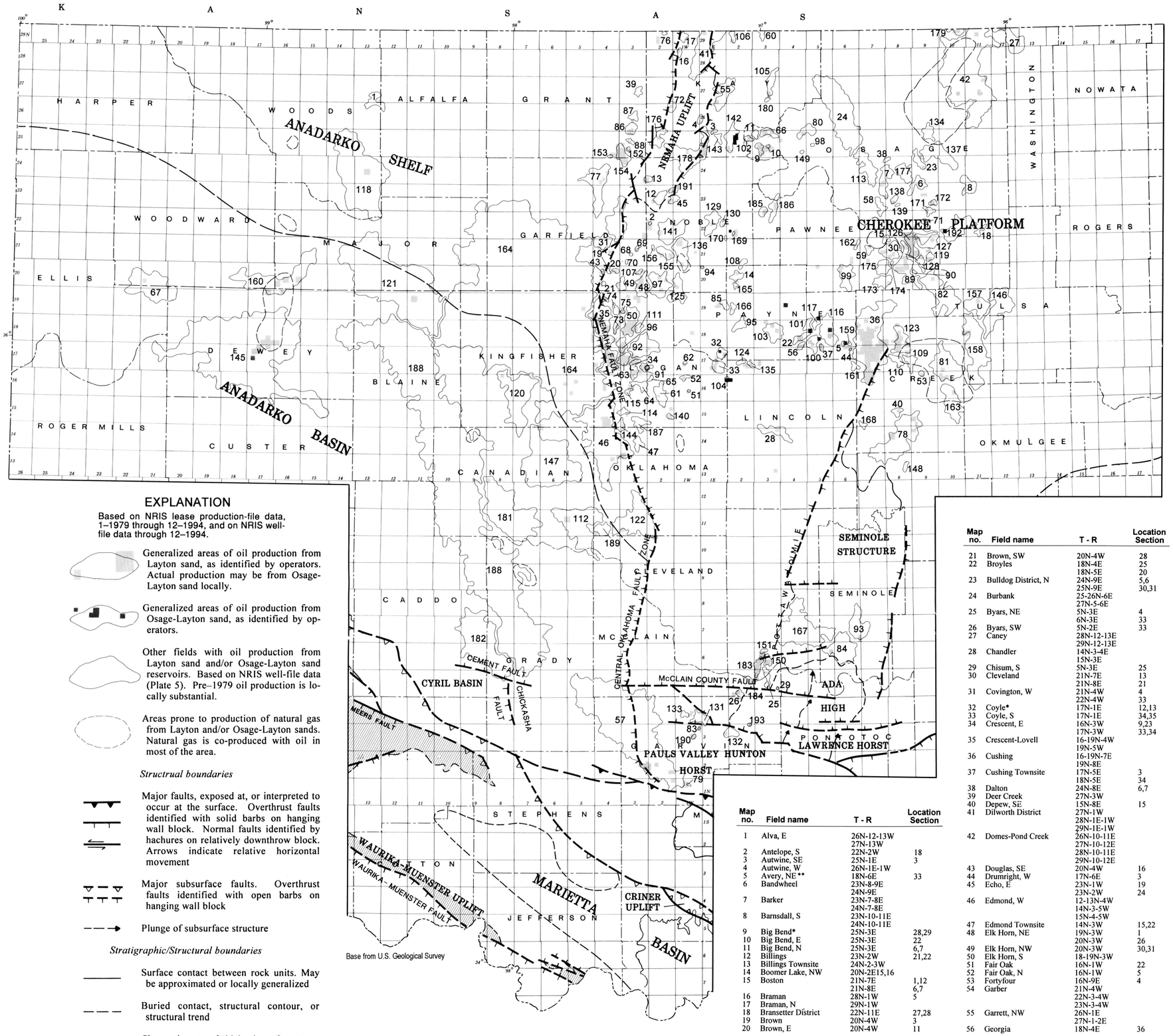


EXPLANATION

Based on NRIS lease production-file data, 1–1979 through 12–1994, and on NRIS well-file data through 12–1994.

Generalized areas of oil production from Layton sand, as identified by operators. Actual production may be from Osage-Layton sand locally.

Generalized areas of oil production from Osage-Layton sand, as identified by operators.

Other fields with oil production from Layton sand and/or Osage-Layton sand reservoirs. Based on NRIS well-file data (Plate 5). Pre–1979 oil production is locally substantial.

Areas prone to production of natural gas from Layton and/or Osage-Layton sands. Natural gas is co-produced with oil in most of the area.

Structrual boundaries

Major faults, exposed at, or interpreted to occur at the surface. Overthrust faults identified with solid barbs on hanging wall block. Normal faults identified by hachures on relatively downthrow block. Arrows indicate relative horizontal movement

Major subsurface faults. Overthrust faults identified with open barbs on hanging wall block

Plunge of subsurface structure

Stratigraphic/Structural boundaries

Surface contact between rock units. May be approximated or locally generalized

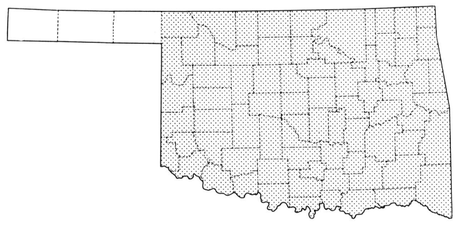
Buried contact, structural contour, or structural trend

Change in rate of thickening of strata or generalized structural trend

Basement outcrop and subcrop

Pre-Pennsylvanian strata missing

INDEX MAP OF OKLAHOMA SHOWING MAPPED AREA



Map no.	Field name	T - R	Location Section
1	Alva, E	26N-12-13W	
		27N-13W	
2	Antelope, S	22N-2W	18
3	Autwine, SE	25N-1E	3
4	Autwine, W	26N-1E-1W	
5	Avery, NE**	18N-6E	33
6	Bandwheel	23N-8-9E	
		24N-9E	
7	Barker	23N-7-8E	
		24N-7-8E	
8	Barnsdall, S	23N-10-11E	
		24N-10-11E	
9	Big Bend*	25N-3E	28,29
10	Big Bend, E	25N-3E	22
11	Big Bend, N	25N-3E	6,7
12	Billings	23N-2W	21,22
13	Billings Townsite	24N-2-3W	
14	Boomer Lake, NW	20N-2E15,16	
15	Boston	21N-7E	1,12
		21N-8E	6,7
16	Braman	28N-1W	5
17	Braman, N	29N-1W	
18	Bransetter District	22N-11E	27,28
19	Brown	20N-4W	3
20	Brown, E	20N-4W	11
21	Brown, SW	20N-4W	28
22	Broyles	18N-4E	25
		18N-5E	20
23	Bulldog District, N	24N-9E	5,6
		25N-9E	30,31
24	Burbank	25-26N-6E	
		27N-5-6E	
25	Byars, NE	5N-3E	4
		6N-3E	33
26	Byars, SW	5N-2E	33
27	Caney	28N-12-13E	
		29N-12-13E	
28	Chandler	14N-3-4E	
		15N-3E	
29	Chisum, S	5N-3E	25
30	Cleveland	21N-7E	13
		21N-8E	21
31	Covington, W	21N-4W	4
		22N-4W	33
32	Coyle*	17N-1E	12,13
33	Coyle, S	17N-1E	34,35
34	Crescent, E	16N-3W	9,23
		17N-3W	33,34
35	Crescent-Lovell	16-19N-4W	
		19N-5W	
36	Cushing	16-19N-7E	
		19N-8E	
37	Cushing Townsite	17N-5E	3
		18N-5E	34
38	Dalton	24N-8E	6,7
39	Deer Creek	27N-3W	
40	Depew, SE	15N-8E	15
41	Dilworth District	27N-1W	
		28N-1E-1W	
		29N-1E-1W	
42	Domes-Pond Creek	26N-10-11E	
		27N-10-12E	
		28N-10-11E	
		29N-10-12E	
43	Douglas, SE	20N-4W	16
44	Drumright, W	17N-6E	3
45	Echo, E	23N-1W	19
		23N-2W	24
46	Edmond, W	12-13N-4W	
		14N-3-5W	
		15N-4-5W	
47	Edmond Townsite	14N-3W	15,22
48	Elk Horn, NE	19N-3W	1
		20N-3W	26
49	Elk Horn, NW	20N-3W	30,31
50	Elk Horn, S	18-19N-3W	
51	Fair Oak	16N-1W	22
52	Fair Oak, N	16N-1W	5
53	Fortyfour	16N-9E	4
54	Garber	21N-4W	
		22N-3-4W	26
		23N-3-4W	
55	Garrett, NW	26N-1E	
		27N-1-2E	
56	Georgia	18N-4E	36
57	Golden Trend	1N-1-2W	
		2N-1-3W	
		3N-2-4W	
		4N-2-5W	
		5N-2-5W	
58	Gilliland	22N-7E	
		23N-7E	
59	Greenup	21N-7E	21
60	Grey Noret	29N-3E	
61	Guthrie Lake, E	15-16N-2W	
62	Guthrie, NE	17N-1W	21
63	Guthrie, NW	17N-3W	18
		17N-4W	24
64	Guthrie, W	16N-3W	13
65	Guthrie Townsite	16N-2W	6
66	Hardy*	25N-3E	3,4
67	Harmon, E	19N-20-22W	
		20N-21-22W	
68	Hayward	21N-3W	21
69	Hayward, N	21N-3W	15
70	Hayward, SW	21N-3W	32
71	Hominy, E	22N-9E	21
72	Hubbard	26N-1-2W	
73	Hull	18N-4W	11
74	Hull, N	19N-4W	24
75	Hull, NE	19N-3W	30
76	Hunnewell, E	29N-2W	14
77	Hunter, S	22-23N-4W	
		24N-4-5W	
78	Iron Post	13N-7-8E	
		14N-7-9E	
		15N-8-9E	
79	Katie, SE	1N-1W	9
80	Kaw South	25N-4-5E	
		26N-5E	
81	Kellyville District, W	16N-9-10E	
		17N-9-11E	
		18N-10E	
82	Keystone	19N-9-10E	
		20N-9-10E	
83	Klondike, N	3N-1W	12
84	Konawa-Dora	6N-5-6E	
		7N-6E	
85	Lake Blackwell, E	19N-1-2E	
86	Lamont, E	25-26N-3W	
87	Lamont, NE	26N-3W	21
88	Lamont, SE	25N-3W	15
89	Lauderdale	20N-8-9E	
		21N-8E	
90	Lauderdale, SE	20N-9E	7,18
91	Lawrie, SW	17N-2W	30
		17N-3W	25
92	Lawrie, W	17N-2-3W	
		18N-2-3W	
93	Little River	7N-6-7E	
		8N-6E	
94	Lone Elm, NW	20N-1E	6
95	Lost Creek	18N-2E	9,10
		19N-2E	34
96	Lovell, SE	17N-3W	5
		18N-3-4W	
97	Lucien	19-20N-2W	
98	Lucy Creek	25N-5E	20
99	Maramec	20N-6E	
100	March*	17N-5E	5
		18N-5E	31
101	March, N**	18N-4E	13
		18N-5E	6
		19N-5E	31
102	McCord, SW	25N-2E	12
		25N-3E	18
103	Mehan	18N-3-4E	
104	Merrick, N**	16N-1-2E	
105	Mervin	27-28N-3E	
106	Middleton, N	29N-2E	
107	Mitchell	20N-3W	10
108	Morrison, SW	20N-2E	3,4
		21N-2E	34,35
109	Mosquito Creek	17N-8E	25,36
		17N-9E	
110	Mosquito Creek, W	17N-8E	22
111	Mulhall, W	18N-3W	11
112	Mustang, N	10N-4-5W	
		11N-4-6W	
113	Naval Reserve	23N-7E	3
		24N-7E	17,18
		25N-7E	30,31
114	Navina	15N-3W	19
		15N-4W	24
115	Navina, NE	16N-3W	21
116	Norfolk*	18N-5-6E	
		19N-5E	
117	Norfolk, W**	18N-5E	5
		19N-5E	33
118	Oakdale	22N-13W	
		23N-13-14W	
		24N-12-14W	
		25N-13-14W	
119	Ohio-Osage	21N-9E	26
120	Okarche, N	14N-7W	
		15N-7-8W	
		16N-7-8W	
		17N-8W	
121	Okeene, NW	18N-10-11W	
		19N-10-12W	
		20N-11-13W	
		21N-12-14W	
122	Oklahoma City	10N-2W	
		11N-2-4W	
		12N-3W	
123	Olive	17-18N-8E	
124	Olivet	17N-2E	21,22
125	Orlando	19-20N-1-2W	
126	Osage City	21N-8-9E	
		22N-9E	
127	Osage City District, E	21-22N-9E	
128	Osage City District, SE	20-21N-9E	
129	Otoe City	22N-1E	22
130	Otoe City, E	22N-1E	13
131	Pauls Valley	4N-1E-1W	
132	Pauls Valley, E	3N-1-2E	
133	Pauls Valley, W	4N-1W	28,29
134	Pawhuska	25N-9E	14,15
		26N-9E	34,35
135	Perkins, S	17N-2E	24
136	Perry District	20-21N-1W	
		21N-2W	
137	Pershing	24N-9-10E	
		25N-9-10E	
138	Pettit	23N-8E	20
139	Pettit, SE	23N-8E	28
140	Pleasant Valley,	SE15N-2W	24
141	Polo	21N-2W	
		22N-1-2W	
142	Ponca City*	25N-1-2E	
		26N-2E	
143	Ponca City, SW	25N-1E	12,13
144	Prairie Bell, NW	14N-3W	6
		14N-4W	1
		15N-3-4W	
145	Putnam*	15N-15W	
		16N-15-19W	
		17N-16-21W	
		18N-16-20W	
		19N-16-18W	
146	Red Fork District	18N-11E	1,2
		18N-12E	5,6
		19N-11E	13,25
		19N-12E	22,23
147	Richland	12N-6-7W	
		13N-5-7W	
		14N-6-7W	
148	Rosenwald	13N-8E	13,14
149	Ross Day, NE	25N-4E	25
150	Rover	6N-3E	27
151	Rover, N	6N-3E	9
152	Salt Fork, E	25N-3W	29
153	Salt Fork, S	25N-4W	25
154	Salt Fork, SE	24-25N, 3-4W	
155	Sams	21N-2W	15
156	Sams, W	21N-2W	8
157	Sand Springs District	18N-11E	3
		19N-11E	22
158	Sapulpa District	16-17N-11E	
		18N-10-11E	
		19N-11E	
159	Schlegel, SE	18N-6E	34
160	Seiling, NE	19N-16-17W	
		20N-15-18W	
		21N-15W	
161	Shamrock District, W	17N-6E	23,26
		17N-7E	30,31
162	Skedee, SE	21N-6E	1
163	Slick	15-16N-10E	
164	Sooner Trend	15N-4-7W	
		16N-4-7W	
		17N-4-9W	
		18N-4-10W	
		19N-4-10W	
		20N-5-10	
		21N-5-10W	
		22N-6-9W	
		23N-7-9W	
165	Stillwater Airport	20N-2E	28,29
166	Stillwater, W	19N-2E	20
167	St. Louis	7N-4E	
		7N-5E	
		8N-4E	
168	Stroud, E	14N-7E	5
		15N-7E	30,31
169	Sumner District, N	22N-2E	32
170	Sumner, NW	21N-1E	1
		22N-1E	36
171	Sunset	22N-9E	2,3
		23N-9E	33,34
172	Sunset, NE	23N-9E	26
173	Terlton	20N-7E	23
		20N-8E	19
174	Terlton, NE	20N-8E	5
		21N-8E	31,32
175	Terlton, N	20N-7E	10,11
		20N-8E	6,7
		21N-7E	35,36
		21N-8E	30,31
176	Thomas	25N-2W	
		26N-2W	
177	Tidal Osage	24N-8E	21,22
		24N-9E	30,31
178	Tonkawa	24N-1-2W	
		25N-1E-2W	
179	Turkey Creek	29N-10E	13,14
180	Uncas, W	27N-3E	34
181	Union City	10N-7-8W	
		11N-7-9W	
		12N-8-9W	
		13N-8-9W	
182	Verden	5N-8W	
		6N-8-9W	
		7N-8-10W	
		8N-9W	
183	Wanette	5N-3E	6
		6N-3E	31
184	Wanette, S	5N-2E	13
185	Watchorn	22N-3E	4
		23N-3E	32
186	Watchorn, E	22N-3E	10
		23N-3E	35
187	Waterloo, N	14N-3W	2,11
		15N-3W	25,26
188	Watonga-Chickasha Trend	6-9N, 6-10W	
		10-14N, 8-11W	
		15-19N, 10-12W	
189	Wheatland	11N-4W	28
190	Whitebead, S	3N-1W	22
191	Whiterock, SE	23N-1W	6
		23N-2W	12
192	Wildhorse*	21N-10E	
		22N-10-11E	
193	Willow-Garvin	3N-2E	2

* Identified Layton and Osage-Layton
** Identified Osage-Layton

SCALE 1:1 000 000

25 0 25 50 75 100 MILES

25 0 25 50 75 100 KILOMETERS

FLUVIAL-DOMINATED DELTAIC (FDD) OIL RESERVOIRS IN OKLAHOMA
THE LAYTON AND OSAGE-LAYTON PLAY
OIL FIELDS WITH PRODUCTION FROM THE "LAYTON" AND OSAGE-LAYTON SANDS

By
S. C. March, D. P. Brown, and J. A. Campbell

1996