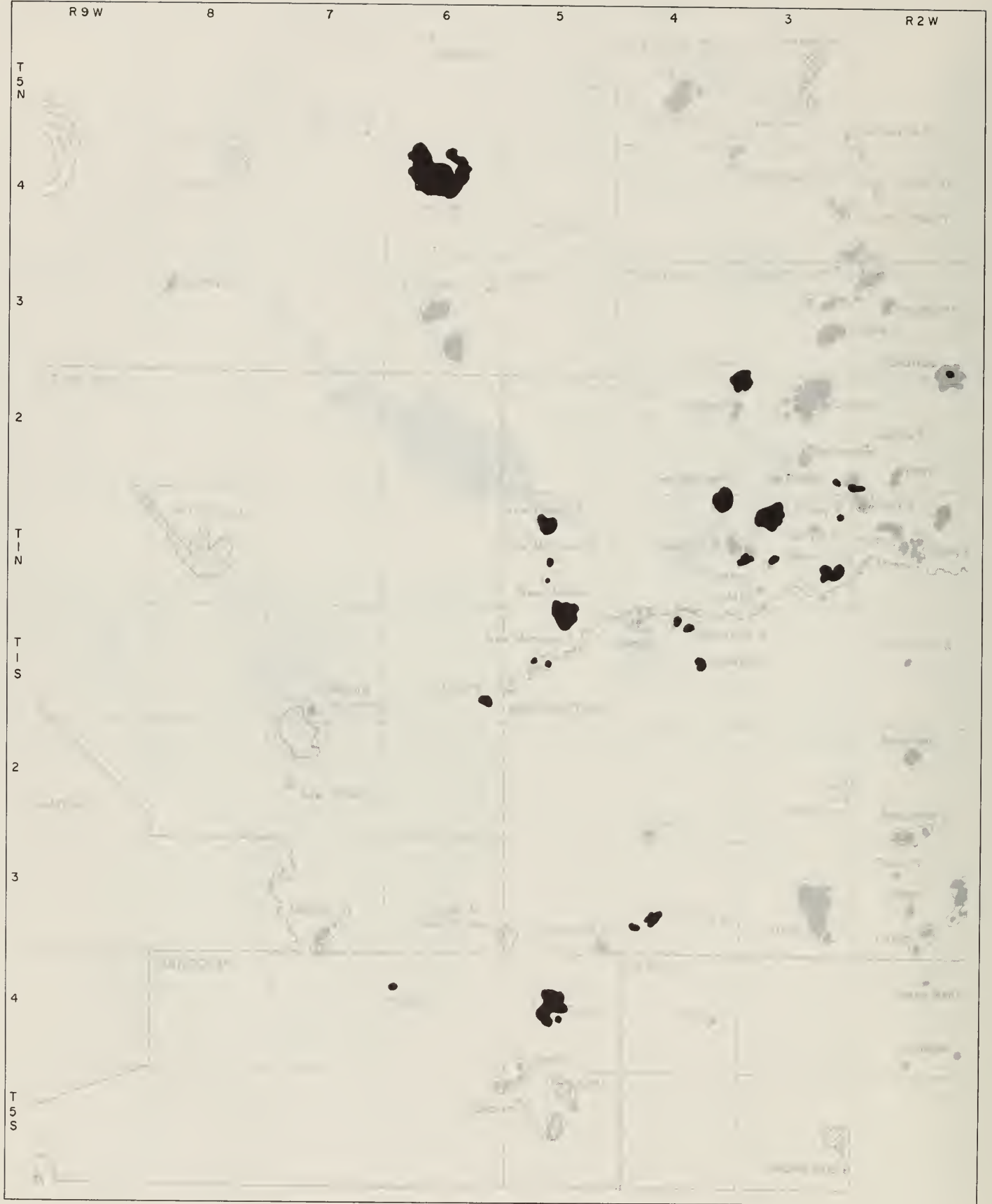
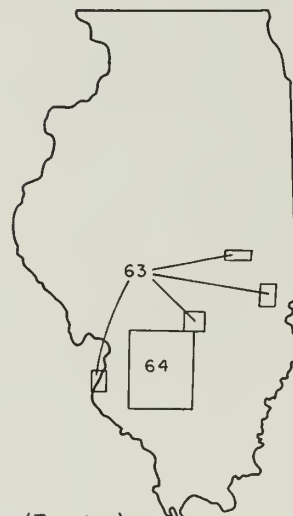
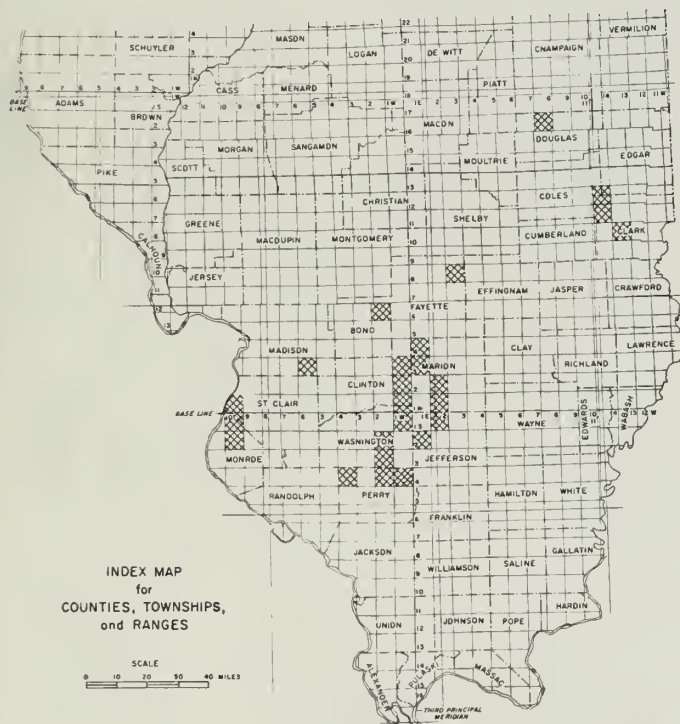
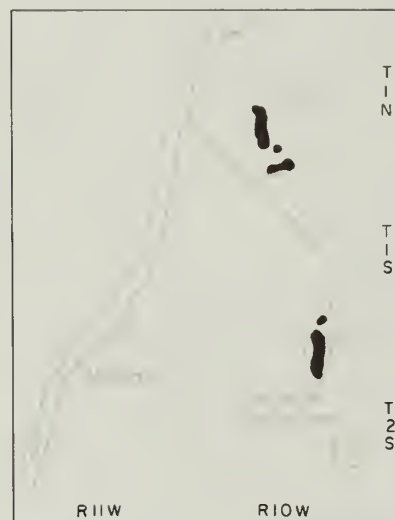
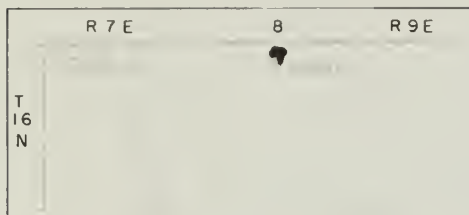


Figure 22 - Silurian oil and gas productive area in Illinois, pages 60 through 62.







Galena (Trenton)
Productive Area

Oil Gas

Producing Wells

Oil Wells

Gas Wells

Producing Wells

Figure 23 - Galena (Trenton) oil and gas productive area in Illinois, pages 63 and 64.



