

DATA ON SECONDARY RECOVERY PROJECTS IN KANSAS, 1960

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Sheet 1

State Geological Survey of Kansas

(Includes Allen thru Cowley Counties)

Oil and Gas Investigations No.24

No.	Field	Operator	Project	Location	Cooperative or limited	Year started	Total developed acres	Producing formation	Thickness of producing zone, feet	Average depth to producing zone, feet	Flowing	Pumping	Total	No. producing wells drilled in 1960	No. active injection wells, 1960	No. injection wells drilled in 1960	Medium of injection	Source of water	Average bbl. water injected per well per day	Cumulative secondary recovery per acre, bbl.	Production attributable to recovery in 1960, bbl.	No.
ALLEN COUNTY																						
1	Bronson-Xenia	Ray Beers, Jr.	Southeastern Co. K-S Project	4-25-218	-	1956	110	"Bartlesville"	13	750	-	3	3	-	-	-	Salt water	Arbuckle	-	-	-	1
2	do	Mack C. Colt	do	22,27,28,35-24-218;15-24-218	No	1951	-	do	-	-	-	139	139	-	-	-	do	do	-	-	-	2
3	Davis-Bronson	Jackson	Dawson Farm	15-24-218	Unit.	1959	20	do	20	660	-	8	8	1	3	0	-	Stream	32	-	1,000	3
4	do	Steiner Drig. Co.	Steiner	15-24-218	do	1959	60	do	10	650	-	14	14	0	12	0	Fresh water	do	20	450	14,128	4
5	Elsmore-Shoestring	George Morris	Elsmore Shoestring	10,15-26-218	-	1941	-	do	-	660	-	31	31	-	-	-	-	-	-	-	-	5
6	do	Scharmerhorn Oil	Trask and Gray	16-26-218	-	1944	-	do	-	700	-	23	23	-	-	-	-	-	-	-	-	6
7	Elsmore West	Deerfield Oil Corp.	Young and Newby	32-25-188	-	1950	-	do	-	750	-	14	14	-	-	-	-	-	-	-	-	7
8	Humboldt-Chamute	Aylward	Humboldt	20,29,30-26-188	-	1952	-	do	-	-	-	199	199	-	-	-	-	-	-	-	-	8
9	do	do	do	4,5,8-26-188	-	1951	-	do	-	-	-	-	-	-	-	-	-	-	-	-	-	9
10	do	Aylward and Willis	Humboldt Unit	15,16,21,22-26-188	-	1952	-	do	-	-	-	19	19	-	-	-	-	-	-	-	-	10
11	do	Big Chief Drig. Co.	Wolf	16,17,20,21-26-188	Unit.	1957	680	"Bartlesville"	9	800	20	38	58	0	57	0	Salt water	-	25	-	34,099	11
12	do	Creek Oil and Gas	Henriehs	22-26-188	No	1958	27	do	17	765	-	9	9	1	8	0	do	Kansas City and return	46	890	9,827	12
13	do	Faulkner	Callahan-Whitaker	19-26-198	-	-	-	do	-	-	-	17	17	-	-	-	-	-	-	-	-	13
14	do	Gamble, et al.	Wolfe-Benson	24-26-173	-	1953	-	"Bartlesville"	-	840	-	24	24	-	-	-	-	-	-	-	-	14
15	do	Gidley	Diamond-Shelton	16-26-198	-	1952	-	do	-	860	-	14	14	-	-	-	-	-	-	-	-	15
16	do	General American Oil Co. of Texas	Matson	16,17,18,19,20-26-188	-	1958	322	do	30	800	138	9	147	0	124	0	Fresh water	Neosho River	12	3,688	54,160	16
17	do	Great Western Drig. Co.	Hausner	15-26-188	-	1951	-	do	-	-	-	25	25	-	-	-	-	-	-	-	-	17
18	do	do	Humboldt	13,14,23,24-26-188	-	1942	-	"Bartlesville"	-	-	-	214	214	-	-	-	Salt water	Mississippian	-	-	-	18
19	do	H-R-S Oil Co.	Knox-Medina	18,19-26-208	-	1953	-	do	-	700	-	17	17	-	-	-	-	-	-	-	-	19
20	do	Johantone	Hoepker-MoCormack	11,16,17-26-188	-	-	-	do	-	-	-	17	17	-	-	-	-	-	-	-	-	20
21	do	Jones and Campbell, Inc.	Batts Lease	17-26-198	-	1950	20	"Bartlesville"	10-15	820	-	4	4	4	1	1	Salt water	"Oswego"	20	-	-	21
22	do	do	Hendricks-Koepker	11,14-26-198	-	1959	60	do	5-15	735	-	15	15	2	7	1	do	"Oswego" and return	25	-	-	22
23	do	do	MoCormack	16-26-198	-	1959	40	do	5-15	880	-	7	7	5	3	0	do	do	30	-	14,941	23
24	do	do	Monaroh Unit	9-26-188	-	1950	40	do	10-15	850	-	9	9	1	4	1	do	do	20	-	2,500	24
25	do	Oilfield Management	Campbell	29-26-208	-	1958	-	do	-	-	-	5	5	-	-	-	-	-	-	-	-	25
26	do	Sinclair Oil and Gas	Iola Air and Gas Repressure	21,22,28-25-188	-	1955	-	"Bartlesville"	-	820	-	32	32	-	-	-	-	-	-	-	-	26
27	do	C. A. Willis	Hoepker	25-26-188	-	1953	-	do	-	-	-	6	6	-	-	-	-	-	-	-	-	27
28	do	C. A. and Roy Willis	Krouse	56-26-188	-	1957	-	do	-	830	-	6	6	-	-	-	-	-	-	-	-	28
29	do	do	Yount	25-26-188	-	1957	-	do	-	800	-	2	2	-	-	-	-	-	-	-	-	29
30	Iola	J. A. Aylward	Monfort Block	10,15,22-24-188	-	1956	-	do	-	890	-	49	49	-	-	-	-	-	-	-	-	30
31	do	Marrin E. Boyer Oil Co.	Boyer No. 1 Unit	33,34-25-188; 4-24-188	-	1950	90	"Squirrel"	10	780	-	21	21	0	17	5	Salt water	"Salt sand"	10-15	60	15,344	31
32	do	Joey Drig.	Iola	14,15-26-198	-	1959	-	"Bartlesville"	-	865	-	28	28	-	-	-	-	-	-	-	-	32
33	do	Scoville	Bartlesville Sand	15-24-188	-	1957	-	do	-	860	-	10	10	-	-	-	-	-	-	-	-	33
34	do	Star Producers, Inc.	Lorraine Farm	21-24-188	Unit.	1959	80	"Squirrel Sand"	16	670	-	14	14	0	1	0	Fresh water	River gravel	20	-	0	34
35	Moran	A. P. Brigham, Jr.	B-B-L Oil Producers	54,35-24-208	No	1958	-	"Bartlesville"	-	850	-	27	27	-	-	-	Salt water	Mississippian	-	-	-	35
										Estimated wells	158	1,201	1,359	237	8	Estimated secondary recovery 612,000 835,787						
ALLEN AND ANDERSON COUNTIES																						
36	Colony West and Iola	Mack C. Colt	Colony Unit	5,9,16,16,21,22,27,34-25-188; 4-24-188	-	1955	-	"Squirrel"	-	900	-	126	126	-	-	-	-	-	-	-	-	36
ALLEN AND HOBURN COUNTIES																						
37	Bronson-Xenia	Davis and Crowder	Jones-Bartlett	26,34-24-218; 3-26-218	-	-	-	"Bartlesville"	-	695	-	43	43	-	-	-	-	-	-	-	-	37
38	do	Davis Supply	Bucks-Clemmings	26,34-24-218	-	-	-	do	-	-	-	21	21	-	-	-	-	-	-	-	-	38
39	Davis-Bronson	Mack C. Colt	M-T	3,10,14,15-24-218	-	1937	-	do	-	-	-	70	70	-	-	-	-	-	-	-	-	39
										134	134	26,200										
ALLEN AND NEOSHO COUNTIES																						
40	Humboldt-Chamute	Deerfield Oil Corp.	MFA Unit	36-26-188; 1-27-188	-	1959	170	"Bartlesville"	8	850	-	38	38	1	15	1	Salt water	Mississippian	30	250	-	40
41	do	Kosa Drilling Co., Inc.	K-T Unit	4-27-188; 32,33-26-188	Coop.	1955	148	do	25	760	-	64	64	0	47	0	Salt and fresh	Gravel and return	61	2,528	51,616	41
42	do	Willis	Seefeldt	3-27-188; 34-26-188	-	1955	-	do	-	760	-	3	3	-	-	-	-	-	-	-	-	42
										105	105	27	1	Estimated secondary recovery 31,600 83,716								
ANDERSON COUNTY																						
43	Bush City Shoestring	General American Oil Co. of Texas	Reed, Connelly and Loriaux	4,5,7,8,18-21-218;12,13,14-21-208	No	1959	986	"Squirrel"	30	620	399	15	414	0	378	0	Salt water	Arbuckle	21	2,780	100,536	43
44	do	Kewanee Oil Co.	Dengo	4-21-218; 27,28,32,33-20-218	-	1943	334	do	18	600	116	25	142	0	127	0	do	do	6	3,275	42,427	44
45	do	Maracibo Oil Corp.	Starit	8,9,16,17-21-208	No	1950	80	do	11	700	-	44	44	-	-	-	do	-	-	-	28,626	45
46	do	Salmon Oil Corp.	East and West Oko	7,8,15,16-21-208	Coop.	1952	370	do	30	800	82	35	117	0	119	0	do	Arbuckle and Mississippian	19.5	2,495	74,946	46
47	Centerville	United Mines Co.	Centerville	4,10,15,22-21-218	-	1947	-	"Bartlesville"	20	725	3	2	5	0	-	0	do	Mississippian	-	-	5,366	47
48	Colony-Welda	Brecheisen	Summers	34-21-198	-	1958	-	do	-	-	-	8	8	-	-	-	-	-	-	-	-	48
49	do	W. S. Peas	Stauffer, North Hyde	22-22-198	-	1947	-	"Squirrel"	-	800	-	9	9	-	-	-	-	-	-	-	-	49
50	do	do	Unit No. 1	21,22,27,29,33-22-198	Unit.	1948	-	do	15	800	-	89	89	-	-	-	Salt water	Mississippian	-	-	-	50
51	do	do	Unit No. 2	28,29,32,33-22-198	do	1955	-	do	13	800	-	14	14	-	-	-	do	do	-	-	-	51
52	do	do	Unit																			

No.	Field	Operator	Project	Location	Cooperative or unitized	Year started	Total developed acres	Producing formation	Thickness of producing zone, feet	Average depth to producing zone, feet	Flowing	Pumping	Total	No. producing wells drilled in 1960	No. active injection wells, 1960	No. injection wells drilled in 1960	Medium of injection	Source of water	Average bbl. water injected per day	Cumulative secondary oil developed per acre, bbl.	Production attributable to secondary oil, 1960, bbl.	No.
150	Fox-Bush	Blair	"Bartlesville"	14,22,23-29-55	-	1958	-	"Bartlesville"	-	2,780	-	17	17	-	-	-	-	-	-	-	-	150
151	do	do	do	13,14-29-52	-	1958	-	do	-	2,790	-	8	8	-	-	-	-	-	-	-	-	151
152	do	Rockland Drig. Co.	Kingsley	24-28-52	No	-	-	do	-	-	0	16	16	0	15	0	Salt water	Arbuckle and Produced	200	-	42,000	152
153	do	Mobil Oil Co.	North Fox-Bush Unit	23,24,25,26,35-28-55	Unit.	1961	888	do	-	2,800	-	16	16	-	-	-	-	-	-	-	-	153
154	do	Morrison	Fox Unit No. 1	1,12,13-29-55	Unit.	1943	585	do	25	2,800	0	39	59	3	35	0	do	Wrexford	140	2,250	104,688	154
155	Garden	Sitirin	Mississippian	55,18-29-52	-	1958	-	Mississippian	-	2,750	-	2	2	-	-	-	-	-	-	-	-	155
156	Haverhill	Cities Service Oil Co.	Haverhill	15,22,27,34-27-58	Unit.	1949	180	"Bartlesville"	30	2,700	0	19	19	1	8	0	Salt water	Arbuckle and Produced	260	1,874	37,898	156
157	Harlett	Rex and Morris	Flickinger Unit	27-58	-	1958	-	do	-	2,450	-	26	26	-	-	-	-	-	-	-	-	157
158	Hickory Creek	Nadel and Sussman	Hickory Creek Unit	20,31-25-52	Unit.	1957	-	Conglomerate	-	-	-	15	15	-	-	-	Salt water	Arbuckle	-	-	-	158
159	Keighley	Franco-Central	Lucas	11,14-28-52	-	1957	-	do	-	-	-	15	15	-	-	-	-	-	-	-	-	159
160	Kramer-Stern	Sitirin	Stern	6-27-83	-	1956	-	do	-	2,721	-	4	4	-	-	-	-	-	-	-	-	160
161	do	do	do	27,28,33-27-68	-	1959	-	Viola	-	3,075	-	9	9	-	-	-	-	-	-	-	-	161
162	do	do	do	12,27-63	-	1952	20	do	15	3,100	0	1	1	0	1	0	Salt water	Produced	60	-	5,150	162
163	do	do	do	19-27-62	-	1955	-	"Bartlesville"	-	2,890	-	6	6	-	-	-	-	-	-	-	-	163
164	do	do	do	19,20-27-62	-	1958	-	do	-	2,700	-	11	11	-	-	-	-	-	-	-	-	164
165	do	do	do	11-28-62	-	1959	-	do	-	2,715	-	2	2	-	-	-	-	-	-	-	-	165
166	do	do	do	25,35,36-29-48	-	1957	-	do	-	2,760	-	10	10	-	-	-	-	-	-	-	-	166
167	Muddy Creek	Butler	Fresh	7-29-58	-	1959	-	do	-	2,750	-	5	5	-	-	-	-	-	-	-	-	167
168	do	Gross Producing	Stewart	6-29-53	-	1958	50	do	12	2,700	0	4	4	0	1	0	Salt water	Kansas City	100	178	6,312	168
169	do	Stelbar	Muddy Creek Unit	7-29-52; 13-29-43	-	1959	-	do	-	2,800	-	13	13	-	-	-	-	-	-	-	-	169
170	Potwin	Wagner	Potwin	25,36-24-33	-	1955	-	Mississippian	-	2,700	-	5	5	-	-	-	-	-	-	-	-	170
171	Reynolds-Shaffer	Dunne and Strait	Brissay	8-27-62	-	1957	-	do	-	2,760	-	2	2	-	-	-	-	-	-	-	-	171
172	do	do	do	6-27-62	-	1954	-	"Bartlesville"	-	2,710	-	4	4	-	-	-	-	-	-	-	-	172
173	do	do	do	6-27-62	-	1954	-	do	-	2,700	-	6	6	-	-	-	-	-	-	-	-	173
174	do	do	do	6-27-62	-	1954	-	do	-	2,700	-	5	5	-	-	-	-	-	-	-	-	174
175	do	do	do	6-27-62	-	1954	-	do	-	2,700	-	5	5	-	-	-	-	-	-	-	-	175
176	do	do	do	6-27-62	-	1954	-	do	-	2,700	-	5	5	-	-	-	-	-	-	-	-	176
177	do	do	do	6-27-62	-	1954	-	do	-	2,700	-	5	5	-	-	-	-	-	-	-	-	177
178	do	do	do	6-27-62	-	1954	-	do	-	2,700	-	5	5	-	-	-	-	-	-	-	-	178
179	do	do	do	6-27-62	-	1954	-	do	-	2,700	-	5	5	-	-	-	-	-	-	-	-	179
180	do	do	do	6-27-62	-	1954	-	do	-	2,700	-	5	5	-	-	-	-	-	-	-	-	180
181	do	do	do	6-27-62	-	1954	-	do	-	2,700	-	5	5	-	-	-	-	-	-	-	-	181
182	do	do	do	6-27-62	-	1954	-	do	-	2,700	-	5	5	-	-	-	-	-	-	-	-	182
183	do	do	do	6-27-62	-	1954	-	do	-	2,700	-	5	5	-	-	-	-	-	-	-	-	183
184	do	do	do	6-27-62	-	1954	-	do	-	2,700	-	5	5	-	-	-	-	-	-	-	-	184
185	do	do	do	6-27-62	-	1954	-	do	-	2,700	-	5	5	-	-	-	-	-	-	-	-	185
186	do	do	do	6-27-62	-	1954	-	do	-	2,700	-	5	5	-	-	-	-	-	-	-	-	186
187	do	do	do	6-27-62	-	1954	-	do	-	2,700	-	5	5	-	-	-	-	-	-	-	-	187
188	do	do	do	6-27-62	-	1954	-	do	-	2,700	-	5	5	-	-	-	-	-	-	-	-	188
189	Coabe	Kewanee Oil Co.	Dillard	32,33-29-58; 4,5-30-58	-	1954	270	"Bartlesville"	9	2,830	0	11	11	0	9	0	Salt water	Shallow well	172	1,019	-	189
190	Couan and Fox-Bush	Stelbar Oil	Couch	55-29-52; 6-30-62	-	1957	-	do	-	2,800	-	9	9	-	-	-	-	-	-	-	-	190
191	Blankenship	Tidewater Oil Co.	Blankenship Pool	10,16,17,21-26-83	Coop.	1949	608	"Bartlesville"	33	2,450	0	20	20	0	17	0	Salt water	Arbuckle	93	2,580	21,900	191
192	Teeter	Jackman and Jackman	Leady	25-22-98	-	1953	-	"Bartlesville"	-	2,500	-	2	2	-	-	-	-	-	-	-	-	192
193	do	Surrey Oil Corp.	do	25-22-98	-	1958	-	do	-	2,570	-	9	9	-	-	-	-	-	-	-	-	193
194	Borroum	Patterson	Borroum	20-34-92	-	1959	-	"Osawego"	-	1,770	-	6	6	-	-	-	-	-	-	-	-	194
195	do	do	do	32,33-54-103	-	1959	-	"Peru"	-	1,545	-	9	9	-	-	-	-	-	-	-	-	195
196	do	do	do	9-35-102	-	1958	-	do	-	1,525	-	-	-	-	-	-	-	-	-	-	-	196
197	do	do	do	54-34-102	-	1958	-	do	-	1,400	-	-	-	-	-	-	-	-	-	-	-	197
198	do	do	do	54-34-102	-	1958	-	do	-	1,550	-	-	-	-	-	-	-	-	-	-	-	198
199	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	199
200	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	200
201	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	201
202	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	202
203	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	203
204	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	204
205	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	205
206	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	206
207	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	207
208	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	208
209	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	209
210	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	210
211	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	211
212	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	212
213	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	213
214	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	214
215	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	215
216	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	216
217	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	217
218	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	218
219	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	219
220	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	220
221	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	221
222	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	222
223	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	223
224	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	224
225	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	225
226	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	226
227	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4	4	-	-	-	-	-	-	-	-	227
228	do	do	do	15-35-102	-	1957	-	do	-	1,275	-	4										

By Goebel, E.D., Hilpman, P.L., Beene, D.L., and Noever, R.J.

State Geological Survey of Kansas

(Includes Crawford thru Morris Counties)

Oil and Gas Investigations No. 24

No.	Field	Operator	Project	Location	Cooperating or unitized	Year started	Total de-veloped acres	Producing Formation	Production of producing zone, feet	Average depth to producing zone, feet	Flowing	Pumping	Total	No. completing in 1960	No. active injection wells, 1960	No. injection wells drilled in 1960	Medium of Injection	Source of water	Average bbl. water injected per well per day	Cumulative secondary oil recovery per acre, bbl.	Production to secondary recovery in 1960, bbl.	No.
CRAWFORD COUNTY																						
308	"Houston"	Golden	Houston	5-31-22E	-	-	-	"Bartlesville"	-	200	-	-	-	-	-	-	-	-	-	-	-	308
309	McGuns	Bud Oil Co.	Bud Oil Co.	6,7-30-22E	No	1953	480	McCune "Stray"	40	-	-	39	39	0	-	0	Salt water	Arbuckle	-	-	*	309
310	do	General Oil and Gas	do	1-31-21E; 19,30,31-30-22E; 51-22E	-	1952	-	do	-	-	-	129	129	-	-	-	-	-	-	-	*	310
311	St. Paul-Walnut	Cooper	Bundy	36-28-21E	-	1958	-	"Bartlesville"	-	400	-	12	12	-	-	-	-	-	-	-	-	311
312	do	Walters Drig. Co.	O'Brien	35-28-21E	No	1953	30	do	20	400	0	4	4	0	4	0	Salt water	Arbuckle	25	-	1,400	312
313	Walnut-Southeast	Aylward	Hess-Walsh	33-28-22E	-	-	-	do	-	-	-	28	28	-	-	-	-	-	-	-	-	313
314	do	General American Oil Co. of Texas	Walnut	27-28-28-22E	No	1951	149	do	12	385	0	40	40	33	63	0	Salt water	Arbuckle	11	324	10,646	314
315	do	Oseage Petroleum	Phillips Air Repress. Proj.	28-28-22E	-	1956	-	do	-	360	-	8	8	-	-	-	-	-	-	-	-	315
316	do	Walters Drilling	Sollwinkle-Wintjen	26,27-28-22E	No	1960	15	do	20	380	0	4	4	0	6	0	Salt water	Arbuckle	17	160	600	316
							874			Estimated wells	34	54	298	298	73				Estimated secondary recovery		12,700	31,345
DECATUR COUNTY																						
317	Follnow	Anderson-Priohard Oil Co.	Follnow Unit	4,5,6,9-3-29N	Unit.	1960	1,100	Lans.-K.C.	4	3,740	0	15	15	2	1	0	Salt water	Dakota Sand	318	0	0	317
DICKINSON AND MARION COUNTIES																						
318	Lost Springs	McPherson	Lost Springs	3,10-17-4E; 27,32,34-16-4E	-	1958	-	Mississippian	-	2,300	-	-	44	-	-	-	-	-	-	-	**	318
DOUGLAS COUNTY																						
319	Baldwin	Russel Hayes	Baldwin	9-15-20E	-	1959	-	"Squir-rel"	-	840	-	-	2	-	-	-	-	-	-	-	-	319
EDWARDS COUNTY																						
320	Enlow	Natural Gas and Oil Co.	Enlow Unit	4,9-24-16W	Coop.	1956	140	Lans.-K.C. Line	6	3,740	0	5	5	0	2	0	Salt water	Lans.-K.C. and Topeka	245	279	13,790	320
ELK COUNTY																						
321	Bush-Denton	Elk Petroleum	Kyser A	9,10-30-9E	-	1956	-	Mississippian "Line"	-	2,875	-	18	18	-	-	-	-	-	-	-	-	321
322	Dele-Ringo	Union Gas System	Dele-Ringo	27,34-31-12E	-	1958	-	Newton Shallow Sand	-	670	-	0	0	-	-	-	-	-	-	-	-	322
323	New Albany	C. F. Jones	Manderscheid	9-23-13E	No	1960	-	New Albany Sand	9	610	0	4	4	0	1	0	Salt water	New Albany	40	-	-	323
										Estimated wells	88	98	120	120						Estimated secondary recovery		31,500
ELLIS COUNTY																						
324	Bemis-Shotts	Vye	Hall-Windholtz	2,3-12-17W	-	1960	-	Arbuckle	-	3,650	-	6	6	-	-	-	-	-	-	-	-	324
325	Catherine	Giesler	Giesler	10-15-17W	-	1960	-	Kansas City	-	3,300	-	1	1	-	-	-	-	-	-	-	-	325
326	Catherine Northwest	Bowe	Walter Unit	4,9-13-17W	-	1955	-	Lans.-K.C.	-	3,405	-	-	-	-	-	-	-	-	-	-	-	326
327	Cromb	Leslie Oil, et al.	Cromb	15-11-20W	-	1957	-	Kansas City	-	3,645	-	5	5	-	-	-	-	-	-	-	-	327
328	Degenhart	Tenneco Oil Co.	Degenhart	15,16-16-17W	No	1959	35	Lans.-K.C.	10	3,425	0	2	2	0	1	0	Salt water	Arbuckle	95	131	4,602	328
329	Drilling	The Atlantic Refining Co.	Drilling Field	22-14-15W	Coop.	1957	-	do	7	3,200	-	4	4	-	-	-	-	-	-	-	-	329
330	Drilling Southeast	Sun Oil	Bayl	26-14-15W	-	1958	-	do	3	3,065	-	2	2	-	-	-	-	-	-	-	-	330
331	Sagle Creek	Tennessee Gas	Meadan	2-11-20W	-	1958	-	do	-	3,420	-	1	1	-	-	-	-	-	-	-	-	331
332	Smernan	Cooperative Refinery Association	Froelich	4-13-16W	No	1959	180	do	30	3,235	0	3	3	1	1	0	Salt water	Dakota	150	19	3,046	332
333	Smernan Northeast	Keweenaw Oil	do	34-12-16W	-	1959	-	Kansas City	-	3,270	-	4	4	-	-	-	-	-	-	-	-	333
334	Fairport	Solar Oil Co.	Wieland	36-12-16W	Coop.	1957	160	Lans.-K.C.	4	3,225	0	7	7	0	1	0	Salt water	Arbuckle and Kansas City	240	-	-	334
335	Herrl	Lions Oil	Hinkie Oil	28-14-17W	-	1958	-	Kansas City	-	3,390	-	5	5	-	-	-	-	-	-	-	-	335
336	Herzog	Hinkie Oil	Herzog	32-13-16W	-	1959	-	do	-	3,230	-	5	5	-	-	-	-	-	-	-	-	336
							375					50	50		3					Estimated secondary recovery		67,400
																					75,047	
ELLIS AND ROOKS COUNTY																						
337	Brungardt	Champlin Oil and Refining Co.	Brungardt	2-11-17W; 35,36-10-17W	Unit.	1956	237	"Pennsylvanian conglomerate"	7	3,400	0	10	10	0	7	0	Salt water	Arbuckle	151	850	33,135	337
ELLSWORTH COUNTY																						
338	Genesee-Edwards	Continental Oil	Shonyo-Shumway	9,10-17-8W	-	1960	-	Simpson	-	3,150	-	16	16	-	-	-	-	-	-	-	**	338
339	Holman	Westworth Drig.	Strun	36-17-10W	-	1959	-	"Conglomerate Sand"	-	3,220	-	4	4	-	-	-	-	-	-	-	**	339
												20	20									
FRANKLIN COUNTY																						
340	Paola-Rantoul	Daniel	Coulter	5,6-18-21E	-	1942	-	"Squirrel"	-	630	-	13	13	-	-	-	-	-	-	-	-	340
341	do	Gardner Co.	Rantoul	22,27-17-21E	-	1941	-	"Paru"	-	370	-	86	86	-	-	-	-	-	-	-	-	341
342	do	General American Oil Co. of Texas	Heminger-Finch	20,28,29-16-21E	No	1951	191	"Squirrel"	20	500	22	46	68	0	76	0	Salt water	Mississippian	30	2,067	25,745	342
343	do	do	Johnson	27,34-16-21E	No	1948	136	do	12	580	40	8	48	0	47	0	do	do	28	1,940	9,294	343
344	do	Kerr-McGee Oil Ind., Inc.	Moherman	20-16-21E	Both	1959	350	do	20	700	0	65	65	7	80	12	do	do	32	73	344	
345	do	King	Moherman	20-16-21E	Both	1941	-	do	-	620	-	12	12	-	-	-	-	-	-	-	-	345
346	do	Layton Oil Co.	Flood 10	31,32-17-21E	Coop.	1948	-	do	15	825	-	-	-	-	-	-	Salt water	Arbuckle	-	-	-	346
347	do	Maracabo Oil Corp.	Group 3 and 7	4,8,9,16,17, 20,31-16-21E; 3,10,15,22-17-21E	Unit.	1911	-	do	-	-	-	237	237	-	-	-	-	-	-	-	-	347
348	do	J. D. Newton	-	17,18-18-21E	Coop.	1957	-	do	10	600	-	7	7	-	-	-	Salt water	Mississippian	-	-	-	348
349	do	Salmon Oil	Jackman	7,8-18-21E	-	1942	-	do	-	630	-	39	39	-	-	-	-	-	-	-	-	349
350	do	Texas Natural Gas	Ottawa	31,32-16-21E	-	1955	-	do	-	630	-	45	45	-	-	-	-	-	-	-	-	350
351	do	Prod Williams	McConnell	18-16-21E	-	1956	-	do	-	685	-	10	10	-	-	-	-	-	-	-	-	351
							357			Estimated wells	15	15	20X	12						Estimated secondary recovery		95,600
												82	82X	74E		20X	12					216,742
GRAHAM COUNTY																						
352	Brassfield	Leslie Oil Co.	Brassfield	2-10-22W; 35-9-22W	-	1959	-	Kansas City	-	3,725	-	7	7	-	-	-	-	-	-	-	-	352
353	Brush Creek	Imperial Oil	McPherson	4-9-23W	-	1959	-	Lans.-K.C.	-	3,743	-	8	8	-	-	-	-	-	-	-	-	353
354	Cooper	C and G Drig. Co.	Hunt-Dehrens	12-10-21W	-	1959	-	Arbuckle	-	3,835	-	4	4	-	-	-	-	-	-	-	-	354
355	do	Natural Gas and Oil	Smith Unit	32-9-21W; 5-10-21W	-	1950	-	Lans.-K.C.	-	3,550	-	9	9	-	-	-	-	-	-	-	-	355
356	do	Skelly Oil Co.	Martin	9-10-21W	Coop.	1960	60	Lansing	20	3,620	0	5	5	0	1	0	Salt water	Arbuckle and Lansing	312	63	3,778	356
357	do	Sunray Mid-Continent	Germany	6-10-21W	-	1960	-	Kansas City	-	3,600	-	3	3	-	-	-	-	-	-	-	-	357
358	Diebolt	Skelly Oil	Stewart	17-20-12W	-	1959	-	Lansing	-	3,845	-	6	6	-	-	-	-	-	-	-	-	358
359	Evergreen Northwest	Imperial Oil	Robinson	17-8-23W	-	1959	-	Lans.-K.C.	-	3,850	-	15	15	-	-	-	-	-	-	-	-	359
360	Harmony	Anderson-Priohard	Sanford	5-8-22W	-	1958	-	do	-	3	-	3	3	-	-	-	-	-	-	-	-	360
361	Higer Northeast	Permer	Silworth	17-8-23W	-	1960	-	Lans.-K.C.	-	3,630	-	2	2	-	-	-	-	-	-	-	-	361
362	Holley	Imperial Oil	Straus	33-8-24W	-	1959	-	do	-	3,950	-	10	10	-	-	-	-	-	-	-	-	362
363	do	do	Sterling Drig.	31-8-24W; 25,36-9-25W	-	1957	-	do	-	3,600	-	6	6	-	-	-	-	-	-	-	-	363
364	do	Sunray Mid-Continent	Blackburn	35-8-24W	No	1958	50	do	9	3,970	0	2	2	0	1	0	Salt water	Produced	250	28	1,430	364
365	Mickleson	Farmer	Mickleson	27-8-22W	-	1960	-	do	-	3,500	-	3	3	-	-	-	-	-	-	-	-	365
366	Nana	Colorado Oil and Gas Corp.	Goff	10-8-24W	Coop.	1959	-	do	6	3,560	-	3	3	-	-	-	Salt water	Lans.-K.C.	-	-	-	366
367	Penkles	Barnett	Solve	2-8-24W	-	1958	-	do	-	3,730	-	3	3	-	-	-	-	-	-	-	-	367
368	Red Line	Sunray Mid-Continent	P. P. Sturgeon	32-9-22W	80	1958	-	Lansing	-	3,808	-	3	3	-	-	-	Salt water	Produced	122	13.5	810	368
369	Schmid	Tennessee Gas	Schmid	21-8-25W	-	1958	-	Lans.-K.C.	-	3,800	-	3	3	-	-	-	-	-	-	-	-	369
370	Van	Rock Island Oil and Ref.	Sundeen	14-9-22W	Coop.	1960	70	Kansas City	22	3,560	0	6	6	0	1	0	Salt water	Arbuckle	100	43	3,000	370
							245					101	101		4					Estimated secondary recovery		65,400
																					74,318	
GRAHAM AND TREGO COUNTIES																						
371	Diebolt	Imperial Oil	Diebolt	33-10-23W; 4, 5,9-11-23W	-	1958	-	Lans.-K.C.	-	3,590	-	24	24	-	-	-	-	-	-	-	-	371
GREENWOOD COUNTY																						
372	Atyeo-Pixies	Cities Service Petroleum	Atyeo	6-22-10E	Both	1952	230	"Bartlesville"	27	2,300	-	21	21	0	23	0	Salt water	Arbuckle and Produced	164	6,589	*	372
373	do	Degen Oil	Browning-Pixies	8,9,17-22-10E	-	1947	-	do	-	-	-	10	10	-	-	-	-	-	-	-	*	373
374	Browning	Gross Prod.	Prather	30																		

No.	Field	Operator	Project	Location	Cooperative or unitized	Year started	Total developed acres	Producing formation	Thickness of producing zone, feet	Average depth to producing zone, feet	Flowing	Pumping	Total	No. producing wells drilled in 1960	No. active injection wells, 1960	No. injection wells drilled in 1960	Medium of injection	Source of water	Average bbl. water injected per well per day	Cumulative secondary oil recovery per acre, bbl.	Production attributable to secondary recovery in 1960, bbl.	No.
HARPER COUNTY																						
460	Gish	Skelly Oil	Gish	17,19,20-31-6W	-	1957	-	Simpson	-	4,710	-	16	16	-	-	-	-	-	-	-	**	460
HARVEY AND MCPHERSON COUNTIES																						
461	Harnac	Brunson-Spines, Inc.	Harnac Unit	55,56-21-SW; 1,2-22-SW	Coop.	1959	-	"Hunton"	11	5,525	-	22	22	-	-	-	-	-	-	-	**	461
HODGEMAN COUNTY																						
462	Hallet	Kewanee Oil Co.	Hallet	10,15,22-22-2SW	100% Co. Owned	1960	190	Mississippian	22	4,610	-	16	16	0	4	0	-	880' Sand	120	-	0	462
463	Purdyville	Armer	Schraeder	5-24-24W	-	1959	190	do	-	4,680	-	6	6	-	-	-	-	-	-	-	**	463
KINGMAN AND PRATT COUNTIES																						
464	Cunningham	Skelly Oil Co.	Cunningham "B" Unit	19,30,31-27-10W;24,25,36-27-11W	Unit.	1956	1,100	Lansing Lime	16	5,400	-	31	31	0	21	0	Water and Gas	Shallow gravel	274	1,234	52,172	464
KINGMAN AND SEDGWICK COUNTIES																						
465	Bartholomew	Cities Service Petroleum	Bartholomew Unit	29,30,31-27-4W;36-27-SW; 6-28-6W;1-28-6W	Unit.	1956	180	Mississippian	11	3,700	-	39	39	0	8	0	Salt	Arbuckle and Produced	553	99	15,534	465
LABETTE COUNTY																						
466	Coffeyville-Cherryvale	Helms	McClellan	25-33-17S	-	1958	-	"Bartlesville"	-	675	-	4	4	-	-	-	-	-	-	-	-	466
467	do	McKiokle	McKiokle	14-33-17S	-	1955	-	do	-	-	-	1	1	-	-	-	-	-	-	-	-	467
468	do	Oakleaf Drig.	Utter	23-32-17S	-	1960	-	"Bartlesville"	-	-	-	1	1	-	-	-	-	-	-	-	-	468
469	Edna	Davis and Berard	Brown-Wilmoth	12,13-34-18S	No	1964	-	do	-	650	-	5	5	-	-	-	-	Arbuckle	-	-	-	469
470	Mound Valley	Ralph Helms	B and K Flood	22-32-18S	No	1956	70	"Squirrel"	25	650	0	12	12	2	6	0	do	Arbuckle and return	75	-	10,890	470
471	Price	O. B. Helms	Bellah Farm	4,5-33-18S	No	1956	30	"Bartlesville"	15	560	0	7	7	1	3	0	Fresh and Salt water	30' Well and return	200	800	8,932	471
472	do	Ralph Helms and Larry Moore Ranch, Inc.	K and H Flood	4-33-18S	Unit.	1959	40	"Squirrel"	25	550	0	11	11	0	4	0	do	Pond and return	30	-	10,023	472
473	do	Veeder Supply	Labette County	7,8-33-18S	-	1952	-	"Bartlesville"	-	-	-	14	14	-	-	-	-	-	-	-	-	473
													Estimated wells			23	23	13	Estimated secondary recovery			26,400
																23	23					58,245
LABETTE AND MONTGOMERY COUNTIES																						
474	Coffeyville-Cherryvale	Continental Oil Co.	Country Club	26,27-32-17S	Coop.	1955	320	"Bartlesville"	25	760	0	32	32	0	10	0	Salt water	Mississippian	79	919	28,916	474
LINN COUNTY																						
475	Centerville	Fell and Wolfe Oil Co.	Group 6	10,11,13,14, 24-21-22S;19, 20,29,30-20-22S	Coop.	1955	-	"Squirrel"	40	480	111	16	127	0	90	0	Fresh and Salt water	Return and Stream	-	-	-	475
476	Goodrich-Parker	General American Oil Co. of Texas	Goodrich	19,20,29,30-20-22S	No	1944	210	do	30	570	81	17	98	0	98	0	Salt water	Mississippian	15	2,223	21,571	476
477	LaCygne-Cadmus	do	LaCygne	2,20-22S; 34,35,36-19-23S	No	1942	81	"Pruce"	20	250	44	6	50	0	45	0	do	"Wilcox Sand"	33	2,097	7,833	477
													Estimated wells			50	50	233	Estimated secondary recovery			16,001
																57	57					45,405
LYON COUNTY																						
478	Atycro-Pixlee	Barbara Oil Co.	Jones	30-21-10S	Coop.	1948	-	"Bartlesville"	-	-	-	5	5	-	-	-	Salt water	Arbuckle and "Bartlesville"	-	-	-	478
479	do	The Ohio Oil Co.	Atycro Communitization	30,31-21-10S	Coop.	1947	280	do	35	2,200	0	12	12	0	9	0	do	Arbuckle and Produced	140	6,287	30,516	479
480	do	do	Hughes	19-21-10S	No	1959	24	do	35	2,200	0	1	1	0	1	0	do	Douglas and Produced	75	5,168	4,916	480
481	do	Stewart	Lowe	19-21-10S	-	1955	-	do	-	2,200	-	1	1	-	-	-	-	-	-	-	-	481
482	Fankhauser	Berents	Neussen	30-21-12S	-	1955	-	do	-	1,900	-	3	3	-	-	-	-	-	-	-	-	482
483	do	Hugo Oil	Loucke-Phillips	33-21-12S	-	1945	-	do	-	1,950	-	11	11	-	-	-	-	-	-	-	-	483
484	do	W. W. Michaelis	Jest-Childers	32-21-12S	Coop.	1956	-	do	-	1,900	-	5	5	-	-	-	Salt water	"Bartlesville"	-	-	-	484
485	do	White and Sillis	Harlan	31,32-21-12S	-	1955	-	do	-	1,900	-	8	8	-	-	-	-	-	-	-	-	485
486	Rook Creek	Murphy	Murphy	32-21-11S	-	1957	-	do	-	1,875	-	5	5	-	-	-	-	-	-	-	-	486
													Estimated wells			6	6	10	Estimated secondary recovery			45,000
																57	57					50,432
MCPHERSON COUNTY																						
487	Chindberg	George Hess	Swanson	13-19-5W	-	1957	-	Mississippian	-	2,950	-	1	1	-	-	-	-	-	-	-	-	487
488	Georob	Colorado Oil and Gas	Robinson	1-18-2W; 36-17-2W	-	1959	-	do	-	2,800	-	5	5	-	-	-	-	-	-	-	-	488
489	Goessal	Sutton and Sons	Goessen	12-21-1W	-	1959	-	"Hunton"	-	1,400	-	2	2	-	-	-	-	-	-	-	-	489
490	do	Time Petroleum	Goessell	1-21-1W	-	1960	-	do	-	3,395	-	3	3	-	-	-	-	-	-	-	-	490
491	Graber	Cities Service Petroleum	Graber	31,32-21-1W	Coop.	1952	60	do	25	3,285	-	6	6	2	1	0	Fresh water	Shallow water sand	51	3,223	59,647	491
492	do	Continental	do	20,28,29,31, 32-21-1W	-	1947	-	do	-	3,200	-	84	84	-	-	-	-	-	-	-	-	492
493	Jenday	Colorado Oil and Gas	Day	1-19-2W;6-19-1W	-	1956	-	Mississippian Chat	-	2,975	-	7	7	-	-	-	-	-	-	-	-	493
494	do	Tennessee Gas, et al.	Jenday	6-19-1W	-	1957	-	do	-	2,940	-	5	5	-	-	-	-	-	-	-	-	494
495	Lindsberg	Leland Pikes	Hoglund	18-17-5W	-	1958	-	Viola	-	1,400	-	2	2	-	-	-	-	-	-	-	-	495
496	McPherson	Leonard Bruce	Rolander	20-18-2W	-	1958	-	Kansas City	-	2,340	-	2	2	-	-	-	-	-	-	-	-	496
497	do	Lawrence and Bush	Anderson A and B	31,32-18-2W	Coop.	1959	160	Kansas City Lime	10	2,300	0	6	6	0	1	0	Salt water	Mississippian	130	60,825	9,732	497
498	do	Head Prod.	Watson	32-18-2W	-	1960	-	Lans.-W.C.	-	2,350	-	3	3	-	-	-	-	-	-	-	-	498
499	Paden	Anderson-Frithard	Paden	10,15-18-1W	-	1957	-	Viola	-	1,150	-	15	15	-	-	-	-	-	-	-	-	499
500	Ritz-Canton	Cooperative Refinery Association	Eaton-Knudson	23,26-19-2W	No	1960	120	Mississippian Chat	20	2,970	0	6	6	0	2	0	Salt water	Produced water	400	17.4	2,086	500
501	do	do	Unruh	34-19-2W	No	1959	80	Mississippian Dolomite	4	2,948	0	2	2	0	1	0	do	Produced Mississippian	90	42.5	3,013	501
502	do	George Hess	Somes	35-19-2W	-	1959	-	Mississippian Chat	-	2,950	-	2	2	-	-	-	-	-	-	-	-	502
503	do	do	Unruh	16-19-2W	-	1957	-	Mississippian	-	2,975	-	2	2	-	-	-	-	-	-	-	-	503
504	do	Hess and Helms	Jones	9-19-2W	-	1957	-	do	-	2,950	-	1	1	-	-	-	-	-	-	-	-	504
505	do	Frank Jones	Finkle	23,19-2W	-	1960	-	do	-	2,940	-	4	4	-	-	-	-	-	-	-	-	505
506	do	do	Johnson	23-19-2W	-	1959	-	do	-	2,980	-	5	5	-	-	-	-	-	-	-	-	506
507	do	Magrove Drig.	Lively	21,22-19-2W	-	1960	-	do	-	2,950	-	5	5	-	-	-	-	-	-	-	-	507
508	do	Hadel and Sussman	Drum	35-19-2W	-	1958	-	Viola	-	3,780	-	4	4	-	-	-	-	-	-	-	-	508
509	do	Shell Oil	Mississippian and Viola	13,14-19-2W	-	1956	-	Mississippian	-	2,890	-	13	13	-	-	-	-	-	-	-	-	509
510	do	O. J. Sniderger	Suffield	25-19-2W	-	1955	240	Mississippian and Viola	20	3,200	-	7	7	0	-	0	-	-	-	-	-	510
511	Roxbury South	Natural Gas and Oil Co.	Bishop Unit	30-17-1W	Coop.	1958	120	Mississippian Chat	5	2,685	0	2	2	0	1	0	Salt water	Mississippian	578	84	5,315	511
512	Welch-Bornholdt	Shade and Berry	Mattson	28-19-6W	-	1959	-	do	-	3,440	-	2	2	-	-	-	-	-	-	-	-	512
513	do	Sierra Petroleum	Windom	30-19-5W	-	1959	-	Mississippian	-	3,415	-	8	8	-	-	-	-	-	-	-	-	513
													Estimated wells			204	204	8	Estimated secondary recovery			452,300
																204	204					510,035
MARION COUNTY																						
514	Elbing	Bayes	Evans	33-22-4S	-	1958	-	Kansas City	-	2,100	-	4	4	-	-	-	-	-	-	-	-	514
515	Lost Springs	Cling	Riffel	10-17-4S	-	1955	-	Mississippian	-	2,340	-	3	3	-	-	-	-	-	-	-	-	515
516	do	Doerflinger	Martin	5-17																		

DATA ON SECONDARY RECOVERY PROJECTS IN KANSAS, 1960

By Goebel, E. D., Hilpman, P. L., Beene, D. L., and Noever, R. J.

Sheet 5

State Geological Survey of Kansas

(Includes Neosho thru Woodson Counties)

Oil and Gas Investigations No. 24

No.	Field	Operator	Project	Location	Cooperative or unitized	Year started	Total developed acres	Producing formation	Thickness of producing zone, feet	Average depth to producing zone, feet	Flowing	Pumping	Total	No. producing wells drilled in 1960	No. active injection wells, 1960	No. injection wells drilled in 1960	Medium of injection	Source of water	Average bbl. water injected per day	Cumulative secondary oil recovered per acre-ft. developed	Production attributable to secondary recovery in 1960, bbl.	No.	
NEOSHO COUNTY																							
575	Erie	Earl Beeler	Barnhart, Erney, Faust	34,35-28-20E	Unit.	1953	-	"Bartlesville"	-	-	-	62	62	-	-	-	-	City water and Mississippi	-	-	-	575	
576	do	do	Hudson	21-28-20E	-	1959	-	do	-	500	-	1	1	-	-	-	-	Mississippian	-	-	-	576	
577	do	Deerfield Oil Corp.	Erie	24,25-28-19S; 19,20,29,30-28-20E	No	1962	440	do	12	550	-	164	164	23	-	15	Fresh and salt water	City and return	15	2,000	25,000	577	
578	do	J. O. Purvance	Edwards-Purvance	19,50-28-20E	Unit.	1949	20	do	15	600	0	7	7	0	2	0	do	Cherokee Shale and return	15	-	4,025	578	
579	Humboldt-Chanute	Aylward	MFA-Chanute	28,29,32,33, 34-27-19E	-	1958	-	-	-	-	-	240	240	-	-	-	-	-	-	-	-	579	
580	do	do	Pioneer Corp. Flood No. 1	20,29-27-19E	-	1961	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	580	
581	do	Belle Air Oil Corp.	Odessa Block	7,18-27-20E	No	1953	-	"Bartlesville"	-	-	-	20	20	-	-	-	-	Salt water	Mississippian	-	-	-	581
582	do	do	Weimer	4,9-27-18E	-	1949	-	do	-	750	-	70	70	-	-	-	-	-	-	-	-	582	
583	do	Buck Brothers	Lowen Lease	30-27-19E	No	1960	80	do	10	690	0	2	2	2	1	1	Salt water	Oswego	35	0	100	583	
584	do	Caddo Oil Co.	W. M. Wells	12-28-18E; 6,7-28-19E	Coop.	1962	107	do	35	750	0	31	31	5	18	0	do	Mississippi Limestone	75	1,115	13,780	584	
585	do	do	do	14,15-27-19E	Coop.	1952	57	do	30	825	0	8	8	0	5	0	do	do	41	418	3,560	585	
586	do	Keas Drilg. Co.	Chanute Project	3,4,9,10,15, 16-27-18E	Coop.	1959	290	do	25	750	48	87	135	0	82	0	Fresh and salt	Gravel and Return water	41	3,453.68	29,207	586	
587	do	do	Russell Unit	6,7-27-19E; 1,2,10,11,12, 14,15,21,22, 23,27,28-27-18E	Coop.	1958	1,151	do	25	760	387	19	406	0	374	0	do	do	38	3,898.23	78,942	587	
588	do	Powell Drilg. Co.	Keenan Lease	30-27-19E	No	1959	-	do	7	725	0	6	6	0	1	0	Fresh	Upper Formation	-	-	3,600	588	
589	do	Sage	Fickle	20-28-18E	-	1954	-	do	-	800	-	4	4	-	-	-	-	-	-	-	-	589	
590	do	Weygint	Rasmann	34-27-18E; 3-28-18E	-	1959	-	do	-	750	-	7	7	-	-	-	-	-	-	-	-	590	
591	Morehead	Creek Oil and Gas Co., Inc.	Morehead Project	18,30-70-18E	No	1958	18	do	17	850	-	12	12	0	7	0	Salt water	Kansas City and return	14	565	4,601	591	
592	St. Paul-Walnut	Carroll	Bentler	30-28-21E	-	1958	-	do	-	440	-	25	25	-	-	-	-	-	-	-	-	592	
593	do	Erie Oil	Dent	21,28-28-21E	No	1953	-	do	-	-	-	10	10	-	-	-	-	Fresh water	Shallow	-	-	-	593
594	do	S. S. Faulkner	Henry Van Leeuwen	33-28-21E	No	1955	-	do	-	-	-	25	25	-	-	-	-	Surface water	-	-	-	594	
595	Trout	OMH	Hazen	23-28-20E	-	1959	-	do	-	500	-	17	17	-	-	-	-	-	-	-	-	595	
596	do	Joey	Blaine	23-28-20E	-	1959	-	do	-	475	-	8	8	-	-	-	-	-	-	-	-	596	
597	do	do	Fouts	16-28-20E	-	1959	-	do	-	500	-	4	4	-	-	-	-	-	-	-	-	597	
598	do	Marsalis	"Bartlesville"	22-28-20E	-	1957	-	do	-	480	-	17	17	-	-	-	-	-	-	-	-	598	
599	do	R and D Oil Lease	Arthur Blane	24-28-20E	Unit.	1958	-	do	15	500	-	6	6	-	-	-	Salt water	Oswego	-	-	-	599	
600	do	V. R. Wyatt	V. R. Wyatt Unit	14,15,22-28-20E	No	1960	60	do	16	475	0	17	17	2	3	0	Fresh	Fresh well	15	0	-	600	
601	Urbana	Creek Oil and Gas Co., Inc.	Lewis Project	27-28-18E	No	1959	46	do	11	750	-	8	8	0	5	0	Salt water	Kansas City and return	31	71	2,269	601	
602	do	Deerfield Oil	Urbana Unit	33,35-28-18E	No	1958	-	do	-	680	-	28	28	-	-	-	-	-	-	-	-	602	
603	do	Lewis S. Taylor	Lewis S. Taylor	26,27-28-18E	No	1959	-	do	18-30	750	-	4	4	-	-	-	-	Fresh and salt water	Oswego	-	-	-	603
									Estimated wells		208	208	Estimated secondary recovery		498		18			210,901		375,975	
									2,259		475	1,117	1,552		498	18							
NESS COUNTY																							
604	Aldrich	Cooperative Refinery Association	Aldrich Pool	13,14,23,24-18-26W	No	1956	560	Mississippian	8	4,430	0	15	15	0	3	0	Salt water	Mississippian	400	296	-	604	
605	do	Tennessee Gas	Everett	7,8-18-26W	-	1960	-	do	-	4,420	-	4	4	-	-	-	-	-	-	-	-	605	
									360		-	19	19	3		-	-	-	-	-	-	35,533	
PAWNEE COUNTY																							
606	Benson	Cities Service Oil	Benson-Southeast Lease-K.C.	31,32-23-15W	Unit.	1958	112	Lans.-K.C.	250	3,700	-	9	9	0	1	0	Fresh and salt water	Supply well and Lens.-K.C.	477	0	0	606	
607	do	Pan American	Benson	19,30-23-15W	Coop.	1960	30	Lansing	28	3,625	0	2	2	0	1	0	Salt water	Lansing Produced	262	416	12,462	607	
608	Garfield	Clark Knight Drilg. Co.	Hutchinson Estate	3-23-17W	No	1959	-	Pennsylvanian-Mississippian	8	4,150	-	8	8	-	-	-	-	Dakota water	-	-	-	608	
609	do	Colorado Oil and Gas	Hutchinson "H"	3-23-17W	Coop.	1959	-	Conglomerate	10	4,175	-	8	8	-	-	-	-	Conglomerate	-	-	-	609	
610	Shiley East	National Coop. Refg. Assoc.	Cherokee	7,18-20-19W	-	1956	-	Cherokee	-	4,260	-	4	4	-	-	-	-	-	-	-	-	610	
									142		-	31	31	2		-	-	-	-	-	-	30,000	42,482
PHILLIPS COUNTY																							
611	Dayton	Humble Oil and Refg. Co.	Dayton Unit	25,26,35,36-2-19W	Unit.	1960	150	Toronto and Kansas City Limestones	37	3,350	-	4	4	0	2	0	Salt water	Cheyenne Sandstone	6	2	-	611	
612	Huffstutter	Thos. H. Allen	Huffstutter Unit	15-2-19W	Coop.	1960	360	Lans.-K.C.	10	3,300	-	8	8	0	3	0	do	Dakota Sandstone	150	0	0	612	
613	do	Petroleum Management	Davis	33-1-18W	Coop.	1960	150	do	-	3,400	-	4	4	0	1	0	do	do	127	35	5,537	613	
614	do	do	North Huffstutter Unit	16,17,20,21-18E	Unit.	1959	-	do	165	3,330	-	42	42	-	-	-	-	do	do	-	-	614	
615	Mont-Sol	Sohio Petroleum Co.	Mont-Sol Lens.-K.C. Unit	6,7-4-18W; 1,12-4-19W	Unit.	1960	100	do	28	3,200	-	4	4	0	1	0	do	do	310	36	3,580	615	
616	Stuttgart	Phillips	Stuttgart Unit	13,14,23-3-19W	do	1952	165	do	35	3,200	-	7	7	0	4	1	do	do	300	720	16,600	616	
									59		59	11		1			35,410		-				
PRATT COUNTY																							
617	Chance	General American	Chance	33-26-15W	-	1960	-	Viola	-	4,500	-	23	23	-	-	-	-	-	-	-	-	617	
618	do	Monsanto Chemical Co.	Strait and Drews	28,34-26-15W	-	1959	-	do	-	4,250	-	11	11	-	-	-	-	-	-	-	-	618	
619	do	R. W. Rine Drilg. Co.	Chance Pool	33-26-15W	No	1960	-	do	30	4,900	0	4	4	0	1	0	Fresh water	Shallow well	225	0	0	619	
620	Chitwood	Monsanto Chemical Co.	Chitwood Unit	14,22,23,26, 27-28-12W	Unit.	1955	1,492	Simpson	26	4,390	0	37	37	0	17	0	Salt water	Topeka and Produced Simpson	870	1,935	644,476	620	
621	Cunningham	Skelly Oil Co.	Southwest Cunningham	27-28-12W; 35-27-11W; 2,3-28-11W	100 o/o owned	1958	320	Lansing	7	5,501	-	8	8	0	1	0	Fresh water	Shallow gravel	181	0	0	621	
622	Frisbie	Texaco, Inc.	F. Smith	6-26-15W	-	1957	120	do	-	3,910	0	5	5	0	1	0	Salt water	Produced	93	-	6,659	622	
623	Frisbie Northeast	Skelly Oil Co.	Northwest Frisbie	4,5-26-15W	100 o/o owned	1950	30	do	18	3,710	-	2	2	0	1	0							

No.	Field	Operator	Project	Location	Cooperative or unitized	Year started	Total de-veloped acres	Producing formation	Thickness of producing zone, feet	Average depth to producing zone, feet	Flowing	Pumping	Total	No. producing wells drilled in 1960	No. active wells, 1960	No. injection wells drilled in 1960	Medium of injection	Source of water	Average bbl. of water injected per well per day	Cumulative secondary recovery per acre, bbl.	Production attributable recovery in 1960, bbl.	No.
706	Hall-Gurney	Cooperative Refinery Assoc.	Herbert and Horace Fink	15,16-14-14W	No	1957	280	Lans.-K.C.	17	3,070	0	7	7	0	1	0	Produced water	Produced Lans.-K.C. water	350	287	27,295	706
706	do	Duke Drig.	Boxberger	21-14-14W	-	1956	-	do	-	3,025	-	3	3	-	-	-	-	-	-	-	-	706
707	do	Harry Gore	do	26-14-14W	-	1954	-	do	-	2,800	-	6	6	-	-	-	-	-	-	-	-	707
708	do	Theodore Gore	Kastrup	10,16,16-15-12W	-	1958	-	do	-	3,020	-	8	8	-	-	-	-	-	-	-	-	708
709	do	Gulf Oil Corp.	H. A. Fink (Pilot)	15-14-14W	Coop.	1960	-	do	-	3,000	0	3	3	0	1	1	Salt water	Produced	110	-	-	709
710	do	Keystone Petroleum	Weismister Repressure	26-14-15W	-	1955	-	*arkio	-	2,170	-	5	5	-	-	-	-	-	-	-	-	710
711	do	Murfin Drig. Co.	Tarkio Unit	13,14,24-14-14W;17,18,20-14-15W	-	1959	-	do	-	2,850	-	45	45	-	-	-	-	-	-	-	-	711
712	do	National Cooperative Refinery Association	Rein "A"-Tarkio Flood	19-14-15W	Coop.	1959	70	Tarkio Sand	11	2,825	-	5	5	0	2	0	Salt water	Dakota formation	100	58	4,500	712
713	do	R. P. Nixon	Bond Unit	23-14-15W	No	1960	160	do	5	2,400	0	7	7	0	3	2	Fresh water	Shallow well	125	25.2	4,033	713
714	do	Pan American	Krug	27,28-14-14W	Coop.	1953	480	Lansing	136	3,000	0	16	16	0	9	0	Salt water	Dakota Sand	87	1,455	169,059	714
715	do	do	Ben Rein Lease	25-14-14W	Coop.	1957	120	do	20	2,950	0	3	3	0	2	0	do	Lansing and produced water	249	1,845	7,722	715
716	do	Petroleum Management, Inc.	Hall-Gurney	21-14-14W	Coop.	1959	40	Lans.-K.C.	20	3,110	-	2	2	0	1	0	do	Lans.-K.C.	180	889	12,900	716
717	do	R. H. Shields	Gustason	14-15-12W	-	1959	-	Toronto	-	2,840	-	2	2	-	-	-	-	-	-	-	-	717
718	do	Shields Oil	Miller	31-14-15W	-	1960	-	Lans.-K.C.	-	2,900	-	4	4	-	-	-	-	-	-	-	-	718
719	do	Morris Strin	Herbal	26,35-14-14W	-	1958	-	Kansas City	-	3,000	-	10	10	-	-	-	-	-	-	-	-	719
720	do	Skelly Oil Co.	Hall-Gurney Area	28,25,35-14-15W;25-14-14W	Coop.	1950	890	Lansing Lime	18	2,890	-	30	30	0	7	0	Salt water	Arbuckle, Dakota, and Lansing	160	284	57,326	720
721	do	do	Hall-Gurney Tarkio	15W;25-14-14W	Coop.	1959	160	Tarkio Sand	10	2,250	-	6	6	0	2	0	do	Dakota	162	13	2,044	721
722	do	Sunray Mid-Continent	Boxberger	32-14-14W	Coop.	1956	80	Lansing	20	2,960	-	3	3	0	1	0	do	Lansing and Cheyenne	389	2,772	20,656	722
723	do	do	Strecker A and B Lansing	25-14-14W	No	1956	167	do	15	2,920	-	5	5	0	1	0	do	Shallow water supply	642	437	26,500	723
724	do	do	Strecker A and B Tarkio	25-14-14W	Coop.	1959	145	Tarkio	7	2,257	-	7	7	1	3	0	do	Produced from Tarkio and Lansing	180	243	35,221	724
726	do	Texasco, Inc.	E. A. Borell	32-14-12W	-	1958	40	Lansing Lime	?	3,100	0	2	2	0	0	0	do	do	0	-	11,594	726
726	do	do	G. Boxberger "A" and "B"	22-14-14W	Coop.	1951	200	do	?	3,100	0	8	8	0	4	0	Salt water	Produced	850	-	28,521	726
727	do	do	H. L. and S., Boxberger	10,11,14,15-14-14W	-	1954	230	do	?	3,050	0	11	11	0	6	0	do	do	1,100	-	49,168	727
728	do	do	E. P. Gurney	23-14-14W	Coop.	1955	120	do	?	3,150	0	4	4	0	2	0	do	do	318	-	14,722	728
729	do	do	O. Kaufman	9-15-12W	-	1957	80	do	?	3,000	0	3	3	0	1	0	Salt water	do	366	-	0	729
730	do	do	D. Keil	36-14-14W	-	1958	80	do	?	2,900	0	4	4	0	1	0	do	Dakota Sand and Produced	13	-	0	730
731	do	do	Mohl and Shaffer	18-14-15W	Coop.	1953	220	Tarkio Sand	11	2,825	0	10	10	0	11	0	do	Cheyenne, Dakota, and Produced	940	-	44,692	731
732	do	Woland Corp.	Blair	8-14-15W	-	1956	-	Tarkio	-	2,400	-	4	4	-	-	-	-	-	-	-	-	732
733	do	Frank Wood Drig. Co.	Bond-Rein	22,23-14-15W	-	1956	-	do	-	2,280	-	10	10	-	-	-	-	-	-	-	-	733
734	James	Woodman-Lamnititi	Heine	13,24-15-12W	-	1958	-	Kansas City	-	3,050	-	6	6	-	-	-	-	-	-	-	-	734
735	Trapp	Cities Service Petroleum	Sichman "A" Lans.-K.C.	12,15-15-14W	Coop.	1957	159	Lans.-K.C.	12	3,090	-	11	11	-	5	0	Salt water	Arbuckle and Lans.-K.C.	285	672	50,971	735
736	do	do	Rogg "D" Lans.-K.C.	9-15-13W	Coop.	1960	160	do	28	3,090	0	5	5	0	3	0	do	Arbuckle, Dakota and Lans.-K.C.	485	13	2,016	736
737	do	Cooperative Refinery Assoc.	Gale Sellens	19-15-15W	No	1960	150	do	25	3,020	0	6	6	0	1	0	do	Produced Lans.-K.C.	-	14.6	1,894	737
738	do	do	George Sellens	20-15-15W	No	1959	160	do	30	3,040	0	7	7	0	1	0	do	Lans.-K.C.	620	199	25,676	738
739	do	Humble Oil	Detrich Unit	7,8,17,18-15-13W	-	1960	-	do	-	3,100	-	27	27	-	-	-	-	-	-	-	-	739
740	do	Isern-Wells	Schultz-Webarg	16-15-15W	-	1960	-	do	-	3,150	-	6	6	-	-	-	-	-	-	-	-	740
741	do	San Mitzel	Lansing	14-15-14W	-	1957	-	do	-	3,140	-	3	3	-	-	-	-	-	-	-	-	741
742	do	National Cooperative Refinery Association	Flegler "B"-Tarkio Flood	2,11-15-14W	No	1956	85	Tarkio	8	2,728	-	8	8	0	1	0	Salt water	Kansas City-Tarkio	370	234	6,955	742
743	do	do	Flegler "C"-Kansas City Flood	2,11-15-14W	No	1958	100	Kansas City	12	3,057	-	6	6	0	1	0	do	Arbuckle, Kansas City, Topeka and Toronto	685	75	3,148	743
744	do	Pan American	Northeast Trapp	4,9-15-15W	Coop.	1960	1,030	Lansing	55	3,010	0	10	10	0	9	0	do	Dakota Sand	351	3	2,819	744
745	do	Phillips Petroleum	Rosener	9-15-15W	-	1959	-	Lans.-K.C.	-	3,000	-	3	3	-	-	-	-	-	-	-	-	745
746	do	R. H. Shields	Gross	5-15-15W	-	1956	-	do	-	3,000	-	3	3	-	-	-	-	-	-	-	-	746
747	do	Shields Oil Producers, Inc.	Northeast Trapp	1-15-14W	Coop.	1960	160	do	50	2,850	0	7	7	0	3	0	Salt water	Cheyenne and Dakota	300	20.74	3,318	747
748	do	H. Shumaker	Michal	1-15-14W	-	1959	-	do	-	3,150	-	2	2	-	-	-	-	-	-	-	-	748
749	do	R. H. Steffried	Ross	11-15-15W	-	1957	-	do	-	3,050	-	3	3	-	-	-	-	-	-	-	-	749
750	do	Skelly Oil Co.	Rein	8-15-15W	-	1960	-	Lansing	-	3,180	-	15	15	-	-	-	-	-	-	-	-	750
751	do	Sohio Petroleum Co.	Northeast Trapp	10-15-15W	Coop.	1960	100	Lans.-K.C.	18	3,050	0	3	3	0	3	0	Salt water	Dakota	500	0	0	751
752	do	Sunray Mid-Continent	Trapp Pool Lansing	25,26,35,36-15-15W	No	1957	70	Lansing	19	3,110	-	5	5	0	1	0	do	Produced from Lansing and Arbuckle	245	0	0	752
												549	549	120	5	Estimated secondary recovery		337,600	1,192,565			
R																						