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ENERGY RESOURCE SERIES 3

ENHANCED OIL-RECOVERY IN KANSAS, 1973

ABSTRACT

Data for 1,402 enhanced recovery projects in 69 counties in Kansas are listed, and counties in which they are located are shown. Oil zones and sub-surface water sources are shown on a rock classification chart. Types of projects are indicated, and these include 1 with inert gas injection as the production mechanism, 1 with air injection, and 3 fire floods. Three hundred-thirty are identified as pressure maintenance projects, 283 as dump floods, and most of the remaining 784 are waterflood operations. During 1973, 78 repressuring applications were approved.

Crude oil production in Kansas totaled 66,227,391 barrels during 1973; of this, 14,712,913 (22.2%) were recovered from the projects listed. County and project summaries shown include totals of acreage, oil producing and input wells, and the amount of water injected and oil produced.

Water injection in producing zones to aid in extracting oil was sanctioned by law in Kansas in 1935. During the nearly 40 years since then, many of the projects have been abandoned. Accumulated production from these abandoned projects is not reflected in the present report; such information on them, however, may be found in references.

Research now underway at Lawrence is directed at developing new techniques for recovery of oil from large areas in Kansas where wells do not respond to the present recovery techniques. Hope for success in this research is reflected in the change in title of this report to "Enhanced Recovery Operations," from the former title which was designed to cover the work done primarily by waterflood and pressure maintenance operations in the state.

INTRODUCTION

Renewed interest in research on methods for recovering oil from known accumulations of "heavy oil" in Kansas is reflected in the title change for the accompanying report. "Enhanced Oil Recovery Operations" covers all methods of production used after normal flowing and pumping have depleted a well (primary recovery methods). During the 1973-74 session of the Kansas Legislature, funds for research in tertiary recovery methods were granted, and a joint study is now under way by members of the University of Kansas Department of Chemical and Petroleum Engineering and Geochemical and Subsurface Sections of the Kansas Geological Survey.

The world-wide energy crisis that developed during 1973, and the resulting increases in prices paid for crude oil, have joined to bring many companies back to the old oil-field areas. Kansas may see another cycle of increased oil production in the near future.

In many Kansas oil reservoirs, not enough energy is inherent in the rocks in which the oil is associated (solution gas, gas cap, or water drive) to drive more than a portion of the oil to the wellbore. It is then necessary to adopt other means of furnishing energy to move the oil. When the natural energy for

production has declined, it is possible, in most oil reservoirs, to increase oil production by injection of either gas or water into the reservoir. If such injection takes place while the reservoir pressure is high, and the producing wells are in the flowing stage, the operation is classified as pressure maintenance. If it is started after the pressure has been substantially depleted, and the field is in the pumping stage, it is referred to as secondary recovery, repressuring, or water-flooding. Only the operators of an oil field can make the judgment as to when a field is in the secondary recovery stage. Another term used is "dump flood." The word "dump" is used by operators to describe the technique used in flooding when water zones overlying the oil-producing horizon are opened in selected wells, allowing water to flow by gravity into the oil "pay" with very little control. This type of operation is quite successful if the oil reservoir is highly permeable.

A rule-of-thumb in Kansas is that about one-third of the oil originally in place will be recovered by use of primary production methods (flowing and pumping). Another one-third portion can usually be produced by injecting water in one or more holes to displace and move the residual oil to another well (waterflooding). For many years now, additional methods have been used, or tried experimentally, in attempts to wring out more of the oil that is not recoverable by either primary or secondary methods. These tertiary methods include, among others, the use of steam, fire (thermal), various special gases (including CO₂), wetting agents and detergents, solvents, and miscible agents. Studies of core samples enable operators to identify factors such as the types of clay minerals that are present, and the amount of permeability, porosity, and the oil and water content. With this knowledge the operator can best determine the method of recovery that will work in a particular field. Large areas in Kansas have reservoirs that have not been amenable to primary and secondary methods of recovery, and the current research is attempting to rectify this problem.

In addition to aiding in the production of additional amounts of crude oil, waterflood projects also help in the disposition of oilfield brines; thus they serve a double purpose. Companies are prohibited from disposing of brine on the land surface or in sands where potable water supplies may become polluted. Produced brines can be injected into their original rock zone with little difficulty if a closed system of production is used. If air is permitted to reach the brine, some components may become oxidized and will plug rock openings (pores) when re-injected. Water treatment units quite often are needed to prepare brines and fresh water from wells, streams, etc., so that they will not seal up the

face of the rock near the well bore.

HISTORICAL REVIEW

Prior to the turn of the century, operators in Pennsylvania and western New York oil fields observed substantial increases in oil production rates when water leaked past corroded casings of old wells into producing sands. This prompted them to purposely slit casing opposite water producing formations in some wells to permit water to enter the oil producing horizon.

Some years later, Kansas operators introduced the new technique from the eastern states. Waterflooding was practiced haphazardly for many years in southeastern Kansas counties before it was authorized by law in 1935. The first legal project commenced under the new Kansas statute was started on May 15, 1935, in the Seeley pool of Greenwood County, by York State Oil Company. Water was injected on that date into the Bartlesville sand at a depth of 1,940 feet. Two other projects started later in 1935. The Wiser Oil Company's Paulus flood in Chautauqua County was begun in September when water was injected into the "Peru" at a depth of 1,100 feet. The Texas Company inaugurated the third flood in December, 1935, in the Centerville Shoestring field of Linn County, by injecting water into the Bartlesville sand at a depth of about 400 feet. It is significant that the early "legal" water floods in Kansas were located in different areas, at various depths, and under differing geological conditions.

From 1937 on, interest in waterflooding spread rapidly throughout old stripper fields in eastern Kansas. By 1942, waterflooding projects were in operation in 13 counties, with greatest activity in Chautauqua, Montgomery, Greenwood, Neosho, Allen, Anderson, Linn, Franklin, Miami, and Crawford counties.

A special committee was organized at Chanute in 1950 to study secondary recovery operations in the state. Members of our present committee, who were appointed by Governor Frank Carlson, are our Co-Chairman Mack C. Colt, and Carl L. Pate. This group set up the mechanics for obtaining information on secondary oil recovery operations in Kansas, the information to be obtained, compiled, and published by the State Geological Survey at the University of Kansas, Lawrence. This also represents the Geological Survey's entrance into the efforts of the Interstate Oil Compact Commission to promote and improve oil conservation programs.

The forward to Bulletin 57, published in 1945, states:

"This report, Oil and Gas in Eastern Kansas, constitutes a summary of the results of past work, and a preface to important future work on the

occurrence and development of oil and gas deposits in eastern Kansas. The history of petroleum developments in this area covers a span of 85 years. It has passed from an era of relatively easy discovery of shallow pools to one of more difficult prospecting for deposits in older and more obscured rocks, and of varied techniques for extracting oil from reservoirs that were only partly exhausted during the earlier period of flush production. Significant quantities of oil will undoubtedly be produced from eastern Kansas rocks for many years to come."

The research now underway, in Lawrence and other places, designed primarily to find ways to unlock the large quantities of low-gravity oil, hopefully will bring the flood tide of production back to Kansas.

1973 PROJECT DATA

Data for 1,402 enhanced recovery projects in 69 counties are listed in Table 1, and the counties in which they are located are shown by shading in Figure 1. A number of the projects cross county borders and are listed as multiple-county projects in the report. The projects' official identification numbers are given in the first column of Table 1. For ease in locating the projects a table of contents is included.

Crude oil production in Kansas has declined rapidly since the peak year, 1956, when 124.7 million barrels were produced. Secondary methods of recovery accounted for 15.1 million barrels (12.2 percent) of that oil (Goebel, et al., 1957). The 1973 total of 66,227,391 barrels is just over half of the production 18 years earlier, and the 14,712,913 barrels reported produced by enhanced recovery methods last year was about 22.2 percent of the oil produced during the year (Table 2).

The types of projects used in Kansas fields in 1973 are indicated in this report. Table 1 lists 1 inert gas, 1 air-repressuring, and 3 fire-flood projects, among the more unusual. Three hundred-thirty are identified as pressure maintenance, 283 as dump floods, and most of the remaining 784 are called water flood operations. Some projects were not identified as to type, and several are called salt-water disposal operations.

During 1973, 78 repressuring applications were approved in the state.

Project report totals, provided by the companies, indicate that about 23 barrels of water or brine were injected for every barrel of oil recovered by secondary or tertiary methods in 1973; 14,712,913 barrels of oil to 339,372,839 barrels of water. An average of 10,496 oil wells and 5,408 injection wells were operating on the 305,664

acres of land involved. Many additional wells are on these leases, as companies find that they may get better results if inputs and/or producers in a field are put in an inactive status for a few months, while another group of wells is put into production. In some areas, in the later stages of a flood, this seems to help the water/oil ratios. The spacing of wells for secondary recovery is normally closer than that employed in the development of fields for primary recovery. The permeability of the sands between the wells is one of the determining factors in well spacing. The "shoestring sands" in many of the Kansas fields are narrow and sinuous and conventional spacing patterns cannot be used in these fields.

Also in Table 1, we have listed oil pay zones and sources of water, with their average depth below the surface and bed thicknesses. As an aid in comparing one bed with another, and identifying the geological group with which each is identified, a rock classification chart is included (Figure 2). Two useful marker beds, the Heebner Shale Member of the Shawnee Group, and the Stone Corral Formation of the Sumner Group, were added. The Stone Corral is present in the western half of the state, but the Heebner is found over all but the eastern portions of Kansas.

The zones listed in Table 1 are listed on the rock chart, and identified as oil and/or water sources.

This report covers only projects that were in operation during 1973. The cumulative statistics in Table 2 do not reflect production in floods that have been abandoned. Information on waterflood operations through the years can be obtained in great part from references listed in Table 3.

A number of operators did not furnish information on their field operations.

RULES AND REGULATIONS

General rules and regulations for the conservation of crude oil and natural gas in Kansas, issued by the State Corporation Commission, have specific sections dealing with the application, approval, operation, and discontinuance of fluid repressuring and waterflooding of oil and gas properties in Kansas. Applications for permanent disposal of brines produced from Kansas oil and gas fields also comes under the jurisdiction of the Conservation Division of the Commission. The permanent disposal of brines differs from water-flooding or secondary recovery operations in that disposal is in other than the producing zones (oil and gas reservoirs). The Oil Field and Environmental Geology Section of the State Department of Health and Environment monitors oil and gas producing areas to see that good housekeeping methods are used.

ACKNOWLEDGMENTS

We wish to thank the companies and individuals operating the recovery projects for responding so well to our request for information. This report could not have been prepared without their assistance.

With few exceptions, the data they provided were used exactly as reported to us. Field names in some cases were changed to conform to the official names recognized by the Kansas Geological Society's Nomenclature Committee.

Members of our Secondary Recovery and Pressure Maintenance Committee were contacted frequently during the past year, and were generous with their time and suggestions. Along with Mack C. Colt, of Mack C. Colt, Inc., Iola, KS, and Margaret O. Oros, Kansas Geological Survey, our Co-Chairmen; the members include Ray Anderson, Jr., BMG, Inc., Independence, KS; J. Lewis Brock, Conservation Division, Kansas Corporation Commission, Wichita, KS; James D. Elder, Terra Resources, Inc., Tulsa, OK; F. Doyle Fair, Petroleum Engineer, Wichita, KS; E.E. Funk, Cities Service Oil Company, Tulsa, OK; R. James Gear, Gear Operating Company, Wichita, KS; J.D. Kenworthy, Kewanee Oil Company, Tulsa, OK; Bruce F. Latta, Oil Field and Environmental Geology Section, State Department of Health and Environment, Topeka, KS; Larry A. Martin, Home-Stake Production Company, Tulsa, OK; John E. McLeland, Petroleum, Inc., Wichita, KS; Carl L. Pate, Oilfield Research Laboratories, Chanute, KS; Gene Rowe, Vance Rowe, Inc., Tulsa, OK; E.W. Sauder, Independent Producer, Emporia, KS; Tom L. Schwinn, Schwinn and Schwinn, Wellington, KS; and C.L. Sheedy, Jr., Bird-Hanley & Sheedy, Yates Center, KS. Geological Survey members of the Committee are Douglas L. Beene, Robert L. Dilts, and William J. Ebanks, Jr.

Frank Broadfoot, member of the Conservation Division of the Kansas Corporation Commission, was very helpful in providing information on projects, and in many other ways. Joan Jaeger, of the Survey staff, designed the cover and figures. Patsy Byrd and Margaret Williams assisted in preparation of material for the tables.

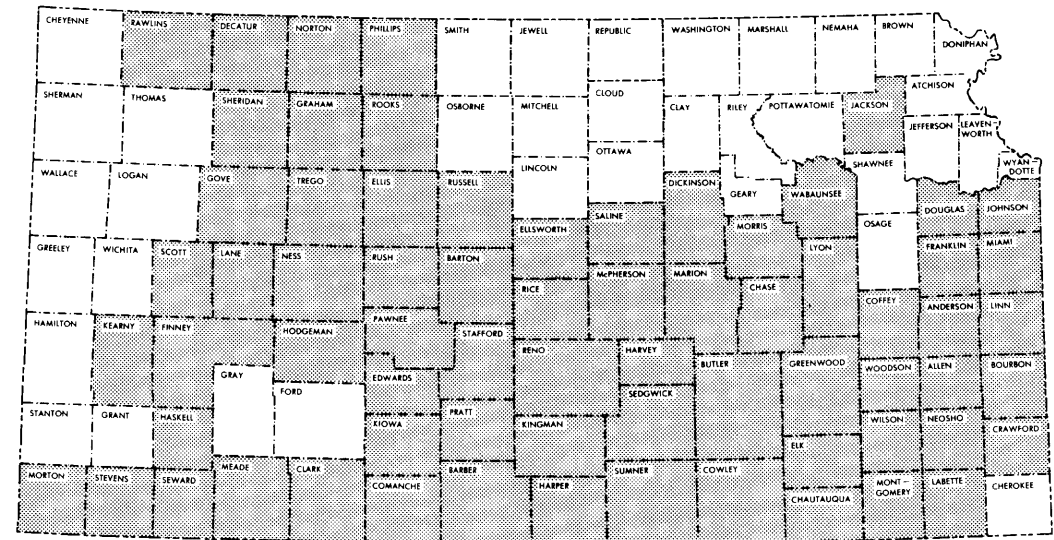


Fig. 1--Map of Kansas showing counties with enhanced recovery projects.

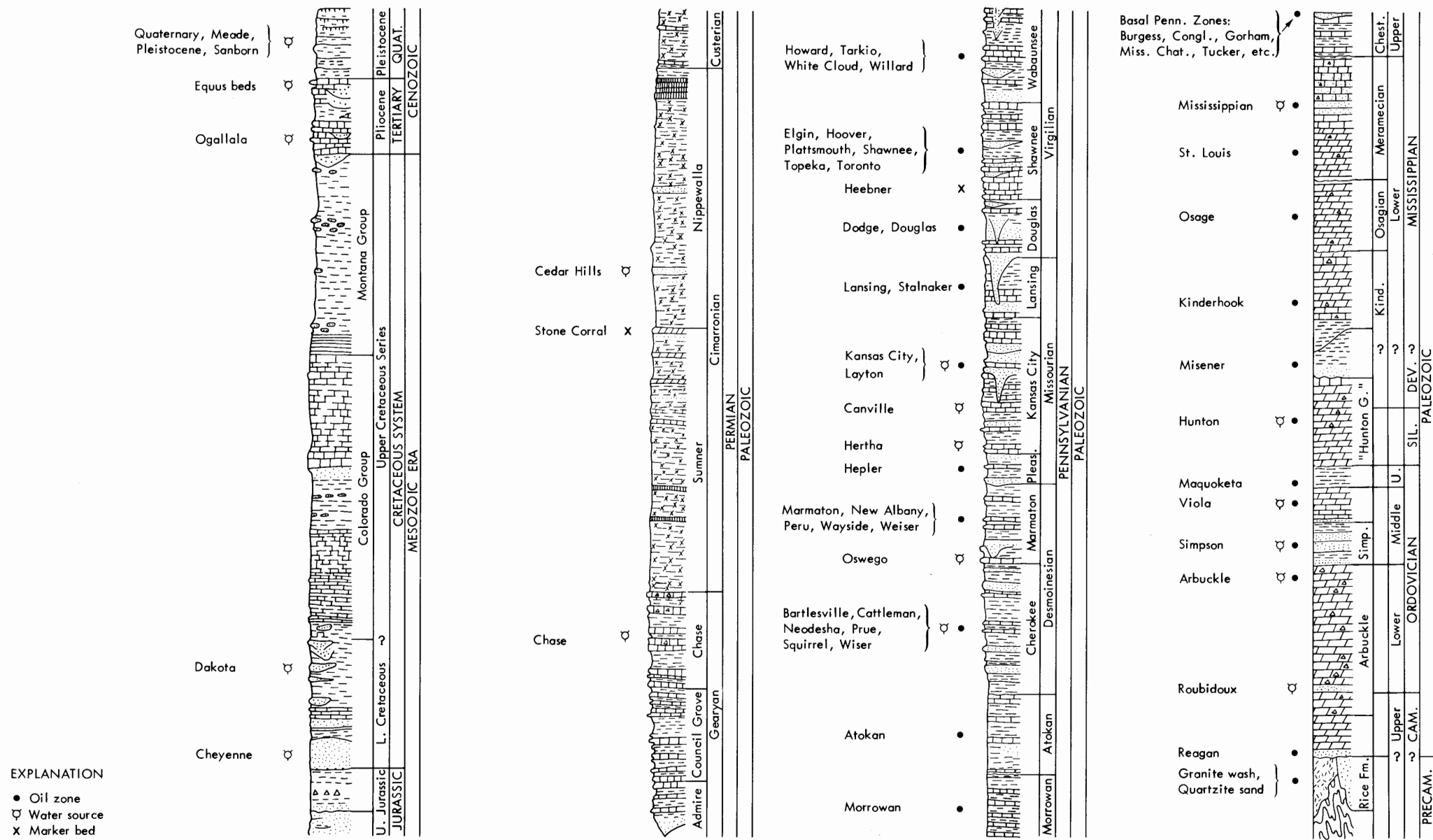


Fig. 2--Classification of rocks in Kansas (Ors, 1971, modified from Jewett et al, 1968). Stratigraphic positions of oil producing zones, water sources, and marker beds are indicated.

OIL ZONES AND WATER SOURCES

Names of oil producing zones and sources of water injected into these zones during waterflood operations are included in data presented in Table 1. The present primary source of information on these rock units in Kansas is Bulletin 189 (Jewett, et al., 1968).

A number of pay-zone names which are in daily use in the petroleum industry are not included in the Bulletin. In Jewett (1954), many of these names are listed, with a description of their normal stratigraphic position. Some of the terms may have been used for similar appearing, although different, sands in southeastern Kansas oil fields. A discussion of the reservoir rocks and water sources may also be found in Jewett's World Oil article (1948).

In Figure 2, oil pay-zones and subsurface water zones are identified with the geologic group with which the names are usually associated. Some liberty was taken, however, in the presentation, as subsurface units are not present in uninterrupted layers throughout the state. Sands and conglomerates at the base of the Pennsylvanian System (listed here as Congl sd, Gorham, etc.) shown just above the Mississippian rocks, occur at various positions in the Desmoinesian and Missourian Groups. A major unconformity exists between Pennsylvanian age rocks and the older rocks which underlie them. "Mississippi Chat" is a name used for erosional rocks at the top of the Mississippian rock units. Layton, Stalnaker, and some other names are applied to sands that have filled stream channels. These channels quite often cut deeply into older rocks; their stratigraphic position is in rocks much older than their depositional age.

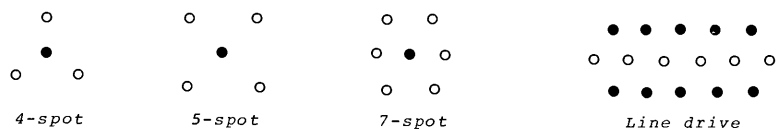
In addition to the indicated water source beds, a number of the projects depend on fresh water from streams, lakes, and municipal water supplies.

The approximate position of two important marker beds are also shown on the rock chart.

WELL PATTERNS

Four representative oil well and input well patterns are shown below. (See Craig, Chapter 5, 1971, for discussion of various injection patterns used in waterflood projects.) Abbreviations used for other patterns listed in this report are:

- Irreg = Irregular
- Line = Line drive
- Peri = Peripheral or perimeter



KEY: ● - oil well; ○ - water input

TYPE OF MATERIAL INJECTED

- TYPE OF PROJECT
- (A) = Air injection
 - (D) = Dump flood
 - (F) = Fire flood
 - (P) = Pressure maintenance
 - (S) = Steam flood
 - (SWD) = Salt water disposal
 - (W) = Controlled waterflood
 - (-) = Not identified

- Inert gas
- Natural gas
- F = Fresh water
- M = Mixture of fresh water and brine
- T = Treated brine
- U = Untreated brine
- Special additives:
 - MS = Micellar solution
 - P = Polymer
 - S = Surfactant

AVERAGE WELL-HEAD INJECTION PRESSURE

Pounds per square inch, as indicated, and:

- Grav = Gravity
- Vac = Vacuum

PRINCIPAL OIL PRODUCTION MECHANISM BEFORE SECONDARY RECOVERY OR REPRESSURING EFFORT

- Comb = Combination of production mechanisms not specifically designated
- Gas Exp = Gas expansion (gas cap) drive
- Grav = Gravity drainage
- S Gas = Solution gas drive
- Wat = Water drive

ABBREVIATIONS FOR OIL PRODUCING ZONES AND SOURCES OF INJECTED WATER

- Arb = Arbuckle
- Bartl = Bartlesville
- B Penn, Basal Penn = Basal Pennsylvanian
- Burg = Burgess
- Can = Canville
- Cattle = Cattleman
- Ced Hills = Cedar Hills
- Cgl, Cong, Congl = Conglomerate
- Chat = Mississippain chat
- Chey = Cheyenne
- Doug = Douglas
- Fr, Fresh = Unnamed fresh water source
- Gr = Gravel
- Hunt = Hunton
- KC = Kansas City
- Kind = Kinderhook
- L-KC, Lans-KC = Lansing-Kansas City
- Maq = Maquoketa
- Marm = Marmaton
- Miss = Mississippian
- Mor = Morrowan
- Penn congl = Pennsylvanian conglomerate
- Platt = Plattsmouth
- Pleist = Pleistocene
- Prod = Produced water
- Quat = Quaternary
- Salt Sd = Unnamed salt water sand
- Sd = Sand
- Sh Grav = Unnamed shallow gravel bed
- Sh Sd = Unnamed shallow sand
- Simp = Simpson
- Sr, Surface = Surface water source
- St L = St. Louis
- Stal = Stalnaker
- Ter = Tertiary
- Top = Topeka
- Tor = Toronto
- Wat, wtr = Water

Some project reports in Table 1 listed a figure for combined 1973 primary and secondary oil production. These data are carried in the "Remarks" column and are preceded by a number symbol (#).

In Table 2, the first column shows total primary and secondary oil reported produced in each county and for the state in the project areas during 1973.

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1973—

Kansas Geol. Survey Energy Resource Series 3, 1974

County	Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been continuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
ALLEN COUNTY																
	9546	Bronson-Xenia	Harold T. Beck	(W) Allen Co. Flood	Crowder	34-24S-21E	320	0	Bart1	650	15	30	14	0	0	Yes
	13452	Bronson-Xenia	R.W. Booth & G.K. Woods	(W) R.W. Booth Lse.	Richard W. Booth	3,4-25S-21E 18-25S-21E	10	0	Bart1	762	24	1	3	0	0	No*
	3091	Bronson-Xenia	Colt Oil Company, Inc.	(W) KBC-KBN	North Holeman, Stewart-Holeman, Lamb, Isenhardt-Hickson, Zimmerman, Grubaugh, Lent-Hullum, Moore-Davidson, Smith-Lundberg, Johnson, Harvey, Morrison, Newton-Wright	22-24S-21E 27-24S-21E 28-24S-21E 33-24S-21E	310	140	Bart1	750	20	84	36	0	0	Yes
	9440	Bronson-Xenia	Colt Oil Company, Inc.	(W) C-W	Harris, J.W. Bartlett, Bartlett, McLaughlin, L.M. Bacon	34-24S-21E 33-24S-21E 4-25S-21E 4-25S-21E 8-25S-21E 9-25S-21E	30	20	Bart1	800	20	6	0	0	0	Yes
	15815	Colony West	Welda Recovery, Inc.	(W) Colony B South Unit	Colony B South Unit	21,22,27-23S-18E	--	--	Squirrel	815	25	9	0	3	0	Yes
	6814	Davis-Bronson	Harold T. Beck	(W) Allen Co. Flood	Steiner	10,15-24S-21E	160	0	Bart1	650	15	13	0	0	0	Yes
	6851	Davis-Bronson	Dee Eastwood*	(W) Dawson	Dawson	15-24S-21E	80	0	Bart1	650	10	6	0	1	0	Yes
	13975	Davis-Bronson	Jackson Bros.	(W)	Melvin Stewart	22-23S-21E	160	--	Bart1	630	10	7	3	0	0	Yes
	11082	Elsmore Shoestring	Walter Duncan	(W) Walquist	Walquist	32-26S-21E	100	0	Bart1	670	30	5	4	0	0	Yes
	8152	Elsmore Shoestring	Geo. A. Hoffman Oil Co.	(W) Elsmore Pool	David Roy Perry, James F. Pavlicek	34-25S-21E	120	80	Bart1	720	16	11	--	--	--	--
	207	Humboldt-Chanute	Intermountain Petroleum Co.*	(W) Humboldt Unit	Pens, Puckett	21-26S-18E	260	--	Bart1	730	20	--	6	--	40+	No
	2362	Humboldt-Chanute	Jones & Campbell, Inc.	(W) Monarch	Dietrich	22-26S-18E	10	0	Bart1	800	10	4	10	0	0	Yes
	8170	Humboldt-Chanute	Layton Oil Co.	(W) Project 503	Monarch Unit	9-26S-18E	60	0	Bart1	820	16	12	0	1	0	Yes
	8647	Humboldt-Chanute	Layton Oil Co.	(W) Project 503	Project 503	1,12,13-26S-18E 6,7-26S-19E	488	0	Bart1	750	20	135	--	1	0	Yes
	596	Humboldt-Chanute	Minn Kan Oil Co.*	(W) Humboldt-Petrolia	Hamm, Shultz, D. Work, R.L. Work, Mathias, D. Work, Grother, Middendorf, Wadley, Armel, Campbell, McKinley, Morris, Trabue, Wilson-Dickerson	4-26S-18E 5-26S-18E 7-26S-18E 8-26S-18E 19-26S-18E 20-26S-18E 29-26S-18E 29,32-26S-18E	488	0	Bart1	750	20	135	--	1	0	Yes
	2698	Humboldt-Chanute	Minn Kan Oil Co.*	(W) Humboldt-Petrolia	Hamm, Shultz, D. Work, R.L. Work, Mathias, D. Work, Grother, Middendorf, Wadley, Armel, Campbell, McKinley, Morris, Trabue, Wilson-Dickerson	4-26S-18E 5-26S-18E 7-26S-18E 8-26S-18E 19-26S-18E 20-26S-18E 29-26S-18E 29,32-26S-18E	488	0	Bart1	750	20	135	--	1	0	Yes
	3183	Humboldt-Chanute	Minn Kan Oil Co.*	(W) Humboldt-Petrolia	Hamm, Shultz, D. Work, R.L. Work, Mathias, D. Work, Grother, Middendorf, Wadley, Armel, Campbell, McKinley, Morris, Trabue, Wilson-Dickerson	4-26S-18E 5-26S-18E 7-26S-18E 8-26S-18E 19-26S-18E 20-26S-18E 29-26S-18E 29,32-26S-18E	488	0	Bart1	750	20	135	--	1	0	Yes
	3435	Humboldt-Chanute	Minn Kan Oil Co.*	(W) Matson Group	Wadley, Fussman, Morris, McCarty, McKinley, Burtiss, Fraker	16-26S-18E 17-26S-18E 18-26S-18E	--	--	Bart1	800	8 to 60	150	6	2	0	Yes
	11183	Humboldt-Chanute	Bucane Oil & Research Co.*	(W)	Hayworth, Yount, Brachuer	36-26S-18E	160	0	Bart1	825	8	10	0	0	0	Not
	1858	Humboldt-Chanute	Ross-Keas Oil, Inc.	(W) Henrichs	Henrich, Henrich "A", Henrich "B"	22-26S-18E 22,23-26S-18E 23,26,27-26S-18E	167	0	Bart1	800	20	37	0	--	--	Yes
	4919	Humboldt-Chanute	Ross-Keas Oil, Inc.	(W) K-T	L.D. Butler, Ingram, Butler-Aldrich, Dickerson, Stewart, Swartz, Darby, Zeiner	32-26S-18E 32,33-26S-18E 33-26S-18E 4-27S-18E	205	0	Bart1	750	20	48	0	0	--	Yes
	5717	Humboldt-Chanute	Roy Willis*	(D) Heavy Oil	Hoepker, Krouse, McKaska	25-26S-18E 36-26S-18E	--	--	Bart1	825	15	4	3	0	0	Not
	10579	Humboldt-Chanute	Roy Willis*	(D) Townsend	Townsend	31-26S-19E	20	--	Bart1	830	10	4	0	0	1	Not
	16718	Humboldt-Chanute	Kenneth J. Wimsett	(W) K.J. Wimsett	C. Johnson Lease	18-26S-20E	160	50	Bart1	725	10	12	0	3	0	Yes
	9014	Humboldt-Chanute	Wimsett & Thompson	(W) Perrenoud	Perrenoud	9-26S-18E	80	60	Bart1	790	15	8	2	--	--	Yes
	13992	Iola	Fabco Oil Co., Inc.	(W) Miller-Ling-Teats and Dolecek	Miller, Teats, Ling (Abd. 1971), Dolecek	36-24S-17E 36-24S-17E 31-24S-18E	20	0	Squirrel	801	12	4	0	0	0	Yes
	8717	Iola	Layton Oil Co.*	(F) Cross-Clinkenbeard (offset lease)	Cross, Clinkenbeard	3-24S-18E										Primary oil production during 1973; thermal pilot project will start during 1974.

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1973

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl./well/day	Injected-water data			Date first inj.	Primary production mechanism	Primary oil-water ratio	API grav., deg.	Oil visc., cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks			
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.						Type	Water Injection		Oil recovered by secondary methods					
																	Total 1973	Cum. 12-31-73	Total 1973			Cum. 12-31-73		
9546	10	0	0	0	Irreg	--	--	--	--	U	--	--	24	--	--	--	158	--	--	#= 1973 Primary and Secondary Production				
13452	1	0	0	0	5-spot	320	10	Prod + Miss	1020	--	U	1967	S Gas	1/3	21.1	533	150	32,290	0	0	612	*Shut down most of year #22		
3091	88	24	0	0	Line	450	53	Prod + Miss	980	--	T	1951	Grav	1/0	30	--	1,688,501	30,023,657	54,115	2,948,211	2,948,211			
9440	6	9	0	0	5-spot	350	14	Prod + Miss	940	--	T	1962	Grav	1/0	26	--	29,993	972,841	1,215	73,360	--			
15815	6	0	2	0	Line	250	43	Shallow Lime	350	35	T	1971	Grav	1/0	32	--	94,938	215,850	13,726	28,845	28,845			
6814	3	5	0	0	Irreg	--	--	--	--	--	U	--	--	--	28	--	--	--	946	--	--			
6851	6	0	0	0	Irreg	550	20	Prod + Lake	--	--	F	1972	Grav	3/1	25	--	43,000	86,000	1,000	2,000	3,681	*Was O.R. Jackson #1681		
13975	6	0	0	0	Irreg	400	20	Prod + Miss	985	15	T	1970	--	1/30	26	26	30,000	--	--	--	--	--	#1200	
11082	7	0	0	0	Line	650	51	Prod + Miss	950	68	F	1964	S Gas	--	32.5	--	105,143	1,652,592	3,586	--	124,671			
8152	8	4	--	--	--	600	300	Prod + Arb	1800	16	T	--	S Gas	--	30	--	64,489	--	--	--	--	--	#1401	
207	0	--	--	40+	Irreg	0	--	--	--	--	--	--	--	--	--	--	Operation suspended since 1971					*Was Petro Futures, Inc. (L.W. Smith, Trustee)		
2362																							*Plus 4-spot	
8170	6	8	0	0	Irreg*	400	40	Prod + Oswego	500	25	M	--	Water	--	31	--	14,400	112,650	1,097	5,333	5,333			
8647	22	0	5	0	5-spot	255	46	Prod + Miss	1061	--	T	1970	S Gas	1/5	32	--	366,109	866,318	3,829	53,758	53,758			
596	58	54	0	0	Irreg	600	20	Prod + Neosho	--	--	M	1950	--	--	28.9	80 app.	318,904	25,307,772	21,444	1,119,398	1,119,398		*Was M.S. Kay Investments	
2698																								
3183																								
3435	140	9	0	0	Irreg	780	12	Prod + Neosho	--	--	M	1936	S Gas	--	27-28	--	657,000	--	9,729	--	--	--	?	*Was Barsent, Inc.
11183	0	0	0	0	Irreg	200	5	Prod	--	--	U	1965	Grav	1/0	33	--	9,000	49,000	400	1,930	2,660	*Was F. Merton Jeanes †Not operating part of yr. #960		
1858	23	0	--	--	5-spot	750	17	Prod + Arb	1380	--	M	1956	S Gas	--	29	--	143,415	3,370,905	4,746	184,422	184,422			
4919	37	0	0	--	5-spot	700	36	Prod + Miss	1100	--	M	1956	S Gas	--	30	--	491,735	12,213,969	9,120	--	574,757*	*Corrected for error in Report of 1970 & 1971		
5717	3	0	0	0	Irreg	400	5	Prod + Oswego	450	30	U	1953	Grav	1/0	31	--	2,000	683,000	--	--	185,011	*Was C.A. and Roy Willis †Shut down part of year. #590		
10579	6	0	0	2	Irreg	250	5	Prod + Oswego	450	30	U	1963	Grav	1/2	32	--	3,000	211,000	--	--	27,840	*Was C.A. and Roy Willis †Shut down part of year. #398		
16718	5	--	0	0	5-spot*	480	20	Prod + KC	200	5	M	1972	Grav	70/30	--	32	5,000	14,600	4,500	4,500	13,089	*Irreg #9,083		
9014	3	--	--	--	5-spot	650	100	Prod	--	--	U	1960	Grav	9/1	30	--	36,000	--	2,900	?	?			
13992	1	0	0	0	5-spot	600	52	Prod + Salt Water	137	350	U	1968	Grav	9/1	28	--	15,000	82,400	480	2,200	8,400	#560		
8717	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*Opr. for Oil Ventures Co. Assignee of Hudson Bay Fur & Realty Co.	

County Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been con- tinuous?
						Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
ALLEN COUNTY (concl.)															
9089	Iola	Layton Oil Co.*	(F) Carlyle Thermal	Gregg, Wiggins "B", Riggs, Javaux	10-24S-18E 11-24S-18E	Primary oil production during 1973.									
3246	Iola	Royal Oil & Gas Corp.	(D) Charlotte Hobbs	Charlotte Hobbs	9-24S-18E	160	--	Bart1	956	10	12	3	0	0	Yes
6633	Iola	The Star Producers, Inc.	(W) Lorance Lease	Lorance	21-24S-18E	10	0	Squirrel	668	9	3	0	0	0	Yes
7469	Iola (LaHarpe)	Tech-Am. Resources Corp.*	(W) Scott-Sallee	Otis Sallee, H.E. Scott	14-25S-19E	320	0	Bart1	808	35	10	15	0	0	Not
14322	Iola (LaHarpe)	Tech-Am. Resources Corp.*	(W) Lee Maloney & E.H. Rose	Lee Maloney & Everett H. Rose	15-25S-19E	320	0	Bart1	820	35	6	2	0	0	Yes
14357	Iola (LaHarpe)	Tech-Am. Resources Corp.*	(W) H.P. Morrison Unit	H.P. Morrison Unit	22-25S-19E	320	0	Bart1	861	35	9	2	0	0	Yes
14897	Iola (LaHarpe)	Tech-Am. Resources Corp.*	(W) D.L. Jarred & A.H. Setter "B"	D.L. Jarred, A.H. Setter "B"	21-25S-19E 22-25S-19E	320	0	Bart1	800	25	6	0	0	0	Yes
16534	Iola (LaHarpe)	Tech-Am. Resources Corp.*	(W) A.W. Wade	A.W. Wade	23-25S-19E	80	0	Bart1	845	24	3	1	0	0	Yes
10334	Moran	Marvin E. Boyer Oil Co.	(W) LaHarpe Unit #2	Knox, Wade, Coltrane, Jones, Wolfe, Foust	23-25S-19E 24-25S-19E	95	0	Squirrel	860	10	50	0	2	0	Yes
9952	Moran	Colt Oil Company, Inc.	(W) Moran Group	Bowen	35-24S-20E	25	0	Bart1	800	15	6	2	0	0	Yes
14856	Moran	Inexco Oil Company*	(W) Moran Waterflood	Winslow, Kreiger, Talbott, Seber, Sager, Weatherbie, Apt, Winslow, Hawkins	33,34,35-24S-20E	450	--	Bart1	+800	8	150	10	0	5	Yes
11361	Savonburg	Geo. A. Hoffman	(W) Savonburg	Joseph Lowe (now Nelson), Donald R. Nelson, Guy Shirley, Warren Sisson	28-26S-21E 21,29-26S-21E 29-26S-21E 22-26S-21E	640	--	Bart1	690	13	17	--	--	--	--
ALLEN COUNTY TOTALS (Reported)						5,660	350				862	122	13	46+	
ALLEN-ANDERSON COUNTIES															
4401	Colony West & Iola	Colt Oil Co., Inc.	(W) West Colony Project	Schulte, Davenport, Alexander, R. Baker, Victory Life, Harris, Kivett, Haldeman Ed Kelly, County Farm, Blohm, Bowlus	8-23S-18E 9-23S-18E 16-23S-18E 34-23S-18E 3-24S-18E	150	105	Squirrel	850	15	40	27	0	0	Yes
ALLEN-BOURBON COUNTIES															
37-01- 02A	Davis-Bronson	Colt Oil Co., Inc.	* McIntyre-Travis	Henninger C, Donovan, Depoy, Henninger A, Marshall, Gillaspie, Henninger B, Haynes, Honneus (Purdom), Lowe	34-23S-21E 2-24S-21E 3-24S-21E 10-24S-21E 11-24S-21E 15-24S-21E	0	0	Bart1	700	30	0	0	0	0	Not
ALLEN-NEOSHO COUNTIES															
4444	Humboldt-Chanute	Roy Willis*	(P) Seefeldt	Seefeldt, Seefeldt	34-26S-18E 3-27S-18E	20	--	Bart1	760	30	0	2	0	0	Not
ANDERSON COUNTY															
1111 852	Bush City Shoestring	Kewanee Oil Co.	(W) Dengo	McCraab, Litle, Oko, Woods, Cleveland, Kretchmer, Victor, Brownrigg, Jackson, Bandy, Daniel	28-20S-21E 33-20S-21E 4-21S-21E	346	17	Squirrel	614	15	122	5	0	0	Yes

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1973

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl./ well/ day	Injected-water data				Date first inj.	Primary production mechanism	Primary oil-water ratio	API grav., deg.	Oil visc., cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks	
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Oil recovered by secondary methods				
																	Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73			
9089	-	-	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	#=1973 Primary and Secondary Production
3246	1	0	0	0	Irreg	200	150	Prod	--	--	T	1952	S Gas*	--	19	--	48,600	570,954	--	†	--	--	*Opr. for Oil Ventures Co. Assignee of Hudson Bay Fur & Realty
6633	2	1	0	0	5-spot	--	3	River Gravel	20	6	F	1962	Grav	1/0	33	--	3,295	--	400	--	--	--	†Unable to determine
7469	1	24	0	0	Irreg	100	5	Prod + KC	170	30	M	1968	S Gas	99/1	17.8	650	293	74,275	0	0	81,835	--	*Was Tenneco Oil Co. #1,786
14322	4	0	0	0	Irreg	380	45	Prod + KC	170	30	M	1968	S Gas	99/1	21.7	--	62,948	257,797	12,970	46,497	88,746	--	†Resumed inj. Nov. '73 *Was Tenneco Oil Co. #13,840
14357	7	0	0	0	Irreg	470	55	Prod + KC	170	30	M	1968	S Gas	99/1	23.7	100	141,041	672,327	9,885	60,751	127,514	--	*Was Tenneco Oil Co. #12,257
14897	3	0	0	0	Irreg	582	73	Prod + KC	170	30	M	1969	S Gas	99/1	23.5	--	79,978	382,378	3,827	10,082	38,389	--	*Was Tenneco Oil Co. #5,681
16534	3	0	0	0	Irreg	333	59	Prod + KC	170	30	M	1972	S Gas	99/1	21.9	--	64,223	79,573	469	469	12,169	--	*Was Tenneco Oil Co. #753
10334	35	0	3	0	5-spot	500	16	Prod + Miss	1010	65	T	1963	Grav	98/2	24.6	--	215,026	--	52,415	--	--	--	--
9952	7	0	0	0	5-spot	600	47	Prod + Miss	960	--	T	1953	Grav	1/0	22	--	111,629	1,033,305	4,045	77,885	77,885	--	
14856	111	0	0	0	5-spot	650	12	Prod + Miss	1100	50	T S	1964	Fluid Exp.	--	22	150	438,000	--	93,672	694,397	694,397	--	*Was Roger Wheeler
11361	-	-	-	-	--	600	400	Prod + Arb	1600	16	T	--	S Gas	--	30	--	138,542	12,473,231	--	--	743,209	--	#10,545
	<u>619</u>	<u>138</u>	<u>10</u>	<u>42+</u>													<u>5,421,352</u>	<u>91,438,684</u>	<u>310,674</u>	<u>5,314,038</u>	<u>7,144,832</u>		
4401	20	39	0	0	Line	600	7	Prod + Miss	1260	--	T	1955	Grav	1/0	32	--	50,706	6,938,702	8,530	1,306,394	--	--	
37-01-02A	-	-	-	-	Line	0	0	Prod + Miss	960	--	T	1952	Grav	1/0	28.5	--	0	8,326,899	0	457,409	--	--	*Inactive Water Flood †Shut down, may reactivate #542
4444	0	3	0	0	Irreg	400	5	Prod + Oswego	525	20	U	1955	Grav	1/0	32	--	0	152,500	0	0	29,366	--	*Was C.A. and Roy Willis †Shut down
1111 852	117	5	0	0	5-spot	775	8	Prod + Miss	1451	--	T	1944	S Gas	--	36	*	415,141	9,745,894	24,690	1,466,635	2,105,040	--	*6.3 @ 75 ⁰

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1973—Continued

Kansas Geol. Survey Energy Resource Series 3, 1974

County	Project no.	Field	Operator	Type and project name	Lease name	Location		Acres in project		Oil producing zone			Oil producing wells (1973)				Has ini. been continuous?
						S—T—R		Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
ANDERSON COUNTY (concl.)																	
	5985	Bush City Shoestring	Kewanee Oil Co.	(W) Dengo	Bandy, Victor, Daniel		32-20S-21E 33-20S-21E 4-21S-21E	0	30	Bartl	740	11	0	3	0	0	No*
	3098	Bush City Shoestring	Ladd Petroleum Corp.*	(W) East and West Oko	C. Melcher, S.P. Johnson, Willson, Melcher, Ware, Doering, Herman, Weiss, Hunley, Pugsley		7-21S-20E 8-21S-20E 15-21S-20E 16-21S-20E	424	--	Squirrel	800	30	134	0	0	0	Yes
	3177	Bush City Shoestring	Marmon Oil Co.	(P) C & L Group	Badders, Croan, Gadelman, Hydorn, Roselle, Webber		8-21S-21E	319	0	Squirrel	620	30	140	0	0	0	Yes
	3151	Bush City Shoestring	Marmon Oil Co.	(P) Reed Group	Bab, Crozier, Odaffer, Cochran, Dennis, Diedel, Ewing, Mulkey		13-21S-20E	667	0	Squirrel	620	30	200	20	0	20	Yes
	6421	Colony-Welda	Brecheisen Oil Co.	(W) Summers-Cameron	Summers-Cameron		34,35-21S-19E	60	0	Squirrel	800-820	20	18	--	0	--	Yes
	6436	Colony-Welda	Brecheisen Oil Co.	(W) R.W. Brecheisen	R.W. Brecheisen		35-21S-19E	15	5	Squirrel	800	20	4	1	0	--	Yes
	6699	Colony-Welda	Brecheisen Oil Co.*	(W) Kattenhorn	Faith Kattenhorn		27-21S-19E	40	0	Squirrel	830	20	7	0	2	1	Yes
	9179	Colony-Welda	Brecheisen Oil Co.	(W) Buchanan & Settle	Buchanan, Settle		2-22S-19E	25	5	Squirrel	820	20	6	0	0	0	Yes
	11406	Colony-Welda	Brecheisen Oil Co.*	(W) Alex Mellville	Mellville-Kellstadt		34-21S-19E	60	0	Squirrel	830	20	15	0	2+	0	Yes
	11165	Colony-Welda	James E. Russell Petroleum*	(W) Unit No. 1	Unit No. 1		21,22,27,28, 33-22S-19E	320	0	Squirrel	800	15	0	88	0	0	Not
	4389	Colony-Welda	James E. Russell Petroleum*	(W) Unit No. 2	Unit No. 2		28,29,32, 33-22S-19E	116	0	Squirrel	800	16	1	17	0	0	Not
	5363	Colony-Welda	James E. Russell Petroleum*	(W) Unit No. 3	Unit No. 3		2,3-22S-19E	146	0	Squirrel	800	19	19	11	0	0	Not
	10781	Colony-Welda	James E. Russell Petroleum*	(W) Martin & Strain	Martin, Strain		4-22S-19E 9-22S-19E	55	0	Squirrel	800	21	17	5	0	0	Yes
	8945	Colony West	James E. Russell Petroleum*	(W) West Colony	West, McChee, Wolfe, Brecheisen, Lacy, Kelley		36-22S-17E 31-22S-18E 5-23S-18E 6-23S-18E	214	0	Squirrel	850	18	47	18	0	0	Yes
	10327	Colony West	James E. Russell Petroleum*	(W) Charles M. Hill (Was W.M. Dary)	Charles M. Hill		25-22S-17E	16	0	Squirrel	885	15	0	5	0	0	No
	7361	Garnett Shoestring	Glenn Caldwell	(P) Caldwell	Caldwell		32-20S-20E	30	-	Squirrel	660	20	9	4	0	0	--
	12120	Garnett West	H & G Pulling Company	(D) West Garnett	Hermrick, Macklin, White		25,26-20S-19E	80	0	Peru	610	10	4	1	0	0	Yes
	16816	Kincaid	Richard Engineering Co.*	(W) Kincaid Unit	Baptist Church Land Richard, Cooper, Richart, Frost, Gaddis, McCaslin-Vanbuskirk		29-22S-21E 32-22S-21E 4-23S-21E 4,5-23S-21E	+600	0	Bartl	710	+40	33	2	11	-	Yes
	581	Selma	Colt Oil Company, Inc.	* Selma	Steele, Cochran, Monroe		4-22S-21E 9-22S-21E	0	0	Bartl	850	18	0	0	0	0	Not
	13952	Selma	James E. Russell Petroleum*	(W) Vernon Croan	Vernon Croan		21-21S-21E	10	0	Bartl	650	12	0	5	0	0	Not
ANDERSON COUNTY TOTALS (Reported)								3,543	57				776	185	15	21	
BARBER COUNTY																	
	13209	Amber Mills	Cameron K. Reed	(W) House & Lawrenz	Emma House, Ella Lawrenz		15,16-30S-12W 16-30S-12W	210	0	Viola	4500	8	6	0	1*	0	Yes
	5362	Bloom	Am. Petrofina Co. of Texas*	(D) Bloom	Bloom		23-32S-12W	20	20	Miss	4321	17	1	0	0	0	Yes
	6939	Highway	Aylward Drilling Co.	(P) Gilbert	Stone		23-32S-11W	80	10	Douglas	3586	6	2	0	0	0	Yes
	15010	Medicine Lodge-Boggs	Skelly Oil Co.	(W) Boggs "C"	Boggs "C"		17-33S-12W	160	0	Simpson	4794	12	9	4	0	0	Yes
	14776	Medicine Lodge North	Robert R. Price*	(W) Forsyth Unit	C.J. Forsyth, J. Hill, D. Kirkbride		17,18,19, 20-32S-12W	200	0	Miss	4480	15	12	0	0	0	Yes

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl./well/day	Injected-water data				Date, first inj.	Primary production mechanism	Primary oil-water ratio	API grav., deg.	Oil visc., cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73		
5985	0	0	0	0	Irreg	--	--	Prod + Miss	1451	--	T	1958	S Gas	--	38	--	0	86,882	--	0	--	#=1973 Primary and Secondary Production
3098	112	6	0	0	5-spot	85	16	Prod + Arb + Miss	1625†	--	T	1951	S Gas	--	36	--	641,583	17,913,155	45,676	1,703,733	--	*Was Salmon Corp. †and 1,450
3177	114	0	0	0	5-spot	600	10	Prod + Arb	1430	30	T	1941	Grav	--	33	--	169,229	27,641,301	--	--	195,723	#6,462
3151	260	20	0	0	5-spot	600	10	Prod + Arb	1430	20	T	1939	Grav	--	33	--	294,632	39,022,919	--	--	1,387,987	#16,918
6421	10	0	0	0	Irreg	650	15	Prod + 400 Ft Sh	400	4	T	1958	S Gas	49/1	35	--	37,500	531,880	7,665	--	--	--
6436	2	2	0	2	Irreg	650	20	Prod + 400 Ft Sh	--	--	T*	1958	S Gas	40/1	34	--	9,000	--	--	--	--	* And S #700
6699	3	3	1†	0	Irreg	600	25	Prod + Oswego	400	5	T	1959	S Gas	9/1	34	--	27,250	325,500	2,920	--	--	*Was J.W. Perry †Converted from oil well
9179	5	0	0	0	5-spot*	500	20	Prod + 400 Ft Sh	400	4	M†	1962	S Gas	49/1	35-36	--	30,000	316,170	960	--	--	*And Irreg †And U
11406	3	0	1	0	Irreg	600	20	Prod + Oswego	400	4	T	1965	S Gas	9/1	34	--	20,220	63,220	2,875	--	--	*Was J.W. Perry †Plus 4 old wells cleaned out #5,475
11165	0	41	0	0	5-spot	0	0	Prod + Miss	1200	--	T†	1948	S Gas	--	33.1	13	0	6,458,240	34	579,789	1,320,314	*Was Russell-LeClair, Inc. †Shut down †And S
4389	0	17	0	0	5-spot	0	0	Prod + Miss	1200	--	T†	1955	S Gas	--	33	13	0	2,502,786	0	19,254	313,419	*Was Russell-LeClair, Inc. †Shut down †And S #894
5363	0	24	0	0	5-spot	0	0	Prod + Miss	1200	--	T†	1957	S Gas	--	36	7.5	0	2,301,116	0	72,700	187,950	*Was Russell-LeClair, Inc. †Shut down †And S #7,716
10781	18	1	0	0	5-spot	579	34	Prod + Oswego	700	60	T†	1964	S Gas	--	36	7.5	221,160	1,131,331	27,845	118,994	213,209	*Was Russell-LeClair, Inc. †And S
8945	42	46	0	0	Line	611	30	Prod + Salt Sd	1100	35	T†	1961	S Gas	--	30	22	465,008	5,383,667	21,399	460,487	635,198	*Was Russell-LeClair, Inc. †And S
10327	0	7	0	0	5-spot	0	0	Prod + Hertha	500	--	T†	1963	--	--	27	38	0	87,600	0	2,511	2,511	*Was Russell-LeClair, Inc. †And S
7361	5	0	0	0	5-spot	0	5	Prod	--	--	U	1959	S Gas	--	35	--	9,000	710,940	881	--	72,900	
12120	1	0	0	0	--	550	3000	Prod	--	--	U	1965	Wat	--	32	--	--	--	3,000	--	--	#680
16816	1	-	0	-	5-spot	450	30	Prod	--	--	T	1971	S Gas	100/10	27	30	--	--	+1,000	--	--	#19,716 *Was J. Cleo Thompson
581	0	0	0	0	Line	--	--	Prod + Miss	1100	--	M	1952	Grav	1/0	26	--	0	985,000	0	263,780	--	*Inactive Water Flood †Inactive
13952	0	5	-	-	5-spot	0	0	Prod + Surface	--	--	F	1968	S Gas	--	32	8	0	334,200	0	9,934	9,934	*Was Russell-LeClair, Inc. †Inj. shut down
	693	177	1	2													2,339,723	115,541,801	138,945	4,697,817	6,444,183	
13209	1	0	0	0	Irreg	200	1400	Prod	--	--	T	1967	Wat	9/1	36	--	511,000	--	5,788	121,806	121,806	*Dry, gas test
5362	1	0	0	0	Irreg	220	33	Prod	--	--	U	1957	S Gas	1/2	33	--	11,837	176,197	0	0	122,288	#8,841
6939	-	0	0	0	Irreg	*	47	Prod	--	--	U	1959	Gas Expt	8/2	28	--	34,310	386,794	2,900	67,850	104,235	*Was El Dorado Refg. Co. *Gravity †Wat #3,067
15010	1	0	0	0	Irreg	0	464	Prod	--	--	U	1969	S Gas	73/352	26.2	--	169,396	759,271	19,953	37,482	2,842,716	
14776	3	0	0	0	Peri	1500	590	Prod + KC	4000	--	T	1969	S Gas	9/7	30	--	531,000	1,635,000	16,668	30,069	610,895	*Was Barbara Oil Co.

County	Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been continuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
BARBER COUNTY (concl.)																
	16556	Medicine Lodge North	Robert R. Price*	(W) Kirkbride et al	Kirkbride et al	20-32S-12W	0	0	Miss	4388	15	0	0	0	0	Yes
	15203	Moffett West	Tenneco Oil Co.	(P) L.M. Lee "A" & "B"	L.M. Lee "A" & "B"	8,9-30S-15W	40	0	Viola	4646	30	0	0	0	0	Yes
	6584	Rhodes	Clinton Oil Co.	(W) W.A. Newkirk	W.A. Newkirk	20-33S-11W	571	409	Miss	4433	10	8	1	0	18	No*
	10102	Rhodes	Gulf Oil Corp.	(W) W.A. Newkirk	W.A. Newkirk	29-33S-11W										
	9123	Rhodes	Kewanee Oil Co.*	(W) Rhodes Unit	Page A,	17-33S-11W	160	0	Miss	4450	0	6	2	0	0	Yes
	10266				Page C, Newkirk,	15-33S-11W	1763	90	Miss	4550	20	19	10	0	0	--
					Page B	16-33S-11W										
					Page D	21-33S-11W										
	16262	Salt Fork	Braden-Deem, Inc.	(P) Davis Ranch	Davis, Noland, Merrill	11,12-35S-15W	320	0	Miss	4970	30	4	0	0	0	Yes
	15863	Skinner	Robert F. White	(D) Skinner "B"	Skinner "B"	17-31S-14W	--	--	Viola	4400	30	1	-	-	-	Yes
BARBER COUNTY TOTALS (Reported)							3524	529				68	17	1	18	
BARTON COUNTY																
	15252	Ames	Clinton Oil Co.	(W) Ames Unit	Feist, Feist "A", Henry L & Margaret Feist, Zink, Allen, Isern, Musenberg, Feist "B", Feist "C", Robl	26-18S-11W 34-18S-11W 35-18S-11W	800	0	L-KC	3150	30	8	0	0	0	Yes
	6929	Ames	Pioneer Operations Co.	(W) Robl Unit	Robl Unit	22,23,26, 27-18S-11W	480	0	L-KC	2925	155	6	0	0	0	Yes
	11512	Bailey	NCRA	(W) Bailey L-KC Unit	Bailey, Bock, Robl	30-18S-11W	50	0	Lans	3278	16	5	0	0	0	Yes
	14631	Beaver	Thos. H. Allan	(P)	Christians	10-16S-12W	40	--	L-KC	3060	12+	1	0	0	0	Yes
	16407*	Beaver	Colorado Oil Co.	(D) Kramer	Kramer	15-16S-12W	--	--	Arb	3342	4	1	2	0	0	Not
	16938	Beaver	Colorado Oil Co.	(D) Kramer	Kramer	15-16S-12W	60	40	Lans Arb	3051	181	2	0	0	0	Yes
	11244	Beaver	Keener Oil Co.*	(W) Feltes	N. Feltes	8-16S-12W	50	0	Lans	3318	2	2	1	0	0	Yes
	2259					3050				8						
	15418	Bernard	Graybol Oil Corp.	(W) Musenberg Unit	Musenber	10-19S-11W	60	0	Lans	3192	8	4	0	0	0	Yes
	8475	Bloomer	Stepco Oil Co.*	(D) Herr "A"	Bloomer	36-17S-11W	80	--	L-KC	--	--	2	0	9	7	Yes
	8376	Bottoms	Hillenburg Oil Co.*	(W) Zink A	Zink A	35-18S-12W	20	0	L-KC	3130	10	3	1	0	0	Yes
					Birzer B	36-18S-12W										
	15841	Boyd	Clinton Oil Co.	(W) C. Frieb	C. Frieb	4-18S-14W	80	0	L-KC	3230	20	6	1	0	0	Yes
	7810	Carroll	Everett Swander	(P) Meitner "A"	Meitner "A"	28-17S-14W	0	30	L-KC	3100	6	3	0	0	0	No*
	14333	Chaffee	H. A. Chapman	(W) Panning-Russell Waterflood	Panning, Russell, Grunwald	31-19S-13W	240	180	L-KC	3252	6	2	-	-	1	Yes
	11510*	Chase-Silica	NCRA	(D) Herr "A"	Herr "B", Herr "C"	24-19S-11W	--	--	--	--	--	--	-	-	-	No*
	11715	Chase-Silica	Okmar Oil Co.	(W) Burmeister	Burmeister, Isern A	25-19S-11W	40	0	L-KC	3080	7	2	0	0	0	Yes
	16630	Chase-Silica	Range Oil Co.*	(P) Batchman "C"	Batchman "C"	35-20S-12W	80	0	Arb	3370	10	1	-	-	-	Yes
	15218	Cheyenne	NCRA	(W) Lucas	Lucas	4-19S-12W	30	0	Lans	3104	15	3	0	0	0	No*
	16052	Cheyenne	NCRA*	(D) Miller "A"	Miller "A"	4-19S-12W	10	0	Lans	3100	15	1	0	0	0	Yes
	4344	Cheyenne View	Aladdin Petroleum Corp.	(P) Schartz	Schartz	14-19S-12W	160	160	KC	3050	30	5	0	0	0	Yes
	3561	Cheyenne View	Aladdin Petroleum Corp.	(P) Rinker B	Rinker B	12-19S-12W	80	0	KC	3060	30	3	1	0	0	Yes
	5387	Cheyenne View	Geo. H. Hannum (Isern-Wells)	(W) Lanterman	Lanterman "A"	23-19S-12W	160	0	KC	3142	49	7	-	0	-	Yes
	3980	Cheyenne View	Kewanee Oil Co.*	(W) Milton-Pflugl	Milton, Pflugl	14-19S-12W 15-19S-12W	50	40	KC	3144	260	3	0	0	0	Yes

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl/well/day	Injected-water data				Date first ini.	Primary production mechanism	Primary oil-water ratio	API grav. deg.	Oil visc. cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73		
#-1973 Primary and Secondary Production																						
16556	1	0	0	0	Irreg	750	525	Prod + KC	4000	--	T	1972	S Gas	9/7	30	--	--	--	0	0	2,896	*Was Barbara Oil Co. #611
15203	1	0	0	0	Irreg	0	50	Prod	--	--	T	1968	Grav	--	--	--	18,250	67,765	0	0	81,675	#1,597
6584	1	4	0	6	Irreg	1900	64	Prod	--	--	U	1958	S Gas	--	25	--	23,670	9,587,719	10,279	584,052	584,052	*Reinjecting prod. water
10102	2	4	0	0	Irreg	1633	174	Prod	--	--	U	1963	S Gas	59/38	25.4	--	126,867	8,964,417	13,200	323,289	323,289	†cp @ 126°F.: 4.7 (@ Reservoir Pressure and Temperature)
9123	13	6	0	0	Peri	2200	1513	Prod + Medicine Lodge River (Wells)	14	16	M	1962	Gas Exp	1/13.3	26	†	7,179,395	59,267,435	136,899	1,643,168	5,243,168	
10266																						
16262	1	0	0	0	Irreg	100	70	Prod	--	--	U	1971	S Gas	35/30	26	--	25,550	--	0	0	191,690	*Was Barbara Oil Co. #9,560
15863	1	-	-	-	Irreg	0	40	Prod	--	--	U	1971	Gas Exp*	20/40	33	--	15,000	45,000	0	0	512,000	*And Water #5,400
	26	14	0	6													8,646,275	80,889,598	205,687	2,807,716	10,740,710	
15252	3	0	0	0	Irreg	1565	--	Arb	3300	20	U	1971	S Gas	1/8	33	--	189,047	502,464	31,745	59,043	650,884	
6929	2	0	0	0	Irreg	570	250	Prod + Red Bed	375	80	M	1971	S Gas	1/1	40	--	111,325	257,747	1,800	--	--	#5,460
11512	1	0	0	0	Irreg	1200	206	Prod + Sh Sd	40	20	M	1972	S Gas	52/45	42.5	--	75,056	91,764	839	839	23,555	#17,385
14631	1	0	0	0	Peri 2-spot	0	28	--	--	--	U	1968	S Gas	25/75	40	--	10,220	62,890	800	2,900	--	#1,744
16407	0	1	0	0	Irreg	0	8	Prod	--	--	U	1972	Wat	16/752	39	--	983	97,564	0	0	345,685	*Project discontinued †Shut down #210
16938	1	0	0	0	Irreg	375	302	Prod	--	--	U	1973	Wat	16/369	39	--	70,161	70,161	0	0	348,266	#2,791
11244	1	1	0	0	Irreg	375	800	Prod	--	--	T	--	Wat	--	38	--	292,000	--	5,980	--	--	*Was Mobil Oil Corp. #6,642
2259	3	0	0	0	4-spot	850	355	Prod + Sh Sd	20	30	M	1970	S Gas	16/70	40	3.2	132,291	728,266	25,060	95,214	95,214	*Was Skelly Oil *Was Terra Resources #3,123
15418	1	-	-	-	3-spot	0	350	Prod	2964	10	T	1948	Gas Exp	98/2	35	--	--	--	--	--	--	
8475	1	0	0	0	3-spot	15	120	Prod	--	--	T	1961	Wat	73/27	40.3	--	34,000	--	0	--	--	
8376	1	0	0	0	3-spot	15	120	Prod	--	--	T	1961	Wat	73/27	40.3	--	34,000	--	0	--	--	
15841	1	0	0	0	Irreg	0	242	Prod	--	--	U	1971	S Gas	1/4.6	39.1	--	88,169	163,654	14,750	14,750	931,784	#15,607
7810	0	1	0	0	Irreg	0	0	Prod	--	--	T	1960	S Gas	18/82	38.7	--	0	--	0	--	--	*Not injecting #5,234
14333	2	-	-	1	Peri	Vac	110	Prod + Fresh	65	--	M	1968	S Gas	15/1	36	--	35,236	234,728	18,149	25,000	170,807	
11510	-	-	-	-	--	--	--	--	--	--	-	1965	--	336/0	42.2	--	19,280	1,111,535	2,279	28,124	47,751	*Project terminated 11-1-73
11715	1	0	0	0	Peri	350	200	Prod + Arb	3300	5	T	1966	S Gas	--	34	34	73,000	662,777	1,040	2,694	228,885	#2,241
16630	1	-	-	-	Irreg	0	45	Prod	--	--	U	1972	Wat	1/9	40	--	16,425	--	0	--	5,419	*Was Terra Resources #1,848
15218	0	1	0	0	Irreg	0	0	Prod + Gravel Bed	60	30	T	1969	S Gas	1/1	44	--	0	316,469	62	9,420	62,027	*Temp. shut down #8,996
16052	1	0	0	0	Irreg	0	112	Prod	--	--	T	1972	S Gas	10/5	40	--	40,931	94,904	0	0	6,903	*Was Thunderbird Drlg. #3,256
4344	1	0	0	0	Irreg	180	250	Fresh	50	20	F	1972	S Gas	--	40	--	100,020	160,295	15,978	22,566	22,566	
5561	1	2	0	0	Irreg	250	200	Prod + Fresh	50	30	M	1959	S Gas	1/0	38	--	63,950	1,875,000	5,185	330,527	330,527	
5387	1	-	-	-	Irreg	700	156	Prod	--	--	T	1966	S Gas	1/1	40	--	57,013	150,063	7,993	9,312	419,311	#13,993
3980	2	0	0	0	Irreg	300	54	Prod	--	--	U	1954	S Gas	26/7	43	--	39,423	2,680,549	2,703	215,796	432,112	*Milton sold 11-1-73 to Raymond Oil Co. and Pflugli sold 11-1-73 to Misco Supply Co.

County	Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been continuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
BARTON COUNTY (cont.)																
	14846	Cheyenne View	Nadel and Gussman	(W) Cheyenne View Unit	Lucas, Schartz, Wess, Eppstein	10-19S-12W	140	15	L-KC	3100	15	3	1	0	0	Yes
	3272	Cheyenne View	Sohio Petroleum Co.	(W) Heinz "A"	Heinz "A"	12-19S-12W	30	--	L-KC	3100	17	1+	1-	0	0	Yes
	7208	Cheyenne View	Southern States Oil Co.*	(P) Kultgen	Kultgen	12-19S-12W	160	--	L-KC	3100	19+	10	1	0	0	Yes
	8476	Ellinwood North	Am. Petrofina Co. of Texas*	(W) Schwamborn	Schwamborn	28-19S-11W	100	40	L-KC	3065	12	3	0	0	0	Yes
	6777*	Ellinwood North	Clinton Oil Co.†	(W) Nic J. Schartz	Nic J. Schartz	33-19S-11W	0	40	L-KC	3052	265	0	0	0	2	No
	9555	Ellinwood North	Kewanee Oil Co.*	(W) Hartman-Lanterman	Lanterman A Hartman	27-19S-11W 28-19S-11W	130	0	KC	3056	250	2	1	0	0	Yes
	17067	Erna Northwest	Icer Addis	(W) Nordman	Nordman "B" Nordman, Ralph Nordman, Sophia Bahr	19-18S-14W 24-18S-15W	480	--	L-KC	3300	10	7	0	0	1	Yes
	8604	Erna Southeast	Carl W. Boxberger	(D) Russell B	Russell B	29-18S-14W	60	60	L-KC	3258	210	2	0	0	0	Yes
	11427*	Ft. Zarah	W. L. Hartman	(D) Harris	Harris	30-19S-12W	30	0	L-KC	3139	60	2	-	-	-	--
	17199	Ft. Zarah	LVO Corporation	(W) Harris "A"	Harris "A"	30-19S-12W	80	0	L-KC	3128	70	2	1	0	0	No*
	15942	Frank	Raymond Oil Co.	(W) Hammeke-Neeland	Hammeke-Neeland	7, 8-19S-12W	120	--	L-KC	3160	22	3	-	-	-	Yes
	5366	Great Bend Airport	Petroleum Management, Inc.	(W) Great Bend Airport	Essmiller "A", Opie	26-19S-14W	320	100	L-KC	3188	240	2	1	0	0	Yes
	8335	Hammeke West	Nadel and Gussman	(W) Hammeke	Hammeke	18-19S-11W	20	10	L-KC	3142	10	2	2	0	0	No
	9812	Hammer	LVO Corporation	(W) Hammer Water Flood	Hammer "B", Johanning Birzer	35-19S-12W 36-19S-12W	160	20	L-KC	3100	220	10	0	0	0	No*
	12894	Hiss	Baruch-Foster Corp.	(W) McGreevy Lse.	McGreevy	30-20S-13W	80	0	Lans	3290	20	3	0	0	0	Yes
	5970	Hiss	Joe Brougner Oil Co.	(D) Murphy	Murphy	29-20S-13W	80	--	KC	3196	230	2	0	0	0	Yes
	13421	Hiss	Wayne L. Brown*	(P) McGreevy	McGreevy	30-20S-13W	80	0	L-KC	3214	40	2	0	0	0	Yes
	13046	Kimpler	Icer Addis	(W) Kimpler Water-flood	Kimpler "C"	31-18S-11W	80	--	L-KC	3150	5	1	0	0	0	Yes
	8421	Klepper	C. L. Hanes		Klepper	2-19S-11W	20	0	KC	3040	5	0	0	0	0	--
	10802	Knop	Clinton Oil Co.	(W) Knop Field WFS	Knop, Fox-Rusco "B", Wess	9-19S-12W	470	0	L-KC	3130	20	5	0	0	0	Yes
	16524	Kraft-Prusa	Colorado Oil Co.	(W) Esfeld	Esfeld	29-16S-11W	90	70	Douglas	2960	15	3	3	0	0	Yes
	9560	Kraft-Prusa	Gulf Oil Corp.	(W) Joseph	Joseph	29-16S-11W	160	0	Douglas	2995	--	7	5	0	0	Yes
	12275	Kraft-Prusa	Hazen Oil Co.*	(W)	Morgan "B"	22-16S-12W	160	0	L-KC	3105	4	3	1	7	1	Yes
	11293	Kraft-Prusa	NCRA	(W) Paul Dolechek	Paul Dolechek	24-16S-12W	40	0	Gorham	3352	26	4	0	0	0	Yes
	6187	Kraft-Prusa	NCRA	(W) Dolechek Est.	Dolechek Estate	24-16S-12W	30	10	Gorham	3339	20	3	0	0	0	Yes
	9163	Kraft-Prusa	NCRA	(W) Schneweis	Schneweis	5-17S-11W	20	0	Lans	3070	18	2	0	0	0	Yes
	12483	Kraft-Prusa	Skelly Oil Co.	(W) E.F. Esfeld	E.F. Esfeld	30-16S-11W	50	0	Lans- Douglas	2965	15	4	3	0	0	Yes
	13453	Kraft-Prusa	NCRA	(D) Gibler	Gibler	16-17S-11W	--	--	--	--	--	-	-	-	-	No
	16011*	Kraft-Prusa	NCRA	(D) Gibler	Gibler	16-17S-11W	--	--	--	--	--	-	-	-	-	No
	14488	Kraft-Prusa	Okmar Oil Co.	(W) Smith	Smith	36-16S-11W	40	0	Arb	3373	8	4	0	0	0	Yes
	16846	Kraft-Prusa	Petroleum Management, Inc.	(W) North Oeser	N. Oeser	30-16S-11W	160	--	L-KC	3057	--	5	-	-	-	Yes
	15222	Kraft-Prusa	Robinowitz Oil Co.*	(-) J.F. Zorn	J.F. Zorn	31-16S-11W	160	0	Douglas	2955	10	-	-	-	-	--
	12991	Kraft-Prusa	Schusterman Operating Co.*	(W) Krier WF	Krier A & C	30-16S-11W	160	0	Douglas	2980	8	5	0	0	0	Yes
	15196	Kraft-Prusa	Tenneco Oil Co.	(D) John Riemann "B"	John Riemann "B"	22-16S-12W	40	0	L-KC	3108	85	1	0	0	0	Yes
	13853	Lanterman	Lario Oil & Gas Co.	(P) Rehme	Rehme	15-19S-11W	40	0	L-KC & Arb	3050	--	2	0	0	0	Yes
	14882	Mary A.	Murfin Drilling Co.*	(W) Mary Axman	Mary Axman	23-17S-15W	80	40	L-KC	3414	12- 14	3	0	0	0	Yes
	17144*	Mater	Murfin Drilling Co.†	(W) Mater Waterflood	Ed Mater, Max Mater	11-17S-15W	160	0	L-KC & Toronto	3142	20	5	3	0	0	No
	11059	Ney Southwest	Ralph R. Rhyne*	(D) Rude	Rude E	2-16S-13W	20	13	Lans	3100	5	1	-	-	-	Yes
	13049	Prairie View	Icer Addis	(W) John Schartz	John Schartz, Ahrens, Kowalsky	20-19S-11W	160	0	L-KC	3200	150	4	0	0	0	Yes

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl/well/day	Injected-water data			Date, first inj.	Primary production mechanism	Primary oil-water ratio	API grav., deg.	Oil visc., cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pr. & sec.	Remarks		
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.						Type	Water Injection		Oil recovered by secondary methods				
																	Total 1973	Cum. 12-31-73	Total 1973			Cum. 12-31-73	
																				#=1973 Primary and Secondary Production			
14846	4	0	0	0	Peri	--	87	Prod + Sh Sd	50-	50	M	1969	S Gas	54/46	42	215	127,000	612,200	8,376	51,276	--		
3272	1	0	0	0	Irreg	0	280	Prod	--	--	T	1960	S Gas	1/5.1	40.1	--	102,040	1,190,638	2,824	73,940	77,955*	*Cum. prod. and inj. data from start of flood.	
7208	3	0	0	0	Irreg	650	335	Prod	--	--	T	--	Grav	--	39	--	348,729	1,460,412	36,958	--	--	*Was Westrans Petroleum	
8476	2	1	0	0	Peri	90	423	Prod	--	--	U	1961	S Gas	1/2	42	--	309,076	3,188,707	5,116	55,204	55,204	*Was El Dorado Refg. Co.	
6777	0	0	0	1	Irreg	0	243	Prod	--	--	U	1961	S Gas	1/1.3	37.6	--	27,663	1,678,701	363	61,608	--	*Plugged & Abd. 7-18-73	
9555	1	0	0	0	Irreg	1000	--	Prod	--	--	U	1962	S Gas	--	40	--	183,656	3,571,000	3,329	120,695	658,719	*Was Pan American	
17067	2	0	0	0	Irreg	50	170	Prod	--	--	U	1973	Gas Exp	--	40	--	125,064	125,064	16,080	16,080	152,157	*Sold 11-1-73 to Misco Supply Co.	
8604	1	0	0	0	Irreg	20	140	Prod	--	--	U	1961	--	23/13	39	--	51,100	241,985	1,460	4,015	150,268	#2,655	
11427	1	-	-	-	Irreg	60	60	Prod + Wat Sd	20	15	M	1964	S Gas	--	39.8	--	18,108	212,572	1,100	17,370	34,248	*Proj. not started yet	
17199	0	0	0	0	Irreg	--	--	Prod	--	--	T	--	S Gas	1/19	43	--	0	0	0	0	155,769	*Proj. not started yet	
15942	1	-	-	-	Irreg	60	350	Prod + Dakota	360	--	T	1971	S Gas	1/0	41	--	146,805	382,309	5,022	27,630	27,630	*Proj. not started yet	
5366	1	0	0	0	Irreg	0	100	Prod	--	--	U	1957	S Gas	--	--	--	23,390	1,410,321	1,748	55,599	55,599		
8335	0	1	0	0	Irreg	0	0	Fresh	100	20	F	1961	S Gas	8/2	38	--	0	411,750	0	63,400	--	#2,940	
9812	6	0	1+	0	Irreg	615	146	Fresh	50	--	F	1963	S Gas	58/549	38-39	--	287,179	3,311,378	14,118	273,243	273,243	*Reactivated 2-7-73	
12894	1	0	0	0	Irreg	0	20	Prod	--	--	U	1966	S Gas	15/18	34	--	7,200	50,300	0	200	201,495	+Prod. converted to W.I.	
5970	1	0	0	0	Peri	Vac	100	Prod	--	--	U	--	S Gas	--	38	--	--	--	--	--	--	#3,704	
13421	1	0	0	0	Irreg	0	386	Prod	--	--	U	--	Grav	60/40	32.6	--	136,786	263,306	1,081	1,931	3,863	*Was Phillips Pet. Co.	
13046	1	0	0	0	Irreg	0	48	Prod	--	--	T	1961	S Gas	--	41	--	17,520	484,000	700	63,506	--	#2,162	
8421																						#1,712	
10802	1	0	0	0	Line	0	90	Prod	--	--	U	1964	Grav	66/33	42.6	--	200,125	--	0	--	--	#676	
16524	3	0	1*	1	Irreg	550	205	Dakota	95	155	U	1971	--	1/3	41.7	--	224,291	309,104	51,671	88,502	592,254	*Recompleted	
9560	1	1	0	0	Irreg	1100	333	Prod	--	--	U	1963	S Gas	16/19	36	--	121,664	1,660,961	6,441	139,750	--		
12275	1	0	0	0	Irreg	670	546	Prod	--	--	U	1966	S Gas	86/1845	40.1	--	199,431	1,494,839	19,223	208,035	208,035		
11293	2	0	2	0	Irreg	500	580	Prod	--	--	U	1972	Grav	1/14	38	--	200,000	--	2,000	--	--	*Was NCRA	
6187	1	0	0	0	Irreg	800	518	Prod	--	--	U	1958	S Gas	1/3.8	42.4	--	188,985	2,769,152	5,413	102,995	160,881	#4,380	
9163	1	1	0	0	Irreg	250	313	Prod + Cheyenne Sd	525	50	M	1962	S Gas	1/3.2	42.1	--	114,249	1,465,371	4,088	80,494	155,662	#7,149	
12483	1	0	0	0	Irreg	650	255	Prod + Arb	3331	7	U	1966	S Gas	1/0	40.5	--	93,006	775,724	2,124	19,846	40,664	#3,846	
13453	1	0	0	0	Irreg	350	603	Prod	--	--	T	1967	S Gas	--	40	--	220,077	1,640,810	13,059	84,787	584,309		
16011	-	-	-	-	--	--	--	--	--	--	-	1971	--	1/9	39.6	--	0	50,581	0	0	2,569	*Terminated 3-1-73	
14488	1	0	0	0	Irreg	Vac	48	Prod	--	--	U	1972	S Gas	16/46	36	--	17,520	22,262	0	0	369,160	#1,636	
16846	1	-	-	-	Irreg	0	160	Prod	--	--	U	1972	S Gas	2/1	--	--	42,421	126,879	26,953	953,614	1,127,670	#4,558	
15222	-	-	-	-	--	1000	500	Prod	--	--	U	--	--	--	--	--	--	--	--	--	--	*Was Skelly Oil Co.	
12991	1	0	0	0	Irreg	650	275	Prod	--	--	T	1966	S Gas	--	36	--	100,300	1,658,880	3,100	71,600	783,897	No data received '73	
15196	1	0	0	0	Peri	0	150	Prod	--	--	U	1969	S Gas	64/120	--	--	54,750	237,276	0	0	206,332	*Was Kathol Petroleum Inc.	
13853	1	0	0	0	Irreg	Gr.	336	Prod	--	--	U	1967	S Gas	14/145	37	--	122,791	557,567	0	0	28,971	#5,461	
14882	1	0	0	0	Irreg	Vac	600	Prod + Dakota	410	30	M	1969	S Gas	99/1	40	--	219,000	752,366	6,799	15,330	31,330	*Was 3-G Oil Co.	
17144	0	0	0	0	Peri	--	--	Prod + Dakota	500	50	M	--	S Gas	9/1	37	--	0	0	0	0	274,362	+Was 3-G Oil Co.	
11059	1	-	-	-	Irreg	0	80	Prod	--	--	U	1964	S Gas	1/4	38	--	27,600	237,200	650	5,460	10,401	*Proj. not started	
13049	1	1	0	0	Irreg	900	510	Prod + Surface	40	10	M	1956	S Gas	--	38	--	186,150	1,536,700	8,915	148,002	--	#8,183	
																						*Was K & E Drilling Co.	
																						#1,021	

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1973—Continued

County Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been con- tinuous?
						Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
BARTON COUNTY (concl.)															
7104	Pritchard	Phillips Petroleum Co.	(W) West Hiss LKC	---	36-20S-14W	130	--	L-KC	3350	50	4	1	0	0	Yes
17155	Putnam West	Murfin Drilling Co.	(W) Williams W.F.	Williams Unit	12-17S-14W	160	0	L-KC	3214	30	1	0	0	0	No*
13249	Roesler	Nadel and Gussman	(W) Bieberle	Bieberle	15-18S-11W	30	0	KC	3025	10	2	0	0	0	Yes
16593	Roesler West	Clinton Oil Co.	(W) Kaiser	Kaiser	15-18S-11W	160	0	L-KC	3025	225	5	0	0	0	Yes
15193	Rolling Green East	Southern States Oil Co.*	(P) Lonnon B	Lonnon B	25-20S-13W	160	--	KC	3258	32	2	0	0	0	Yes
11630	St. Peter	Shelley Oil Co.	(D) Robl Unit	Robl, Musenberg, Hickle	32-18S-11W 33-18S-11W 5-19S-11W	240	40	L-KC & Platt	2912	216	8	0	0	0	No*
11909	St. Peter	Texaco Inc.	(W) St. Peter Pool	H. Schlochtermeir, T. Schlochtermeir	32-18S-11W	240	--	Lans & Platt	2300- 3100	--	6	2	0	-	Yes
12861	St. Peter East	Nadel and Gussman	(W) Johanning	Johanning	34-18S-11W	110	10	KC	3060	10	7	3	0	0	Yes
14055	St. Peter East	Nadel and Gussman	(W) Birzer	Birzer	3,4-19S-11W	80	0	L-KC	3100	20	4	0	0	1	Yes
9838	Sandrock	APCO Oil Corp.*	(W) Sandrock Unit	Weathers, Morrison, Jackson	27-20S-13W 28-20S-13W	60	0	L-KC	3400	20	4	0	0	0	Yes
13215	Sandrock	Phillips Petroleum Co.	(W) Pursel Unit	---	28-20S-13W	55	0	L-KC	3300	15	3	0	0	0	Yes
6478															
12586	Sandrock Southeast	Kewanee Oil Co.	(W) Engleman-McDonald	Engleman, McDonald	27-20S-13W 34-20S-13W	80	0	KC	3261	54	4	0	0	0	Yes
5560	Trapp	Aladdin Petroleum Corp.	(P) Soderstrom	Soderstrom	21-17S-13W	40	40	KC	3145	10	3	0	0	0	Yes
16089	Trapp	Colorado Oil Co.	(W) Siemsen	Siemsen	24-16S-14W	30	0	L-KC	3127	14	1	0	0	0	Yes
11190	Trapp	NCRA*	(W) Hoisington Flood	Boger, Underwood, Russell, Putnam	8-17S-13W 9-17S-13W 16-17S-13W 17-17S-13W	50	20	Lans	3326	6	5	0	0	0	No†
16882	Trapp	Petroleum, Inc.	(W) Trapp Unit	Sausen "B", Reif "I", Nettlesingham, Karst "B"	13-16S-14W 14-16S-14W	440	0	L-KC	3130	27	3	0	0	0	Yes
14759	Trapp	Lee Phillips Oil Co.	(W) Oltmann	Oltmann	15-17S-13W	10	0	Arb	3350	10	3	0	0	0	Yes
11517	Trapp	Schusterman Operating Co.*	(W) Schneider C WF	Schneider C	2-16S-14W	160	0	Lans	3082	4	1	0	0	0	Yes
16787	Trapp	Sierra Petroleum Co.	(W) Wilborn-LKC Unit	Thorne "C", Wilborn, Thorne "B"	22-16S-13W 27-16S-13W	360	--	L-KC & Topeka	3121	64	6	0	0	0	No*
15821	Two-Eighty-One	Cities Service Oil Co.	(D) Eveleigh "C"	Eveleigh "C", Streck "A"	27-16S-14W	32	0	L-KC	3188	12	2	1	0	0	--
11972	Workman Northwest	Kewanee Oil Co.	(W) Buckbee	Buckbee	14-20S-12W	30	0	Arb	3373	28	1	0	0	1	Yes
15842	Workman Northwest	Petroleum, Inc.	(P) Hulme "G-I"	Hulme "G-I"	16-20S-12W	160	0	L-KC	3160	52	5	0	0	0	Yes
BARTON COUNTY TOTALS (Reported) (Includes project in supplemental list.)						9,757	978				270	36	16	14	
BARTON-ELLSWORTH COUNTIES															
11565	Kraft-Prusa	Sun Oil Co.	(W) Kraft Prusa	Kraft Prusa Unit	7,18-17S-10W 1,13-17S-11W	620	180	L-KC	3101	124	-	-	-	-	--
BARTON-RICE COUNTIES															
9151	Mary Ida	Sohio Petroleum Co.	(W) Mary Ida Unit	Reif "A", Reif "B", Manke, Buehler, Mooney Doll, Musenberg	31-18S-10W 36-18S-11W	370	--	L-KC	3100	21	7+	5+	0	0	Yes
BARTON-RUSSELL COUNTIES															
14582	Hall-Gurney	NCRA	(W) Northwest Beaver	Hilgenberg "A", Hofmeister, Hilgenberg, Hilgenberg, Hilgenberg "B", Staudinger "A", Staudinger "E", Staudinger "B", Staudinger "D", Depiesse	32-15S-12W 5-16S-12W 6-16S-12W	400	40	Lans & Topeka	2980 2835	15	16	0	0	2 conv.	

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl./well/day	Injected-water data				Date first inj.	Primary production mechanism	Primary oil-water ratio	API grav. deg.	Oil visc. cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks
	Active	In-active	Drilled 1973	Ald. 1973				Source	Depth. ft.	Thick. ft.	Type						Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73		
7104	2	1	0	0	--	0	760	Prod + Fresh	150	--	M	1959	S Gas	1/4.3	40	5.5	518,319	5,349,788	12,145	141,808	1,094,534	#=1973 Primary and Secondary Production
17155	1	0	0	0	Irreg	Vac	50	Prod + Dakota	245	50	M	1973	S Gas	9/1	37	--	300	300	0	0	37,564	*17,855 *First inj. 11-16-1973 #2,599
13249	1	0	0	0	Irreg	0	114	Fresh	100	40	F	1967	S Gas	9/1	45	--	41,700	184,200	7,560	15,835	--	
16593	3	0	1*	0	Irreg	700	187	Dakota	35	168	U	1972	S Gas	1/1.2	42.5	--	136,701	257,334	36,550	53,392	275,728	*Recompleted
15193	1	0	0	0	Irreg	--	36	Prod	--	--	T	1969	Grav	--	35	--	13,177	64,129	3,278	21,761	21,761	*Was Westrans Petroleum
11630	0	4	0	0	Irreg	0	0	Prod	--	--	T	1965	S Gas	--	38	--	0	1,970,737	23,809	239,543	--	*No water inj. in 1973 #29,009
11909	3	1	0	--	Peri	0	94	Prod	--	--	U	1962	Wat	2384/3649	42	--	103,830	4,078,415	8,938	181,394	334,225	
12861	3	0	0	0	Peri	0	171	Prod + Sh	100	20	M	1966	S Gas*	85/15	40	--	187,350	1,447,050	13,775	103,375	--	*Partial Water
14055	3	0	0	1	Peri	0	175	Prod + Sh	100	100	M	1968	S Gas*	1/4	30	--	192,200	875,000	4,242	26,542	--	*Partial Water
9838	2	0	0	0	Irreg	50	155	Prod + Ter. Sd	60	16	F	1962	S Gas	--	30	--	113,030	1,549,968	6,070	135,652	--	*Was Schermerhorn
13215	2	1	1	0	Line	280	217	Prod + Fresh	60	--	M	1967	S Gas	1/0.5	30	18	237,341	1,414,272	10,473	79,193	331,913	#13,533
6478			conv																			
12586	2	0	0	0	Irreg	Vac	241	Prod	--	--	U	1966	S Gas	68/59	30	--	175,869	753,030	3,834	27,305	277,606	#8,085
5560	2	0	0	0	Irreg	150	190	Prod	--	--	T	1957	S Gas	--	38	--	55,025	1,922,248	1,826	61,416	461,914	
16089	1	0	0	0	Irreg	400	670	Prod + Arb	3349	3	U	1971	Wat	6/70	35	--	251,690	668,040	0	0	--	#3,526
11190	0	1	0	0	Irreg	0	196	Prod + Arb	3413	2	U	1964	S Gas	2.79/0	39.8	--	55,491	364,713	3,093	42,696	205,723	*Was Thunderbird Drlg. †Temp. shut down #9,120
16882	1	0	0	0	Line	Vac	45	Prod + Cedar Hills	247	44	T	1973	S Gas	17/36	41	--	8,948	8,948	4,568	4,568	4,568	
14759	--	0	0	0	Irreg	Vac	250	Prod	--	--	U	1969	--	31/69	40	--	91,615	701,815	2,469	6,789	384,656	#8,221
11517	1	2	0	0	Irreg	0	60	Prod	--	--	U	1965	S Gas	1/10	37	--	22,000	295,000	1,400	5,000	909,548	*Was Shell Oil Co. #3,099
16787	1	0	0	0	Peri	250	308	Prod + Dakota	312	30	M	1973	Wat	34/66	39	--	68,680	68,680	0	0	6,340	*Inj. part of year #5,903
15821	0	0	0	0	Irreg	0	0	Prod	--	--	U	1970	S Gas	55/28	37.6	--	0	48,316	0	0	156,675	#21,023
11972	1	0	0	0	Irreg	Vac	7	Prod	--	--	U	1965	Wat	10/16	40	--	2,558	74,452	0	0	46,919	#1,558
15842	1	0	0	0	Line	682	182	Prod	--	--	T	1971	S Gas	61/163	40.1	--	66,505	147,038	16,124	43,537	43,537	
	124	35	7	10													15,496,267	65,404,618	547,091	4,849,966	11,455,819	
11565	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9151	8	5	0	0	Peri	840	251	Prod + Fresh	130	10	M	1962	S Gas	1/4.25	39.6	--	733,112	7,521,032	46,917	724,356	888,219*	*From start of flood
14582	9	0	2	0	Peri	535	236	Prod + Dakota	360	40	T	1968	S Gas	130/700	41.3	--	776,020	4,169,186	30,718	199,486	383,310	#59,240

County	Project no.	Field	Operator	Type and project name	Lease name	Location S - T - R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has ini- been con- tinuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
BARTON-STAFFORD COUNTIES																
	1942	Bart-Staff	NCRA	(W) Dorfshaffer-	McGreevy "A", McGreevy "B"	33-20S-14W	70	60	Lans	3330	15	7	0	0	0	Yes
	11131			(W) McGreevy	Dorfshaffer	5-21S-14W										
	11810	Shaeffer-Rothgarn	Kewanee Oil Co.	(W) Sharp A & B	Sharp A, Sharp B	35-20S-13W 3-21S-13W	100	40	KC	3267	206	2	1	0	0	Yes
BARTON-STAFFORD COUNTIES TOTAL (Reported)							170	100				9	1	0	0	
BOURBON COUNTY																
	11503	Bronson Southeast	Terra Resources, Inc.	(W) Ellington Waterflood	Ellington	1-25S-21E	40	0	Bart1	630	10	2	2	0	4*	Yes
				(W) Holeman "A"	Holeman "A"	1-25S-21E	20	0	Bart1	650	10	2	0	0	1*	Yes
				(W) Lormor Waterflood	Lormor	1-25S-21E	40	0	Bart1	650	10	2	4	0	4*	Yes
				(W) O'Harah Waterflood	O'Harah	1-25S-21E	20	0	Bart1	650	5	0*	2	0	2*	--
				(W) Humphrey WF	Humphrey	36-24S-21E	140	0	Bart1	650	8	11	1	0	1*	Yes
	11914	Bronson Southeast	Terra Resources, Inc.	(W) Woodward "A" WF	Woodward "A"	12,13-25S-21E	90	0	Bart1	661	18	10	2	0	0	Yes
	11355	Bronson-Xenia	T.E. Bird	(W) Collins	Collins, Camac	25-24S-21E	25	0	Bart1	610	16	9	1	0	0	Yes
	11545	Bronson-Xenia	Crystal Oil Co.*	(-) --	Arthur Ziegler	7,8,17-24S-22E	--	--	--	--	--	0	--	--	--	--
	11780	Hepler	Walter Duncan	(W) Hepler	Freeman, Jackson Shireman, Johnson	24-27S-21E 19-27S-22E	140	0	Tucker	675	14	34	0	0	0	Yes
BOURBON COUNTY TOTALS (Reported)							515	0				70	12	0	12	
BTLER COUNTY																
	11719	Augusta	Cities Service Oil Co.	(W) Skaer-Starkey	Skaer, Starkey	35-27S-4E	265	0	KC	2030	5	10	5	0	0	Yes
	11415	Augusta	Cities Service Oil Co.	(W) Augusta Unit	Augusta Unit	2,10,11,14- 15-28S-4E	732	28	KC	2050	6	17	7	0	14	Yes
	11786	Augusta	Farm and Ranch Unified Inv.*	(W) --	Lee Prier, Bohannan	2-28S-4E	160	--	KC	2050	--	5	2	10	3	Yes
	11240	Augusta	Hammer & Maclean	(P) Ambler & Moyle	Moyle, Ambler	35-27S-4E 2-28S-4E	160	0	KC	2062	10	7	--	0	0	Yes
	11242	Augusta	Hammer & Maclean*	(D) Safford-Mann	--	26-27S-4E	160	0	KC	2032- 2040	10	1	0	0	0	Yes
	11120	Augusta North	Robert F. White*	(D) Foster	Foster	21-27S-4E	160	80	KC	2000	20	6	0	0	0	Yes
	11187			(-) Scully "C"	Scully "C"	16-27S-4E	--	--	--	--	--	--	--	--	--	--
	11049*	Augusta North	Robert F. White	(-) Scully "C"	Scully "C"	16-27S-4E	--	--	--	--	--	--	--	--	--	--
	11682			(P) Dunne	Dunne	9-26S-8E	80	0	Bart1	2400	20	2	1	0	0	Yes
	11672	Blankenship	Eureka Drilling Co.	(W) Drumm-Bitler	Drumm-Bitler	20-26S-8E	80	0	Bart1	2660	25	2	2	0	0	Yes
	11169	Blankenship	Okmar Oil Co.	(D) Brewer	Brewer, Seeley	23-28S-7E	60	0	Peru	2350	10	3	0	0	0	Yes
	11105	Brandt-Sensenbaugh	J.E. Morris	(D) Ramp	Ramp	23,26-28S-7E	160	0	Peru	2450	10	2	0	0	0	Yes
	111259	Brandt-Sensenbaugh	White & Ellis Drilling	(W) De Moss Unit	De Moss "A", De Moss "B", Sutter, Farner	5,8-28S-7E 5-28S-7E 7-28S-7E 8-28S-7E	--	--	Bart1	2650	40	8	0	0	0	Yes
	111136	De Moss	Rex & Morris Drilling	(W) De Moss Unit	De Moss "A", De Moss "B", Sutter, Farner	5,8-28S-7E 5-28S-7E 7-28S-7E 8-28S-7E	--	--	Bart1	2650	40	8	0	0	0	Yes
	115958	Eckel Northeast	Rex & Morris Drilling	(W) Henn Unit	Vernon, Lill, Henn	5-27S-7E 6-27S-7E	110	0	KC	2025	10	6	0	0	0	Yes
	111895	Elbing	Aladdin Petroleum Corp.	(P) Furman	Furman	8-23S-4E	120	0	KC	1925	30	5	0	0	0	Yes
	117145	Elbing	Hillenburg Oil Co.	(P) North Lathrop	North Lathrop	17-23S-4E	80	0	KC	1950	30	4	0	0	0	Yes
	118005	Elbing	Hillenburg Oil Co.	(P) South Lathrop	South Lathrop	17-23S-4E	40	0	KC	1950	30	4	2	0	0	Yes
	111973	Elbing	Phillips Petroleum Co.	(W) J.C. Scully	--	17-23S-4E	60	0	L-KC	2020	30	2	0	0	0	Yes
	113622	Elbing & Elbing E.	James Cook*	(D) Everett Flood	Parris, Everett, Neer	20-23S-4E 27-23S-4E	150	0	KC	2048	25	3	0	0	--	Yes
	114575	El Dorado	R.R. Abderhalden	(P) Pollard Water- flood	Pollard	25-25S-4E	80	--	El Dorado	700	20	2	3	0	0	--
	116672	El Dorado	R.R. Abderhalden	(W) Deming Water- flood	Deming	19-25S-5E	80	0	El Dorado	650	13	3	1	0	0	Yes

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl/well/day	Injected-water data			Date, first inj.	Primary production mechanism	Primary oil-water ratio	API grav., deg.	Oil visc., cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks				
	Active	In-active	Drilled 1973	Abd. 1973				Source								Water Injection		Oil recovered by secondary methods				Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73
								Depth, ft.	Thick., ft.	Type						Total	Cum.	Total	Cum.						
9942 10131 13810	3 1 1	0 0 0	0 0 0	0 0 0	Irreg Irreg	775 350	234 289	Prod + Arb Prod	3550 --	-- --	T U	1963 1967	S Gas S Gas	1/2.6 40/46	30.5 34	-- --	256,740 105,582	2,532,388 522,606	19,950 0	192,033 0	325,007 297,677	#1973 Primary and Secondary Production #22,601 #3,771			
	4	0	0	0													362,322	3,054,994	19,950	192,033	622,684				
14503	2+	2	0	2+	Irreg	398	110	Miss	830	--	F	1968	S Gas	100/2	30.5	--	84,377	354,335	0	0	14,307	*Temp. Abandoned #1,142			
	1+	0	0	0	Irreg	412	71	Miss	830	--	F	1968	S Gas	100/11	31.5	--	44,025	286,131	2,683	38,188	44,100	*Temp. Abandoned			
	2	0	0	0	Irreg	411	82	Miss	850	--	F	1968	S Gas	100/70	31.3	--	44,843	378,842	1,778	24,678	26,642	*Temp. Abandoned			
	1-	1-	0	0	Irreg	398	28	Miss	830	5	F	1968	S Gas	100/74	30.8	--	4,241	77,041	128	6,528	7,758	*Temp. Abandoned			
	7	0	0	0	Irreg	308	98	Miss	850	--	F	1968	S Gas	100/9	33.2	--	250,574	1,458,869	15,811	95,274	154,605	*Temp. Abandoned			
12914	10	1	0	0	Line	191	101	Miss	832	--	F*	1966	S Gas	32.2/1	34.1	--	370,229	3,001,778	18,339	211,179	282,107	*And T			
14355 5545 8780	8 - 40	2 - 0	0 - 0	0 - 0	Line - 5-spot	230 - 498	40 - 11	Prod + Miss - Prod + Miss	820 - 830	-- - 30	T - F	1968 - 1961	S Gas - S Gas	1/0 - -	32 - 26	15 - -	116,800 - 331,052	923,060 - 3,799,932	2,939 - 10,892	72,629 - -	72,629 - 450,998	- - *Was Osborne Oil Co.			
	71	6	0	2													1,246,141	10,279,988	52,570	448,476	1,053,146				
9719 10415	14 18	0 3	0 0	0 0	5-spot 5-spot	213 452	247 351	Prod + Arb Prod	2600 --	-- --	U T	1962 1963	S Gas S Gas	43/143 69/232	36 36	-- --	1,132,485 2,167,393	13,072,137 23,257,153	24,690 29,497	642,784 970,910	645,184 2,899,939				
15786	2	-	2	-	4-spot	35	600	Prod	--	--	U	1964	Grav	--	37	--	--	--	--	--	--	*Was Fred Ayesh #5,000			
12240	4	2	0	0	Irreg	250	369	Prod + KC	2062	10	U	1965	Grav	7/3	35	--	538,225	3,818,358	11,319	109,539	109,539				
16242	1	0	0	0	Irreg	0	241	Prod	--	--	U	1971	Grav	96/4	32	--	88,063	235,298	1,869	500	4,236	*Was Wilbur Skaer			
2120 2187 4049 4682	1 - - -	0 - - -	0 - - -	0 - - -	Irreg - - -	350 - - -	1000 - - -	Prod - - -	-- - - -	-- - - -	U - - -	-- - - -	-- - - -	-- - - -	-- - - -	-- - - -	350,000 - - -	6,750,000 - - -	3,000 - - -	127,000 - - -	-- - - -	*Was Mobil Oil #5,400 *Proj. Abandoned			
2672 4169 6105 15259 11136	1 1 1 1 2	1 0 0 0 2	0 0 0 0 0	0 0 0 0 0	-- -- Irreg Irreg Irreg	-- 50 190 0 125	50 120 240 4 200	Prod Prod Prod + Miss Prod Prod	-- -- 2700 -- --	-- -- 30 -- --	T U U T U	-- 1954 1958 1969 1964	S Gas S Gas S Gas S Gas S Gas	6/4 -- -- 3/2 --	35 36 -- 38 40	-- -- -- -- --	10,950 4,380 87,600 1,440 146,730	84,200 664,220 -- 5,500 --	0 187 --* 0 --	-- 13,779 --* 0 --	-- 10,584 --* 64,000 --	-- #1,564 --* #1,651 #8,043			
13958	2	0	0	0	Irreg	125	328	Prod + Quat	20	20	M	1967	S Gas	11/9	37	--	236,160	745,860	7,000	14,143	154,894	#12,345			
11895 7145 8005 11973	2 1 1 2	1 0 0 0	0 0 0 0	0 0 0 0	Irreg Irreg Irreg Irreg	200 0 400 0	450 200 400 223	Prod Prod + Hunt Prod + Hunt Prod + Hunt +	-- 2300 2300 2400/	-- 15 15 --	T U U U	1964 1959 1960 1965	S Gas S Gas S Gas S Gas	-- -- -- 1/10.7	35 34 34 35	-- -- -- 10	169,252 73,000 146,000 156,000	1,917,087 -- 2,229,500 1,327,770	4,546 1,500 2,000 0	102,546 -- -- 4,293	102,546 -- -- 52,856	-- #4,800 #6,000 #1,531			
13622	1	0	0	0	Irreg	275	--	Prod	--	--	U	1967	Wat	1/9	32.5	--	34,000	260,804	670	--	11,799	*Sold 1-1-74 to Richard B. Morris #3,261			
4575	1	-	0	-	Irreg	500	50	Prod	--	--	U	--	S Gas	--	35	--	18,250	--	78	--	--				
6672	3	5	0	0	5-spot	200	30	Prod	--	--	T	1958	S Gas	11/28	36	6.5	32,850	994,496	274	79,476	--				

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1973—Continued

Kansas Geol. Survey Energy Resource Series 3, 1974

County	Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has ini. been con- tinuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
BUTLER COUNTY (cont.)																
	7084	El Dorado	R.R. Abderhalden*	(W) Jackson "C"	Jackson	24-25S-4E	160	0	El Dorado	650	20	2	-	0	-	Yes
	14985	El Dorado	Aikman & Braden	(P) Turner	Turner	15-26S-4E	40	0	Simp	2420	15	3	0	0	0	Yes
	15390	El Dorado	J.A. Allison	(P) Berndsen, Hether- ington, Turner	Berndsen, Hetherington, Turner	15-26S-4E	100	60	Simp	2448	28	8	0	0	0	Yes
	4077	El Dorado	Baker Oil Inc.	(P) Wilson	Wilson	22,27-25S-5E	40	--	Viola	2553	10	2	1	0	2	Yes
	15896	El Dorado	Braden Petroleum Co.*	(W) Houston	Houston	19-26S-5E	160	80	Viola/ Simp	2635	50	8	0	0	0	Yes
	2577	El Dorado	Cities Service Oil Co.	(W) Finney Simpson	Pierpoint, Finney, Graham "C", Fulkerson & Millheisler "A", D.L. Howe, Millheisler "B", & Thompson	32-25S-5E 4-26S-5E	271	350	Simp	2460	27	22	4	0	14	Yes
	5493															
	6586															
	6888															
	6351	El Dorado	Cities Service Oil Co.	(W) Chesney KC	Chesney, Knox, Mills, Hegberg	21-25S-5E 22-25S-5E 28-25S-5E	347	100	KC	1900	32	21	3	0	8	Yes
	7869	El Dorado	Cities Service Oil Co.	(W) Enyart L-KC	Abraham-Ralston, Porter, Paulson	1-26S-4E 2-26S-4E	568	268	L-KC	1600- 2000	22	26	2	0	7	Yes
	10002															
	9803	El Dorado	Cities Service Oil Co.	(W) Stokes KC	B. Stokes, Hegberg, Stapleton, Pierpoint, Stokes "A"	28-25S-5E 29-25S-5E 32-25S-5E 33-25S-5E	600	0	KC	2000	20	27	4	0	6	--
	13743	El Dorado	Cities Service Oil Co.	(W) Chesney White Cloud	Chesney "A"	21-25S-5E	50	0	White Cld	860	10	5	0	0	0	Yes
	13973	El Dorado	Cities Service Oil Co.	(W) Stapleton Simpson	Stapleton, Moler	29-25S-5E 32-25S-5E	135	20	Simp	2440	19	4	1	0	1	Yes
	16163	El Dorado	Cities Service Oil Co.	(W) Empire Lansing	Empire Fee	17-26S-5E	61	0	Lans	1700	20	4	0	0	0	Yes
	3016	El Dorado	Dunne Equities, Inc.	(D) M.A. Koogler	Koogler	25-26S-4E 29,30,32-26S-5E	265	--	Simp- Viola	2400	40	26	0	0	0	Yes
	4830	El Dorado	Gulf Oil Corp.	(W) A.J. Shumway	A.J. Shumway	11-26S-4E	160	0	KC	1975	--	16	8	0	0	Yes
	4036	El Dorado	Eugene B. McAllister*	(W) Cameron	Cameron	2-25S-5E	160	--	Peru	2150	20	2	1	0	0	Yes
	13161	El Dorado	Okmar Oil Co.	(W) Fowler	Fowler	1-26S-4E	20	0	KC	2040	20	3	0	0	0	Yes
	15109	El Dorado	Okmar Oil Co.	(W) Baker Coop	Baker West	16-26S-5E	--	--	Lans	1650	10	1	0	0	0	Yes
	7402*	El Dorado	W.E. Stone Opr. by† Saco Oil Co.	(P) W.E. Stone	W.E. Stone	2-25S-5E	60	--	Peru	2130	14	0	3	0	-	--
	7484	El Dorado	Saco Oil Co.	(-) Belton	Belton	3-25S-5E	40	--	Peru	2130	14	2	-	-	2	Yes
	12221	El Dorado	Anna Seeber*	(W) Ramsey, et al	Ramsey	6-25S-5E	50	0	White Cld	760	10	5	-	0	-	Yes
	6333	El Dorado	Southern States Oil Co.*	(P) Mills	Mills	27-25S-5E	160	--	El Dorado KC Douglas	700 2000 2500	--	14	36	0	0	Yes
	8192															
	8336															
	8386															
	7096	El Dorado	Southern States Oil Co.*	(P) W.E. Brown	W.E. Brown	32-26S-5E	160	--	Viola	2692	12.5	2	0	0	0	Yes
	3454	El Dorado	Stelbar Oil Corp., Inc.	(W) Stone	Stone	2-25S-5E	80	--	Peru	2150	20	2	3	0	0	Yes
	4099	El Dorado	White & Ellis Drilling*	(D) Wilson	Wilson	7-25S-5E	160	0	Miss	2560	15	3	0	0	0	Yes
	16481	El Dorado	Wilson Prod. Co., Inc.	(P) Wilson-Hawkins	Robison	17-25S-5E	100	0	Miss	2500	35	21	0	0	0	Yes
	5287	Ferrell	Midwest Supply Co.*	(W) Ferrell	Ferrell	21-28S-8E	480	0	Miss	2750	30	7	7	0	3	Yes
	6254	Fox-Bush-Couch	H.H. Blair Estate	(D) Naden	Naden	13,14-29S-5E	200	--	Bart1	2802	12	5	-	-	1	No
	1909	Fox-Bush-Couch	Misco Industries, Inc.	(W) Fox-Bush	Brown, Leonard Brown, Fox, Haver, Jackson, Myers, Naden, Perisho, Price, Sooter	35,36-28S-5E 1,2,11,12, 13-29S-5E 18-29S-6E	560	1070	Bart1	2800	55	18	2	1	5	Yes
	5496	Fox-Bush-Couch	Tomlinson Oil Co.	(D) Speer & Bunnell	Bunnell, Speer	25-28S-5E 27-28S-5E	80	0	Bart1	2790	25	3	0	0	0	Yes
	1650	Fox-Bush-Couch	Southern States Oil Co.*	(P) Brown (North)	Brown A	25-29S-5E	72	--	Bart1	2735	45	2	0	0	0	Yes

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water in. bbl/well/day	Injected-water data				Date first ini.	Primary production mechanism	Primary oil-water ratio	API grav. deg.	Oil visc. cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73		
7084	1	-	0	-	Irreg	200	50	Prod	--	--	T	--	S Gas	1/10	32	--	18,250	18,250	571	571	571	#=1973 Primary and Secondary Production *Was Abels Oil Co. #4,800
14985	1	-	-	-	Irreg	Grav	300	Prod	--	--	U	1969	Wat	2/8	37	--	109,500	442,530	--	--	31,143	
15390	3	0	0	0	Irreg	Vac	700	Prod	--	--	T	1970	Wat	2/8	39	--	255,000	646,816	12,978	46,294	976,665	
4077	1	0	0	0	Irreg	500	250	Prod	--	--	U	1960	Wat	--	36	--	175,000	11,875,000	0	0	94,491	#2,575 *Was Cities Service Oil
15896	5	0	0	0	--	0	1000	Prod	--	--	U	--	Grav	--	35	--	33,500	--	7,356	--	--	
2577	15	1	0	4	Irreg	200	414	Prod + Arb	2426	11	T	1950	S Gas	5/0	34.5	--	1,846,331	44,709,993	67,196	2,663,822	4,414,576	
5493																						
6586																						
6888																						
6351	24	0	0	3	5-spot	372	268	Prod + Arb	2500	31	T	1958	S Gas	135/441	36	--	2,227,039	28,892,771	59,730	2,259,927	4,614,562	
7869	25	0	0	1	5-spot	588	420	Prod + Arb	2400	193	T	1963	S Gas	1/0	36	--	3,942,317	34,308,640	113,465	1,479,546	1,510,775	
10002																						
9803	19	0	0	2	5-spot	540	345	Prod + Arb	2500	--	T	1962	S Gas	45/190	36	--	2,081,156	26,133,938	68,017	976,142	1,437,418	
13743	4	0	0	0	Peri	10	98	Prod	--	--	T	1972	S Gas	17/109	35	--	258,082	292,320	7,725	9,623	50,403	
13973	5	0	0	0	5-spot	278	400	Prod + Arb	2404	672	T	1967	S Gas	1/0	36	--	694,933	3,726,011	24,661	189,430	1,443,039	
16163	3	0	0	0	Irreg	150	308	Prod + Viola + Simp	2500	--	T	1971	S Gas	3/2	36.1	--	316,530	718,550	10,526	21,791	408,575	
3016	10	0	0	0	Irreg	0	5900	Prod	--	--	U	1951	Gas Exp	--	34	--	21,535,000	818,681,524	29,555	3,265,742	3,265,742	
4830	6	0	0	0	5-spot	500	487	Prod	--	--	U	1963	S Gas	21/143	33.5	--	1,066,212	9,637,857	48,880	577,030	577,030	
4036	1	0	0	1	Irreg	700	40	Prod	--	--	T	1951	S Gas	--	36	--	14,400	722,500	751	88,258	88,258	*Was Elkan Serv. & Supply #3,487
13161	1	0	0	0	Peri	350	960	Prod + Arb	2440	5	U	1966	S Gas	--	33	--	350,400	2,307,950	1,878	14,571	48,152	
15109	1	0	0	0	Peri	275	355	Prod + KC	1750	10	U	1969	S Gas	18/158	34	--	129,575	734,525	2,616	7,096	32,003	
7402	0	2	0	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*Temp. Abandoned +Was Mobil Oil Corp.
7484	1	-	-	-	Irreg	50	50	Prod	--	--	U	1958	Grav	1/9	34.3	--	36,500	197,000	2,021	12,697	--	
12221	1	-	0	-	5-spot	100	100	Prod	2160	3	T	1965	S Gas	8/2	36	--	54,750	--	2,100	--	--	*Was Ramsey #2,844
6333	2	1	0	0	Irreg	400	625	Prod	--	--	T	1959	Grav	--	35	--	408,924	11,208,341	11,547	671,330	671,330	*Was Westrans Petroleum
8192																						
8336																						
8386																						
7096	1	0	0	0	Irreg	--	484	Prod	--	--	T	1959	--	--	32	--	176,660	1,696,891	2,431	82,660	82,660	*Was Westrans Petroleum
3454	1	0	0	0	Irreg	600	180	Prod + Douglas	600	--	T	1951	S Gas	--	36	--	65,000	1,492,250	6,910	366,353	--	
4099	1	0	0	0	Irreg	50	60	Prod	--	--	U	1954	Wat	--	40	--	14,600	1,907,600	0	0	--	*Was Henderson Oil Co. #5,774
16481	1	0	0	0	Irreg	100	500	Prod	--	--	U	1972	Grav	15/85	43	--	360,000	495,000	27,398	375,000	750,000	#54,795
5287	2	1	0	2	Irreg	750	500	Prod	--	--	T	1955	Wat	--	36.6	--	--	--	--	--	--	*Was Holly Resources Corp. #9,641
6254	2	-	-	-	Irreg	0	30	Prod	--	--	M	1960	Grav	2/8	35	--	60,000	Gas	--	--	--	#3,600
1909	11	10	0	0	5-spot	--	--	Prod	--	--	T	1947	--	--	--	--	454,089	--	0	--	--	#17,684
5496	1	0	0	0	Line	100	753	Prod	--	--	U	1957	Gas Exp	--	37.8	--	274,845	8,473,352	4,058	94,312	504,058	
1650	1	0	0	0	Irreg	--	218	Fresh	--	--	T	1959	Grav	--	41	--	79,750	1,267,171	2,916	101,723	101,723	*Was Westrans Petroleum

County Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has ini. been con- tinuous?	
						Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.		
BUTLER COUNTY (cont.)																
2903	Fox-Bush-Couch	James H. Webster	(P) North Fox-Bush Unit	Craig, Kingsley, Bowyer, Mall, Speedling, Molter, Shawver, Bunnell	23-28S-5E 24-28S-5E 25-28S-5E 26-28S-5E 35-28S-5E	--	--	Bartl	2750	50	6	0	0	0	0	Yes
10457	Harlan	Adair Oil Co.	(P) Harvey	Harvey	26,35-23S-4E	280	40	KC	2140	7	4	0	0	0	0	Yes
16646	Hazlett	Range Oil Co.	(P) Sommers	Sommers	5-24S-5E	120	--	Cong	2375	10	1	--	--	--	--	Yes
17052	Hazlett	Rex & Morris Drilling	(D) Fannie	Fannie	29-23S-5E	40	0	Miss	2453	25	2	0	0	0	0	No*
16357	Hazlett	Petroleum Management, Inc.	(W) Clearwater Unit	H.A. Goering, E.R. Goering, Clearwater, Ammeter	29-23S-5E 31-23S-5E 32-23S-5E	360	0	Miss	2459	24	26	2	0	--	--	Yes
5621	Hickory Creek	Catt Drilling Co.	(W) Hickory Creek Unit	Crowley	14-28S-5E	40	160	Bartl	2700	14	2	0	0	--	--	Yes
3805	Keighley	R.W. Musgrove*	(D) Worrell	Worrell	12-27S-7E	160	144	Bartl	2750	20	2	0	0	1	--	Yes
15654	Keighley	R.W. Musgrove*	(D) Barnhill	Barnhill	12-27S-7E	160	144	Bartl	2750	20	2	--	0	4	--	Yes
37-05- 05	Kramer-Stern	Dunne Equities, Inc.	(D) Blakeman	Blakeman, Clay	4-28S-6E	240	0	Viola	3089	10	3	0	0	0	0	Yes
13048	Kramer-Stern	Hammer & Maclean	(D) Leon Unit	Tabing, Poindexter, Sontag, Holt, Woolm, Stern, Stern B	21-27S-6E 22-27S-6E	230	0	Viola	3006	12	14	1	0	0	0	Yes
16178	Kramer-Stern	Rex & Morris Drilling	(W) Lucas A & B Waterflood Unit	Lucas "A", Lucas "B"	11-28S-6E	160	0	Simp	3000	6	7	0	0	0	0	Yes
6984	Kramer-Stern	Southern States Oil Co.*	(P) Stern	Stern	27, 28, 33-27S-6E	320	--	Viola	3086	4	9	5	0	0	0	Yes
8301	Kramer-Stern	Southern States Oil Co.*	(P) Shriver	Shriver	34-27S-6E	240	--	Viola	3080	--	7	6	0	0	0	Yes
976	Kramer-Stern	Texaco Inc.	(P) Tabing	Frank Tabing	28-27S-6E	--	--	Viola	3075	16	1	--	0	--	--	Yes
3218	Kramer-Stern	Texaco Inc.	(P) Tabing	Frank Tabing	28-27S-6E	--	--	Viola	3075	16	1	--	0	--	--	Yes
6758	Leon	Home-Stake Prod. Co.*	(W) Leon Waterflood	Boellner, Sarah Clark, Vanwinkle "B" & "C", Seglem, Snodgrass, State Bank of Leon	19, 20-27S-6E 19-27S-6E 20-27S-6E	450	150	Bartl	2700	26	12	1	0	--	--	Yes
13911	Leon	Hammer & Maclean	(D) Maclean	Maclean	17-27S-6E	160	0	Viola	3129- 3136	17	2	0	0	0	0	Yes
5677	Mt. Tabor	Stelbar Oil Corp.	(W) Stolebarger	Stolebarger, Howard, Mahlandt, Shawver, Spicer	35-29S-4E	440	440	Cattle	2750	10	0	3	0	0	0	No*
6426	Muddy Creek	R.R. Abderhalden	(W) South Muddy Creek W.F. Unit	--	13-29S-4E	60	20	Bartl	2800	22	3	1	0	0	0	Yes
6853	Muddy Creek	R. R. Abderhalden	(-) North Muddy Creek W.F.	E. Fresh, C. Williams	7-29S-5E	60	--	Bartl	2730	13	3	1	0	0	0	Yes
7476*	Muddy Creek	Stelbar Oil Corp.	(W) Muddy Creek Unit	Perisho, Perisho, Elliott	7-29S-5E 18-29S-5E 13-29S-4E	480	480	Cattle	2750	20	0	6	0	0	0	No*
6099	Muddy Creek	Tomlinson Oil Co.	(W) Stewart "A"	Stewart "A"	6-29S-5E	20	0	Bartl	2700	9	1	1	0	0	0	Yes
13254	Paulson	Am. Petrofina Co. of Texas*	(-) Paulson Field Waterflood St. 2	Paulson "A" Paulson "C"	25-23S-3E	160	0	Miss	2460	28	1	0	0	1	0	Yes
11990	Paulson	Am. Petrofina Co. of Texas*	(P) Paulson Water- flood St. 1	Busenitz, Guinty, Webreck, Scully "A", Scully "B", Hinz	13-23S-3E 23-23S-3E 24-23S-3E	320	120	Miss	2460	28	22	0	0	0	0	Yes
16335	Paulson	I.O. Miller Estate	(D) Hinz	Hinz	13-23S-3E	160	--	Miss	2464	28	8	0	9	0	0	Yes
13412	Pierce	Aikman & Braden	(-) Tillotson	Tillotson, Whitson	27, 28-25S-4E	--	--	--	--	--	--	--	--	--	--	--
15596	Pierce	Baker Oil Inc.	(D) Jones	Jones	33-25S-4E	20	--	Miss	2525	40	2	0	0	0	0	Yes
16947	Pierce	White & Ellis Drilling	(D) Albers	Albers	21-25S-4E	320	0	Miss	2550	10	9	0	0	0	0	Yes
11186	Potwin	Ray Law*	(W) Potwin Unit	McCraner D	2-25S-3E	--	--	Miss	2671	9	2	0	0	0	0	Yes
11095	Potwin	Rex & Morris Drilling*	(D) --	Maxwell "A"	31-24S-4E	80	0	Miss	2670	9	1	0	0	0	0	Yes
11160*	Potwin	Robert F. White	(-) Mulnix	Mulnix	2-25S-3E	--	--	--	--	--	--	--	--	--	--	--
9368	Reynolds-Shaffer	Am. Petrofina Co. of Texas*	(D) Brewer	Brewer	33-26S-6E	80	0	Miss	2784	12	5	0	0	0	0	Yes

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl/well/day	Injected-water data				Date first inj.	Primary production mechanism	Primary oil-water ratio	API grav. deg.	Oil visc. sp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth. ft.	Thick. ft.	Type						Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73		
2903	5	6	0	0	Irreg	Grav	250	Prod	--	--	T	--	S Gas	--	42	--	--	--	3,456	--	--	#=1973 Primary and Secondary Production
10457	1	0	0	0	Irreg	250	10	Prod	--	--	U	1963	Wat	--	32	--	14,600	141,075	880	15,430	73,634	#3,548
16646	--	--	--	--	Irreg	0	45	Prod	--	--	U	1972	Wat	5/5	40	--	--	--	--	--	24,917	#3,643
17052	1	0	0	0	Irreg	0	210	Prod	--	--	U	1973	S Gas	9/210	41	--	76,650	--	0	0	115,005	*Part of year
16357	2	0	0	0	Irreg	0	407	Prod	--	--	U	1971	Grav	11/1	41.6	--	297,516	575,342	4,590	8,170	68,461	#3,225 #22,950
5621	2	0	0	1	Line	350	60	--	--	--	U	1955	S Gas	3.5/2.5	38	--	22,500	--	100	--	--	#653
3805	0	--	--	--	--	--	--	Prod	--	--	--	1960	--	3/7	39	--	--	--	--	--	--	*Was White & Ellis Oil Co. #1,200
15654	0	--	--	--	--	0	--	Prod	--	--	--	1960	Gas Exp	3/7	39	--	--	--	--	--	--	*Was White & Ellis Oil Co. #1,200
37-05-05	2	0	0	0	Irreg	--	500	Prod	--	--	U	--	Gas Exp	1/1	35	--	365,000	--	--	--	--	#18,709
13048	4	0	0	0	Irreg	0	156	Prod	--	--	U	1966	Grav	6/4	34	--	228,268	1,703,068	23,627	150,716	150,716	
16178	1	1	0	0	Irreg	Grav	300	Prod + Miss	2750	50+	U	1971	S Gas	7.5/12.5	34	--	109,500	246,900	1,800	1,800	367,839	#18,062
6984	6	0	0	0	Irreg	475	1959	Prod + Viola	--	--	M	1959	Grav	--	34	--	1,396,688	13,177,748	21,111	551,579	551,579	*Was Westrans Petroleum
8301	2	0	0	0	Irreg	425	1271	Prod	--	--	T	1963	Grav	--	34	--	909,921	6,689,722	26,468	345,167	345,167	*Was Westrans Petroleum
976																						
3218	1	--	0	--	Irreg	Vac	260	Prod	--	--	U	1952	Wat	25/45	--	--	8,060	--	0	--	99,208*	*Since 1-1-1953 #3,455
6758	5	2	0	--	Irreg	700	485	Prod	--	--	T	1964	S Gas	--	38	--	862,008	15,616,455	21,590	1,009,197	1,009,197	*Sold 5-1-73 to Flowers Prod. Co.
13911	1	0	0	0	Irreg	0	200	Prod	--	--	U	1968	Grav	5/95	35	0	73,000	438,000	1,924	5,051	5,051	
5677	0	1	0	0	Line	--	--	Prod	--	--	T	1957	S Gas	--	36	--	3,000	1,125,300	330	128,646	--	*Proj. shut down
6426	1	0	0	0	Line	600	150	Prod + Douglas	800	70	T	1962	S Gas	3/1	38	3	54,750	1,263,111	3,059	81,207	--	
6853	2	0	0	0	Irreg	250	75	Prod + Douglas	560	20	T	1963	S Gas	3/0	38	--	54,750	391,535	4,958	66,609	--	
7476	0	6	0	0	Line	--	--	Prod	--	--	T	1960	S Gas	--	37	--	64,470	3,029,660	1,995	263,998	--	*Shut down 5-1-1973, Sold to Buckeye Corp.
6099	1	1	0	0	Peri	140	62	Prod + Douglas	1599	30	T	1958	S Gas	--	38.4	--	22,681	448,348	2,981	50,662	110,972	
13254	1	0	0	1	5-spot	300	715	Prod	--	--	U	1967	Wat	1/20	39.9	--	260,860	3,705,796	2,046	39,648	40,720	*Was El Dorado Refg. Co.
11990	3	1	0	0	Irreg	650	404	Prod	--	--	U	1965	Wat	1/5	41	--	441,682	3,216,090	30,254	263,720	865,712	*Was El Dorado Refg. Co.
16335	1	0	1	0	Irreg	--	--	Prod	--	--	--	1971	--	--	--	--	--	250	--	--	--	
13412	--	--	--	--	--	--	--	--	Project was plugged				--	--	--	--	--	120,395	--	20,043*	--	*Prod. thru 1972
15596	1	0	0	0	Irreg	0	30	Prod	--	--	U	1970	Grav	--	43	--	10,950	40,050	0	0	34,518	#653
16947	1	0	0	0	Irreg	0	20	Prod	--	--	T	1973	S Gas	3/1	40	--	4,200	4,200	0	0	224,000	#6,273
11186	1	0	0	0	Irreg	0	80	Prod	--	--	U	--	Wat	1/2	42	--	18,000	--	2,000	--	--	*Was Clinton Oil Co.
11095	1	0	0	0	Irreg	1000	160	Prod	--	--	U	1964	Wat	1/3	43	--	58,400	140,517	--	--	--	*Was Clinton Oil Co. #1,550
11160	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	595,000	--	16,200	--	*Prod. Abd., Prod. thru '72
9368	1	0	0	0	Irreg	0	80	Prod	--	--	U	1962	--	1/5	34	--	29,320	267,460	4,092	13,178	109,329	*Was El Dorado Refg. Co.

County	Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been continuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
EUTLER COUNTY (concl.)																
	4039	Reynolds-Schaffer	Yuma Oil Co.	(D) Palmer-Doughty	Doughty, Palmer	6-27S-6E	40	--	Bartl	2700	10	2	0	0	0	Yes
	12229	Rosalia	Continental Oil*	(P) Rosalia	Friesen, Roy, Zimmerman, Merle, Bell, Gish	11-25S-7E	480	40	Squirrel	2560	30	5	1	--	0	Yes
	12310					12-25S-7E										
	16653	Salter	Kathol Petroleum, Inc.	(D) Salter	Swindell, Showalter	22-28S-3E	400	160	Simp	3001	6	4	2	0	0	Yes
	1319	Seward	W.R. Gross	(D) --	Seward	23-28S-3E										
	10166	Shinn	Petroleum Management, Inc.	(W) Shinn Waterflood	Shinn	12-27S-7E	50	--	Bartl	2700	30	1	0	0	0	Yes
	2096	Smock-Sluss	Bisagno Bros. & Bisagno Six Oil Co., Inc.*	(D) Bisagno	Bisagno Bros., Inc., Bisagno Six Oil Co., Inc.	19-29S-8E	120	0	Miss	2760	16	11	4	--	--	Yes
	3509	Smock-Sluss	Burton Oil Co.*	(W) Falkenberg	Sluss, Sluss A & B	35-26S-5E	90	10	Bartl	2700	40	4	2	0	0	Yes
	13206	Smock-Sluss	J.E. Morris	(D) Knutson	Knutson, Irvine	25,26-26S-5E	240	--	Bartl	2700	25	4	--	--	--	Yes
	3430	Snowden-McSweeney	Earl F. Wakefield, Inc.	(D) Wakefield "Fee"	Wakefield "Fee"	11-27S-5E	320	0	Bartl	2700	30	4	0	0	0	Yes
	4029	Towanda	Kewanee Oil Co.	(W) Rice-Wait	Rice, Wait	9-29S-6E	200	0	Bartl	2800	20	6	6	0	0	Yes
	5580					5-26S-4E	0	0	Viola	2445	30	11	3	0	7	Yes
	16406	Whitewater East	White & Ellis Drilling*	(D) Edmiston	Edmiston	27-26S-7E	240	0	Miss	2476	30	5	0	0	0	Yes
	15442	Whitewater West	Kathol Petroleum, Inc.	(D) Vachal	Vachal	29-26S-7E	80	--	Miss	2460	8	1	0	0	0	--
	15546	Whitewater West	Kathol Petroleum, Inc.	(D) Hamilton Scully	Scully	28-25S-3E	160	--	Miss	2700	--	2	0	0	0	Yes
	1318	Young	Dunne Equities, Inc.	(D) Willhite	Willhite	27-26S-7E	80	--	KC	2108	28	5	0	0	0	Yes
	5919	Young	J.E. Morris	(D) Guenther	Guenther "A", Henry	29-26S-7E	320	0	Miss	2750	20	4	1	0	0	Yes
	5932		Rex & Morris Drilling		Guenther "B", Johnson	20,29-26S-7E	280	0	Miss	2750	20	4	0	0	0	Yes
	3258	Young	Okmar Oil Co.	(W) Young Coop	Young A, Young B, Young-Inger, A.R. Willhite, Willhite A & B	27-26S-7E	110	0	KC	2140	37	8	0	0	0	Yes
	12982	Young Southwest	Crowe Drilling Co., Inc.	(P) PMA Ranch	PMA Ranch	32-26S-7E	80	0	Miss	2724	8	5	0	0	0	Yes
	BUTLER COUNTY TOTAL (Reported) (Includes project in supplemental list.)							16,656	3,964			631	144	20	81	
EUTLER-COWLEY COUNTIES																
	5547	Fox-Bush-Couch	Stelbar Oil Corp., Inc.	(W) Brown Unit & Shawver Atlanta Ranch	Brown, Brown, Brown, Shawver Atlanta Ranch	36-29S-5E	640	420	Bartl	2800	30	3	1	0	0	Yes
	16114	Rock Northeast	Stelbar Oil Corp., Inc.	(W) Abildgaard	Hoyt, Holt, Holt-Gimple, Gimple, Pottorff, Abildgaard	31-29S-6E										
						1-30S-5E										
						6-30S-6E										
						29-29S-5E	960	--	Bartl	2832	18	12	0	2	1	Yes
						31-29S-5E										
						32-29S-5E										
						6-30S-5E										
	BUTLER-COWLEY COUNTIES TOTAL (Reported)							1,600	420			15	1	2	1	
CHASE COUNTY																
	16856	Teter	Glacier Petroleum Co.	(P) Hartley A	Hartley A	35-22S-9E	30	--	Bartl	2457	36	4	--	--	--	Yes
CHASE-GREENWOOD COUNTIES																
	15055	Atyeo-Pixlee	Buckeye Corp.	(W) Evans Unit	--	12-22S-9E	250	--	Miss	2400	30	13	0	0	0	Yes
						7-22S-10E										
CHASE-LYON COUNTIES																
	519	Atyeo-Pixley	E.W. Sauder	(P) Annie Hughes & H.W. Hughes	H.W. Hughes, Annie Hughes	19-21S-9E	80	40	Bartl	2200	25	6	0	0	0	Yes
						24-21S-9E										
CHAUTAUQUA COUNTY																
	14002	Cloverdale	Olympic Petroleum Co.	(W) Cloverdale Field Unit	F. McConaghy, J.H. Haden, Haden "G", Ruby Haden, R.O. Hawkins	12-33S-8E	243	0	Cattle	2030	15	16	2	0	0	Yes
						13,14-33S-8E										

County	Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been continuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
CHAUTAQUA COUNTY (cont.)																
	469	Elgin	John M. Denman Oil Co.	(D) --	Newman,	12,13-35S-9E 18-35S-10E	1560	0	Peru	1540	40	13	0	0	0	Yes
					Fleisher, Kygar, Whartenby	7,18-35S-10E 17,18-35S-10E 18-35S-10E										
	10744*	Hale-Inge	Layton Oil Co.†	(W) Hale Flood	Monroe, Harmon, Kursky, Sweeney, Fee, Vaughn	18-32S-13E 19-32S-13E	--	--	--	--	--	0	-	0	0	No
	16059	Kingston	BMG, Inc.	(D) Kingston Project	Kingston	8-32S-11E	--	--	Miss	180	10	10	-	-	-	Yes
	9072	Landon-Floyd	Patteson Bros, Inc.	(D) Shaffer	Nile McNee	14,23-32S-10E	220	--	Miss	1950	8	4	2	0	-	Yes
	5161	Leniton	John M. Denman Oil Co.*	(P) Leniton	Eggen, Goode "A", Goode "B", McCall, Smith, J., Burden, Smith, W.W.	17-33S-10E 17,20-33S-10E 18,19-33S-10E 20-33S-10E	1040	0	Peru	1425	50	29	0	0	0	Yes
	4746	Leniton	John M. Denman Oil Co.*	(P) Lowe Unit	Keith, McAfee, Mattocks	20-33S-10E	320	0	Peru	1440	25	13	0	0	2	Yes
	6721	Leniton	Charles J. Martin*	(W) Staats Chautauqua Unit	Campbell, Webb	21,22,27,28,29, 32,33-33S-10E	40	--	Peru	1300	20	4	0	0	0	Yes
	2207	Niotaze	Steinberger Bros.	(W) Hyder field	Hyder, Giver, Buckles, Stough	5-35S-13E 6-35S-13E	250	0	Redd	700	15	20	2	0	0	Yes
	11863	Oliver	Adair Oil Co.	(P) McNee	Oliver, McNee	2-32S-10E	95	10	Miss	2000	6	1	0	0	1	Yes
	36-01-	Peru-Sedan	Roy A. Burt dba	(D) Gardner	Henry Gardner	26-33S-11E	160	0	Peru	1200	23	5	1	0	0	Yes
	28		Burlington Oil Co.*													
	289	Peru-Sedan	Bill I & Myra Custer*	(D) O.K. Spurlock	O.K. Spurlock	36-34S-11E	40	0	Peru	1177	22	3	2	0	0	Yes
	10903	Peru-Sedan	Walter Darnall	(D) Paullus Heirs	Paullus Heirs	6-35S-12E	102	0	Peru	1050	50	4	0	0	0	Yes
	3221	Peru-Sedan	Deck Oil Co.	(W) McMillan	McMillan	27-34S-12E	160	--	Peru	1100	15	12	-	0	-	Yes
	139	Peru-Sedan	John M. Denman Oil Co.*	(P) --	D.J. Moore	3-34S-11E	150	0	Peru	1073	16	10	3	0	0	Yes
	388	Peru-Sedan	John M. Denman Oil Co.*	(P) --	Peru Farm, H.W. Moore	31-33S-12E 6-34S-12E 3-34S-11E	490	0	Peru	980	38	24	13	0	0	Yes
	15	Peru-Sedan	John M. Denman Oil Co.*	(P) --	Blundell, Cleek	36-34S-11E 30,31-34S-12E	440	0	Peru	1000	36	7	1	0	0	Yes
	402				Alexander, Hann, Ellexson, Hatfield, Spurlock, Pennell	33-34S-11E 35-34S-11E 36-34S-11E 31-34S-12E 1-35S-11E	930	0	Peru	1100	30	62	0	0	0	Yes
	463	Peru-Sedan	John M. Denman Oil Co.*	(D) Albright Fee	Albright	15,16-34S-11E	680	0	Peru	1165	20	8	0	0	0	Yes
	465	Peru-Sedan	John M. Denman Oil Co.*	(D) --	Bird, Lemmon, Johnson, Keenan	25,26-34S-10E 26-34S-10E 27-34S-10E 34-34S-10E	1320	0	Peru	1360	40	39	0	0	0	Yes
	467	Peru-Sedan	John M. Denman Oil Co.*	(D) --	Riley, Morton	27-33S-12E 34-33S-12E	360	0	Peru	990	30	13	0	0	0	Yes
	468	Peru-Sedan	John M. Denman Oil Co.*	(D) --	Dunham-Lemmon, Beck	25,36-34S-11E 1-35S-11E	550	0	Peru	1125	50	36	0	1	0	Yes
	1473	Peru-Sedan	John M. Denman Oil Co.*	(P) --	Gregg, Wadsworth	14,15,21,22,23,26, 27,28-33S-11E 27-33S-11E	2380	0	Peru	1224	33	16	37	2	1	Yes
	793				A. Casement, C. Casement	33-33S-11E	350	0	Peru	1187	25	14	18	0	0	Yes
	1029	Peru-Sedan	John M. Denman Oil Co.*	(P) --		5-34S-11E										
	17030	Peru-Sedan	John M. Denman Oil Co.*	(P) C.C. Poor Farm Unit	C.C. Poor Farm, J.A. Lowe, Conley, Haney-Johnson, H.W. Moore	10-34S-12E 10,15-34S-12E 15-34S-12E 22-34S-12E	629	80	Peru	984	20	22	10	2	0	Yes
	17031	Peru-Sedan	John M. Denman Oil Co.	(D) Bowman Unit	Dennis, Huffman, Orton, Winans, Spire	27-34S-11E 34-34S-11E	390	0	Peru	1220	40	23	0	0	0	Yes
	17032	Peru-Sedan	John M. Denman Oil Co.*	(P) Mary S. Hazelton	Mary S. Hazelton	28-34S-12E	100	0	Peru	1020	19	1	2	0	0	Yes

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl/wel/day	Injected-water data			Date, first inj.	Primary production mechanism	Primary oil-water ratio	API grav., deg.	Oil visc., cp. @ 60° F	Production and injection statistics (bbls)		Oil recovered by secondary methods		Total Oil from project Pri. & sec.	Remarks	
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.						Type	Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973			Cum. 12-31-73
469	3	0	0	0	Irreg	0	30	Prod	--	--	U	--	S Gas	--	38	--	20,870	2,860,600	5,217	430,000	715,152	#=1973 Primary and Secondary Production
10744	0	-	0	-	Irreg	--	--	--	--	--	-	1963	S Gas + Grav	--	--	--	--	--	--	--	--	*Temp. shut down +Was Frank Hall
16059	1	-	-	-	Irreg	0	500	Prod	--	--	U	1971	Gas Exp	--	31	--	--	--	0	--	--	#12,194
9072	2	-	-	-	Irreg	0	700	Prod	--	--	U	1962	Grav	1/10	30	--	250,000	--	1,500	--	--	#6,200
5161	3	0	0	0	Irreg	250	20	Prod	--	--	U	--	S Gas	--	31	--	21,900	1,262,228	7,323	315,557	315,557	*Was Mendenhall Drilg. Co.
4746	1	1	0	0	Irreg	275	60	Prod	--	--	U	--	S Gas	--	32	--	21,900	87,600	3,596	7,970	7,970	*Was D.J. Marshall et al
6721	1	0	0	0	5-spot	175	60	Prod	--	--	U	--	Gas Exp	1/?	30	--	18,000	--	0	--	--	*Was C.W. Staats #1,800
2207	10	2	0	0	5-spot	350	5	Prod + Big Salt	350	50	U	1941	S Gas + Gas Exp	1/0	34.5	--	20,000	425,000	5,000	115,000	115,000	
11863	1	0	0	0	Irreg	0	50	Prod	--	--	U	1965	Wat	--	29	--	340	110,700	0	0	17,806	#746
36-01-28	2	0	0	0	Irreg	Grav	2400	Prod	--	--	U	1933	Grav	--	34	--	2,160	--	770	--	--	*Was Sinclair Oil Co. #2,315
289	1	0	0	0	5-spot	0	10	Prod	--	--	U	--	Grav	--	33.7	--	3,650	--	0	--	--	*Was Little Nick Oil Co. #365
10903	1	0	0	0	Irreg	0	15	Prod	--	--	U	--	Grav	--	36	--	5,470	--	730	--	--	
3221	1	1	0	0	Irreg	150	250	Prod	--	--	U	1952	S Gas	--	34	--	91,250	--	0	--	478,442	#3,442
139	2	2	0	0	Irreg	300	40	Prod + Salt Sd	450	60	U	1955	S Gas	--	32	--	29,200	202,368	1,614	32,934	32,934	*Was Federal Petroleum
388	5	10	0	0	Irreg	250	57	Prod + Salt Sd	450	60	U	1955	S Gas	--	33.3	--	55,000	888,622	4,046	162,662	162,662	*Was Federal Petroleum
15402	1	0	0	0	Irreg	250	35	Prod + Salt Sd	450	60	U	1955	S Gas	--	34	--	12,775	16,675	1,091	2,071	2,071	*Was Federal Petroleum
462	20	0	0	0	Irreg	--	30	Prod	--	--	U	--	S Gas	--	35	--	219,000	13,700,236	34,581	2,055,035 est.	3,425,059	
463	1	0	0	0	Irreg	0	20	Prod	--	--	U	--	Grav	--	35	--	8,875	62,000	2,219	15,510	15,510	*Was Denman Bros.
465	5	0	0	0	Irreg	0	30	Prod	--	--	U	--	Grav	--	38	--	55,670	328,860	13,917	82,215	82,215	*Was Denman Bros.
467	1	0	0	0	Irreg	0	40	Prod	--	--	U	--	Grav	--	33.5	--	14,576	100,435	3,644	25,109	25,109	*Was Denman Bros.
468	8	0	0	0	Irreg	0	20	Prod	--	--	U	--	Grav	--	34	--	80,960	437,110	20,240	109,278	109,278	*Was Denman Bros.
1473793	5	10	0	0	Irreg	300	20	Prod + Salt Sd	460	60	U	1955	S Gas	--	33.5	--	36,500	1,677,942	7,269	1,740,047	1,740,047	*Was Federal Petroleum
1029	3	13	0	0	Irreg	200	80	Prod + Salt Sd	450	60	U	1955	S Gas	--	32	--	87,600	2,603,449	8,267	314,078	314,078	*Was Federal Petroleum
17030	8	20	0	0	Irreg	275	20	Prod + Salt Sd	450	60	U	1955	S Gas	--	34	--	58,400	1,800,700	8,477	1,088,609	1,088,609	*Was Federal Petroleum
17031	4	0	0	0	Irreg	0	20	Prod	--	--	U	--	S Gas	--	35	--	29,200	142,375	6,756	35,594	35,594	
17032	2	2	0	0	Irreg	250	20	Prod + Salt Sd	450	50	U	1955	S Gas	--	34	--	14,600	500,407	1,410	211,138	211,138	*Was Federal Petroleum

County	Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has ini. been continuous?	
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.		
CHAUTAUQUA COUNTY (concl.)																	
	17033	Peru-Sedan	John M. Denman Oil Co.*	(P) --		Hartzell, A.L., Rodgers, James	19-34S-12E	320	0	Peru	1000	16	7	9	2	1	Yes
	4134	Peru-Sedan	Bill D. Farris	(D) --		Logsdon	26-34S-11E	230	0	Peru	1000	14	9	-	-	-	Yes
	4135	Peru-Sedan	Bill D. Farris*	(P) Coulter Raymond		Coulter Raymond	15-34S-12E	240	--	Peru	1000	14	12	4	0	0	Yes
	16970	Peru-Sedan	Federal Petroleum, Inc.	(P) Stafford		Stafford	9-34S-12E	200	0	Peru	1027	35	12	14	6	0	Yes
	16971	Peru-Sedan	Federal Petroleum, Inc.	(P) Peru-Sedan		Bowen, Winchell	20-34S-12E	160	0	Peru	1055	15	11	6	1	0	Yes
	16972	Peru-Sedan	Federal Petroleum, Inc.	(P) Peru-Sedan		Michel De Armond, C.H. Inglefield, G.B. Oakes	15-34S-12E 22-34S-12E	310	0	Peru	984	20	20	11	0	0	Yes
	16973	Peru-Sedan	Federal Petroleum, Inc.	(P) Peru-Sedan		E.E. Brooks, F.G. Hills	28-34S-12E	200	0	Peru	1020	19	11	4	0	0	Yes
	16974	Peru-Sedan	Federal Petroleum, Inc.	(P) Peru-Sedan		Neff, Ewers, Bales, R.M. Hartzell	24-34S-11E 19-34S-12E	554	0	Peru	1055	15	29	2	4	0	Yes
	14682	Peru-Sedan	William V. Herbert	(D) Parker "B"		Parker "B"	26-34S-11E	80	0	Red Sd	978	9	6	0	0	0	Yes
	6087	Peru-Sedan	Lee R. Jones, Jr., Oil Co.	(D) Austin		Clint Austin	7-34S-12E	160	--	Peru	950	15	6	-	-	-	No
	905	Peru-Sedan	Lee R. Jones, Jr., Oil Co.	(D) Crane		Carrie A. Crane	12-35S-11E	320	80	Peru	1170	30	14	-	1	-	No
	6133	Peru-Sedan	Lee R. Jones, Jr., Oil Co.	(D) C.W. Smith-Lee		C.W. Smith, George Lee	12-35S-11E	320	--	Peru	1160	25	14	-	-	-	No
	10679	Peru-Sedan	Lee R. Jones, Jr., Oil Co.	(D) Witham		O.R. Witham	18-35S-12E	220	--	Peru	1150	30	5	-	-	-	No
	10715	Peru-Sedan	John H. Loyd	(D) Wemmer		Wemmer	24-35S-11E	80	0	Peru	1100	15	2	0	0	0	Yes
	556	Peru-Sedan	Nunneley & Powell*	(P) Kimbrell		Kimbrell	4-34S-12E	40	20	Peru	1050	18	4	-	-	-	Yes
	5477	Peru-Sedan	Nunneley & Powell*	(P) Violet Stafford		Violet Stafford	8-34S-12E	160	--	Peru	1050	20	12	-	4	-	Yes
	6132	Peru-Sedan	Nunneley & Powell*	(D) Big Turner		Big Turner	3-35S-12E	80	0	Peru	1000	10	2	-	2	-	Yes
	6170	Peru-Sedan	Nunneley & Powell*	(D) Blount		Blount	34-34S-12E	160	0	Peru	1035	20	4	-	3	-	Yes
	"	"	"	(D) J.R. Chance		J.R. Chance	34-34S-12E	160	40	Peru	1035	20	12	-	3	-	Yes
	6320	Peru-Sedan	Petroleum Enterprises, Inc.	(P) --		Hill	22-34S-12E	10	70	Peru	1000	15	7	-	-	-	Yes
	14956	Peru-Sedan	Petroleum Enterprises, Inc.	(P) --		Heath Murray Estate	27-34S-11E	60	--	Peru	1130	15	15	-	-	-	Yes
	3556	Peru-Sedan	Shannon Brothers	(D) Turner-Johnson		Johnson, Turner	6-35S-12E 7-35S-12E	80	40	Peru	1180	40	3	0	0	0	Yes
	7945	Peru-Sedan	The Star Producers, Inc.	(-) Jobe		Jobe	8-34S-12E	0	--	Wiser	1000	12	4	-	0	-	--
	10806	Peru-Sedan	Robert E. Warren*	(W) --		O.F. Pitts	29-33S-12E	80	--	Peru	1000	14	3	1	0	0	Yes
	"	"	"	"		Sam Shade	29-33S-12E	40	--	Peru	1000	14	1	1	0	0	Yes
CHAUTAUQUA COUNTY TOTALS (Reported)								17,263	340				634	145	31	5	
CLARK COUNTY																	
	6764	Harper Ranch	Union Oil Co. of California	(W) Harper Unit		J.C. Harper "A", K.C. Harper	2-34S-21W 11-34S-21W	1280	--	Morrow	5450	9	3	3	0	0	Yes
COFFEY COUNTY																	
	15677	Crandall	Cameron K. Reed	(D) LeRoy Project		Sutherland	31-22S-16E	5	0	Squirrel	1065	6	2	0	0	0	Yes
	15709*	Crandall	George Elliott	(P) --		Morris #2	6-23S-16E	40	--	Squirrel	1100	36	0	1	0	2	No
	17175	LeRoy North	Arthur Klaus	(D) C & C Oil Co.		--	22-22S-16E	80	0	Squirrel	1015	12	4	0	1	0	Yes
	11619	Neosho Falls-LeRoy	Bartlett & Hannen Oil Co.	(-) Rue-B-Lee #1		Rue-B-Lee #1	35-22S-16E	30	0	Squirrel	962	12	10	5	0	0	--
	11074	Neosho Falls-LeRoy	Bartlett & Hannen Oil Co.	(-) Rue-B-Lee #2		Rue-B-Lee #2	12-23S-16E	5	0	Squirrel	945	7	2	-	0	0	--
	11714	Neosho Falls-LeRoy	Glenn B. Boden	(P) Boden Lease		Boden	35-22S-16E	120	0	Peru	970	10	8	0	0	1	Yes
	199	Virgil North	French & Winterscheid, Inc.	(P) Kelly		Kelly	14-23S-13E	90	20	Miss	1800	6	9	0	0	0	Yes
	202	Virgil North	French & Winterscheid, Inc.	(P) Olinger & Olinger		Olinger	14-23S-13E	90	0	Miss	1800	5	5	0	0	0	Yes
	5835			B													
	5633	Winterscheid	French Oil Company	(P) Pilcher		Pilcher	16-23S-14E	20	0	Miss	1700	5	2	0	0	0	Yes
	13052	Winterscheid	Arnold E. Kraft*	(W) Vostrze, Shotwell-McCartney		Vostrze, Shotwell, McCartney	14-23S-14E	40	0	Miss	1600	15	7	0	0	1	Yes

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water in. hb/ well/ day	Injected-water data				Date first in.	Primary production mechanism	Primary oil-water ratio	API grav. deg.	Oil vis. cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks
	Active	In. active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73		
17033	2	4	0	0	Irreg	350	20	Prod + Salt Sd	450	60	U	1955	S Gas	--	34	--	21,900	892,687	2,017	689,830	689,830	#=1973 Primary and Secondary Production
4134	1	-	-	-	5-spot	0	100	Prod	--	--	U	1967	Grav	1/10	34	--	--	--	--	--	--	*Was Federal Petroleum
4135	1	-	0	-	5-spot	100	100	Prod	--	--	U	1969	--	1/10	32	--	--	--	--	--	--	*Was Brinkman Oil Co.
16970	2	2	0	0	Irreg	250	57	Prod + Salt Sd	450	60	U	1955	S Gas	--	34	--	41,547	1,004,807	12,606	144,259	144,259	
16971	3	2	0	0	Irreg	165	45	Prod + Salt Sd	450	60	U	1965	S Gas	--	34	--	49,281	241,013	11,769	57,321	57,321	
16972	3	13	0	0	Irreg	300	24	Prod + Salt Sd	450	60	U	1955	S Gas	--	34	--	33,381	2,298,921	8,207	566,202	566,202	
16973	2	5	0	0	Irreg	200	28	Prod + Salt Sd	450	60	U	1955	S Gas	--	34	--	20,762	1,428,219	4,777	186,631	186,631	
16974	5	5	0	0	Irreg	300	50	Prod + Salt Sd	450	60	U	1966	S Gas	--	34	--	90,431	808,807	27,777	230,204	230,204	
14682	1	0	0	0	Irreg	120	7	Prod	--	--	U	1968	Wat	7/18	37	--	15,719	59,443	1,882	12,420	12,420	
6087	1	-	-	-	Irreg	50	25	Prod	--	--	U	--	Grav	1/10	32	--	7,000	--	600	--	--	
905	2	-	-	-	Irreg	100	50	Prod	--	--	U	--	Grav	1/10	34	--	18,250	--	2,150	--	--	
6133	2	-	-	-	Irreg	200	70	Prod	--	--	U	--	Grav	1/10	33	--	25,000	--	4,000	--	--	
10679	1	-	-	-	Irreg	100	70	Prod	--	--	U	--	Grav	1/10	33	--	25,500	--	2,540	--	--	
10715	1	0	0	0	Irreg	0	15	Prod	--	--	U	1960	Grav	1/5	33	--	5,000	70,000	0	0	13,000	#919
556	1	-	-	-	Irreg	0	20	Prod	--	--	U	1941	Grav	1/5	34	--	3,000	--	0	--	--	*Was Gene Nunneley Oil Co. #698
5477	1	-	-	-	Irreg	150	40	Prod	--	--	U	1957	Grav	1/2	34	--	15,000	--	0	--	--	*Was Gene Nunneley Oil Co. #7,224
6132	1	-	-	-	4-spot	0	10	Prod	--	--	U	--	Grav	1/2	33	--	3,000	--	0	--	--	*Was Lee R. Jones, Jr. #1,522
6170	1	-	-	-	Irreg	0	20	Prod	--	--	U	1958	Grav	1/4	34	--	7,000	--	0	--	--	*Was Lee R. Jones, Jr. #1,749 (Blount)
"	2	-	-	-	Irreg	250	40	Prod	--	--	U	1958	Grav	1/4	34.5	--	10,000	--	500	--	--	#2,503 (Chance)
6320	3	-	0	-	Irreg	300	100	Prod	--	--	T	--	S Gas	--	34	--	14,000	--	--	--	--	#1,163
14956	1	-	0	-	Irreg	125	125	Prod	--	--	T	1969	S Gas	--	35	--	20,000	--	--	--	--	#3,760
3556	1	0	0	0	Irreg	0	10	Prod	--	--	U	1953	Grav	1/3	35	--	3,600	35,200	500	9,200	--	#1,300
7945	0	-	0	-	--	--	--	Wiser	1000	9	-	--	--	--	33	--	0	--	0	--	--	#697
10806	2	2	0	0	5-spot	Vac	60	Prod + Big Salt Sd	800	200	M	1973	Wat	1/2	33	--	9,000	--	0	--	--	*Was Bill D. Farris #750
"	1	-	-	-	--	0	3	Prod	--	--	M	1973	Wat	1/12	33	--	Not producing in 1973		--	--	--	*Was Bruen & Davis
	137	94	0	0													1,857,517	35,982,121	278,764	8,956,307	11,541,425	
6764	1	5	0	0	Irreg	0	247	Prod	--	--	U	1959	S Gas	120/10	36	3	90,088	5,138,089	6,223	539,787	1,135,062	
15677	1	3	0	0	Irreg	0	1	Prod	--	--	U	1970	S Gas	1/0	21	--	365	1,920	0	0	1,557	#167
15709	-	-	-	-	Irreg	2	--	Prod	--	--	U	1970	--	1/3	24	--	--	--	0	600	--	*Did not operate in 1973
17175	1	0	0	0	4-spot	0	10	Prod	--	--	U	1973	Grav	1/1	25	25	675	--	--	--	--	#1,518
11619	2	2	0	0	Irreg	200	75	Prod + KC	180	--	-	1965	Gas Exp	1/19	26	--	27,000	--	--	--	--	#6,219
11074	1	0	0	0	Line	300	25	Prod + KC	300	--	-	1964	Gas Exp	1/19	26	--	6,900	--	--	--	--	#635
11714	1	0	0	1	Line	300	40	Prod	--	--	U	1965	Wat	9/1	26.5	--	10,000	32,000	465	3,465	44,721	#2,465
199	1	0	0	0	Irreg	90	350	Prod	--	--	T	1945	Wat	45/55	38	--	99,000	--	4,301	175,002	--	#5,735
202	2	0	0	0	Irreg	Vac	150	Prod	--	--	T	1960	Wat	6/4	--	--	36,500	377,000	3,244	51,825	--	#4,915
5835																						
5633	1	0	0	0	Irreg	75	90	Prod	--	--	T	1955	S Gas	48/52	36	--	12,000	372,000	1,171	42,390	--	
13052	1	0	0	0	4-spot†	250	65	Prod	--	--	U	1966	Wat	1/3	38	--	23,725	--	365	--	--	*Was Vannocker Oil Co. †Also Peri #1,825

County	Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been continuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
COFFEY COUNTY (Concl.)																
	13346	Winterscheid	Arnold E. Kraft*	(W) Scott, Wiley, Cochran	Scott, Wiley, Cochran	14-23S-14E	80	0	Miss	1600	15	6	0	0	0	Yes
COFFEY COUNTY TOTALS (Reported)							600	20				55	6	1	4	
COFFEY-WOODSON COUNTIES																
	2863	Neosho Falls-LeRoy	Howard Newland*	(W) Unit 13,24-23S-16E	Murray, Remlinger, Wolfe, Maynard	13-23S-16E 24-23S-16E	80	0	Squirrel	940	12	17	1	1	1	Yes
	8745	Virgil North	Sun Oil Company	(W) Chris A. Bahr-Joseph B. Bahr	Joseph B. Bahr, Chriss A. Bahr	14-23S-13E 23-23S-13E	140	25	Miss	1700	125	6	0	0	2	Yes
COFFEY-WOODSON COUNTIES TOTALS (Reported)							220	25				23	1	1	3	
COMANCHE COUNTY																
	17128	Collier Flats	Halliburton Oil Prod. Co.	(P) Collier Flats Unit	Thornhill, O. Baker, Norton	24-33S-20W 25-33S-20W 26-33S-20W	480	0	L-KC	4777	5	3	0	0	0	Yes
COWLEY COUNTY																
	10481	Albright	Deck Oil Company	(P) Albright "A"	Albright "A"	2-34S-5E	160	0	Miss	3100	12	7	0	0	0	Yes
	11121	Bernstorf	Gralapp & Everly	(-) --	Bernstorf-Gralapp & Everly	33-31S-4E	160	0	Bartl	3049	22	3	2	0	-	Yes
	5563	Biddle	Stewart Brothers	(-) Biddle NW Unit	Long "A", CSO-Holt, Long "B", DeFore-Roberts, Morris, Hawkins, Holt	36-31S-4E 31-31S-5E 1-32S-4E 6-32S-5E	80	180	Cattle	2900	18	4	1	0	-	Yes
	9844	Bolack	R.R. Abderhalden	(W) Bolack W.F. Unit	--	20,21-32S-6E	150	--	Cattle	2875	16	3	0	0	0	Yes
	16770	Brandenburg	Aylward Drilling Co.	(D) --	Brandenburg	3-35S-3E	160	0	Miss	3355	3370	3	-	-	-	Yes
	16081	Branson	Gralapp & Everly	(W) --	Branson-Gralapp & Everly	29,32-32S-7E	140	--	Stal	1750	30	2	4	0	0	Yes
	9593	Burden	Texaco Inc.	(W) Burden Unit	N. Brewer, J.I. Lauppe, A.S. Hill, N. Brewer, J. Fitzgerald, N. Brewer, A. Sitton, E. Sitton, Hall-Higginbottom Unit, L. Higginbottom, C.C. Sitton, J.C. Ore, A.F. Sitton, Sisters of Joseph, O.P. Pierce, F. Weigle, R. Smith, E.J. Drury, Sanders, D.J. McMinn	19-31S-6E 20-31S-6E 29-31S-6E 31-31S-6E	1124	--	Bartl	2950	30	12	-	0	-	Yes
	16342	Burden	Wilson Drilling Co.	(P) Keeseey-Blanchet	Harris, Blanchet, Weigel, Wakefield, Keeseey	17-31S-6E 18-31S-6E 20-31S-6E	1280	0	Bartl	2820	80	9	0	0	0	Yes
	11853	Combs	Rex & Morris Drilling Co.	(W) Graham Unit	Graham, Saxton, Swain	5-30S-5E 7-30S-5E 8-30S-5E	160	0	Bartl	2875	25	2	0	0	0	Yes
	4028	Combs	Tomlinson Oil Co., Inc.	(D) Combs	Combs	5-30S-5E	40	0	Bartl	2830	9	3	2	0	0	Yes
	16269	Daniels	Lee Phillips Oil Co.	(P) Daniels Flood Project	Fuchs, Knowles, P.E. Donley, P. Donley, Kennedy, Mahlandt, Brungardt	13-30S-4E 7-30S-5E 17-30S-5E 18-30S-5E	140	0	Bartl	2850	40	7	0	1	1	Yes
	16403	David	Am. Petrofina Co. of Texas*	(P) Kurtz	Kurtz	26-30S-4E	80	0	Bartl	2945	16	1	0	0	0	Yes
	7478	Deichman	H.H. Blair Estate	(-) Deichman	--	24-31S-4E	--	--	Bartl	2825	12	2	1	0	-	Yes
	15676	Deichman	Catt Drilling Co., Inc.	(D) Pierce	Pierce	24-31S-4E	30	--	Layton	2225	25	2	-	0	-	No
	5535	Eastman	Buckeye Corporation	(W) Eastman	Eastman	6-31S-6E	60	0	Bartl	2816	62	1	0	0	0	Yes
	16839	Estep West	Clyde M. Becker	(P) Goatley-Dunn	Dunn, Goatley	19-34S-6E 29-34S-6E	410	--	Miss	3070	15	2	0	0	0	Yes
	7841	Estes	Texaco Inc.	(P) G.O. Brooks	G.O. Brooks, M.M. Spangler, F.G. Jabara	1-32S-6E 6-32S-7E 31-31S-7E 6-32S-7E	560	--	Cott Gr	2136	12	4	-	0	-	Yes

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl./ well/ day	Injected-water data				Date first inj.	Primary production mechanism	Primary oil-water ratio	API grav. deg.	Oil visc. cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73		
13346	4	0	0	0	5-spot + Peri	350	230	Prod	--	--	T†	1966	Wat	1/3	38	--	83,950	--	1,095	--	--	#=1973 Primary and Secondary Production
	15	5	0	1													300,115	782,920	10,641	273,282	46,278	*Was Vannocker Oil Co. †T with Special Additive #4,380
2863	10	2	0	0	--	300	30	Prod + KC	320	20	U	1952	--	--	26†	--	98,000	1,768,934	5,014	351,190	351,190	*Was Susmio Oil Co. †& 27.
8745	7	1	0	1	Irreg	450	275	Prod + Arb + Bartl	2230 1660	150 40	T	1961	S Gas	--	30.9	5.4	705,109	12,710,291	11,038	219,930	219,930	
	17	3	0	1													803,109	14,479,225	16,052	571,120	571,120	
17128	1	0	0	0	Irreg	0	100	Prod + L-KC	4644	16	U	1973	S Gas	--	44	--	9,000	9,000	0	0	23,609	#1,315
10481	1	0	0	0	Irreg	50	100	Prod	--	--	U	1964	S Gas	1/1	39	--	34,000	223,375	3,600	8,400	249,246	#10,991
11121	1	2	0	--	Irreg	--	--	Prod	--	--	T	1964	--	1/1	42	--	56,419	215,362	--	--	161,226	#2,510
5563	2	1	--	--	Line	600	750	Prod + Stalnaker	1000	75	U	1961	Gas Exp	8/2	39	--	317,940	8,695,995	4,500	321,294	321,294	
7358																						
9844	2	0	0	0	Line	400	250	Prod + Layton	1900	80	T	1963	S Gas	5/2	40	8	182,500	3,327,464	9,065	352,854	--	
16770	1	--	--	--	Irreg	0	55	Prod	--	--	T	1973	S Gas	18/30	36	--	9,900	9,900	2,353	2,353	115,567	#5,353
16081	2	4	6	--	Irreg	--	--	Prod	--	--	T	1970	Wat	1/1	39	--	220,150	655,579	--	--	228,842	#27,355
9593	8	--	0	--	5-spot	703	216	Prod	--	--	U	1963	S Gas	868/372	38	--	631,108	26,079,319	43,406	949,575	1,243,579	
16342	2	0	0	0	Irreg	750	350	Prod + Stalnaker	1600	100	T	1968	Grav	10/1	38.4	--	255,500	908,500	10,000	25,000	200,000	#20,000
11853	1	0	0	0	Irreg	180	195	Prod	--	--	U	1965	S Gas	3/11	40	--	71,175	--	--	--	224,024	#6,318
4028	1	2	0	0	Peri	350	209	Prod	--	--	U	1954	S Gas	--	40	--	76,212	570,279	3,158	100,638	397,689	
16269	2	0	0	0	Irreg	135	1524	Prod	--	--	U	1971	S Gas	21/79	39	--	556,260	1,145,203	0	0	84,467	#23,772
16632																						
16403	1	0	0	0	Irreg	0	26	Prod	--	--	U	1972	S Gas	1/4	30.9	--	9,494	19,656	0	0	103,976	*Was El Dorado Refg. Co. #970
7478	1	--	--	--	Irreg	0	50	Prod	--	--	U	1961	Grav	3/7	39	--	180,000	--	--	--	--	#500
15676	0	0	0	0	--	--	--	--	--	--	U	1970	Wat	1/4	38	--	7,200	Project was converted to Stalnaker water disposal in May, 1970.			2,704	#2,704
5535	1	0	0	0	Irreg	0	80	Prod	--	--	U	--	Grav	--	37.9	--	29,200	--	1,783	--	--	#3,565
16839	1	0	0	0	--	Vac	15	--	--	--	-	--	--	--	--	--	--	--	--	--	--	
7841	2	--	0	--	Irreg	Vac	184*	Prod	--	--	U	1961	Wat	--	38.2	--	77,015	--	1,802	--	--	*Plus some unmetered #4,454

County Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has ini- been con- tinuous?
						Prod.	Abst.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abst.	
COWLEY COUNTY (cont.)															
13624 15368 15369	Fra-Mar	Petroleum Management Inc.*	(W) Feaster, Thomas, Johnson	Feaster, Thomas, Johnson	22-30S-4E 27-30S-4E	80	0	Bartl	2852	15	-	-	-	-	--
5863 7136 14230	Frog Hollow	E.T. Lindsay	(D) J.W. Gardner	J.W. Gardner	16-32S-5E	60	-	Bartl	3040	60	2	3	-	-	No*
	Frog Hollow	Phillips Petroleum Co.	(W) Lena	--	17-32S-5E	25	-	Bartl	3035	25	4	0	0	0	Yes
	Frog Hollow East	Merlin Hickman*	(P) East Frog Hollow	Josephine Devore, Glenn Miller, T.E. Allen, C.L. Miller et ux, G.F. Miller et ux, R.H. Miller et ux, Mabel C. Miller	11-32S-5E 12-32S-5E 14-32S-5E 15-32S-5E	427	0	Bartl	3000	13	3	2	-	-	Not
3549 4538 15017 13495	Geuda Springs	Earl F. Wakefield, Inc.	(D) Hower	Hower	32-33S-3E	40	0	Bartl	3300	34	1	0	0	1	Yes
	Gibson	McNeish Oil Operations	(W) Wilson	Wilson	29-34S-3E	40	10	Bartl	3380	18	1	0	0	0	Yes
	Graham	D.C. Berger*	(W) --	Nixon	10-33S-3E	100	-	Miss	3241	10	3	0	0	0	Yes
	Graham	Crest Petroleum, Inc.	(W) Bradbury-Miller- Wright "A"	Bradbury, Miller, Wright "A"	10-33S-3E 15-33S-3E	273	-	Miss	3255	30	10	-	-	1	Yes
15536	Graham	Crest Petroleum, Inc.	(W) Crest-Graham Unit	Myer, Trego, Trego, Kroth, Dobbins, L. Whitson, Myer, C. Whitson, Crane	1-33S-3E 12-33S-3E 6-33S-4E 7-33S-4E	680	-	Miss	3233	26	16	0	0	0	Yes
16280 16692	Graham	Crest Petroleum, Inc.	(W) Nelson	Nelson, Winters	2-33S-3E	80	-	Miss	3268	30	4	0	0	0	Yes
	Graham	Crest Petroleum, Inc.	(-) Wright "B"	Wright "B", Kukuk	10-33S-3E 11-33S-3E	80	-	Miss	3251	16	2	0	0	0	Yes
8938 4843 14142	Graham	Earl F. Wakefield, Inc.	(P) Boyles	Boyles	11-33S-3E	160	0	Bartl	3275	15	5	0	0	0	Yes
	Harvey	Aylward Drilling Co.	(D) Harvey Unit	Harvey	23-34S-3E	10	9	Bartl	3278	20	1	0	0	0	Yes
	Harvey	Aylward Drilling Co.	(P) Fussell Water Flood	Fussell, Pearson	14-34S-3E	80	0	L-KC	2839	6	1	0	0	0	Yes
4536 16022	Harvey	McNeish Oil Operations	(W) Snyder	Snyder	15-34S-3E	40	-	Bartl	3270	18	3	0	0	0	Yes
	Higby	Landers & Musgrove Oil*	(P) Higbee-Woods	Higbee, Woods	31-34S-6E	320	0	Miss	3156	44	2	0	0	0	Yes
11742 6722 5238	Larcom	Robert R. Boley	(P) --	Dunbar, McFarland	4-34S-4E	110	10	Layton	2300+	6+	3	1	0	-	Yes
	McKay	W.J. Lamberton	(W) McKay	Bergkamp, Broce, Klink "A", Klink "B"	6-35S-4E 7,8-35S-4E 8-35S-4E	150	60	Bartl	3300	25	9	-	31	11	Yes
5822 5818 14558	McKay	David D. Wells*	(D) --	McKay	17-35S-4E	40	40	--	3350	10	2	2	0	0	Not
	Maddix North	Roger M. Wheeler	(W) North Maddix Unit	Andes A, Andes B, Yadon, Maddix, Andes, Rockwell, Richardson, Groene, Jarvis	1-33S-5E 2-33S-5E 11-33S-5E 12-33S-5E 14-33S-5E	240	0	Miss	3000	15	19	2	0	0	Yes
10928 3427 2844	Posey	Moran Oil Co.	(W) Muret	Muret	21-33S-4E	160	0	Miss	3150	10	1	0	0	0	Yes
	Rahn	Rance Arnold*	(-) --	Jesse Rahn	13-34S-5E	100	0	Bartl	2900	20	1	1	0	0	Yes
	Rahn	Landers & Musgrove*	(D) Rahn Unit	M. Waldschmidt, George Rahn, Rowe, Thompson, W. Kavanaugh, D. Kavanaugh	12-34S-5E 13-34S-5E 6-34S-6E 7-34S-6E	200	0	Bartl	2900	22	6	0	0	0	Yes
3386	Rahn	W.D. Short*	(D) Rahn Unit I	--	32-33S-6E 5,6-34S-6E	150	150	Bartl	2850	15	0	3	0	0	Yes
7468	Rainbow Bend	McNeish Oil Operations	(W) Rainbow Bend West Unit	Heskett, Holman, Nelson	19-33S-3E	85	-	Bartl	3180	12	4	2	0	0	Yes
3239 9696	Rainbow Bend	Mead Production Co.	(D) Hunt Rainbow Bend Unit	Julia Hunt	16-33S-3E	50	80	Bartl	3200	20	2	0	0	0	Yes
2999	Rainbow Bend	Sun Oil Co.	(W) Rainbow Bend Waterflood	N. Wertman, R.A. Nelson, R.B. Nelson	20-33S-3E 21-33S-3E	620	660	Bartl	3200	30	4	2	0	0	Yes
6330 2918	Rainbow Bend	S & G Oil Company, Inc.	(D) J.U. Hunt	J.U. Hunt, E.E. Hunt	16-33S-3E 21-33S-3E	365	0	Bartl	3200	25	1	2	0	0	No*
15895	Rock	Steve Cowan*	(D) Rock Unit #1	Rock Unit #1	11-30S-4E	420	260	Bartl	2705	40	1	0	0	0	Yes

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl/well/day	Injected-water data				Date first inj.	Primary production mechanism	Primary oil-water ratio	API grav., deg.	Oil visc. cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks		
	Active	In. active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Oil recovered by secondary methods					
																	Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73				
13624	-	-	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	#=1973 Primary and Secondary Production	
15368	-	-	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*Sold 3-1-73 to J & L Oil	
15369	-	-	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
5863	1	-	-	-	Irreg	Grav	673	Prod + Stalnaker	2000	45	T	1969	S Gas	--	38	--	35,984	560,510	1,230	2,321	--	--	*Shut down part of year.	
7136	1	0	0	0	5-spot	0	194	Prod	--	--	U	1959	Wat*	1/5.6	41	5	70,913	759,220	8,527	103,211	--	--	*Plus S Gas	
14230	1	-	-	-	Irreg	Vac	75	Prod	--	--	U	1968	S Gas	1/9	38	--	31,106	183,235	270	15,230	34,690	--	*Was Clinton Oil Co. †Gas inj. discontinued #4,470	
3549	1	0	0	0	Irreg	0	400	Prod	--	--	T	1954	S Gas	--	39	--	146,000	2,477,000	642	61,687	66,491	--	#1,284	
4538	1	0	0	0	5-spot	0	1	Prod	--	--	U	1959	S Gas	--	35	--	365	1,393,183	1,368	100,484	100,484	--		
15017	1	0	0	0	Line	0	42	Prod + Layton	2550	75	U	1969	Gas Exp	4/8	40	--	15,330	74,202	11,183	40,950	--	--	*Was Maggard & Jenkins-Ray	
13495	5	1	0	0	Peri	Vac	100	Prod + Stalnaker	2190	50	T	1967	S Gas	40/56	41	--	150,012	1,276,044	21,339	138,800	138,800	--		
15536	6	0	0	0	Peri	--	184	Stalnaker	2180	68	T	1970	S Gas	43/50	40	--	186,843	881,425	9,000	57,663	68,372	--	#19,709	
16280	1	0	0	0	3-spot	Vac	144	Prod	--	--	T	1971	S Gas	18/100	40	--	50,865	102,094	6,713	6,713	12,073	--		
16692	1	0	0	0	Line	Vac	60	Prod	--	--	T	1972	S Gas	1/5	41	--	14,071	20,167	4,544	4,544	8,367	--		
8938	1	0	0	0	Irreg	0	60	Prod	--	--	U	1961	S Gas	--	40	--	109,500	1,307,000	904	42,909	113,949	--	#3,618	
4843	1	0	0	0	Irreg	Grav	119	Prod	--	--	T	--	Grav	1/1	37	--	43,600	98,350	2,966	40,238	40,923	--		
14142	1	0	0	0	Irreg	200	80	Prod	--	--	T	1968	--	--	38	--	29,200	145,550	5,673	11,491	123,388	--		
4536	2	0	0	0	Irreg	0	0	Prod + Surface	8	20	F	1955	S Gas	--	38	--	0	1,113,452	2,903	143,911	143,911	--		
16022	1	0	0	0	Irreg	130	180	Prod	--	--	T	1971	S Gas	8/20	37	--	42,500	55,000	1,500	8,000	40,000	--	*Was Maggard Supply Co. #3,300	
11742	1	0	0	0	Irreg	0	200	Prod	--	--	U	1964	Wat*	--	38	--	70,000+	570,000	--	--	--	--	*Plus S Gas	
6722	10	-	-	-	Line	400	100	Prod + Surface	10	26.5	F	1959	S Gas	1/0	40	--	35,000	--	11,219	--	--	--		
5238	-	-	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
5822	1	2	0	0	Irreg	0	0	Prod	--	--	U	--	S Gas	--	38	--	--	1,680	560	--	--	253,298	--	*Was Robin Supply Co. †Would not take water
5818	-	-	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
14558	4	0	0	0	Irreg	162	347	Prod + Stalnaker	2062	35	T	1969	S Gas	944/41.8	38	20	506,248	1,635,817	33,980	96,673	866,187	--	#44,583	
10928	1	0	0	0	Irreg	160	250	Prod + Stalnaker	2000	70	U	1964	S Gas	1/1	42	--	91,250	601,291	6,637	71,800	71,800	--		
3427	1	1	0	0	Irreg	20	340	Prod + Elgin	1220	25	U	1952	--	--	36	--	12,400	--	3,214	--	--	--	*Was B.B. Blair	
2844	3	-	0	0	Line	0	400	Prod	--	--	U	1952	S Gas	1/0	37	--	14,000	2,400,000	9,100	350,000	740,000	--	*Was Rance Arnold	
3386	1	3	0	0	Line	0	800	Layton	2100	100	U	1945	S Gas	99/1	40	--	292,000	--	0	1,158,222	1,158,222	--	*Was Continental Oil Co.	
7468	2	2	0	0	Peri	0	58	Prod + Surface	16	20	F	1960	S Gas	--	40	--	84,195	3,500,445	4,374	224,661	224,661	--		
3239	1	1	0	0	Irreg	0	160	--	--	--	U	1952	Gas Exp	6/4	41	--	58,400	2,059,300	4,871	297,307	297,307	--		
9696	-	-	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
2999	3	0	0	0	Irreg	800	2583	--	--	--	T	1952	Wat	10/1	41	2.5	2,828,727	50,790,778	44,167	108,912	2,596,301	--		
6330	0	1	0	0	Irreg	250	700	Prod	--	--	U	1957	Wat	--	40	--	141,700	3,817,278	2,834	335,975	--	--	*Part of year--high water	
2918	-	-	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
15895	1	0	-	0	Irreg	0	15	Prod	--	--	U	--	S Gas	--	40	39	4,025	--	0	--	--	--	--	*Was Satin Supply Co. #1,095

TABLE 1—ENHANCED OIL RECOVERY PROJECTS, 1973—Continued

Kansas Geol. Survey Energy Resource Series 3, 1974

County Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has ini. been con- tinuous?
						Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
COWLEY COUNTY (concl.)															
8101	Rock	Kathol Petroleum, Inc.	(W) Waite	Waite, Olson-Rule	13-31S-3E	400	240	Bart1	2915	21	4	2	0	0	Yes
3085	Rock	Stelbar Oil Corp., Inc.	(W) Rock Unit	Gamble, Stelbar, Apco, Mobil, Starkey	11-30S-4E 14,15-30S-4E 16-30S-4E	760	600	Cattle	2750	20	4	8	0	0	Yes
12366	Rock	Stelbar Oil Corp., Inc.	(W) Rock North	Shawver, Shawver, Davis, Daves, Hornaday	2-30S-4E 3-30S-4E 9-30S-4E 10-30S-4E	680	--	Cattle	2800	20	14	4	0	0	Yes
9651	School Creek North	Petroleum Enterprises	(P) --	Beamer, Davis, Miller	10-32S-7E 11-32S-7E	60	--	Layton	2230	10	12	-	0	0	Yes
9056	Shannon	Lewis Operating	(W) Shannon Unit	Shannon Unit	23,27,35-31S-5E	1000	1000	Layton "A"	2360	11	17	30	55	8	Yes
12927	Smith	Brunson-Spines	(W) Smith Water- flood Project	Mowder Unit, Huggins, Hann, Hann "B", Holtje, Hann "B"	10-31S-3E 15-31S-3E	120	0	Bart1	3000	16	7	3	0	0	Yes
8457	Stayton South	S.J. Roark*	(D) --	A.R. Husted	5-33S-4E	80	0	Bart1	3200	20	3	0	0	0	--
10811	Trees	Braden-Deem, Inc.	(W) Trees Waterflood	Tract 4,5 & 6, Tract 1, 2 & 3	19-30S-4E 30-30S-4E	200	80	Bart1	2860	12	5	4	0	0	Yes
16946	Waldschmidt	Crest Petroleum, Inc.	(P) Waldschmidt- Rahn	Rahn, Waldschmidt	7-34S-6E 7,8-34S-6E	720	0	Miss	3065	20	3	-	1	-	Yes
8340	Werner	E.T. Lindsay	(D) Feaster Unit	Cranston, Feaster, Kadau, Wahlenmaier-Turner	30-32S-6E	240	40	Layton	2240	7.2	8	2	-	-	Yes
15713	Wilmot-Floral	Dawson-Markwell Expl. Co.	(W) Nora King Unit	Aubry Peters, W.J. Pendergraft, John Jarvis, Nora King	17-31S-5E 20-31S-5E	460	60	Bart1	2884	12	5	-	0	0	No*
8785	Winfield	H.H. Blair Estate	(D) Lorton	Lorton	25-32S-4E	160	--	Layton	2800	20	5	0	0	0	No*
1857	Winfield	Gulf Oil Corp.	(D) Mary Shannon	Mary Shannon	24-32S-4E	30	0	Bart1	2930	38	1	8	0	0	Yes
7587	Winfield	Kathol Petroleum, Inc.	(-) Kukuk	Detmer, Wallace, Kukuk, North, Kukuk, South, Bartlow	24-32S-4E 19-32S-5E	--	--	Bart1	2975	30	0	35	0	0	No*
9975	Winfield	Earl F. Wakefield	(D) B.G. Thirsk	B.G. Thirsk	26-32S-4E	80	0	Bart1	2900	7	4	3	0	1	Yes
COWLEY COUNTY TOTALS (Reported) (Includes project in supplemental list.)						15,182	3,479				278	129	88	23	
CRAWFORD COUNTY															
14980	Farlington	G.N. Babcock	(W) --	Granneman	3-28S-23E	30	0	Peru	180	20	5	1	0	0	No*
11453	Farlington	Walter Duncan	(W) Burge	Burge	2-28S-23E	85	0	Peru	175	20	30	1	0	0	Yes
11734	Farlington	E.J. Dunigan, Jr.	(W) Mitchell-Mein Project	Mitchell	2,3-28S-23E	15	0	Peru	195	16	7	0	0	0	Yes
9856	Farlington	Wel-Kan Oil Co.	(W) Holtman	Esther M. Holtman	2-28S-23E	60	0	Peru	160	20	25	0	0	0	Yes
7487	Walnut Southeast	Roy Fultz	(-) --	Wintjen	27-28S-22E	40	0	Bart1	390	15	6	-	-	-	No*
3105	Walnut Southeast	Morris Stephens	(W) --	Engel, Mein, Engel	27-28S-22E 28-28S-22E	200	0	Bart1	370	12	40	2	1	0	Yes
CRAWFORD COUNTY TOTALS (Reported)						430	0				113	4	1	0	
DECATUR COUNTY															
15099	Adell Northwest	Continental Oil	(W) Adell, NW	Adell, NW	26,27,34, 35-5S-27W	333	0	L-KC	3703	23	8	2	-	0	Yes
15829	Altory	Raymond Oil Co.	(W) Steffen	Steffen	34-3S-27W	60	-	L-KC	3520	32	2	-	-	-	Yes
17018	Blees	A.L. Abercrombie, Inc.	(W) Blees	Blees "A", Blees, Huff	5-1S-26W 8-1S-26W	400	0	L-KC	3250	10	3	0	0	0	Yes
10845	Decatur Center	Halliburton Oil Prod. Co.	(W) Harmon Decatur- Center Unit	Witt, Harmon, Witt, Ruzicka	16-3S-28W 21-3S-28W	800	0	L-KC	3744	30	6	0	0	0	Yes
8190	Jennings	Texaco Inc.	(W) Jennings Unit	E.B. Jennings, M. Tacha, R.L. Skubal, E.J. Keenan, Keenan Noone, M.T. Munson	25-4S-27W	614	--	Howard Lans	3500 3715	8.7	10	-	0	-	Yes

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl/well/day	Injected-water data			Date first inj.	Primary production mechanism	Primary oil-water ratio	API grav. deg.	Oil visc., cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks	
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.						Type	Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973			Cum. 12-31-73
8101	3	0	0	0	4-spot	575	1011	Prod + Arb	2900	17	T	1960	S Gas	--	38	--	353,943	3,619,301	7,238	--	304,149	#=1973 Primary and Secondary Production #12,476
3085	3	10	0	0	Line	750	125	Prod	--	--	T	1951	S Gas	--	38	--	130,028	28,425,827	9,273	1,257,529	--	
12366	8	2	0	0	Line	625	500	Prod + Stalnaker	1800	100	T	1966	S Gas	--	39	--	1,501,665	6,581,027	116,333	521,875	1,121,873	
9651	3	-	-	-	Irreg	250	450	Prod	--	--	U	1963	S Gas	--	40	--	172,000	--	--	--	--	#17,642
9056	7	0	7	0	Peri	450	650	Prod + Stalnaker	1950	30	M	1962	S Gas	5/1	42	4.3	1,800,000	20,000,000	161,560	5,499,653	5,499,653	
12927	4	0	0	0	Irreg	1200	431	Prod + Stalnaker	2150	100	U	1966	S Gas	9/60	37	--	629,142	4,197,462	29,420	435,412	435,412	
8457	-	-	-	-	4-spot	50	200	Prod	--	--	-	--	--	--	--	--	10,400	--	--	--	--	*Was Laura Jane Oil Co.
10811	1	3	0	0	Irreg	1200	340	Prod + Sh	32	10	M	1964	S Gas	10/1	40	60	123,716	1,656,188	11,957	328,310	328,310	
16946	1	-	0	-	4-spot	Vac	20	Prod	--	--	U	1973	S Gas	4/8	38	--	2,200	2,200	0	0	4,969	
8340	2	1	-	-	Irreg	Grav	250	Prod + KC	2450	6	T	1961	S Gas	--	37	--	91,250	416,180	2,792	7,532	--	#14,226
15713	3	-	-	-	Irreg	2	--	Prod + Miss	3000	20	T	1970	S Gas	10/1	40.5	5	122,686	160,936	--	--	36,533	*Part of year #4,370
8785	-	-	-	-	Irreg	0	110	Prod	--	--	U	1961	Grav	4/6	36	--	140,000	--	--	--	--	#5,000
1857	1	0	0	0	Line	0	0	Prod	--	--	U	1948	S Gas	20/58	41	--	7,468	745,803	0	--	--	#5,870
7587	-	-	-	-	--	--	--	--	--	--	-	--	--	--	--	--	--	--	--	--	--	*Unit shut down, to be plugged.
9975	1	0	0	0	Peri	20	23	Prod	--	--	T	1963	Wat	--	38.5	--	33,580	688,785	547	15,251	62,002	#2,187
																	13,082,900	184,353,877	619,977	13,248,850	18,223,507	
14980	4	3	0	0	Irreg	180	30	Prod + Miss	--	--	F	1970	Wat	--	31	19	10,000	76,000	--	--	3,700	*Part of year. #840
11453	27	0	0	0	5-spot	180	22.5	Prod + Miss	628	67	F	1965	S Gas	--	31.8	18.9	150,924	1,191,808	7,141	--	110,092	
11734	4	0	0	0	5-spot	200	26	Miss	600	15	M	1965	S Gas	--	29	--	37,696	343,029	1,152	19,884	19,884	
9856	18	0	0	0	5-spot	175	15	Prod + Burgess	610	7	F	1962	*	--	31.5	18.9	97,000	1,071,650	--	--	126,790	*No Pri. Prod. #6,280
7487	0	7	0	-	5-spot	320	3	--	--	--	M	1968	Grav	3/1	28	38.3	8,000	18,000	700	--	1,400	*New line installed
3105	62	0	0	0	7-spot	365	7	Prod + Arb	940	125	M	1951*	--	--	27.8	38.3	158,410	2,682,995	7,928	202,722	202,722	*Pilot 1951, Full, 1959 No Primary production
																	462,030	5,383,482	16,921	222,606	464,588	
15099	3	6	-	-	Peri	260	525	Cedar Hill	1900	40	U	1970	S Gas	--	34.7	--	837,880	3,063,467	97,096	260,576	333,861	
15829	1	-	-	-	Irreg	600	203	Prod + Stray Sd	62	--	M	1971	S Gas	1/0	34	--	74,246	159,876	6,186	27,905	27,905	
17018	3	0	0	0	Irreg	500	150	Prod + Cedar Hills	1608	100	U	1973	S Gas	1/3	32	--	10,590	10,590	0	0	94,699	#9,701
10845	3	0	0	0	Line	800	560	Prod + Cedar Hills	2150	70	T + S	1964	S Gas	2/1	36	*	203,917	522,954	3,000	11,006	484,962	*16.7 @ 40° #21,788
8190	4	-	0	-	Irreg	Vac	122	Prod + Cedar Hills	1680	--	U	--	S Gas	510/1770	37	--	177,457	6,768,467	21,229	362,509	580,013	

TABLE 1—ENHANCED OIL RECOVERY PROJECTS, 1973—Continued

Kansas Geol. Survey Energy Resource Series 3, 1974

County	Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been continuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
DECATUR COUNTY (concl.)																
	16181	Paddock	Donald C. Slawson	(W) Paddock Unit	Paddock Unit	28, 29, 32, 33-2S-28W	740	0	L-KC	3600	4	8	0	0	0	Yes
	14949	Pollnow	Shenandoah Oil Corp.*	(D) Amanda-Pollnow	Amanda, Pollnow, Rogers	6-3S-29W 36-2S-30W	60	-	KC	3750	4	5	-	-	-	Yes
	7653	Pollnow	Rocket Schusterman Oil*	(W) Pollnow Unit	Pollnow Unit	3, 4, 5, 8, 9-3S-29W	740	410	Lans B	3740	4	6	1	0	0	Yes
	15013	Jording	Halliburton Oil Prod.	(P) Jording "A"	Jording "B", Mines	14-2S-30W 23-2S-30W	640	0	L-KC	3847	25	6	0	0	0	Yes
	13755	Vavroch	Halliburton Oil Prod.	(W) Vavroch	Vavroch	33-3S-28W 4-4S-28W	320	160	L-KC	3808	25	5	1	0	0	Yes
	12401	Warner	Cities Service Oil Co.	(W) Warner Unit	Warner Unit	1, 2, 11, 12-1S-27W	220	0	L-KC	3226	12	9	2	0	1	Yes
DECATUR COUNTY TOTALS (Reported)							4,927	570				68	6	0	1	
DICKINSON COUNTY																
	15080	Lost Springs	Frank Jones Oil Operations	(P) Lost Springs	William Martin B	34-16S-4E	320	0	Miss	2280	20	9	0	0	0	Yes
DOUGLAS COUNTY																
	6934	Baldwin	Russell Hays	(D) Smith-Danley	Smith-Danley	9-15S-20E	5	--	Squirrel	820	10	2	-	-	1	Yes
	12705	Baldwin	James E. Russell Petroleum*	(W) Baldwin Unit	Baldwin Unit	36-14S-20E 2-15S-20E 6-15S-21E	120	0	Squirrel	800	18	0	23	0	0	Not
DOUGLAS COUNTY TOTALS (Reported)							125	0				2	23	0	1	
DOUGLAS-FRANKLIN COUNTIES																
	8295	Baldwin	Layton	(W) Baldwin Flood	Finnerty North, Finnerty South, Bell, Broers, Higby, Williams	14-15S-20E 23-15S-20E 24-15S-20E	157	0	Squirrel	820	24	23	0	0	0	Yes
EDWARDS COUNTY																
	6178	Enlow	Messman-Rinehart Oil Co.	(D) Hahn "A"	Hahn "A"	4-24S-16W	100	0	L-KC	3740	6	2	0	0	0	Yes
	15344*	Wil	NCRA	(D) Cudney-Lovell	Cudney, Lovell	36-25S-16W	0	20	Congl	--	--	-	-	-	-	No
EDWARDS COUNTY TOTALS (Reported)							100	20				2	0	0	0	
ELK COUNTY																
	16218	Bush-Denton	Perkins Oil Co.	(D) Clad Criger	Clad Criger	34-29S-9E	80	--	Miss	2289	52	1	-	-	1	No*
	5118	Bush-Denton	Perkins Oil Co.	(D) --	Kyser "B", Hyde, Kyser "A"	9, 10-30S-9E 10-30S-9E	200	--	Miss	2375	29	7	-	1	-	Yes
	15543															
	16219															
	16604	Dory	Cross & Ashlock	(D) --	Cory	17-30S-9E	--	--	Miss	2560	--	3	1	-	1	Yes
	11830	Key	W.N. Huffine	(D) Key	--	25-31S-10E	--	--	Peru	1550	30	3	0	0	0	No*
	10390	Moline	W.R. Gross	(D) --	M. Eyman	9-31S-10E	160	--	Miss	2003	17	2	0	0	-	Yes
	11214	Schrader	Aladdin Petroleum Corp.	(P) Shrader	Shrader	12-31S-8E	160	0	KC	1650	40	7	0	0	0	Yes
	16500	Webb	BMG, Inc.*	(D) Durbin	--	23-31S-10E	10	--	KC	1356	10	3	-	0	-	Yes
	2760	Webb	Tomlinson Oil Co., Inc.	(D) Webb-Leffingwell	Webb, Leffingwell	14-31S-10E	80	40	Miss	1950	15	13	4	0	0	Yes
	10655				Unit											
	17042	Webb	Tomlinson Oil Co., Inc.	(D) Durbin	Durbin	13-31S-10E	80	0	Miss	1937	10	8	1	0	0	Yes
ELK COUNTY TOTALS (Reported)							770	40				47	6	1	2	

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1973—Continued

Kansas Geol. Survey Energy Resource Series 3, 1974

County	Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has ini. been continuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
ELLIS COUNTY																
	10613	Air Base	Am. Petrofina Co. of Texas	(-) Pratt	Pratt Airbase	27-13S-6W	80	120	Gorham	3460	15	6	0	0	0	Yes
	12516*	Air Base	Am. Petrofina Co. of Texas†	(P) Braun "D"	Braun "D"	34-13S-16W	40	0	Penn Cg1	3549	7	1	0	0	0	No
	16340	Air Base East	Hinkle Oil Co.	(W) Air Base	Brungardt "A", Brungardt "B", Leiker East	25-13S-16W	200	--	L-KC	3400	15	4	0	0	0	Yes
	12629	Beeching	Icer Addis	(W) Beeching Water-flood Unit	Beeching, Daisy, Gorham, Sarah	34,35-15S-16W	800	--	L-KC	3330	15	3	0	0	0	Yes
	16660	Bemis-Shutts	Continental Oil	(W) Warren Mtg. Inv.	Warren Mtg. Inv. Co.	3-11S-18W	20	0	L-KC	3322	131	8	0	-	0	Yes
	11239	Bemis-Shutts	Fell & Wolfe Oil Co.*	(D) Pearl Cress	Pearl Cress	13-11S-17W	80	--	L-KC	3068	12	2	0	0	0	Yes
	12116	Bemis-Shutts	Lario Oil & Gas Co.	(P) Henderson "E"	Henderson "E"	22-11S-18W	80	0	L-KC +	3100	--	3	1	0	0	Yes
	12788	Bemis-Shutts	Lario Oil & Gas Co.	(P) Henderson "E"	Lario-Henderson "E", Sohio-Henderson "A"	22-11S-18W	160	0	Arb	3350 3520	--	2	0	0	0	Yes
	7923	Bemis-Shutts	Mallonee-Mahoney, Inc.*	(W) Windholz	Hall "A", Windholz "A", Windholz "B"	2-12S-17W 3-12S-17W	340	--	Arb	3600	50	2	0	0	0	Yes
	12976	Bemis-Shutts	Okmar Oil Co.	(W) Lynn-Henderson	Henderson, Lynn A, Lynn B, Lynn C, Lynn D, Lynn E	22-11S-18W 23-11S-18W	400	0	L-KC	3350	5	3	0	0	0	Yes
	14315	Bemis-Shutts	Petroleum, Inc.	(W) Bemis-Shutts LKC Unit	Reeder #4, #6, #8, Jensen "C" #1, #3, Truan "A" #1	22-12S-18W 27-12S-18W	200	0	L-KC	3404	7	3	2	0	0	Yes
	11621	Bemis-Shutts	Sierra Petroleum Co.	(D) Schmeidler "E"	Schmeidler "E"	8-12S-17W	160	0	L-KC +	3340	224	2	0	0	0	Yes
	12769	Bemis-Shutts	Shade & Berry	(D) --	Henderson 1-E	15-11S-18W	40	--	L-KC	3132	10	3	-	-	-	Yes
	14169	Bemis-Shutts	Sohio Petroleum Co.	(-) Bemis B	--	15-11S-17W	--	--	Topeka	2990	12	-	-	-	-	No*
	14170	Bemis-Shutts	Sohio Petroleum Co.	(-) Bemis A	--	16-11S-17W	--	--	Topeka	2963	12	-	-	-	-	No*
	15294	Bemis-Shutts	Sohio Petroleum Co.	(W) Bemis I	Bemis I	4-12S-17W	80	0	Arb	3560	--	3	0	0	0	Yes
	12646	Bemis-Shutts	Sun Oil Co.	(W) Bemis Co-op Waterflood	Jorgensen, Hadley "A", Phillips-Sites, Phillips-Hendricks, Peavey, Hadley "BC", Peavey "A"	7-11S-17W 12-11S-18W 13-11S-18W	960	0	L-KC + Topeka	2950	20	26	0	0	0	Yes
	13637	Bemis-Shutts	Tenneco Oil Co.	(W) Frank S. Wasinger Unit	Frank S. Wasinger Unit	21-11S-18W	160	120	L-KC	3320	6	8	0	1	0	Yes
	16345	Bemis-Shutts	Trumart Oil Co.	(W) Opdyke A	Opdyke A	15-11S-18W	80	--	L-KC	3047	9	4	1	-	-	Yes
	16348	Bemis-Shutts	Kewanee Oil Co.	(W) Catherine Unit	--	10,11-13S-17W	190	0	KC	3250	210	0	0	0	0	No*
	10120	Bemis-Shutts	Tenneco Oil Co.	(W) Frank S. Wasinger Unit	Frank S. Wasinger Unit	21-11S-18W	160	120	L-KC	3320	6	8	0	1	0	Yes
	8552	Bemis-Shutts	Trumart Oil Co.	(W) Opdyke A	Opdyke A	15-11S-18W	80	--	L-KC	3047	9	4	1	-	-	Yes
	11933	Catherine	Kewanee Oil Co.	(W) Catherine Unit	--	10,11-13S-17W	190	0	KC	3250	210	0	0	0	0	No*
	10619	Catherine Northwest	Texaco Inc.	(W) M. Wolf "A"	M. Wolf	4-13S-17W	70	--	Tor + Lans	3350	37	2	-	0	-	Yes
	15300	Catherine South	Sterling Drilling Co.	(P) Catherine South Unit	--	14-13S-17W	200	--	L-KC	3276-	8-	4	1	0	0	Yes
	10574	Catherine South	Texaco Inc.	(W) L.J. Dreiling Group	L.J. Dreiling "C" L.J. Dreiling "B", "E"	21-13S-17W 22-13S-17W	240	--	Arb	3550	30	6	-	0	-	No*
	15372	Chrisler South	Okmar Oil Co.*	(W) Madsen	Madsen, Snapp, Madsen, McGuire	27-11S-16W 28-11S-16W	100	0	L-KC	3017	148	3	1	0	0	Yes
	5605	Cromb	Maurice L. Brown Trust	(P) Zachman	Zachman	15-11S-20W	160	0	L-KC	3554	8	3	1	0	0	Yes
	13603	Dechant	Icer Addis	(W) Dechant	Dechant	6-15S-18W	80	--	L-KC	3300	5	1	0	0	0	Yes
	16276	Dechant Northwest	Am. Petrofina Co. of Texas*	(P) Wilson	Wilson	1-15S-19W	160	0	Arb	3646	7	4	0	0	0	Yes
	16262	Dechant West	Thornton E. Anderson*	(D) Pfannenstiel SWDS	Pfannenstiel, DeChant	1-15S-19W	50	0	Arb	3700	300	4	0	0	0	Yes
	17098	Dinges	Palomino Petroleum*	(D) Dinges	Dinges	10-15S-18W	160	0	L-KC	3348	46	1	0	0	0	Yes
	15311	Dreiling	Kaiser-Francis*	(D) Dreiling	Dreiling "A"	21-14S-16W	80	0	Lans	3103	49	1	0	0	0	Yes
	13073	Eagle Creek	Veeder Supply & Development	(W) Eagle Creek Unit	Eagle Creek Unit	2,10,11-11S-20W	80	130	L-KC + Toronto	3270	25	6	1	0	1	Yes
	7142	Emmeram	Hillenburg Oil Co.*	(W) Froelich	Froelich A, Froelich B, Froelich C	4-13S-16W	20	0	L-KC	3200	22	4	0	0	0	Yes

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1973—Continued

County Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been con- tinuous?
						Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
ELLIS COUNTY (cont.)															
6605 11769	Emmeram Northeast	Kewanee Oil Co.	(D) Froelich E,F & Sitz	Sitz, Froelich E, Froelich F	26-12S-16W 27-12S-16W 34-12S-16W	0	160	KC	3270	4	2	1	0	0	No*
5267	Fairport	Shenandoah Oil Corp.*	(W) Katie Austin Brungardt	Weiland "C"	36-12S-16W	130	--	L-KC + Dodge	3900	90	8	-	-	0	Yes
8741 14251	Fairport	Shenandoah Oil Corp.*	(W) Schmitt "A" & "B"	Schmitt "A", Schmitt "B"	1-13S-16W 12-13S-16W	50	40	L-KC	3050	20	4	-	-	-	Yes
10416	Fairport	Shenandoah Oil Corp.*	(W) Weiland "B"	Weiland "B"	1-13S-16W	70	0	L-KC + Dodge	3050	30	7	-	-	-	No†
14253	Gatschet	Cecil M. Keller*	(-) --	Gatschet, Sack	13-13S-19W	--	0	L-KC	3368	†	3	0	4	1	Yes
6890	Herzog	Palomino Petroleum*	(D) Braun-Dinkle	Braun	32-13S-16W	80	0	L-KC†	3227±	6	1	2	0	0	Yes
15930 13599 13651	Irvin Leiker East Leiker Southeast	Texaco Inc. Kewanee Oil Co. Aylward Drilling Co. (Baruch-Foster Corp. part of project unreported)	(P) J.A. Engle (W) Leiker-Herl (W) Witt-Graf	J.A. Engle Leiker, Herl Graf	35-13S-20W 13-15S-18W 14-15S-18W	160 0 40	-- 0 0	Arb KC Lans	3854 3304 3450	30 29 10	2 0 6	- 0 0	1 0 0	- 0 0	Yes No* Yes
13428	Lieb	Chief Drilling Co.*	(W) Craig Lundy Water Flood	Craig, Lundy	16-11S-16W	160	0	L-KC	3000	200	3	0	0	0	Yes
13535 14316	Lieb East Meistrell	Chief Drilling Co. Petroleum, Inc.	(W) Lundy (W) Meistrell L-KC Unit	Lundy O'Brien "B", Meistrell "D"	16-11S-16W 9-11S-18W	120 160	0 0	L-KC L-KC	0 3262	0 8	3 3	0 0	0 0	0 0	Yes Yes
13093	Mixer	Murfin Drilling Co.	(P) Mixer Repres- suring Project	Mixer C	7-11S-20W	160	100	L-KC	3372	19	2	0	0	0	Yes
15916 15850	Pleasant Rajewski	Cameron K. Reed Meltzer Oil Co.*	(D) Storm (P) Rajewski	Storm Rajewski	35-13S-20W 28-15S-17W	-- 80	0 --	Squirrel KC	3840 3400	12 6	3 1	0 1	0 -	0 -	Yes Yes
13426 15955 14553*	Ruder Ruder Schoenchen	Gulf Oil Corp. Kaiser-Francis Okmar Oil Company	(W) J.A. Swires (D) Ruder "C" (W) Wolf	J.A. Swires Ruder "C" Wolf	8-15S-18W 8-15S-18W 16-15S-18W	80 60 --	0 0 --	L-KC Lans L-KC	3260 3601 3300	-- 180 4	3 2 -	1 0 -	0 0 -	0 0 -	Yes Yes --
16804 13234 10846	Schmeidler Solburn Solomon	Frontier Oil Co. NCRA Okmar Oil Co.	(P) Giebler (W) Solomon-Burnett (W) Albert	Giebler Solomon-Burnett Albert, Wickham, Fred	28-12S-17W 28-14S-20W 10-11S-19W 15-11S-19W	160 70 160	0 10 0	L-KC Lans L-KC	3400 3409 3244	6 6 5	3 5 4	0 0 0	0 0 0	0 0 0	Yes Yes Yes
14016	Solomon	Okmar Oil Co.	(W) Albert-Fred	Albert, Fred	10-11S-19W 15-11S-19W	120	0	Arb	3600	5	-	-	-	-	--
13553 16583	Sugarloaf Southeast Sugarloaf Southeast	Okmar Oil Co. Am. Petrofina Co. of Texas*	(W) Dreiling (P) Braun "B"	Dreiling A, Braun "B"	28-13S-17W 26-13S-7W	60 80	0 0	L-KC Arb	3280 3484	5 336	2 4	1 0	0 0	0 0	Yes --
13434 15682	Toulon Toulon South	Sun Oil Co. Okmar Oil Co.	(W) Braun (W) Brungardt WF	Braun Goetz D, Brungardt, Christina	35-13S-17W 10-14S-17W 14-14S-17W 15-14S-17W	25 100	0 --	L-KC L-KC	3235 3430	12 7	2 3	0 1	0 0	0 0	Yes Yes
13069	Toulon Southwest	Okmar Oil Co.	(W) Dinkel A	Dinkel, Dinkel A	16-14S-17W	50	0	L-KC + Arb	3250 3500	5.5 7	3 1	0 0	0 0	0 0	Yes Yes
9229	Turkville	Palomino Petroleum*	(D) McCombs	McCombs	11-11S-17W	40	0	L-KC	3175	7	1	0	0	0	Yes
16041	Ubert	Dreiling Oil, Inc.	(D) Ubert	Ubert "A", Ubert "B", Staab "A", Staab "B"	1,12-13S-18W 12-13S-18W	240	0	L-KC	3349	60	4	0	0	0	Yes
9694 11815	Ubert Northwest Ubert Northwest	E.K. Edmiston Kewanee Oil Co.	(W) Schmidt (W) Crissman A & B	Schmidt Crissman A, Crissman B	36-12S-18W 1-13S-18W 2-13S-18W	-- 60	-- 0	L-KC Top + Tor + KC	3600 3260	-- 144	4 5	0 0	0 0	0 0	Yes No*
11068	Victoria North	Richard L. Mai	(P) Schulte	Quint, Schulte	7-14S-16W 8-14S-16W	160	105	L-KC	3214	6	4	0	0	0	Yes
13470	Wheatland	Petroleum Management	(W) Leiker	Leiker	18-15S-17W	20	0	L-KC	3282	225	2	-	-	-	Yes

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water in: bbl/ well/ day	Injected-water data			Date first ini.	Primary production mechanism	Primary oil-water ratio	API grav., deg.	Oil visc., cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks	
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.						Type	Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973			Cum. 12-31-73
																						#=1973 Primary and Secondary Production
6605 11769	0	1	0	0	Irreg	0	0	Prod	--	--	U	1961	S Gas	--	34	--	0	338,099	0	11,705	--	*No water injected #1,900
5267	1	-	-	-	Peri	0	402	Prod	--	--	U	1957	S Gas	2/3	35	--	146,730	1,500,347	26,309	1,194,417	1,500,000	*Was Solar Oil Co.
8741 14251 10416	1	-	-	-	Peri	130	284	Prod	--	--	T	1961	S Gas	2/23	35	--	103,554	1,595,317	6,985	1,334,707	1,650,000	*Was Solar Oil Co.
14253	1	0	2	1	Irreg	Vac	421	Dakota	300	300	T	1963	S Gas	3/20	32	--	153,617	1,979,813	16,086	176,546	2,135,000	*Was Solar Oil Co. †Shut-in for repairs *Was Martin & Keller †Lans 3 zones@ 4' 1 " " 6'
14253	1	0	2	1	Irreg	Vac	225-350	Cedar Hills	785	47	U	1968	Wat	6/4	34+	--	10,800	426,970	8,269	84,097	304,424	*Was Solar Oil Co. †Shut-in for repairs *Was Martin & Keller †Lans 3 zones@ 4' 1 " " 6'
6890	1	0	0	0	Irreg	0	15	Prod	--	--	U	1962	S Gas	--	38	--	5,475	66,000	0	0	195,878	*Was Hinkle Oil Co. †Added new L-KC zone in Nov. '73 #939
15930	1	-	-	-	Irreg	Vac	2171	Prod	--	--	U	1972	Wat	149/409	38.4	--	792,506	1,632,550	14,235	87,795	101,138	#27,578
13599	0	2	0	0	Irreg	0	0	Prod	--	--	U	1967	S Gas	100/1545	36	--	0	556,217	0	16,548	--	*No water injected
13651	2	0	0	0	Irreg	450	450	Prod	--	--	U	1967	S Gas	--	35	--	328,500	1,209,656	18,000	158,259	221,682	#19,346
13428	1	0	0	0	Irreg	300	450	Prod + Dakota + Cheyenne	350	100	M	--	S Gas	--	--	--	136,369	1,007,569	2,000	15,486	--	*Was Shields Drlg. Co. #1,451 - Craig #1,735 - Lundy
13535	1	0	0	0	Irreg	300	350	Prod + Dak + Chey	--	--	U	1967	S Gas	2/8	35.8	--	148,000	853,776	3,200	32,575	202,035	#6,191
14316	1	0	0	0	Line	646	422	Prod + Quat	75	100	M	1968	S Gas	23/19	34.6	--	154,114	562,830	10,350	72,608	72,608	
13093	1	0	0	0	Irreg	325	185	Prod + Arb	3650	8	T	1966	S Gas + Grav	68/32	34	--	63,875	--	--	--	--	#4,685
15916	1	0	0	0	Irreg	200	38	Prod	--	--	U	1970	Wat	6/4	38	--	13,870	45,835	0	0	22,156	#5,314
15850	1	1	-	-	Irreg	Vac	20	Prod + KC	3400	6	U	1968	Grav	1/1	36	--	7,300	--	0	--	--	*Was Lee Phillips #4,745
13426	2	0	0	0	Irreg	660	825	Prod	--	--	U	1967	S Gas	16/36	33.9	--	301,046	1,468,881	6,104	30,795	38,495	#7,604
15955	2	0	0	0	--	Grav	19	Prod	--	--	U	1971	Gas Exp	6/25	31	--	6,935	194,343	0	0	95,897	#1,637
14553	-	-	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*Project not started
16804	1	0	0	0	Irreg	0	100	Prod	--	--	U	1972	S Gas	4/6	29	--	36,500	36,500	800	800	8,176	
13234	4	0	0	0	Irreg	250	146	Prod + Dakota	430	60	M	1970	S Gas	1.06/1	41.2	--	212,280	984,971	21,170	100,309	205,126	#36,173
10846	1	0	0	0	Peri	Vac	240	Prod + Arb	3500	5	U	1964	S Gas	--	34	--	87,600	622,005	5,200	50,345	--	#13,856
14016	-	-	-	-	Irreg	Vac	2600	Prod + L-KC	3200	--	U	1968	Wat	48/4500	26	--	949,000	4,870,000	0	0	--	#8,862
13553	1	0	0	0	Peri	Vac	65	Prod + Arb	3530	5	U	1967	S Gas	34/20	30	--	23,725	176,898	632	1,468	344,958	#6,052
16583	-	-	-	-	--	Vac	804	Prod	--	--	U	1972	Wat	1/2	34	--	293,469	476,474	0	0	630,631	*Was El Dorado Refg. Co. #11,058
13434	1	0	0	0	Irreg	270	407	Prod + Fr	220	80	M	1967	S Gas	1/3.5	32.7	--	148,650	566,208	5,158	46,953	46,953	
15682 9849	2	0	0	0	--	1000	300	Prod + Arb	3500	3	U	1963	S Gas	--	35	--	105,900	1,659,125	11,000	80,374	494,555	#14,840
13069	1	0	0	0	Irreg	450	279	Prod	--	--	U	1960	S Gas	--	33	--	101,835	958,144	9,237	84,510	393,932	#10,737
9229	1	0	0	0	--	0	5	Prod	--	--	U	1962	S Gas	4/6	36	--	1,825	20,000	0	0	78,409	*Was Colorado Oil & Gas #1,047
16041	1	0	0	0	--	100	150	Prod	--	--	T	1971	S Gas	7/3	34	--	14,900	88,400	2,800	76,300	192,522	#13,170
9694	1	0	0	0	Irreg	0	--	Prod	--	--	U	1963	Pumping	--	29	--	--	--	0	--	490,564	#9,090
11815	0	2	0	0	Irreg	--	0	Prod	--	--	U	1965	S Gas	49/138	29	--	0	630,186	0	0	453,143	*No water injected #10,532
11068	2	1	0	0	Peri	50	200	Prod	--	--	T	1964	S Gas	8/2	34	--	65,000	790,000	4,000	79,630	--	#8,430
13470	1	-	-	-	Irreg	200	170	Prod + Arb	3580	--	U	1967	S Gas	1/0	36	--	9,378	316,317	1,655	3,625	11,629	#1,655

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1973—Continued

Kansas Geol. Survey Energy Resource Series 3, 1974

County Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has ini. been con- tinuous?
						Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
ELLIS COUNTY (concl.)															
15655	Wheatland East	Petroleum Management	(W) Wheatland East Unit	Leiker "B", Leiker "C", Gross, Leiker "D", Stecklein	17-15S-17W 17,18-15S-17W 18-15S-17W	120	40	L-KC	3338	146	10	0	0	0	Yes
15425	Younger	Okmar Oil Co.	(W) Hoffman	Hoffman	32-13S-17W	40	0	L-KC	3318	5	3	0	0	0	Yes
ELLIS COUNTY TOTALS (Reported)						8,325	825				234	15	6	2	
ELLIS-ROOKS COUNTIES															
3145	Krueger	Cities Service Oil Co.	(W) Krueger Unit	Krueger Unit	35,36-10S-16W 1,2,3-11S-16W	352	0	L-KC + Dodge	3225	49	21	0	0	0	Yes
ELLIS-RUSSELL COUNTIES															
3243 5055 5094 12481 14224	Fairport	Clinton Oil Co.*	(W) Kate Austin Waterflood Unit	Kate Austin, J.J. Brungardt "A", J. Furthmyer, L.L. Austin	30-12S-15W 31-12S-15W 25-12S-16W 36-12S-16W	450	0	Topeka Dodge Lans	2750 3000 3050	90	13	0	0	0	Yes
ELLSWORTH COUNTY															
16438	Geneseo-Edwards	Cities Service Oil Co.	(D) Rathbun Arbuckle	Rathbun	16-17S-8W	96	0	Arb	3206	25	4	0	0	0	Yes
14783	Heiken	Skelly Oil Co.	(W) John Stumps	John Stumps	25-17S-10W	80	20	Penn Cgl	3200	25	4	2	0	0	Yes
13631	Lorraine	Petroleum, Inc.	(W) Lorraine Unit	Rolfs, Offner, Neinke, Janzen	11-17S-9W 12-17S-9W	480	0	L-KC	2870	10	5	0	0	0	Yes
14779	Palacky	Messman-Rinehart Oil Co.	(D) Jiricek	Jiricek	31-16S-10W	160	0	Lans	3063	11	1	0	0	0	Yes
10057	Stoltenberg	Icer Addis	(W) Zvolanek "B"	Zvolanek "B"	33-15S-10W	30	30	Simp	3246	10	1	0	0	0	Yes
14991	Wilson Creek	L.G. Stephenson & Co.*	(P) --	Borell B-2, Borell C, H. Kratky	20-14S-10W	420	0	Lans	2820	20	20	0	0	0	Yes
16265	Wilson Creek	L.G. Stephenson & Co.	(P) --	Vopat D	21-14S-10W	160	0	Lans	2820	20	11	0	0	0	Yes
16302	Wilson Creek	Arthur J. Gorski	(P) George Vopat A	George Vopat A	21-14S-10W	160	0	L-KC	2850	14	11	1	1	-	Yes
16442	Wilson Creek	L.G. Stephenson & Co.	(P) --	Soukup	16-14S-10W	80	0	Lans	2800	20	3	0	0	0	Yes
16499	Wilson Creek	L.G. Stephenson & Co.*	(P) --	Pekarek	20-14S-10W	120	0	Lans	2820	20	5	0	0	0	Yes
16708	Wilson Creek	L.G. Stephenson & Co.	(P) --	K. Vopat	16-14S-10W	80	0	Lans	2800	20	4	0	1	0	No*
ELLSWORTH COUNTY TOTALS (Reported)						1,866	50				69	3	2	0	
FINNEY COUNTY															
13914	Damme	Palomino Petroleum*	(D) Clark	Clark	22-22S-33W	160	0	Miss	4693	10	2	0	0	0	Yes
16552	Damme	Texaco Inc.	(P) Garden City "B"	Garden City B	5-22S-33W	480	--	Marm	4412	--	10	-	0	-	Yes
9779	Nunn	Maurice L. Brown Trust	(P) Nunn	McHugh, Davis, Maune, Gobleman, Nunn, Ely, Aeilts, Gobleman	23-21S-34W 26-21S-34W 27-21S-34W 34-21S-34W	1440	160	Marm	4276	9	17	2	0	0	Yes
FINNEY COUNTY TOTALS (Reported)						2,080	160				29	2	0	0	
FINNEY-HASKELL COUNTIES															
13423	Pleasant Prairie	Helmerich & Payne, Inc.	(P) Pleasant Prairie Unit	Tract #3, Tract #2, Tract #6, Tract #7, #8, Tract #10, Tract #1	17-26S-34W 18-26S-34W 19-26S-34W 20-26S-34W 29-26S-34W 29,30,31,32, 33-26S-34W	--	--	St L (Miss)	5050	15	64	5	0	0	Yes

Project 13423 continued on following page.

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1973

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water in. bbl./well/day	Injected-water data			Date, first inj.	Primary production mechanism	Primary oil-water ratio	API grav., deg.	Oil visc., cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks	
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.						Type	Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973			Cum. 12-31-73
																	#=1973 Primary and Secondary Production					
15655	6	0	0	0	Peri	0	75	Prod	--	--	T	1970	S Gas	2/1	37	--	359,445	955,766	53,036	140,622	589,855	#82,869
15425	1	0	0	0	Peri	Vac	80	Prod	--	--	U	1970	S Gas	30/67	34	--	29,200	109,218	1,670	6,428	285,022	#8,769
	80	12	2	3													12,887,272	61,511,972	573,057	6,698,668	18,825,883	
3145	10	1	0	0	Irreg	487	376	Prod + Dakota	475	--	T	1961	S Gas	155/107	37	--	1,712,877	14,076,148	89,546	992,891	3,120,942	
3243 5055 5094 12481 14224	3	1	0	0	Irreg	0	640	Prod	--	--	U	1956	S Gas	1/2.6	37	--	700,986	9,352,458	38,572	868,448	2,831,577	*Was Pan American
16438	1	0	0	0	Irreg	720	55	Prod	--	--	F	1972	S Gas	25/420	37.3	--	26,069	39,683	1,083	1,732	521,071	#6,985
14783	1	0	0	0	Irreg	150	534	Prod + Dakota	250	--	F	1969	S Gas	20/57	45.5	--	194,813	1,099,151	7,029	75,139	651,178	
13631	1	0	0	0	Line	950	852	Prod + Dakota	200	50	M	1967	Wat	693/292	35.8	--	311,100	1,786,495	16,968	106,226	106,226	
14779	1	0	0	0	Irreg	Grav	40	Prod	--	--	U	1969	Wat	--	39.9	--	8,000	73,950	484	6,538	6,538	
10057	1	0	0	0	Irreg	0	80	Prod	--	--	T	1962	Wat	--	37	--	29,200	288,150	1,418	24,187	--	#2,835
14991	4	0	0	0	Peri	400	400	Prod	--	--	U	1969	S Gas	92/8	38	--	129,000	379,000	0	0	684,210	*Was Will P. Ash #129,353
16265	2	0	0	0	Peri	400	400	Prod	--	--	U	1971	S Gas	92/8	38	--	87,000	87,000	0	0	430,909	#112,869
16302	2	-	0	-	Peri	300	50	Prod	--	--	U	1971	S Gas	9/1	38	--	36,500	66,500	4,000	4,000	90,000	#40,000
16442	1	0	0	0	Peri	300	200	Prod	--	--	U	1971	S Gas	92/8	38	--	135,000	195,000	0	0	47,304	#12,127
16499	1	0	0	0	Peri	350	400	Prod	--	--	U	1973	S Gas	92/8	38	--	99,709	99,709	0	0	210,919	*Was A. Gorski #59,270
16708	-	1	-	-	Peri	--	--	Prod	--	--	U	--	S Gas	6/4	38	--	0	0	0	0	43,509	*Water supply not sufficient. #26,071
	15	1	0	0													1,056,391	4,114,638	30,982	217,822	2,791,864	
13914	1	0	0	0	Irreg	0	45	Prod	--	--	U	1968	S Gas	1/1	30	--	16,400	84,705	6,300	36,800	272,270	*Was Rocket Drlg. Co. #10,432
16552	1	-	-	-	Irreg	350	305	Prod	--	--	-	1972	S Gas	688/57	28.4	--	111,325	121,997	0	0	422,208	#211,355
9779	2	3	0	0	Line	0	179	Prod	--	--	T	1958	S Gas	--	34	*	130,840	2,769,434	19,432	181,087	3,304,234	*11.6 @ 100° #38,864
	4	3	0	0													258,565	2,976,136	25,732	217,887	3,998,712	
13423	7	0	0	0	Irreg	480	350	Prod	--	--	T	1966	Wat + S Gas	2573/3278	33.5	--	896,446	5,577,647	0	0	16,817,686	#671,614

County Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been con- tinuous?
						Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
FINNEY-HASKELL COUNTIES (concl.)															
13423 (cont.)	Pleasant Prairie (cont.)			Tract #9, Tract #11, Tract #12, Tract #5, Tract #13, Tract #14, Tract #4, Tract #15	30-27S-34W 32-26S-34W 33-26S-34W 4-27S-34W 4,5-27S-34W 15-27S-34W 6-27S-34W 8,9,16-27S-34W										
FRANKLIN COUNTY															
11721	Baldwin	Layton Oil Co.	(W) Wellsville Project	Broers, Wiseman "A"	25-15S-20E 30-15S-21E	60	0	Squirrel	750	18	10	0	0	0	Yes
12165	Paola-Rantoul	Dome Petroleum	(W) Wellsville	Collins, Coons, Shawen, Todd, Beckmeyer	31-15S-21E 32-15S-21E	--	--	Squirrel	720	20	27	-	-	-	Yes
7526	Paola-Rantoul	Elton R. Greer	(W) Wellsville Flood	Ackley, Rice, Lidikay, Rhoads, Bell, Royer, Dorsey	3-16S-21E 4-16S-21E 10-16S-21E	300	0	Squirrel	700	30	34	29	0	0	Yes
3152	Paola-Rantoul	Glenn Layton	(W) --	Gingrich	33-16S-21E	50	0	Squirrel	650	20	10	-	-	-	Yes
5498	Paola-Rantoul	Glenn Layton	(-) Naylor	Naylor	32-16S-21E	10	0	Squirrel	650	20	2	-	-	-	Yes
12728	Paola-Rantoul	Glenn Layton	(-) Hays	Hays	20-16S-21E	20	0	Squirrel	650	25	3	-	-	-	Yes
5012	Paola-Rantoul	Rader Oil Co.	(P) McConnell	McConnell	18-16S-21E	5	10	Squirrel	685	12	5	0	1	0	Yes
12273															
15342	Paola-Rantoul	Cameron K. Reed	(W) Rantoul Project	Gilliland, McCullough, Detweiler	19-17S-21E 20-17S-21E	59	0	Squirrel	610	8	16	0	2	0	Yes
FRANKLIN COUNTY TOTALS (Reported)						504	10				107	29	3	0	
GOVE COUNTY															
13915	Albin	Chief Drilling Co.*	(P) Albin	Albin	10-14S-27W	320	0	Miss	4330	16	1	0	0	0	Yes
13217	Castle Rock	Chief Drilling Co.*	(P) Sauer	Sauer	27-14S-27W	160	160	Miss	4300	16	1	0	0	0	Yes
16501	Castle Rock	Pickrell Drilling Co.	(D) Albin G-H Unit	Albin G-H Unit, Leighton B-F Unit	29-14S-27W	200	0	KC	3917	12	5	0	0	0	Yes
17166	Chapman	Pickrell Drilling Co.	(W) Chapman A	Oshay B, Chapman A	26-15S-26W 35-15S-26W	120	0	Marm	4338	17	2	0	0	0	No*
15205	Rosa	Pickrell Drilling Co.	(P) Rosa Becker B	Becker B	34-15S-27W	40	0	KC	4000	6	1	0	0	0	Yes
16380*	Sutcliffe	Chief Drilling Co.	(P) Sutcliffe	Sutcliffe, Sutcliffe "B"	12-14S-27W	160	0	L-KC	3918	128	3	0	0	0	Yes
GOVE COUNTY TOTALS (Reported)						1,000	160				13	0	0	0	
GRAHAM COUNTY															
9707	Blazier	Cities Service Oil Co.	(W) Blazier Lansing- Kansas City Unit	Blazier Unit	21,27,28-7S-25W	180	0	L-KC	3800	20	2	7	0	0	Yes
14844	Bollig	Bankoff Oil Co.	(W) Bollig Ing.	Bollig, Sauer, Brungardt (A)	28-9S-25W 33-9S-25W	120	80	Lans	3870	4	3	0	0	0	Yes
15497	Brush Creek	Cities Service Oil Co.	(W) Brush Creek L-KC Unit	Brush Creek L-KC Unit	4,9-9S-23W	106	0	L-KC	3740	10	8	1	0	0	Yes
15929	Brush Creek NW	Dane G. Hansen Trust	(D) Wilson "K"	Wilson "K", McVey	32-8S-23W	240	0	L-KC	3700	200	3	0	0	0	Yes
16127															
8815	Conness	Kaiser-Francis	(D) Conness "C"	Conness "A"	23-10S-23W	40	20	Lans	3608	200	1	0	0	0	Yes
7966	Cooper	White Hawk Oil Co.*	(P) C Smith Unit	Denning, Rudman, Smith	32-9S-21W 5-10S-21W	160	0	L-KC	3510	6	6	0	0	0	Yes
12527	Cooper	Petroleum, Inc.	(W) Cooper Pilot Flood	Schmalfeldt	24-10S-21W	160	0	Arb	3740	15	6	0	0	0	Yes
9110	Diebolt	Sun Oil Co.	(W) Diebolt LKC	Diebolt LKC Unit,	16,20,21, 28-10S-23W	1570	100	L-KC	3050	20	21	0	0	5	Yes
14576	Elrick	Shenandoah Oil Corp.*	(W) Elrick Unit	Elrick Unit	3,9,10,14, 15-10S-25W	1640	0	KC	3800	150	29	11	0	0	Yes

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl./well/day	Injected-water data				Date first inj.	Primary production mechanism	Primary oil-water ratio	API grav. deg.	Oil vis. cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73		
11721	11	-	0	0	Line	700	32	Sand	60	40	F	1970	S Gas	1/5	26	--	131,305	203,191	1,435	2,645	2,645	
12165	9	-	-	-	Irreg	650	335	Prod + Arb	1600	10	T	1965	Grav	1/3	25	--	123,704	986,755	5,070	65,000	195,766	#14,494
7526	21	61	0	1	Line	700	25	Prod + Arb	1500	300	T + P	1959	S Gas	130/58	28	40	180,000	9,479,868	10,450	--	--	
3152	0	10	-	-	Line	--	--	--	--	--	T	1950	--	10/1	30	--	--	--	--	--	--	#75
5498	2	-	-	-	Irreg	300	30	Prod	--	--	-	1950	Gas Exp	10/1	29	--	9,000	--	--	--	--	#920
12728	3	-	-	-	Irreg	600	30	Prod + Surface	--	--	M	1945	Gas Exp	10/1	31	--	30,000	--	--	--	--	#1,620
5012	2	0	0	0	Irreg	150	35	Prod	--	--	U	1970	Gas Exp	10/1	26	--	12,650	29,675	150	500	--	#2,500
12273																						
15342	11	0	0	0	Irreg	500	30	Prod + Gravel	20	5	M	1970	S Gas	1/0	29	--	121,063	410,377	9,365	38,276	38,276	
	59	71	0	1													607,722	11,109,866	26,470	106,421	236,687	
13915	1	0	0	0	Irreg	0	82	Prod	--	--	T	--	S Gas	--	36	--	29,930	59,130	1,200	2,700	13,169	*Was Tidewater Oil Co. #5,200
13217	1	0	0	0	Irreg	0	90	Prod	--	--	T	--	S Gas	--	36	--	32,850	65,335	300	1,100	5,358	*Was Tidewater Oil Co. #1,446
16501	1	0	0	0	Irreg	0	48	Prod	--	--	-	1972	S Gas	84/28	38	2.5	17,520	24,046	0	0	109,352	#10,472
17166	0	0	0	0	Irreg	--	0	--	--	--	-	--	S Gas	18/13	39	2.5	0	0	0	0	28,510	*Project not started yet #5,732
15205	1	0	0	0	Irreg	0	12	Prod	--	--	U	1970	S Gas	12/14	38	2.5	4,380	17,016	633	1,409	54,818	#3,166
16380	1	0	0	0	Irreg	0	500	Prod	--	--	T	1972	S Gas	8/2	39	--	121,500	132,450	0	0	179,075	*Converted to Cedar Hills Disposal 9-1-73 #45,439
	5	0	0	0													206,180	297,977	2,133	5,209	390,282	
9707	4	0	0	0	Peri	880	228	Prod + Dakota	1500	--	T	1962	S Gas	1/0	39	--	319,687	2,970,780	31,792	404,471	917,543	
14844	1	0	0	0	Irreg	100	100	Prod	--	--	U	1969	Grav	4/1	36	--	36,500	481,290	10,565	81,420	70,855	#19,565
15497	6	0	0	0	Irreg	523	107	Prod + Cedar Hills	1480	256	T	1970	S Gas	29/175	35	--	537,207	2,493,121	44,292	199,565	997,207	
15929	1	0	0	0	Irreg	Vac	190	Prod	--	--	U	1971	S Gas	1/1	31	--	69,350	245,110	--	--	20,875	#7,448
16127																						
8815	-	-	-	-	Irreg	Grav	246	Prod	--	--	U	1961	Gas Exp	15/101	37	--	89,790	516,815	1,560	49,829	95,429	
7966	1	0	0	0	Irreg	195	540	Prod	--	--	U	1960	Wat	--	35	--	197,100	3,546,416	8,466	131,300	--	*Was Natural Gas & Oil #9,407
12527	1	0	0	0	Irreg	Vac	255	Prod	--	--	U	1966	S Gas + edgewater	2254/2834	34.8	--	93,057	682,640	13,160	149,168	674,780	
9110	8	0	0	9	Peri	650	252	Prod	--	--	U	1962	S Gas	1/1.9	--	--	727,083	21,865,284	96,442	1,499,315	1,499,315	
14576	9	5	0	0	Irreg	0	500	Prod	--	--	T	1969	S Gas	9/1	40	3	1,557,750	10,277,981	157,503	788,868	1,465,626	*Was Empire Drilling Co. #223,383

#=1973 Primary and Secondary Production

TABLE 1—ENHANCED OIL RECOVERY PROJECTS, 1973—Continued

Kansas Geol. Survey Energy Resource Series 3, 1974

County Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been con- tinuous?
						Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
GRAHAM COUNTY (cont.)															
15410	Elrick East	Texaco Inc.	(W) East Elrick Unit	J.P. Billinger, H.J. Rome "D", Frank	11-10S-25W	400	--	L-KC	3750	2.5	6	-	0	-	Yes
16551	Emor	Texaco Inc.	(W) D. Spies	Spies	35-9S-25W	80	--	L-KC	3800	3	1	-	0	-	Yes
10747	Evergreen NW	Sunflower Operating Co.	(W) --	Evergreen N.W. Unit	8,17-9S-23W	240	0	L-KC	3703	10	5	1	0	2	Yes
11076	Fabricius	Cities Service Oil Co.*	(W) Fabricius L-KC	Fabricius Lansing-Kansas City Unit	19-7S-22W	680	80	L-KC	3636	10	5	5	0	1	Yes
11084					23,24,25,26-7S-23W										
14533	Glen Dale South	Dreiling Oil Inc.	(D) Nickelson "B" Unit	--	23,26-9S-24W	480	0	L-KC	3825	90	7	-	-	-	Yes
6420	Harmony	Rocket-Schusterman Oil*	(D) Dunwoody WI	Dunwoody	5-8S-22W	280	280	Lans	3550	5	0	1	0	0	No†
16842	High Hill	King Oil Company	(P) High Hill Field	Dave Rush "B", Amanda Hobbs, Dave Rush "A", G. Rush Est. "A", G. Rush Est. "B", G. Rush Est. "C"	17-10S-24W 18-10S-24W 20-10S-24W	560	0	L-KC	3725	250	8	0	0	0	Yes
12174	Holley	Herndon Drilling Co.	(W) Keith Waterflood	Keith	9-9S-24W	90	0	KC	3882	4	3	1	-	-	Yes
10363	Holley	Fell & Wolfe Oil Co.*	(D) Clark	Clark	10-9S-24W	160	--	KC	3960	3- 6	1	0	0	0	Yes
11613	Holley	Fell & Wolfe Oil Co.*	(-) Holley Pool	G. Keith, Keith "A", A.E. Hildebrand	4-9S-24W	630	209	L-KC	3775	209	9	0	0	0	Yes
6453	Holley	Fell & Wolfe Oil Co.*	(D) Blackburn	Blackburn	33-8S-24W	160	--	KC	3968	6	2	0	0	0	Yes
8742	Holley	Fell & Wolfe Oil Co.*	(W) Holley Pool	Ida Keith	4-9S-24W	160	--	L-KC	3924	40	4	0	0	0	Yes
9991	Holley	Cities Service Oil Co.*	(W) Holley Unit	Holley Unit	33-8S-24W	460	20	L-KC	3957	4	5	0	0	2	Yes
9577	Holley	Petroleum Management	(W) Holley Unit	T.L. Smith et al, Wm. L. Bell, R. Keith, A. McKinley, L. Keith, Keith "A", Keith "B", Schemberger "C", A.J. Clark, W.L. Bell, Schemberger, L. Keith "b-c", W.L. Bell, F.E. Watte, R. McKinley, D. Clark "A"	30-8S-24W 31-8S-24W 32-8S-24W 25-8S-25W 36-8S-25W 5-9S-24W 6-9S-24W	2800	--	Lans	3950	8	13	13	-	18	Yes
11228	Holley North	Cities Service Oil Co.*	(W) Holley North	Holley North Unit	28,29-8S-24W	0	0	L-KC	3950	10	0	1	0	5	No†
10367	Holley Southeast	Cities Service Oil Co.*	(W) Holley South- east Waterflood	Nickelson	15-9S-24W	160	0	L-KC	3847	12	1	1	0	0	Yes
15766	Hoof	Cities Service Oil Co.	(W) Hoof L-KC Unit	Hoof L-KC Unit	9,16-10S-23W	573	0	L-KC	3850	16	16	3	0	1	Yes
16528	Hoof Northwest	Cities Service Oil Co.	(W) Hoof N.W. L-KC Unit	Hoof N.W. L-KC Unit	31-9S-23W	253	0	L-KC	3900	6	9	0	0	0	Yes
13102	Hoof Northwest	Dane G. Hansen Trust	(D) Gano Input	Gano	6-10S-23W	160	0	L-KC	3700	220	6	0	0	0	Yes
13981	Ironclad	Glenn W. Peel Oil Oper.	(D) Desair	Desair	26-9S-22W	160	0	L-KC	3640	160	2	0	0	0	Yes
10578	Ironclad	Cities Service Oil Co.	(W) Ironclad Unit	Ironclad Unit	23,25,26-9S-22W	309	0	L-KC	3575	27	0	0	0	10	No*
13960	Jackson Branch	Beren Corporation	(P) H.H. Stewart	H.H. Stewart	8-9S-23W	120	35	L-KC	3625	30	1	0	0	0	Yes
16383	Knoll North	Dane G. Hansen Trust	(D) Hansen Estate Fee	Hansen Estate Fee	30-8S-25W	240	0	L-KC	3825	200	4	0	0	0	Yes
8035	Kobler	John O. Farmer, Inc.	(P) Kobler	Kobler	27-8S-24W	80	--	L-KC	3854	7	2	-	-	-	Yes
15310	Kohart	Petroleum Management	(W) Moore-Kurtz	Moore, Kurtz	27-9S-24W 34-9S-24W	40	10	L-KC	3906	997	1	-	-	-	No
9379	Law Northwest	Burch Exploration, Inc.	(-) Law Northwest	Hildebrand "A", Morris	28-9S-23W 29-9S-23W	320	120	L-KC	3900	180	8	0	0	0	Yes
10386					12-10S-23W	--	--	--	--	--	-	-	-	-	--
9536*	Law Southeast	B-J Oil Company	(W) South East Law Unit	South East Law Unit											
14298	Morel	Maurice L. Brown Trust	(W) Lansing-KC Unit	Lansing-KC Unit	14,23-9S-21W	400	0	L-KC	3420	30	7	0	0	0	Yes
14977	Morel	NCRA	(D) Shaw	Shaw	7-9S-21W	10	0	L-KC	3641	15	1	0	0	0	Yes
13357	Nana	Tomlinson Oil Co., Inc.	(D) Goff Unit	M.G. Goff, Goff "A", Goff "B", Neal "B"	3-8S-24W	220	210	L-KC	3600	8	7	0	0	0	Yes
11191	Nana Northwest	Cities Service Oil Co.	(W) Nana N.W. LKC Unit	Nana N.W. Lansing K.C. Unit	32,33-7S-24W 4,5-8S-24W	55	0	L-KC	3600	10	2	2	0	0	--
6240	Penokee	Barnett Oil Company	(W) Penokee Repres- enting System	Lyon, Paxson	2-8S-24W 11-8S-24W	240	200	L-KC	3790	9	1	-	-	-	Yes
9836															

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water in- ject./ well/ day	Injected-water data				Date first inj.	Primary production mechanism	Primary oil-water ratio	API grav. deg.	Oil visc., cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks
	Active	In- active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73		
#=1973 Primary and Secondary Production																						
15410	5	-	0	-	5-spot	700	330	Prod + Cedar Hills	1690	190	U	1971	S Gas + Liq Exp	42/116	41	2.6	602,486	1,614,243	17,596	139,729	187,089	#26,146
16551	1	-	0	-	--	Vac	154	Prod	--	--	U	1972	S Gas	--	41	--	56,210	57,380	0	0	38,529	#23,697
10747	4	1	0	-	Peri	0	--	Prod	3703	10	T	1964	S Gas	--	36	--	800	--	--	--	--	#7,608
11076	8	1	0	0	Peri	637	194	Prod + Cedar Hills	1435	--	T	1964	S Gas	100/25	40	--	463,068	5,130,850	20,968	481,927	1,328,262	*Was Imperial Oil Co.
11084																						
14533	1	-	-	-	--	100	790	Prod	--	--	T	1968	S Gas	3/1	38	--	280,000	1,210,000	16,500	85,000	301,679	#18,679
6420	0	1	0	0	Irreg	0	0	Prod	--	--	U	1969	S Gas	--	37	--	0	2,893,000	0	0	146,059	*Was Union Texas +Proj. Temp. abandoned
16842	2	0	0	0	Peri	0	100	Prod	--	--	U	1973	S Gas	1/2	37	--	31,850	31,850	0	0	654,361	#35,558
12174	1	-	-	-	5-spot	0	160	Sh Sd	40	--	F	1966	S Gas	68/56	40	--	58,400	432,100	4,200	53,890	--	#4,422
10363	1	1	0	0	Irreg	450	325	Prod	--	--	M	1964	S Gas	--	33.7	--	12,347	--	--	--	--	*Was Sun Oil Co. #162
11613	4	0	0	0	--	300	250	Prod + Water Sd	95	--	M	1965	--	--	36.9	--	325,163	2,804,037	--	--	--	*G. Keith & Keith "A" was Champlin Pet. Co. Hildebrand was NCRA #20,642
6453	1	1	0	0	Irreg	0	22	Prod	--	--	U	1958	S Gas	--	33	--	36,582	--	--	--	--	*Was Sun Oil Co. #3,280
8742	1	0	0	0	Irreg	500-600	290	Prod + Water Sd	100	--	M	1963	--	--	38.5	--	86,149	888,841	--	--	52,125	*Was NCRA #1,678
9991	4	0	0	2	Irreg	1000	150	Prod + C Hills	1800	--	T	1963	S Gas	1/1	37	--	233,801	1,837,202	15,968	193,198	511,983	*Was Imperial Oil Co.
9577	9	11	-	-	Irreg	350	130	Prod + Cedar Hills	1800	--	U	1963	S Gas	6727/8277	40	--	380,221	20,934,693	26,678	1,742,230	1,742,230	
11228	0	2	0	0	Peri	0	0	Prod + Cedar Hills	--	--	T	1964	S Gas	76/760	37	--	29,717	1,325,227	813	75,520	403,387	*Was Imperial Oil Co. +Terminated Aug, '73
10367	2	0	0	2	Irreg	800	232	Prod + Cedar Hills	1400	--	T	1964	S Gas	14/63	37	--	150,940	1,021,895	9,213	69,994	304,128	*Was Imperial Oil Co.
15766	8	0	0	0	Peri	675	403	Prod + C Hills	1556	180	T	1970	S Gas	102/453	35	--	972,793	3,499,771	102,585	299,893	3,236,135	
16528	6	0	0	0	Peri	440	300	Prod + Dakota	1662	78	T	1972	S Gas	26/38	38	--	398,913	464,225	40,207	49,965	836,919	
13102	3	0	0	0	Irreg	Vac	730	Prod + Dakota	1322	88	T	1966	S Gas	8/2	39	--	266,341	596,301	--	--	265,752	#41,853
13981	1	0	0	0	Irreg	Grav	13	Prod	--	--	U	1968	Wat	30/16	38	--	9,490	59,144	6,412	41,507	41,507	
10578	0	0	0	5	Peri	0	0	Prod + Dakota	822	30	T	1964	S Gas	7/8	37	--	67,030	2,575,821	3,289	163,651	918,699	*Unit sold
13960	1	0	0	0	Peri	Vac	270	Prod	--	--	U	1968	S Gas	8.5/91.5	33	--	98,550	378,411	6,903	12,087	12,087	
16383	1	0	0	0	Irreg	Vac	179	Prod	--	--	U	1972	S Gas	1/1	38	--	65,335	136,254	--	--	114,770	#52,376
8035	1	-	-	-	Irreg	--	--	Prod	--	--	U	1960	Grav	--	31	--	--	--	--	--	--	#3,167
15310	-	1	-	-	Irreg	--	--	--	--	--	-	1970	S Gas	1/0	--	--	--	--	--	--	1,250	#1,250
9379	1	0	0	0	Irreg	850	900	Prod + Dakota	1600	210	U	1962	S Gas	--	36	6	73,148	1,937,179	10,483	265,805	265,805	
10386																						
9536	-	-	-	-	--	--	--	--	--	--	-	--	--	--	--	--	--	--	--	--	--	*Project currently not in operation.
14298	2	0	0	0	Irreg	989	666	Prod + Arb	3750	40	T	1968	S Gas	--	35	--	446,701	1,839,727	28,043	143,272	213,588	
14977	1	0	0	0	Irreg	0	57	Prod	--	--	T	1969	S Gas	1/0	32.4	--	20,903	69,950	2,292	11,450	14,397	
13357	2	0	0	0	Irreg	Vac	627	Prod	--	--	U	1966	S Gas	--	38.5	--	228,855	898,866	17,002	123,604	1,106,940	
11191	3	0	0	0	Peri	1100	70	Prod + Cedar Hills	1432	--	T	1966	S Gas	9.5/47.5	38	--	87,800	1,322,087	11,275	135,384	425,291	
6240	1	-	-	4	Irreg	350	50	Prod	--	--	U	1961	S Gas	8/2	37	--	18,000	1,728,000	300	93,300	46,571	#1,195
9836																						

TABLE 1—ENHANCED OIL RECOVERY PROJECTS, 1973—Continued

Kansas Geol. Survey Energy Resource Series 3, 1974

County	Project no.	Field	Operator	Type and project name	Lease name	Location		Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been continuous?	
						S—T—R		Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.		
GRAHAM COUNTY (concl.)																		
	6173	Red Line	Oklahoma Fracturing Services, Inc.	(-) Sturgeon	Sturgeon	32-9S-22W		30	30	L-KC	3862	7	2	1	0	0	Yes	
	14964	Red Line Northwest	Petroleum, Inc.	(W) Redline N.W. L-KC Unit	Blakley, Ninemire (Kaiser-Francis), Ninemire (Rock Is), Lacerte, Lacerte "D", Lacerte "A"	30-9S-22W 24-9S-23W 25-9S-23W		960	0	L-KC	3800	15	7	3	0	0	Yes	
	9396	Schmied	Willie E. Schultz*	(D) Madden Davis "A"	Madden Davis "A"	16-8S-25W		40	280	L-KC	3800	6	3	-	-	-	Yes	
	8553	Schmied	Petroleum Management	(W) Madden-Davis Unit	Madden-Davis B, Madden-Davis A, Madden-Davis C	17-8S-25W		400	--	Lans	3650	15	2	2	-	-	Yes	
	10101	Shiloh	Thornton E. Anderson*	(D) Minium "B"	Minium "B", Minium "A"	36-8S-25W 1-9S-25W		50	40	L-KC	3812	8-10	2	1	0	0	Yes	
	9397	Shiloh	Willie E. Schultz*	(D) Shiloh	Minium, Richmeier "A"	1,2-9S-25W		200	150	L-KC	3800	60	2	-	-	-	Yes	
	7334	Van	Koch Exploration Co.	(W) Sandzen	Sandzen	14-9S-22W		70	0	L-KC	3490	20	3	0	0	0	Yes	
	10328	Van	NCRA	(W) Van Loenen	Van Loenen	14-9S-22W		50	10	Lans	3497	15	5	0	0	0	Yes	
	10172	Vesper	Petroleum, Inc.	(W) Vesper Unit	Sutor "E", Rice, Lacerte "C", Manaugh, Vesper	31-9S-22W 36-9S-23W		920	80	L-KC	3460	22	11	8	0	1	Yes	
GRAHAM COUNTY TOTALS (Reported)									17,456	1,954				253	62	0	45	
GRAHAM-SHERIDAN COUNTIES																		
	15006	Lindenman	Okmar Oil Co.	(W) Lindenman Coop	Lindenman, Ward, Vejl, Horton	31-6S-25W 36-6S-26W		130	0	L-KC	3830	5	4	0	0	0	Yes	
GRAHAM-TREGO COUNTIES																		
	6808	Diebolt	Cities Service Oil Co.*	(W) N.W. Wakeeney Coop. W.F.	Diebolt, Osborn, Walker, Surmeier, Osborn, Erickson	33-10S-23W 4-11S-23W 5-11S-23W 9-11S-23W		390	60	L-KC	3588	4	8	4	0	9	Yes	
GREENWOOD COUNTY																		
	17019	Beaumont	Adair Oil Co.	(P) Fowler	Fowler, Lewis	24-27S-8E		600	40	Miss	2426	16	3	0	0	2	Yes	
	17096	Beaumont	Stewart Bros.	(D) Leroy Edgar	W.W. Edgar, L. Edgar	2-28S-8E 11-28S-8E		250	0	Miss	2500	14	4	0	0	0	Yes	
	10680	Beaumont	K.T. Wiedemann Trust Petroleum Management	(D) Edgar	W.W. Edgar	2-28S-8E		50	0	Miss	2480	24	4	0	0	0	No*	
	8755	Browning	Am. Petrofina Co. of Texas*	(W) Browning "A"	Browning "A"	19-22S-10E		120	0	Bart1	2550	28	8	0	0	0	Yes	
	14909	Browning	Am. Petrofina Co. of Texas*	(W) Browning "C"	Browning "C"	24-22S-9E		30	0	Bart1	2550	28	1	0	0	0	Yes	
	5899	Browning	Baker Oil Inc.*	(P) Emma-Prather	Emma, Prather, Poe	30-22S-10E		200	--	Bart1	950	20	4	8	0	0	Yes	
	6264																	
	13252																	
	2271*	Browning	Eureka Drilling Co.	(W) Browning	A.B. Browning, W.P. Browning	19,20-22S-10E		--	80	Bart1	2350	20	-	-	-	7	No	
	3103	DeMalorie-Souder	L.B. Campbell	(D) Derbyshire	--	13-22S-11E		85	20	Bart1	2100	30	4	2	-	-	Yes	
	2072	DeMalorie-Souder	Maurice L. Brown Trust*	(W) DeMalorie-Souder Unit	Central Unit, East Unit, West Unit	1,12-22S-10E 2,12-22S-10E 11-22S-10E		660	0	Bart1	2100	55	18	0	0	0	Yes	
	3423																	
	9297	DeMalorie-Souder	Maurice L. Brown Trust*	(W) DeMalorie-Souder/Harris Unit	Warrenburg, Kipfer A., Kipfer "B", Kipfer "C", Kipfer "D"	12-22S-10E 13-22S-10E		200	0	Bart1	2150	25	6	1	0	0	Yes	
	2309	DeMalorie-Souder	R & G Oil Co.	(-) Harris	Harris	19-22S-11E		0	0	Bart1	2060	40	0	0	0	0	No	
	3124	DeMalorie-Souder-Clopton	R & G Oil Co.	(-) DeMalorie-Souder	DeMalorie-Souder	18-22S-11E		0	--	Bart1	2100	40	0	0	0	2*	No	
	2309?	DeMalorie-Souder	Thunderbird Oil Prod.	(W) --	Greenwood Unit B	19-22S-11E		40	--	Bart1	2135	15	3	1	0	0	Yes	
	5619	Dunaway	Ale Oil Co.	(-) Sauder Heirs	Sauder Heirs	3-23S-13E		480	--	Miss	1850	15	11	0	1	0	Yes	
	2252	Dunaway	BBL Oil Co.	(W) Miller-Norris	Miller-Norris	27-22S-13E		40	60	Burgess	1830	8	5	0	-	0	Yes	
	9459	Dunaway	Herbert H. Hart	(D) --	Koenig, Hessler	27-22S-13E 34-22S-13E		220	--	Miss	1850	20	10	-	1	-	Yes	
	15638	Fankhauser	L.B. Campbell	(D) Norton	Norton	22-22S-12E		80	30	Bart1	1850	20	1	-	-	-	Yes	

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl./well/day	Injected-water data				Date first ini.	Primary production mechanism	Primary oil-water ratio	API grav. deg.	Oil visc. cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth. ft.	Thick. ft.	Type						Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73		
6173	1	0	0	0	Irreg	90	70	Prod	--	--	U	1965	S Gas	3/17	36	--	24,000	736,128	2,654	148,828	--	
14964	2	1	0	1	Line	138	721	Prod + Dakota + Cheyenne	1200-800	100	M	1969	S Gas	59/64	41.1	--	357,876	1,194,682	11,021	95,081	95,081	
9396	1	-	-	-	Irreg	0	350	Prod	--	--	U	1961	S Gas	1/13	40	--	127,750	1,511,945	7,300	337,761	337,761	*Was Empire Drilling Co.
8553	3	1	-	-	Peri	100	1316	Prod + Cedar Hills	1850	--	T	1961	Other*	5997/8865	41	--	480,376	6,520,250	7,980	72,466	398,700	*Did not indicate.
10101	1	0	0	0	Irreg	50	300	Prod	--	--	U	1963	S Gas	--	41	--	108,000	625,000	2,000	86,000	285,200	*Was High Plains Prod. Co. #3,132
9397	1	-	-	-	Irreg	0	600	Prod	--	--	U	1962	Gas Exp	3/1	38	--	219,000	1,187,524	2,920	125,226	125,226	*Was Empire Drilling Co.
7334	1	0	0	0	Irreg	185	190	Prod	--	--	U	1959	Gas Exp	1/0.5	35.5	--	69,350	1,140,153	8,465	81,155	--	
10328	2	1	0	0	Irreg	300	307	Prod	--	--	T	1963	S Gas	1/0	36.6	--	223,888	2,141,094	9,682	95,876	189,919	
10172	6	4	0	0	Line	284	627	Prod + Dakota + Cheyenne	1200-800	100	M	1963	S Gas	2850/1568	41.7	--	1,031,663	10,124,557	26,895	527,875	527,875	
	124	31	0	23													11,771,020	123,947,824	783,424	9,055,610	20,870,935	
15006	1	0	0	0	Peri	Vac	400	Prod	--	--	U	1969	S Gas	120/35	36	--	146,000	847,118	24,000	89,775	647,226	#75,072
6808	4	2	0	3	Irreg	312	280	Prod + Cedar Hills	1500	--	T	1958	S Gas	--	40	--	564,299	6,834,554	11,283	723,861	2,060,738	*Was Imperial Oil Co.
17019	1	0	0	0	Irreg	Grav	6	Prod	--	--	U	1973	Wat	--	35	--	1,800	1,800	0	0	27,178	#1,173
17096	1	0	0	0	Line	0	76	Prod	--	--	U	1973	Gas Exp	27/73	36.6	--	10,716	10,716	--	--	46,260	#8,565
10680	0	0	0	0	--	0	25	Prod	--	--	T	1963	Grav	--	35	--	9,125	61,499	--	--	--	*Inj. well SD #5,637
8755	2	0	0	0	Irreg	700	282	Prod + Douglas	1421	50	U	1965	S Gas	1/5	41	--	206,132	1,661,350	10,804	87,516	559,458	*Was El Dorado Refg. Co.
14909	1	1	0	0	Peri	700	320	Prod + Douglas	1421	50	U	1966	S Gas	1/1	40	--	116,750	845,652	9,726	74,642	246,990	*Was El Dorado Refg. Co.
5899	2	1	0	0	Irreg	500	300	Prod	--	--	U	1957	S Gas	--	39	--	43,800	2,545,305	4,476	120,575	133,973	*Was Russell Gross #4,973
6264																						
13252																						
2271	-	-	-	-	5-spot	--	--	Prod	--	--	U	--	S Gas	--	40	--	--	--	--	--	--	*Project Abandoned
3103	2	-	0	-	Irreg	100	350	Prod	--	--	T	1952	Grav	--	41	--	127,750	1,852,750	4,200	148,200	148,200	
2072	7	30	0	1	5-spot	1400	160	Prod + Arb	2730	700	T	1949	S Gas	--	41	2.8	408,800	37,203,251	13,931	3,293,675	3,293,675	*Sold 9-1-73 to Dick Soule
3123																						
3423																						
9297	6	9	0	0	Irreg	600	260	Prod + Arb	2730	700	T	1962	S Gas	--	39	4.1	569,400	8,724,427	7,032	460,704	460,704	*Sold 9-1-73 to Dick Soule
2309	0	0	0	0	Irreg	0	0	--	--	--	-	--	Grav	--	39	--	--	--	--	--	--	#1,093
3124	0	0	0	2*	5-spot	0	0	--	--	--	-	--	Grav	--	41	--	--	--	--	--	--	*Temp. Abandoned #2,651
2309	2	2	0	0	Irreg	800	150	Prod + Douglas	850	--	T	--	Grav	--	41	--	100,000	100,000	4,679	4,679	4,679	
5619	3	0	0	0	Irreg	300	50	Prod + Douglas	750	--	T	1957	Grav + Wat	1/1	34	--	54,000	801,400	4,000	--	76,000	#9,119
2252	1	0	0	4	Irreg	140*	150	Prod	--	--	T	--	--	--	36	--	48,000	--	--	--	--	*To 200 #1,825
9459	4	-	-	-	Irreg	--	215	Prod	--	--	U	1962	Grav	6/4	38	--	78,475	5,343,600	--	--	305,222	#33,439
15638	1	-	-	-	Irreg	100	125	Prod	--	--	T	1969	Grav	--	38	--	45,625	--	--	--	--	#338

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1973—Continued

Kansas Geol. Survey Energy Resource Series 3, 1974

County	Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been continuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
GREENWOOD COUNTY (cont.)																
	883	Fankhauser	R & G Oil Co.	(-) --	Fankhauser	4-22S-12E	80	400	Bartl	1900	25	5	0	0	0	Yes
	2065															
	16051	Gaffney	Dimick & Dimick*	(P) --	Barnes, Smith A, Smith C	12-24S-10E 7-24S-11E	200	--	Squirrel	1850	12	7	0	0	0	Not
	5079	Gaffney	Greenwood Petroleum & Ranch Mgmt. Inc.	(P) Kipfer	--	6-24S-11E	160	--	Bartl	1800+	20	10	0	0	0	Yes
	3340	Gaffney	Roy A. Wilson*	(D) Geo. Gaffney	Gaffney	7-24S-11E	240	--	Cattle	1870	17	5	0	0	0	Yes
	3185	Hamilton	Robert K. Butcher	(W) Brothers Unit	--	35-23S-11E	100	--	Bartl	1895	15	1	-	-	-	Yes
	15086*	Hollis	Ale Oil Co.	(-) Laird-Davis-Dean	--	9,10,15-23S-10E	--	20	Cattle	2148	14	-	-	-	-	No
	14986	Lamont	Dorman A. Ball	(W) S.E. Lamont	Wernli	32-22S-13E	160	160	Bartl	1695	70	2	0	3	0	Yes
					Wernli Lease											
	7362	Lamont	Jackman & Jackman	(-) Fankhauser	Fankhauser	23-22S-12E	160	80	Bartl	1660	20	4	1	-	-	--
	16546	Lamont	R & G Oil Co.	(-) --	Peter Fankhauser-Lamont Unit D	23-22S-12E	0	0	Bartl	1670	50	0	0	0	0	--*
	5312	Polhamus	Sid Oil Co.	(P) --	Dunlap	9-25S-9E	160	--	Bartl	2100	10	1	0	0	0	Yes
	12970	Quincy	Edward Ashlock*	(P) Beevers Lse.	Beevers	25-24S-12E	160	0	Bartl	1630- 1670	25	6	3	0	0	Yes
	2676	Quincy	Bird & Hanley	(W) Quincy	Dinius, Pusey-King, Shaw, Hollister, Gilroy, Johnson, Hoggatt	31-24S-13E 5-25S-13E 6-25S-13E 8-25S-13E 9-25S-13E	315	0	Bartl	1500	30	20	20	4	1	Yes
	3565	Sallyards	R.R. Abderhalden	(W) Blankenship Sallyards Unit	F.H. Hull "A & B", A.L. Stevenson	35-25S-8E 2-26S-8E 2,11-26S-8E	520	--	Bartl	2425	39	21	1	0	0	Yes
	3482	Sallyards	Beard, English & Martin*	(W) Bryden-Ladd	Bryden Acct 1, Bryden Acct 2, L. Ladd Moss, Hoffman, Bryden Acct 1, Bryden Acct 3	36-25S-8E 30-25S-9E 31-25S-9E	600	300	Bartl	2470	50	14	0	0	0	Yes
	12717	Sallyards	Eureka Drilling Co.	(P) Bates	Bates	30-25S-9E	64	--	Bartl	--	20	2	-	0	0	Yes
	5052	Sallyards	Jackson Bros.	(D) Ladd "C"	Carrie Ladd	26,35-25S-8E	320	0	Bartl	2450	15	4	0	0	0	--
	11096	Sallyards	Nadel and Gussman	(W) Jackson Heirs	Jackson Heirs	23,25,26-25S-8E	80	20	Bartl	2400	15	9	2	0	-	--
	14001															
	11806	Schindler	C.R. McClelland	(-) Schindler	Schindler	23-23S-11E	240	0	Arb	1680 1780 2200	20 10 5	0	0	0	0	--
	1264	Scott	Maurice L. Brown Trust	(W) Scott	Scott	24,25-23S-8E 19,30-23S-9E	378	--	Bartl	2600	40	11	1	0	0	Yes
	2003	Seeley-Wick	Beard, English & Martin*	(W) Madison Unit	Madison Unit "A", Madison Unit "B", Madison Unit "C", Garth	11,12-22S-11E 14,22-22S-11E 14,15-22S-11E 22-22S-11E	1440	800	Bartl	1850	50- 75	20	47	0	28	Yes
	4711	Seeley-Wick	Robert K. Butcher	(W) Ellis Unit	--	26,27-23S-11E	640	--	Bartl	1950	22	40	-	-	-	Yes
	734	Seeley-Wick	C & J Oil Co., Inc.	(P) Seeley-Wick	Seeley Unit lease	5,6-23S-11E	660	--	Bartl	1925	50	3	0	0	0	Yes
	8952	Seeley-Wick	Eureka Drilling Co.	(P) Humes	Humes	29,30-22S-11E	240	15	Bartl	2100	15	-	-	-	-	--
	14151	Seeley-Wick	Eureka Drilling Co.	(D) Greenwood	Greenwood	6-23S-11E	240	0	Bartl	2500	12	0	0	0	0	--
	17131	Selley-Wick	Glacier Petroleum Co.	(P) Jones	Jones	6-22S-12E	20	10	Bartl	1884	10	2	-	-	-	No*
	16739	Seeley-Wick	Warren G. Godfrey*	(P) Lyke Lease	Lyke	8-24S-12E	80	0	Bartl	1797	10	4	0	0	11	Yes
	13360	Seeley-Wick	Cloide J. Hensley	(P) Hensley Lease	Hensley	6-22S-12E	30	--	Bartl	1775	30	3	-	-	-	Yes
	11539	Seeley-Wick	Merle S. Mitchell	(-) --	Fry	7-24S-12E	--	--	Cattle	1588	10	3	1	-	-	Yes
	11539	Seeley-Wick	Merle S. Mitchell*		Ulrich	7-24S-12E	--	--	Cattle	1600	10	3	1	-	-	--
	12172	Seeley-Wick	E.C. Murphy	(-) Gardner & Winkler	Gardner, Winkler	1-22S-11E	160	--	Bartl	1900	16	2	1	0	0	--
	2664	Seeley-Wick	Howard Johnson*	(-) Johnson	Johnson	16-24S-12E	40	0	Bartl	1600	15	-	-	0	0	Not
	11118	Seeley-Wick	Howard Johnson*	(W) Marlin	Marlin	17-24S-12E	10	0	Bartl	1700	20	0	1	0	0	Not
	5095	Seeley-Wick	R.V. Dimick	(W) B & C Unit	C.G. Beal, Carson, D.A. Edwards, Tom Edwards	28,29,32, 33-23S-11E	490	200	Bartl	1950	12	8	0	0	2	Yes
	14908															

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1973—Continued

Kansas Geol. Survey Energy Resource Series 3, 1974

County	Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been continuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
GREENWOOD COUNTY (cont.)																
	16338	Seeley-Wick	W.F. Harmon*	(P) Harmon	Harmon	31-23S-12E	160	--	KC	1837	2	3	1	0	-	Yes
	10954	Seeley-Wick	Geo. E. Sauder	(W) Wilson-Lewis	Wilson-Lewis	8,9-24S-12E	120	20	Bart1	1700	18	8	1	0	0	Yes
	11213	Seeley-Wick	Geo. E. Sauder	(W) Thornton-Huber-Curtis	Thornton-Huber-Curtis	7,8-22S-12E	70	50	Bart1	1720	20	5	0	0	0	Yes
	11615	Seeley-Wick	K.E. Snyder	(D) Shaefer Flood Project	Shaefer	27-23S-11E	40	0	Bart1	1920	22	9	0	0	2*	Yes
	5552	Seeley-Wick	Tesoro	(-) Hamilton Unit	F. Nisbet, Schultz, Shook, W. Nisbet, Ratcliff, Smith	31-23S-12E 6-24S-12E	560	--	Bart1	1750	15	-	-	-	-	Yes
	11091	Seeley-Wick	Tesoro	(W) Clopton	Clopton	8-23S-11E	320	--	Bart1	1750	15	5	0	0	0	Yes
	1362	Seeley-Wick	White & Ellis Drilling	(W) Kipfer	Kipfer	1,12-22S-11E	320	0	Bart1	1760	17	9	0	0	0	Yes
	10368	Seeley-Wick	Tom Grooms	(-) Lose	Lose	15-26S-8E	160	--	Miss	2550	10	1	0	0	0	Yes
	5450	Stanhope	Tom Grooms*	(-) --	Lose A, B, C	22-26S-8E	340	--	Miss	2450	10	3	0	0	4	Yes
	16709	Stanhope	Tom Grooms*	(-) --	Lose A, B, C	22-26S-8E	340	--	Miss	2450	10	3	0	0	4	Yes
	3293	Teeter	Berentz Drilling Co.*	(W) J.W. Teter Unit	J.W. Teter Unit 22 & 21	21-23S-9E	120	280	Bart1	2425	30-90	4	2	0	0	Yes
	3357	Teeter	Berentz Drilling Co.*	(W) J.W. Teter Unit	J.W. Teter Unit 22 & 21	22-23S-9E	120	280	Bart1	2425	30-90	4	2	0	0	Yes
	10274	Teeter	Maurice L. Brown Trust	(W) Morris	Morris	20,21-23S-9E	320	320	Bart1	2500	40	15	1	0	0	Yes
	2737	Teeter	Maurice L. Brown Trust	(W) Morris	Morris	20,21-23S-9E	320	320	Bart1	2500	40	15	1	0	0	Yes
	10170	Teeter	Maurice L. Brown Trust	(P) Green "A" Unit	Noller, Green "A"	2-23S-9E 2,11-23S-9E	360	0	Bart1	2333	37	4	5	0	0	Yes
	14306	Teeter	Glacier Petroleum Co.	(P) Noller	Noller	3-23S-9E	10	20	Bart1	2450	35	2	-	-	-	No*
	10430	Teeter	Glacier Petroleum Co.	(P) Noller A	Noller A	9,10-23S-9E	20	16	Bart1	2450	35	5	-	-	-	Yes
	14901	Teeter	Glacier Petroleum Co.*	(P) Hartley B	Hartley B	2-23S-9E	50	10	Bart1	2450	50	5	2	-	-	Yes
	11169	Teeter	K.E. Snyder	(D) Green "B" Flood Project	Green "B"	1,2,11,12-23S-9E	40	0	Bart1	2410	45	8	0	0	0	Yes
	12236	Teichgraeber	King Oil Co.	(P) Spencer Lease	Spencer	18-25S-9E	80	0	Bart1	2375	23	5	0	0	0	Yes
	11737	Teichgraeber	Nadel and Gussman	(W) Welsh-Birkett	Birkett, Welsh	12-25S-8E 13,14-25S-8E	300	0	Bart1	2350	15	51	-	0	-	Yes
	13198	Teichgraeber	Nadel and Gussman	(W) Spencer	Spencer	18-25S-9E	40	0	Bart1	2400	15	4	0	0	0	Yes
	1908	Thrall-Aagard	Maurice L. Brown Trust	(W) J.W. Martindell	J.W. Martindell	31-23S-10E	--	452	Bart1	2300	50	1	2	0	0	No*
	2226	Thrall-Aagard	Maurice L. Brown Trust	(W) Thrall-McKee Consolidated	Thrall-McKee Consolidated Louisa Thrall, Ernestine Thrall	28,29,32,33-23S-10E 29-23S-10E	640	560	Bart1	2300	31	3	2	0	1	Yes
	2743	Thrall-Aagard	Maurice L. Brown Trust	(W) Cartwright	--	36-23S-9E 1-24S-9E 6-24S-10E	325	--	Bart1	2200	35	8	6	0	-	Yes
	10734	Thrall-Aagard	Maurice L. Brown Trust	(W) Moore-Holverson	Aagard, Moore, Hill, Holverson	23-24S-9E 25-26-24S-9E 26-24S-9E	275	0	Bart1	2120	20	6	8	0	0	Yes
	15438	Thrall-Aagard	Maurice L. Brown Trust	(W) George I. Miller	George I. Miller	28-23S-10E	40	0	Bart1	2385	25	2	0	0	0	Yes
	12156	Thrall-Aagard	Glacier Petroleum Co.	(P) Osmundson	Osmundson	23-24S-9E	20	18	Bart1	2270	12	3	-	-	-	No*
	16865	Thrall-Aagard	Glacier Petroleum Co.	(P) Eide-Hill	Eide-Hill	26,27-24S-9E	50	--	Bart1	2170	20	5	2	-	-	Yes
	7563	Thrall-Aagard	S.A. McGinnis*	(W) Burke	Burke "A", Mason "A", G.O. Olson, Aagard-Olson, Tony Olson, Oldham "B", Burke "B", Oldham, Thomas-Favour (Erickson)	12-24S-9E 13-24S-9E 14-24S-9E 6-24S-10E 7-24S-10E	504	0	Bart1	2200	20	30	-	0	0	Yes
	11893	Thrall-Aagard	S.A. McGinnis*	(W) Burke	Burke "A", Mason "A", G.O. Olson, Aagard-Olson, Tony Olson, Oldham "B", Burke "B", Oldham, Thomas-Favour (Erickson)	12-24S-9E 13-24S-9E 14-24S-9E 6-24S-10E 7-24S-10E	504	0	Bart1	2200	20	30	-	0	0	Yes
	13474	Thrall-Aagard	Kenneth C. McKee*	(D) Boone-Moore	Moore, Boone	12-24S-9E 24-24S-9E 25-24S-9E	160	--	Bart1	2160	13	3	0	0	0	Yes
	7558	Virgil	R.R. Abderhalden*	(W) West Virgil Unit	Bonnett,† Geist, Sullivan, Wayham	13-24S-12E 14-24S-12E	539	0	Miss	1730	70	33	6	0	0	Yes
	9922	Virgil	Brunson-Spines	(W) Johnson	Johnson	23-24S-12E	450	0	Miss	1700	15	13	6	0	0	Yes
	12482	Virgil	French & Wintersheid	(P) Dame	Dame	12-24S-12E	80	40	Miss	1700	6	8	0	0	0	Yes
	7811	Virgil	Houston-Oklahoma Oil Co.	(W) West Virgil	Mennonite, Sullivan, Fleming	11-24S-12E 14-24S-12E 15-24S-12E	80	0	Miss	1740-1765	9-25	9	1	0	0	Yes
	9884	Virgil	Houston-Oklahoma Oil Co.	(W) West Virgil	Mennonite, Sullivan, Fleming	11-24S-12E 14-24S-12E 15-24S-12E	80	0	Miss	1740-1765	9-25	9	1	0	0	Yes
	13251	Virgil	Lewis C. Long	(P) Barnes	Barnes, Sharp	7-24S-13E	139	--	Miss	1664	16	2	0	0	0	Yes
	12408	Virgil	Lewis C. Long	(P) Barnes	Barnes, Sharp	7-24S-13E	139	--	Miss	1664	16	2	0	0	0	Yes

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water in. bbl/well/day	Injected-water data				Date first in.	Primary production mechanism	Primary oil-water ratio	API grav. deg.	Oil visc. cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks	
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth. ft.	Thick. ft.	Type						Water Injection		Oil recovered by secondary methods				
																	Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73			
16338	1	-	-	-	Line	100	75	Prod	--	--	-	1972	--	4/60	38-	--	--	--	--	--	--	--	#=1973 Primary and Secondary Production
10954	5	0	0	0	Irreg	300	550	Prod + Douglas	600	100	T	1951	Grav	3/1	42	--	200,000	2,450,000	8,600	111,000	111,000	*Was Tesoro Prod. Corp.	
11213	2	0	0	0	5-spot	400	200	Prod + Douglas	600	100	T	1959	Grav	9/1	38	--	72,000	998,000	2,894	188,712	188,712		
11615	2	0	2	1	5-spot	800	180	Prod + Douglas	1090	80	U	1972	S Gas	55/110	41	--	65,700	160,050	0	0	337,865	*Converted #10,835	
5552	6	1	-	-	5-spot	700	--	Prod + Douglas	725	50	M	--	S Gas	--	40	--	--	--	--	--	--	--	
11091	2	15	-	-	5-spot	500	1000	Prod + Douglas	650	50*	M	--	S Gas	--	43	--	730,000	--	4,797	1,317,778	--	*To 75	
1362	2	0	0	0	Irreg	150	85	Prod + Douglas	700	100	T	1963	S Gas	3/1	41	--	60,000	704,200	4,000	47,421	277,000	#11,500	
10368	1	-	-	-	--	0	0	Prod	--	--	U	1956	Grav	1/10	37	--	--	--	--	--	--	--	
5450	1	-	-	-	Irreg	100	300	Prod	--	--	U	1972	Grav	1/30	32	--	109,500	--	2,920	--	--	*Was K.T. Wiedeman Trust	
16709	1	2	3	0	5-spot	450	120	Prod + Douglas	1400	60	T	1963	S Gas	--	42	5	42,000	74,850	3,720	--	10,773	*Was Sinclair	
3293	6	4	0	0	5-spot	169	441	Prod + Douglas + L-KC	1200	75	T + P	1951	Limited Wat Drive	--	40	3.8	924,393	2,328,808	42,574	78,581	108,274	#56,766	
3357	1	1	0	0	Irreg	609	451	Prod	--	--	T	1963	Limited Water	--	41	3.0	167,675	1,809,032	6,966	119,845	386,568		
10274	1	-	-	-	Irreg	150	28	Prod	--	--	U	1969	Grav	1/2	38	--	6,804	44,029	600	--	--	*Pump failure #3,677	
2737	1	-	-	-	Irreg	600	240	Prod	--	--	U	1968	Grav	1/4	39	--	87,600	340,600	651	6,931	--	#3,258	
10430	1	-	-	-	5-spot	0	180	Prod	--	--	U	--	Grav	1/4	39	--	53,500	--	0	--	#5,400	*Was Jamison Pipe & Tool	
14901	1	0	0	0	Irreg	0	225	Prod	--	--	U	1967	S Gas	48/130	39	--	82,125	438,925	0	0	272,915	#9,811	
11169	2	1	0	0	Irreg	800	90	Prod + Douglas	1290	90	U	1965	S Gas	1/1	40	--	66,283	393,000	7,000	22,845	117,276	#8,152	
12236	7	0	0	-	Irreg	1300	106	Prod + Douglas	1000	50	T	1967	S Gas	95/5	41	--	582,000	3,424,000	70,288	390,188	--		
11737	2	1	0	0	Irreg	600	163	Prod + Douglas	1000	50	T	1967	S Gas	9/1	39	--	119,000	585,000	3,326	21,976	--		
13198	0	2	0	0	5-spot	0	0	--	--	--	-	1948	S Gas	--	40	4	0	23,032,364	1,586	2,532,201	2,532,201	*Flood Depleted	
1908	1	4	0	4	5-spot	392	332	Prod + Douglas	1200	40	T	1949	S Gas	--	40	3.4	230,425	57,764,067	2,024	3,980,331	6,255,795		
2226	8	17	0	1	5-spot	1020	377	Prod + Douglas	1200	40	T	1952	S Gas	--	40	5	864,475	26,939,924	14,955	1,252,864*	1,252,864	*Corrected figure	
2743	8	13	0	0	Irreg	1202	232	Prod + Douglas	1000	50	T	1963	S Gas	--	40	3.2	849,461	7,085,808	18,039	473,787	473,787		
10734	1	0	0	0	Irreg	401	396	Prod + Douglas	1200	140	T	1967	--	--	40	3.4	138,100	425,163	8,967	86,367	90,494		
15438	-	-	-	-	Irreg	1000	80	Prod	--	--	U	--	Grav	1/30	35	--	29,200	--	500	--	--	*Equipment failure #932	
12156	1	-	-	-	Irreg	400	215	Prod	--	--	U	1957	Grav	1/4	39	--	78,436	--	500	--	--	#3,901	
16865	11	18	0	0	Irreg	750	100	Prod + Douglas	1200	65	T	1961	S Gas	--	37-	--	401,500	--	31,964	--	988,904	*Was Clinton Oil Co.	
7563																							
7569																							
11893																							
13474	1	0	0	0	Irreg	0	2	Prod	--	--	M	1967	Grav	1/3	37-	--	500	3,900	285	4,385	17,230	*Was Bedell-Catt #2,850	
7558	10	9	0	0	Irreg	250	175	Prod + Arb	2200	150	T	1958	S Gas	2/1	40	3.4	640,000	5,531,625	14,049	730,450	--	*Was Sun Oil Co. +Sold 7/73 - Dick Winterscheid	
9922	15	6	0	1	5-spot	800	191	Prod + Arb	2100	--	U	1962	S Gas	38/70	38	--	1,047,252	15,555,105	15,949	315,067	315,067		
12482	1	0	0	0	Irreg	300	300	Prod	--	--	T	1966	S Gas	1/1	38	--	79,000	474,000	4,889	29,689	--		
7811	9	1	0	0	5-spot + Irreg	165	122	Prod	1740	9-	T	1954	Grav	1/7	38.7	--	160,000	1,290,860	2,336	--	56,117	#9,345	
9884																							
13251																							
12408	1	-	-	-	Irreg	--	50	Prod	16	8	U	1966	Grav	--	38	--	18,000	112,000	100	1,700	--	#1,170	

County Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has ini- been con- tinuous?
						Prod.	Abtl.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abtl.	
GREENWOOD COUNTY (concl.)															
192	Virgil	French & Winterscheid	(P) Hout-Meyers	Meyers, Hout	10-24S-12E 11-24S-12E	50	70	Miss	1700	5	3	0	0	0	Yes
221	Virgil North	French & Winterscheid	(P) Shadel	Shadel	15-23S-13E	120	60	Miss	1800	6	6	0	0	0	Yes
3259	Virgil North	French & Winterscheid	(P) L. Young	L. Young	10-23S-13E	40	40	Miss	1800	6	4	0	0	0	Yes
3915	Virgil North	French & Winterscheid	(P) Lovett & Shambaugh	Lovett, Shambaugh	22-23S-13E	100	--	Miss	1700	6	7	0	0	0	Yes
8069	Virgil North	Houston-Oklahoma Oil Co.	(W) Virgil Pool	W.G. Berry	28-23S-13E	80	--	Miss	1750	10	14	0	0	0	Yes
1057	Virgil North	Kewanee Oil Co.*	(W) Schneider Lse.	Schneider	10-23S-13E	40	0	Miss	1770	15	11	0	0	0	Yes
15851	Virgil North	Sun Oil Co.	(D) Shadel	Shadel	15-23S-13E	160	95	Bartl	1540	50	3	1	0	0	Yes
5838	Virgil North	Sun Oil Co.	(D) Olinger "A"	Olinger "A"	15-23S-13E	10	1	Miss	1720	30	4	0	0	0	Yes
6126	Virgil North	Sun Oil Co.	(W) Jones "A"	Jones "A", Dehlinger "A"	21-23S-13E 28-23S-13E	80	12	Miss	1670	55	7	0	0	0	Yes
8090	Virgil North	Sun Oil Co.	(W) Griblin "B"	Griblin "B"	21-23S-13E	160	10	Miss	1750	30	6	1	0	1	Yes
16111	Virgil North	Sun Oil Co.	(P) Dehlinger "B"	Dehlinger "B"	29-23S-13E	160	20	Miss	1700	10	6	0	0	0	Yes
11036	Wilkerson	Geo. E. Sauder	(D) Wilkinson- Carrington	Wilkinson	6,7-25S-9E	20	20	Cattle	2100	30	4	0	0	0	Yes
11069	Wilkerson	E.W. Sauder	(P) Olsen Lse.	Olsen	6-25S-9E	30	0	Cattle	2100	20	3	0	0	0	Yes
13840	Willow Creek	Geo. E. Sauder	(D) Warren	Warren	6-23S-11E	40	0	Bartl	2050	20	10	0	0	0	Yes
15095	Willow Creek	Oscar Koepke	(-) Feltner & Feltner B	Feltner	31-22S-11E	100	0	Bartl	2000	30	1	0	0	0	--
GREENWOOD COUNTY TOTALS (Reported)						19,614	4,349				665	181	9	61	
HARPER COUNTY															
16914	Spring Valley	Keener Oil Co.*	(P) Schenck Lse.	Schenck	34-31S-5W	80	0	Simpson	4654	8	2	0	0	0	Yes
HARVEY COUNTY															
13454	Burrton	Drillers Prod. Co.	(W) Bott Unit	Bott Unit	6,7,8,18-23S-3W	1580	0	Miss	3350	20	46	0	1	0	Yes
10087	Burrton	Home-Stake Prod. Co.	(W) Burrton Waterflood	Martindale, LeClere, Howell, Frederick "A", Morton, Cunningham, Day A & B, Dick A & B, Gouldner, Krehbiel, Short, Nelson, Norris, Schrag "A", Murphy "A", Jerome, Hancock	17,18,20-23S-3W 19-23S-3W 30-23S-3W	1452	528	Miss	3400	35	38	1	0	0	Yes
11005	Hollow-Nikkel	Kantor Oil Co.	(W) Hollow-Nikkel Waterflood Unit	Schroeder, Hiebert, Duerksen, Siemens, Neufeld, Dyck, Nikkel	5-22S-3W 8-22S-3W	720	520	Hunton	3400	22	12	1	0	8	Yes
HARVEY COUNTY TOTALS (Reported)						3,752	1,048				96	2	1	8	
HARVEY-MCPHERSON COUNTIES															
6889	Harmac	Brunson-Spines	(P) Harmac Unit	Harmac Unit	35,36-21S-3W 1,2-22S-3W	350	300	Hunton	3550	8	2	0	0	0	Yes*
10729	Hollow-Nikkel	Brunson-Spines	(W) Hollow-Nikkel Waterflood Proj.	Schroeder Unit, Hollow-Nikkel Unit	32-21S-3W 33-21S-3W 4-22S-3W	960	320	Hunton	3500	20	8	9	0	0	No*
HARVEY-MCPHERSON COUNTIES TOTALS (Reported)						1,310	620				10	9	0	0	
HODGEMAN COUNTY															
14869	Buda Southeast	Am. Petrofina Co. of Texas*	(W) Cheney	Cheney	1,2-21S-26W	160	0	Miss	--	--	1	0	0	0	Yes
11855	Eakin Northwest	Phillips Petroleum Co.*	(P) Huling Lse.	Huling, Mooney, Waterhouse "A"	15-21S-21W 16-21S-21W 22-21S-21W	120	120	Miss	4325	15	3	0	0	0	Yes

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl./well/day	Injected-water data				Date first ini.	Primary production mechanism	Primary oil-water ratio	API grav., deg.	Oil visc., cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73		
#=1973 Primary and Secondary Production																						
192	1	0	0	0	Irreg	130	125	Prod	--	--	T	1964	Wat	4/6	39	--	30,000	216,000	2,868	29,856	--	#5,737
221	1	0	0	0	Irreg	150	300	Prod	--	--	T	1955	--	1/1	--	--	900,000	6,312,000	1,386	40,839	--	#2,771
3259	1	0	0	0	Irreg	80	120	Prod	--	--	T	1955	S Gas	55/45	36	--	30,000	508,000	914	20,961	--	#1,828
3915	1	0	0	0	Irreg	50	230	Prod	--	--	T	1956	S Gas	55/45	36	--	900,000	6,300,000	2,380	42,934	--	#4,761
8069	4	0	0	0	Irreg	250	75	Prod	--	--	M	1959	Wat	1/3	38.1	--	109,500	1,934,156	3,900	95,200	99,783	#8,483
1057	1	0	0	0	Irreg	1700	451	Prod	--	--	U	1944	S Gas	5/47	39	--	164,758	485,026	5,513	31,281	1,229,615	*Was Barbara Oil Co. #17,766
15851	1	4	0	0	Irreg	300	670	Prod	--	--	U	1938	S Gas	--	34.8	4.5	245,137	17,345,449	4,394	175,264	175,264	
5838	1	0	0	0	Irreg	Grav	30	Prod	--	--	U	1959	S Gas	--	37.5	3.5	12,363	295,274	3,096	59,003	59,003	
6126	1	0	0	0	Irreg	650	600	Prod	--	--	U	1958	S Gas	--	39.5	3.5	224,122	2,519,713	10,346	228,019	228,019	
6135	2	0	0	0	Irreg	650	600	Prod	--	--	U	1958	S Gas	--	39.5	3.5	224,122	2,519,713	10,346	228,019	228,019	
8090	2	4	0	2	Irreg	350	1540	Prod	--	--	U	1961	S Gas	1/4	33.8	3.4	562,394	8,231,549	7,206	123,928	123,928	
16111	2	0	0	0	Irreg	300	275	Arbuckle	2150	150	T	1971	S Gas*	1/21	39.2	4	364,818	707,430	10,236	24,388	27,469	*Plus Water
11036	1	0	0	0	Irreg	450	80	Prod + Douglas	1000	100	U	1964	Grav	--	38	--	30,000	290,000	2,250	16,600	--	#4,500
11069	1	0	0	0	Irreg	350	140	Prod	--	--	T	1964	Grav	2/8	37	--	50,000	528,000	1,000	26,100	--	#2,400
13840	1	0	0	0	5-spot	200	20	Prod	--	--	T	1968	Grav	95/5	38	--	7,000	40,400	550	12,000	173,500	#5,540
15095	1	0	0	0	Irreg	500	100	Prod + Douglas	900	100	T	--	Grav	1/1	39	--	36,500	154,000	1,315	7,115	16,617	#2,390
269	193	7	18														18,098,674	335,418,513	559,211	21,793,621	24,400,218	
16914	1	0	0	0	Irreg	10	80	Prod	--	--	U	1973	Wat	--	45	--	16,320	16,320	0	0	64,869	*Was Oasis Petroleum #16,360
13454	7	1	0	0	Irreg	Vac	635	Prod	--	--	U	1967	Wat*	155/1200	38	--	1,245,270	5,344,651	10,000	54,482	2,455,631	*Plus Gas cap #85,786
10087	19	9	0	0	5-spot	110	866	Prod + Equus	75	40	M	1963	S Gas	--	36	--	6,008,655	88,553,383	97,486	1,861,234	1,861,234	
11005	2	0	0	0	Peri	450	6000	Equus Beds	35	70	M	1964	Wat*	165/500	44	--	2,247,984	12,341,523	77,176	--	1,235,176	*Plus S Gas
28	10	0	0														9,501,909	106,239,557	184,662	1,915,716	5,552,041	
6889	0	1	0	-	Peri	0	0	Prod	--	--	U	1959	Wat†	2/5	40	--	0	6,200,639	5,926	561,627	561,627	*Temp. shut down †And S Gas
10729	0	2	0	2	Peri	0	0	Equus Beds	25	140	F	1963	S Gas†	14/20	40	--	0	16,012,265	28,838	861,635	861,635	*Temp. shut down †And Gravity
0	3	0	2														0	22,212,904	34,764	1,423,262	1,423,262	
14869	1	0	0	0	Line	Vac	41	Prod	--	--	U	1969	Wat	1/1	37.5	--	14,639	26,000	0	0	51,271	*Was Imperial Oil Co. #5,455
11855	1	0	0	0	Irreg	750	435	Prod + Cedar Hills	900	200	T	1965	Wat	--	35	--	159,060	1,164,738	25,037	142,649	539,212	*Was Beardmore Oil Inc. #42,287

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1973—Continued

County	Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has ini- been con- tinuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
HODGEMAN COUNTY (concl.)																
✓	16699	Goebel East	Pickrell Drilling Co.	(P) Hollenbeck A	Hollenbeck A, Goebel A	13-21S-24W	160	0	Miss	4460	10	4	0	0	0	Yes
	7630	Hallet	Kewanee Oil Co.	(P) Hallet Water-flood	Hallet Waterflood	15,22-22S-25W	720	240	Miss	4597	64	10	1	0	0	Yes
✓	16343	Hanston-Oppy	Kaiser-Francis	(D) Sipes	Sipes	22-22S-22W	160	0	Topeka	3572	--	2	0	0	0	Yes
	13232	Hanston-Oppy	Sun Oil Co.	(P) So. Bamberger Repressuring	S. Bamberger	20-22S-22W	640	0	Miss	4528	22	3	1	0	0	Yes
	14233	Hanston-Oppy SE	Petroleum, Inc.	(P) Housman Pilot Flood Project	Housman	3-23S-22W	160	0	Miss	4427	--	1	1	0	0	Yes
	16441	Hummel Southeast	Petroleum, Inc.	(P) Work Pilot Flood Project	Work	8-22S-24W	160	0	Miss	4575	9	0	0	0	0	Yes
	12365	Oppy South	Phillips Petroleum Co.*	(P) Clifton "BB"	Clifton "BB"	1-23S-23W	80	40	Miss	4430	90	2	0	0	0	Yes
	16908	Saw Log Creek	Pickrell Drilling Co.	(W) Gleason B	Hall K, Gleason B	31-23S-21W 32-23S-21W	280	0	Marmaton	4377	20	3	0	0	0	Yes
HODGEMAN COUNTY TOTALS (Reported)							2,640	400				29	3	0	0	
JACKSON COUNTY																
	12576	Leach	Eureka Drilling Co.	(D) Leach	Leach, Beightel, Hladky	15-7S-13E 21-7S-13E 22-7S-13E	400	600	Hunton	2700	6	4	-	-	10	Yes
JOHNSON COUNTY																
	11600	Gardner	Mo-Kan Oil Group	(P) M,K,B&G Flood	McCann, McCann B, Bigelow, Griffin,	15-14S-22E	25	5	Bartl	825	10	5	0	0	0	Yes
	11601	"	Rader Oil Co.	(P) Knabe-A and Roberts	Knabe-A Roberts	10-14S-22E 11-14S-22E	5	0	Squirrel	700	10	2	0	0	0	Yes
	12273*	Gardner	James D. Frazier†	(-) --	James D. Frazier	23-14S-22E	--	--	Bartl	850	--	3	-	-	-	--
JOHNSON COUNTY TOTALS (Reported)							30	5				10	0	0	0	
KEARNY COUNTY																
	16958	Pleasant Prairie	Helmerich & Payne, Inc.	(P) --	White "O", USA "B"	13-26S-35W 14-26S-35W	--	--	Morr + Miss	4966	24	1	0	0	0	Yes
KINGMAN COUNTY																
	13079	Alameda	Texaco Inc.	(P) Alameda Unit	Marteney, G. Richardson, J.S. Gurtner, Nunnemaker, H. Krehbiel, G.W. Richardson, T. Lecklider, T. Lecklider "B", J. Flickner, Jr., L. Lord, T. Lecklider "C", W.A. Robinson, J.P. Krehbiel "C", D. Flickner	22-28S-7W 26-28S-7W 27-28S-7W 28-28S-7W 33-28S-7W 34-28S-7W	1920	--	Miss Viola Simpson KC	4345	10	20	-	0	-	Yes
	16295	Broadway West	Lario Oil & Gas Co.	(P) Clouse	Clouse	18-28S-5W	0	--	Miss	3850	90	0	0	0	0	Yes
	5422	Casley	Petroleum Management	(W) Casley	Casley	11-28S-5W	80	--	Miss	3780	9	1	-	-	-	Yes
	7702	Cunningham	Skelly Oil Co.	(W) Cunningham	Miles "B", Miles "A"	19-27S-10W 30-27S-10W	320	0	L-KC	3400	8	6	3	0	0	Yes
	16625	Spivey-Grabs-Basil	Pickrell Drilling Co.	(P) Maple G	Maple G	30-29S-6W	40	0	Miss	4116	36	1	0	0	0	Yes
	5576	Spivey-Grabs-Basil	Sun Oil Co.	(D) Higgins	Higgins	9-30S-8W	80	0	Miss	4185	45	2	0	0	0	Yes
KINGMAN COUNTY TOTALS (Reported)							2,440	0				30	3	0	0	
KINGMAN-PRATT COUNTIES																
	6106	Cunningham	Skelly Oil Co.	(W) Cunningham "B" Unit	No. Ratcliff, J.M. Ratcliff, Interurban Realty, John Miller,	19-27S-10W 30-27S-10W 31-27S-10W	800	575	L-KC	3400	16	12	1	0	0	Yes

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl/well/day	Injected-water data			Date first inj.	Primary production mechanism	Primary oil-water ratio	API grav., deg.	Oil visc., cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks	
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.						Type	Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973			Cum. 12-31-73
#=1973 Primary and Secondary Production																						
6106 (cont.)																						
5288	0	0	0	0	Peri	0	0	--	--	--	U	1957	Wat†	--	36	--	0	9,369,243	0	269,371	3,318,227	*Depleted +Plus S Gas #14,416
14550	1	0	0	0	Irreg	Vac	--	Prod	--	--	U	1968	Wat*	8/2	35	--	45,000	336,150	0	0	102,200	*Plus S Gas #11,780
14366	0	0	0	0	--	--	--	--	--	--	-	--	--	--	--	--	--	--	--	--	--	*Was Gulf Oil Corp. #14,634
	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>													<u>45,000</u>	<u>336,150</u>	<u>0</u>	<u>0</u>	<u>102,200</u>	
14677	2	0	0	0	Irreg	0	10	Prod	--	--	U	1960	S Gas	4/1	31	--	7,000	27,000	70	2,070	--	#398
7845	0	1	0	0	Irreg	--	--	--	--	--	-	1959	--	--	33	--	--	--	--	--	--	*Part of year #80
9483	2	0	0	0	Irreg	250	35	Prod	--	--	U	1962	Gas Exp	4/6	22	--	--	--	--	--	--	#1,200
16032	1	-	-	-	Irreg	Grav	5	Prod	--	--	U	1971	Grav	4/6	22	--	--	--	--	--	--	#300
6323	1	-	-	-	Line	150	85	Prod + Surface	--	--	M	1958	Wat	10/1	31.7	--	750	7,500	2	--	106,812	#1,196
	<u>6</u>	<u>1</u>	<u>0</u>	<u>0</u>													<u>7,750</u>	<u>34,500</u>	<u>72</u>	<u>2,070</u>	<u>106,812</u>	
14745	0	-	-	-	Irreg	--	--	Prod	--	--	-	--	Grav	1/9	31	--	--	--	--	--	--	*Was Victor Oil Co. +Part of year #1,269
"	11	0	-	-	5-spot	--	--	Prod	--	--	-	--	Grav	1/9	31	--	--	--	--	--	--	*Was Mapco +Part of year #1,712
	<u>11</u>	<u>0</u>	<u>0</u>	<u>0</u>													<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	
16555	1	0	0	0	Irreg	0	166	Prod	--	--	U	1972	--	162/120	38	--	60,621	81,621	0	0	122,687	#60,324
9576	3	-	-	-	Irreg	200	30	Prod + Hertha	--	--	M	1962	Grav	--	29	--	6,000	212,000	1,050	--	33,000	*Was I. E. Buddrus +Not enough water

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1973—Continued

Kansas Geol. Survey Energy Resource Series 3, 1974

County	Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has ini. been continuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
LINN COUNTY (cont.)																
	3165	Goodrich-Parker	Ulses Oil Company	(P) Goodrich Group	Cowan Bearly, Wm. Brownrigg, C. Byerley, M. Byerley, H.B. Cox, Greene, Wooten	20-20S-22E	300	0	Squirrel	600	0	99	0	0	0	Yes
	15290	LaCygne-Cadmus	Lester Bailey	(W) Edith Calvin Lse.	Edith Calvin	35-19S-24E	10	0	Squirrel	200	9	3	2	5	0	Yes
	454	LaCygne-Cadmus	J. & J. Oil Co.*	(W) J. & J. Oil Co.	Teagarden	2-20S-23E	160	0	Peru	187	12	3	0	0	0	Yes
	12025	LaCygne-Cadmus	J. & J. Oil Co.*	(W) J. & J. Oil Co.	Person Lse.	10-20S-23E	160	120	Peru	200	12	30	2	0	0	Yes
LINN COUNTY TOTALS (Reported) (Includes project from supplemental list.)							2,615	120				192	215	5	3	
LINN-MIAMI COUNTIES																
	13055	Beagle	Robert A. Mason	(W) S. Beagle Field	Cook-Day Lease	15,22-19S-22E	40	0	Squirrel	480	15	11	0	0	0	Yes
LYON COUNTY																
	5671	Rock Creek	C.E. Murphy	(P) Murphy	Murphy	29,32-21S-11E	400	--	Bart1	1930	12	6	-	1	3	Yes
	5004	Rock Creek	Schankie Well Service*	(D) R.B. Byrd Lse.	R.B. Byrd	32-21S-11E	110	0	Bart1	1900	17	3	0	0	0	Yes
LYON COUNTY TOTALS (Reported)							510	0				9	0	1	3	
MCPHERSON COUNTY																
	5631	Chindberg	George R. Hess	(P) Swanson S.W.D.	Swanson	13-19S-3W	340	0	Miss	2990	36	5	0	0	0	Yes
	7365	Georob	Colorado Oil Company	(D) Robinson Lse.	Robinson	1-18S-2W	40	0	Miss	2790	7	3	0	0	0	Yes
	13747	Goessel	Donald C. Slawson	(W) Goessel Hunton	Goessel Hunton Waterflood Unit	1,12-21S-1W	800	0	Hunton	3400	10	8	3	0	0	Yes
	1911	Graber	George R. Hess*	(D) Graber Water	A. Hetzke, Kindblade, J.P. Huxman, J.C. Goering, F.A. Hetzke, A.K. Graber, J.M. Boekner, D.B. Jones, Carrie Jones, C.C. Graber	6-21S-1E 20-21S-1W 29-21S-1W	980	640	Hunton	3280	30	16	0	0	0	Yes
	2434			Flood												
	3017	Graber	George R. Hess*	(W) Graber	Jones B, Jones A	30,31-29S-1W 32-29S-1W 31-21S-1W 32-21S-1W	20	40	Hunton	3285	25	2	0	0	0	Yes
	4038	Gypsum Creek	George R. Hess	(P) Buckeye "C"	Van Meter A, Van Meter B, Bukey D	32-16S-1W 5-17S-1W	240	0	Miss	2622	20	4	0	0	0	Yes
	13798	Hollow-Nikkel	George R. Hess	(P) Schroeder	Schroeder	28-21S-3W	80	0	Hunton	3418	20	0	0	0	0	Yes
	1295	Jenday	Alfred Koehn	(D) Wedel B S.W.D.	Smith, Genung, Wedel A	6-19S-1W 7-19S-1W 8-19S-1W	--	--	Miss	2940	30	0	-	0	-	--
	5715	Jenday	Alfred Koehn	(D) Ryno S.W.D.	Russell	6-19S-1W	--	--	Miss	2932	29	-	-	-	-	--
	15232	Johnson	David Litan*	(P) Kasey-Colburn	--	19-17S-3W	320	0	Miss	2990	110	3	1	0	0	Yes
	11527	Lindsborg	Leonard L. Bruce	(D) R.A. Johnson	R.A. Johnson	19-17S-3W	160	0	Maquoketa	3370	10	1	0	0	0	No*
	12269	Lindsborg	Dale Reese	(W) F. Johnson	Frank Johnson, Comm "B"	8-17S-3W	120	0	Viola	3361	10	1	1	0	0	No*
	15946	Lindsborg	Tenneco Oil Company	(W) Community B	Community B	8-17S-3W	--	--	Viola- Maquoketa	3300	--	-	-	-	-	--
	7085	McPherson	Lawrence & Bush	(W) Anderson B &	Johnson, Anderson A, Anderson B, Chindberg	30-18S-2W 31-18S-2W 32-18S-2W	400	0	KC	2300	10	12	1	0	0	Yes
	10429			Johnson												
	7951	McPherson	Mead Production Co.	(W) O.T. Bentson	O.T. Bentson	32-18S-2W	60	20	KC	2350	12	3	0	0	0	Yes
	6179	McPherson	Jo Roy Rierison*	(W) --	Rolander	30-18S-2W	160	0	KC	2340	10	3	0	0	0	Yes
	2158	Ritz-Canton	An-Son Corporation*	(D) Hull	Hull, Decker, Fleming	11-19S-2W	500	240	Miss	2889	40	3	3	0	0	Yes
	3034	Ritz-Canton	An-Son Corporation*	(D) Giffen "A"	Myers "B"	14-19S-2W	160	300	Miss	2889	--	3	0	0	0	Yes
	8813*	Ritz-Canton	Colorado Oil Company	(-) --	Lacquement	20-19S-1W	--	--	--	--	--	-	-	-	-	--

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl./well/day	Injected-water data			Date first inj.	Primary production mechanism	Primary oil-water ratio	API grav., deg.	Oil vis., cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks		
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.						Type	Water Injection		Oil recovered by secondary methods				
																	Total 1973	Cum. 12-31-73	Total 1973			Cum. 12-31-73	
3165	87	0	0	0	5-spot	600	12	Prod + Arb	1400	50	M	--	Gas Exp	--	29	--	381,060	14,613,069	--	--	639,930	#=1973 Primary and Secondary Production #6,570	
15290	1	-	1	0	5-spot	200	20	*	--	--	F	1970	Grav	--	29	--	21,600	--	90	--	--	*Rural Pipe Line	
454	3	0	0	0	Line	150	10	Prod + Peru	210	12	M	1963	S Gas	--	29.4	30.1	--	10,950	--	--	--	600	*Was Roxbury Oil Co. #1,973
10225	22	0	0	0	5-spot	150	10	Prod + Peru	200	12	M	1963	S Gas	--	28.9	29.6	--	79,200	--	--	--	5,250	*Was Roxbury Oil Co. #1,973
	170	212	1	0													457,670	15,023,254	4,495	266,699	945,479		
13055	10	0	0	0	5-spot	473	7	Prod + Surface	--	--	F	1968	S Gas	5/1	31	20	76,000	667,692	3,600	60,834	60,834		
5671	2	1	-	-	Irreg	250	150	Prod	--	--	-	--	--	1/5	38	--	54,750	--	4,000	--	--	#5,500	
5004	1	0	0	0	Irreg	300	55	Prod	--	--	U	1973	Grav	1/9	37	--	16,425	--	0	--	--	*Was Leland Dreyer #1,815	
	3	1	0	0													71,175	0	4,000	0	0		
5631	1	0	0	0	Irreg	0	425	Prod + Chat	3000	4	U	1957	Wat	3/7	35	--	25,000	1,052,425	1,500	1,500	--		
7365	1	0	0	0	Irreg	Vac	124	Prod	--	--	U	1959	Wat	15/121	35	--	45,328	527,929	1,729	23,589	240,863	#4,548	
13747	7	1	0	0	Peri	395	196	Prod + Miss	3050	100	T	1968	S Gas	1/1	40	3	567,910	2,594,160	22,510	115,895	624,706	#25,695	
1911	6	6	0	0	--	0	500	Prod	--	--	T	--	Grav	9/1	44	--	100,000	42,095,000	25,000	5,051,000	--	*Was Continental Oil Co.	
2434																							
3017	2	0	0	0	Irreg	--	82	Prod	--	--	U	1952	Wat	26/0	40	--	30,000	1,402,122	2,500	422,697	--	*Was Cities Service Oil	
4038	1	0	0	0	Irreg	0	400	Prod	--	--	U	1954	Wat	1/1	35	--	70,000	1,610,160	6,000	13,000	--		
13798	1	0	0	0	Irreg	0	365	Prod	--	--	U	1967	Wat	9/1	40	--	60,000	317,570	6,500	65,620	--		
1295	-	-	-	-	Irreg	Vac	400	Prod	--	--	T	--	--	--	--	--	--	--	--	--	--		
5715	-	-	-	-	Irreg	Vac	200	Prod	--	--	T	--	--	--	--	--	--	--	--	--	--		
15232	1	0	0	0	Irreg	0	600	Prod	--	--	U	1969	--	1/3	--	--	219,000	1,159,000	0	0	50,000	*Was Clarence Warner #10,675	
11527	1	0	0	0	Line	0	100	Surface	42	20	F	1965	Wat	5/99	35	--	36,500	422,200	500	10,174	--	*Produces too much water #1,285	
12269	0	1	0	0	Line	0	0		--	--	-	1967	Wat	3/1	34	--	--	--	--	--	--	*Down 4-1-69 #2,447	
15946	-	-	-	-	Irreg	--	200	Prod	--	--	T	1971	S Gas	--	--	--	73,000	219,000	0	0	364,286		
7085	3	0	0	0	Irreg	350	275	Prod + Miss	3000	--	U	1959	S Gas	8/2	35-	--	210,710	2,108,234	15,897	215,758	740,568	#18,304	
10429																							
7951	1	0	0	0	Irreg	25	200	Miss	3000	--	U	1960	S Gas	9/1	36	--	73,000	840,719	2,090	--	78,132		
6179	1	0	0	0	Irreg	250	300	Prod + Miss	2975	10	U	1958	Grav	1/3	34	--	110,000	122,000	--	--	--	*Was Leonard Bruce #730	
2158	1	0	0	0	Irreg	Grav	8200	Prod	--	--	U	1949	S Gas	--	35	--	2,993,000	76,909,014	29,360	--	--	*Was Kathol Petroleum	
3034	1	0	0	0	Irreg	Grav	5300	Prod	--	--	U	1952	S Gas	--	35	--	1,934,500	59,484,596	14,882	--	--	*Was Kathol Petroleum	
8813	-	-	-	-	--	--	--	--	--	--	-	--	--	--	--	--	--	--	--	--	--	*Sold 1-1-73, H.G. Krehbiel	

County Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been con- tinuous?
						Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
MCPHERSON COUNTY (concl.)															
5630	Ritz-Canton	George R. Hess	(P) H.P. Unruh	H.P. Unruh, Maude Smith	16-19S-2W	160	0	Miss	2976	25	4	0	0	0	Yes
5682	Ritz-Canton	George R. Hess	(P) Flock S.W.D.	Flock, Johnson	1-20S-2W	320	0	Miss	2945	8	2	0	0	0	Yes
8148	Ritz-Canton	George R. Hess	(P) Thompson B	Thompson B	22-19S-2W	240	0	Miss	2943	25	4	0	0	0	Yes
2039	Ritz-Canton	Hillenburg Oil Co.	(D) F.A. Lovett	F.A. Lovett	13-19S-2W	160	0	Miss	2916	59	3	0	0	0	Yes
9787															
6975	Ritz-Canton	Hillenburg Oil Co.	(D) Unruh	Unruh	34-19S-2W	160	0	Miss	2945	11	4	0	0	0	Yes
7969	Ritz-Canton	Hillenburg Oil Co.	(D) Eaton-Knudson	Knudson, Eaton	23-19S-2W 26-19S-2W	240	0	Miss	2930	30	7	1	0	0	Yes
7971															
7617	Ritz-Canton	Frank Jones Oil Oper.	(P) Ritz-Canton	Finkle	23-19S-2W	160	0	Miss	2900	8	5	0	0	0	Yes
14280	Ritz-Canton	Frank Jones Oil Oper.	(P) Ritz-Canton	Opal Russell	23-19S-2W	160	75	Viola	3362	8	1	0	0	0	Yes
3476	Ritz-Canton	Alfred Koehn	(D) Unruh S.W.D.	Unruh	26-19S-2W	0	--	Miss	2915	40	--	0	0	0	--
5844	Ritz-Canton	Alfred Koehn	(D) Miller S.W.D.	--	36-19S-2W	--	--	Miss	2960	40	--	--	--	--	--
4067	Ritz-Canton	Homer G. Krehbiel, Sr.	(D) Koehn B	Koehn B	34-19S-2W	80	--	Miss	2958	5	2	0	0	0	Yes
8813	Ritz-Canton	Homer G. Krehbiel, Sr.	(D) Lacquement	Lacquement	20-19S-1W	80	--	Miss	2934	41	2	--	0	1	Yes
6760	Ritz-Canton	Ray Perera*	(D) Drum (+Somers)	Drum	35-19S-2W	160	0	Viola + Miss	3480- 2936	15- 12	1	0	0	0	Yes
7076															
3387	Ritz-Canton	Elmer Unruh	(D) Wiles Lse.	Wiles	25-19S-2W	140	0	Miss	2930	25	4	0	0	0	Yes
14770	Round Hill	Leonard L. Bruce	(D) Krehbiel A	Krehbiel A	33-18S-1W	20	0	Miss	2940	10	1	0	0	0	Yes
3219	Roxbury South	Elmer Unruh*	(-) --	Boyd #2, Boyd S.W.D., Tinkler #1, Tinkler #2	20-17S-1W 29-17S-1W	240	0	Miss	2650	80	3	0	0	0	Yes
6463	Roxbury South	White Hawk Oil Co.*	(D) Bishop Unit	Bishop	30-17S-1W	60	0	Miss	2685	5	1	0	0	0	Yes
14203	Voshell	Herman J. Schrag	(W) Schrag Flood Project	Schrag, Goering	26-20S-3W	80	60	Miss	3090	3	3	0	0	0	Yes
MCPHERSON COUNTY TOTALS (Reported)						6,840	1,375				114	10	0	1	
MARION COUNTY															
8119*	Covert-Sellers	Hillenburg Oil Co.	(-) D.K. Reamey	D.K. Reamey	17-21S-4E	--	--	L-KC	1750- 2050	4	--	--	--	--	--
17154	Elbing North	Am. Petrofina Co. of Texas*	(P) --	J. De Forrest, J.J. Ryan	27-22S-4E	320	0	Miss	2447	1	6	0	0	0	Yes
13411	Lost Springs	Baker Oil Inc.*	(D) Kaiser	Gehrke, Schick, Hajek	33-17S-4E	320	0	Miss	2380	40	0	3	0	0	Not
6630	Lost Springs	Burnette-Thompson	(D) --	Martin	2-17S-4E	480	0	Miss	2290	30	4	1	0	0	Yes
13045	Lost Springs	Roland Jones	(D) Huna Project	A. Melcher	20-18S-4E	320	320	Miss	2403	40	1	--	0	1	Yes
MARION COUNTY TOTALS (Reported)						1,440	320				11	4	0	1	
MEADE COUNTY															
6354	Adams Ranch	Cotton Petroleum Corp.*	(D) Adams Ranch Field	Adams "D"	25-34S-30W	240	80	Marmaton	5368	4	2	0	0	1	Yes
16693	McKinney	Skelly Oil Co.	(W) I.B. Regier	I.B. Regier	17-33S-27W	640	640	Morrow	5710	6	0	0	0	0	Yes
16489	Singley	Diamond Shamrock Corp.	(P) Ida K. Heinson	Ida K. Heinson	29-33S-29W	320	80	Morrow	5800	12	5	2	0	0	Yes
11839	Stevens	Colorado Oil Co.*	(W) Stevens Field	Holmes, Kelly, Leslie, Leslie "A"	2-33S-30W 3-33S-30W	200	400	Morrow	4500	10	6	8	0	0	Yes
MEADE COUNTY TOTALS (Reported)						1,400	1,200				13	10	0	1	
MIAMI COUNTY															
590	Black	Robert A. Mason	(W) South New Lancaster	Middaugh, Crume, Fernstrom	3,10-19S-24E	80	--	Prue	200	12	35	2	1	0	Yes
13497															
11056	Louisburg	E. Buddrus et al	(W) Louisburg Group	McHall, Roger	9-17S-25E	105	--	Prue	400	11	30	2	0	--	Yes
5762	Louisburg	E.S. & J.M. Cook*	(W) E.S. & J.M. Cook	Richmond, Miller, Briggs	28-16S-25E 34-16S-25E	75	4- 5	Prue	330	14	19	2	--	--	Yes
14695	Louisburg	E.W. Stallings*	(F) Louisburg Unit	James Roe, James Roe, Glenn Seaborn	13-17S-24E 18-17S-25E	240	--	Peru	450	25	--	--	--	--	Not

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl/ well/ day	Injected-water data			Date, first inj.	Primary production mechanism	Primary oil-water ratio	API grav., deg.	Oil vis., @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks	
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.						Type	Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973			Cum. 12-31-73
#=1973 Primary and Secondary Production																						
5630	1	0	0	0	Irreg	0	200	Prod	--	--	U	1957	Wat	1/1	35	--	90,000	1,019,650	1,000	1,000	--	#10,000
5682	1	0	0	0	Irreg	0	240	Prod	--	--	U	1958	Wat	7/3	35	--	80,000	430,250	100	100	--	#2,100
8148	4	0	0	0	Irreg	0	70	Prod	2950	--	U	1960	Wat	4/6	35	--	30,000	352,900	300	300	--	#1,500
2039	1	0	0	0	Irreg	Vac	1800	Prod	--	--	U	1948	S Gas	--	34	--	640,000	--	2,000	--	--	#7,015
9787												1962										
6975	1	0	0	0	Irreg	Vac	800	Prod	--	--	U	1959	S Gas	--	35	--	288,000	--	0	--	--	#4,886
7969	2	0	0	0	Irreg	Vac	1200	Prod	--	--	U	1960	S Gas	--	33	--	850,000	--	1,000	--	--	#11,085
7971																						
7617	1	0	0	0	Irreg	0	--	--	--	--	U	1952	Grav	8/92	35	--	354,000	--	1,500	--	--	#7,150
14280	1	0	0	0	Irreg	0	150	Prod	--	--	U	1968	Wat	4/96	36	--	52,000	--	0	--	--	#2,500
3476	-	-	-	-	Irreg	Vac	400	Prod	--	--	T	--	--	--	--	--	--	--	--	--	--	--
5844	-	-	-	-	Irreg	Vac	150	Prod	--	--	T	--	--	--	--	--	--	--	--	--	--	--
4067	1	-	0	0	Irreg	0	50	Miss	2958	51	T	1965	Grav	--	36	--	18,250	--	--	--	--	#1,600
8813	1	-	-	-	Irreg	0	260	Miss	2934	41	T	1961	Grav	--	36	--	90,600	--	--	--	--	#1,800
6760	1	1	-	0	Irreg	0	400	Prod	--	--	U+	1958	S Gas	--	35+	--	6,455,000	--	--	--	--	*Was Nadel & Gussman
7076																						+And bactericides #3,613
3387	1	0	0	0	Irreg	Vac	275	Prod	--	--	U	--	Grav	3/97	35.7	--	100,550	--	--	--	--	#4,450
14770	1	0	0	0	Line	5	20	Prod	--	--	U	--	Wat	3/7	36	--	7,300	14,600	500	500	--	#1,473
3219	1	0	0	0	Irreg	Vac	500	Prod	--	--	-	1952	Grav	--	35	--	162,000	--	--	--	--	*Was Guy Schulz
6463	1	0	0	0	Irreg	0	348	Prod	--	--	U	1958	Wat	--	32	--	127,020	3,156,490	1,647	42,920	--	*Was Natural Gas & Oil
14203	1	0	0	0	4-spot	100	50	Prod + Shallow Sd	80	12	M	1968	S Gas	2.5/22	36	--	18,250	94,575	883	6,728	40,635	
	48	9	0	0													15,910,918	195,932,594	137,398	5,970,781	2,139,190	
8119	-	-	-	-	--	--	--	--	--	--	-	--	--	--	--	--	--	--	--	--	--	*No injection started
17154	1	2	0	0	Irreg	Vac	714	Prod	--	--	U	1973	Wat	1/7	36.9	--	137,789	137,789	0	0	129,397	*Was El Dorado Refg. Co. #6,415
13411	0	1	0	0	Irreg	0	0	Prod	--	--	U	1971	Grav	--	34	--	0	72,000	0	0	5,544	*Was John Gehrke +Wells shut down #596
6630	4	-	-	-	Irreg	0	15	Prod	--	--	U	--	--	--	34	--	--	--	--	--	--	--
13045	1	-	0	-	Irreg	--	--	--	--	--	U	1966	Wat	1/9	34	--	50	--	--	--	--	31,358 #2,158
	6	3	0	0													137,839	209,789	0	0	166,299	
6354	1	0	0	0	Irreg	0	175	Prod	--	--	T	1958	S Gas	--	40	--	63,000	878,457	2,185	107,511	107,511	*Was Cities Service
16693	1	0	0	0	Irreg	0	13	Prod + Morr + Chester	5700-	--	U	--	Gas Well	*	--	--	4,745	5,545	0	0	0	*Trace Gas/24BPD
16489	1	-	0	-	Irreg	0	200	Prod	--	--	T	1959	S Gas	--	29.6	--	12,000	168,000	0	0	358,491	#8,460
11839	3	0	0	0	Irreg	400	153	Prod + Ogallala	295	15	M	1965	S Gas	143/Tr	37	--	125,155	2,745,732	745	4,126	--	*Sold 10-1-73 McAdams Pipe & Supply #3,193
	6	0	0	0													204,900	3,797,734	2,930	111,637	466,002	
590	15	-	-	-	5-spot	200	10	Prod + Surface	--	--	F	1967	S Gas	3/1	27	20	183,000	393,098	12,074	50,229	50,229	
13497																						
11056	21	1	-	-	Line	295	35	Prod + Hertha	260	5	M	1964	S Gas	95/5	32-	--	270,000	2,270,000	--	--	105,546	#8,881
5762	19	2	-	-	Line	340	25	Prod	--	--	M	1958	S Gas	100/5	32-	1005	160,375	4,491,608	4,060	--	364,617	*Was E. Buddrus
14695	-	-	-	-	Varied, experimental	--	--	--	--	--	-	--	Grav	--	23	80	--	--	--	--	--	*Was G. Seaborn & Marathon +Shut down - fuel shortage

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1973—Continued

County	Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has ini. been continuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
MIAMI COUNTY (concl.)																
	2742	Osawatomie	Ralph Spearow	(A) --	Valiera, L.D. Robinson et al	14-18S-22E	320	0	Peru	250	10-30	2	28	0	0	No*
	6816	Paola-Rantoul	Harold T. Beck	(W) Rantoul Pool	Caylor Lease	36-17S-21E	90	60	Squirrel	510	20	10	0	0	0	Yes
	4864	Paola-Rantoul	D.E. Farrar*	(W) Southern Enterprises, Inc.	Hickok, Robert Hickolson	1-18S-21E 10-17S-22E	480	--	Squirrel	700	30	51	0	0	0	Yes
	12704	Paola-Rantoul	Herbert Kepple	(D) --	Kepple	17-17S-23E	54	0	Peru	358	28	2	4	6	0	No*
	9128	Paola-Rantoul	L.O. Tenk	(W) Miller Flood Project	Miller, Whiteford	29-18S-23E 30-18S-23E	80	0	Peru	350	17	24	0	0	0	No*
MIAMI COUNTY TOTALS (Reported)							1,524	65				173	38	7	0	
MONTGOMERY COUNTY																
	6215	Brewster	John S. Norris	(-) --	O.W. Bullock, DeMott, W. Romig	8-32S-16E 9-32S-16E	--	--	Bartl	--	--	-	-	-	-	*
	5236	Coffeyville-Cherryvale	Alexander-Elder*	(W) Clark Hudson	Clark Hudson	17-34S-17E	30	0	Bartl	620	20	5	0	0	0	Yes
	4034	Coffeyville-Cherryvale	John T. Davis*	(W) Coffeyville, Davis & King Day	Coffeyville Pilot Flood, Davis, King Day	19-34S-17E 20-34S-17E 30-34S-17E	140	0	Bartl	600	20	15	0	0	0	Yes
	15114	Jefferson-Sycamore	BMG, Inc.	(D) Nancy Benson	Nancy Benson	25,36-34S-15E	10	--	Arb	1200	50	2	-	-	-	Yes
	13445	Jefferson-Sycamore	F.E. Guyot*	(P) Harvey	Cal Harvey	13-34S-15E	160	--	Wayside	410	15	3	5	-	-	No*
	12123	Jefferson-Sycamore	George Kerasotes et al	(-) Carpenter Lse.	Cities Service Gas Co. (Carpenter)	1-34S-15E	20	10	Squirrel	815	12	-	8	-	-	No*
	10093	Jefferson-Sycamore	Layton Oil Co.	(W) Bolton Extension	Stocker, McVey, Blosser, Hadley, Vineyard, Patterson	13-33S-14E 25-33S-14E 24-33S-14E	40	0	Bartl	1170	16	10	2	1	0	Yes
	13620	Sycamore			E. Sewell, Browning	18,19-33S-15E	25	0	Bartl	1186	15	7	2	0	0	Yes
	14651	Jefferson-Sycamore	Layton Oil Co.	(W) Bolton	H.O. Smith, S.R. Springer, L.C. Demott	6-33S-15E	400	--	Bartl	1160	13	12	0	0	0	Yes
	2045	Jefferson-Sycamore	Stekoll Petroleum Co.	(P) Fld #3	Hester, Banks, H.F. Adams, H.F. Adams, Fitzgerald, Weiner	15-34S-15E 16-34S-15E 21-34S-15E	600	--	Wayside	450	13	47	-	0	1	Yes
	2079	Sycamore			Zinser	8-33S-14E	180	--	Bartl	1190	10	3	2	0	2	Yes
	2094	Jefferson-Sycamore	Carl D. Wyckoff*	(D) Zinser	Zinser	8-33S-14E	180	--	Bartl	1190	10	3	2	0	2	Yes
	7871	Jefferson-Sycamore	Stekoll Petroleum Co.	(P) Fld #2	Nantz	11-31S-16E	160	0	Bartl	860	15	7	-	7	-	No*
	7077	Jefferson-Sycamore	Carl D. Wyckoff*	(D) Zinser	Zinser	8-33S-14E	180	--	Bartl	1190	10	3	2	0	2	Yes
	12289	Neodesha	George J. Hempten*	(P) Nantz	Nantz	11-31S-16E	160	0	Bartl	860	15	7	-	7	-	No*
	4666	Sorgum Hollow	BMG, Inc.	(P) Linn (Circle Basin)	Linn (Circle Basin)	30,31,36-32S-13 & 14E	--	--	Weiser	850	50	6	0	0	0	Yes
	4990	Sorgum Hollow	BMG, Inc.	(-) Fowler	Fowler	17,19,20-32S-14E	15	0	Weiser	850	25	12	0	0	-	Yes
	14036	Tyro	Delaware Flood Co. % Layton Oil Co.*	(W) Tyro Unit-Freidline & Dunbar Lses.	Dunbar, Freidline, Grother, Wilson, Krebs, Krebs	33-34S-15E 4-35S-15E	80	0	Bartl	1162	17	12	0	1	0	Yes
	326	Wayside-Havana	Dodson Prod. Co. & Hawkin Prod. Co.	(W) Bragg-Riggle	Riggle (Hecht), McKemey (Jones), Bragg (Bowersock)	4-34S-14E 5-34S-14E	20	20	Wayside	660	30	1	0	0	0	Yes
	1439	Wayside-Havana	Horton Oil Co.*	(D) Mitchell Lse.	Mitchell	32-33S-14E	160	0	Wayside	680	30	3	0	0	0	Yes
	3222	Wayside-Havana	H.J. Horton*	(W) Havener Lse.	Havener	33-33S-14E	160	120	Wayside	700	30	7	0	0	0	Yes
	10442	Wayside-Havana	Horton Oil Co.*	(W) Bernice Hecht	Bernice Hecht	16-34S-14E	160	0	Weiser	720	30	4	0	0	0	Yes
	10447	Wayside-Havana	Horton Oil Co.*	(W) Ruth Diver	--	5-34S-14E	--	--	Wayside	700	30	18	0	0	0	Yes

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. into well/day	Injected-water data				Date first inj.	Primary production mechanism	Primary oil-water ratio	API grav. deg.	Oil visc., cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks
	Active	In-active	Dilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73		
#=1973 Primary and Secondary Production																						
2742	5	-	0	0	Irreg	385	--	--	--	--	-	--	--	--	28	--	0	--	75	--	--	*As per plan
6816	11	0	0	0	5-spot	500	20	River Gravel	--	--	M	--	--	1/4	28-29	--	--	--	1,670	--	--	
4864	28	0	0	0	5-spot	650	18	Prod + Hertha	240	5	F	1956	Grav	--	28-29	--	154,309	--	--	--	--	*Was Hart and Buster #4,976
12704	3	-	-	-	Irreg	0	--	Prod	--	--	F	--	Grav	--	32	--	--	--	--	--	--	*For dumping only
9128	20	-	0	0	5-spot	350	15	Prod + Arb	1293	102	M	1961	S Gas	14/1	30	22	7,500	685,516	300	--	58,727	*Reworked supply well #375
	122	3	0	0													775,184	7,840,222	18,179	50,229	579,119	
6215	-	-	-	-	--	--	--	--	--	--	-	--	--	--	--	--	--	--	--	--	--	*Lease being plugged
5236	2	0	0	0	Irreg	275	125	Prod	--	--	U	1968	Gas Exp	--	31	--	6,200	--	800	--	--	*Was Paul Meyers #2,300
4034 9081 9082	14	0	0	0	5-spot	200	10	Prod	--	--	U	1954	S Gas	9/1	32	--	49,000	--	4,000	--	--	*Was BMG, Inc.
15114	1	-	-	-	Irreg	200	100	Prod	--	--	U	1970	--	--	25	--	--	--	--	--	--	#2,184
13445	-	2	-	-	Irreg	--	--	Prod	--	--	-	--	--	--	--	--	--	--	--	--	--	*Was R.P. Guyot †Have not inj. water
12123	-	2	-	-	5-spot	--	--	Prod	--	--	U	1965	S Gas	1/2	34	--	--	106,875	--	2,100	--	*Inactive during 1973
10093 13620	15	1	1	2	5-spot	390	46	Prod + Miss	1322	30	U	1967	S Gas	1/8	34.5	4	303,680	646,085	15,897	37,989	37,989	
14651	5	0	0	0	Irreg	580	47	Prod + Arb	1370	--	U	1968	S Gas	6/1	33	--	86,359	177,887	3,114	11,762	11,762	
2045 2079 2094 7871	7 38	0 -	0 -	0 1	5-spot	354 275	14 18	Prod + Fresh Prod + Sh	-- 135	-- 35	T + S + M	1959 1957	Grav Grav	9/1 7/3	36 32	-- --	36,500 254,040	-- --	-- --	-- --	-- --	#11,804 #16,492
7077	1	0	0	0	Irreg	150	15	Prod	--	--	U	1960	Gas Exp	10/1	34	--	5,400	--	300	--	--	*Was Hester and Wright #664
12289	2	-	2	-	5-spot	250	25	Prod + Oswego	600	30	U	1973	Grav	7/3	36	5	6,000	6,000	800	800	1,200	*Was Jeanbro Oil Co. †Shut down part of year #1,200 #7,643
4666	3	5	-	-	Irreg	--	--	Prod	--	--	U	--	Grav + S Gas	--	30	--	200,000	--	1,000	--	--	
4990	6	0	0	0	5-spot	300	50	Prod	--	--	U	--	S Gas	--	30	--	15,000	--	2,000	--	--	#3,509
14036	13	2	1	1	5-spot	360	61	Prod + Tucker	1243	23	T	--	S Gas	--	32	--	185,735	--	4,863	--	--	*Was Tyro Oil Co. Purch. 4-1-73
326	3	0	0	0	5-spot	150	5-6	Prod	--	--	U	1970	Gas Exp	33/67	30	--	--	--	--	--	--	#5,946
1439	1	0	0	0	--	Grav	8	Prod	--	--	U	1971	Grav	1/2	29	--	2,500	7,900	0	0	1,273	*Was Amherst Oil Co. #553
3222	1	0	0	0	--	200	12	Prod	--	--	U	1953	Grav	1/2	30	--	4,300	2,012,900	200	1,100	9,069	*Was Cone Gas, Oil & Mfg. #1,481
10442	1	0	0	0	4-spot	250	10	Prod	--	--	U	1964	Grav	1/3	31	--	3,000	25,300	0	0	4,700	*Was Bert L. Horton Sold 12-20-73 to Layton Oil Co. #579
10447	1	1	0	0	--	250	30	Prod	--	--	U	1963	Grav	1/3	30	--	10,800	71,300	500	2,000	27,599	*Was Bert L. Horton Sold 12-20-73 to Layton Oil Co. #4,489

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1973—Continued

County Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been con- tinuous?
						Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
MONTGOMERY COUNTY (concl.)															
11712	Wayside-Havana	H. J. Horton	(W) Mantooth-Dunham	Mantooth, Dunham	28-33S-14E	240	0	Wayside	700	30	14	0	0	0	Yes
13823	Wayside-Havana	Horton Oil Co.*	(W) Boon Lse.	Boon	35-33S-14E	6	0	Wayside	650	30	2	0	0	0	Yes
15264	Wayside-Havana	Horton Oil Co.*	(W) A.D. Berry	A.D. Berry	33-33S-14E	80	0	Wayside	735	30	13	0	0	0	Yes
10949	Wayside-Havana	Nunneley & Powell*	(P) Neiswanger	Neiswanger	17-34S-14E	80	--	Bart1	1270	15	6	-	0	-	Yes
16035	Wayside-Havana	Wheeler & Haddan	(D) Snell Unit	Snell, Blex, Anderson, Brown	18-34S-15E	560	80	Wayside	550	30	33	7	0	-	Yes
MONTGOMERY COUNTY TOTALS (Reported)						3,326	230				242	26	9	3	
MORRIS COUNTY															
17028	Bosch	Ablah & Brandt	(P) Bosch Field	Bosch	24-16S-7E	240	0	Hunton	2784	49	5	0	4	2	Yes
15416	Comisky	Maurice L. Brown Trust	(D) Porter "A"	Porter "A"	13-16S-9E	40	0	Viola	2930	18	1	0	0	0	--
MORRIS COUNTY TOTALS (Reported)						280	0				6	0	4	2	
MORTON COUNTY															
15918	Elkhart	Texaco Inc.	(W) Carthage N.E. Morrow "A"	W. Pritchett "A", W. Pritchett "B"	23-35S-43W	100	--	Morrow	4300	15	1	-	0	-	Yes
11602	Interstate	Anadarko Prod. Co.	(P) Interstate Purdy Sand Oil Unit	Interstate Unit	8,9,16,17,20,21,28,29,30,31,32-34S-43W	3800	--	Purdy Morrow	4192	35	36	33	0	0	Yes
15849	Taloga	Andarko Prod. Co.	(W) Taloga Morrow "G" Unit	Cavanaugh, Riley C, Riley, Hall, Westerfield, Watson, Hall T, O'Dell, Cyr	26-34S-42W 35-34S-42W 2-35S-42W	1280	0	Morrow "G"	4494	11	7	3	0	0	Yes
MORTON COUNTY TOTALS (Reported)						5,180	0				44	36	0	0	
NEOSHO COUNTY															
15113	Erie	Forrest Crawford	(W) Ashcraft	Ashcraft	2-29S-20E	160	0	Wayside	120	20	0	-	-	-	No*
11382	Erie	Graybol Oil Corp.*	(W) Shaw Unit	Luther, Waggoner, McCan	13-28S-19E	40	80	Bart1	600	10-20	8	6	0	2	Yes
15249	Erie	Graybol Oil Corp.*	(W) Kinne Unit	O.A. Kinne, B & M Kinne	13-28S-19E 18-28S-20E	80	0	Bart1	600	10-20	19	2	0	0	Yes
15761	Erie	Graybol Oil Corp.*	(W) Hudson	Carlson-Torrey, Hudson, Leatherman, Hines, LaRue, McCan "B", Swiller	10-28S-19E 11,14-28S-19E 14-28S-19E	75	20	Bart1	600	10-20	16	3	6	-	Yes
15675	Erie	Wason Oil Co.	(W) Wason Oil	Sam Maphies	27-28S-20E	140	--	Bart1	474	10	6	-	-	-	Yes
4121	Humboldt-Chanute	Walter Lacey	(P) --	Raymond Fickel	20-28S-18E	25	0	Bart1	795	20	4	0	0	0	No*
14681	Humboldt-Chanute	Layton Oil Co.	(W) Earlton	Kepley	18-28S-18E	30	0	Bart1	800	16	3	2	0	0	No*
11	Humboldt-Chanute	Ross-Keas Oil, Inc.	(W) Russell	J.W. Brinkmeyer, McCune, Alonzo	1-27S-18E	1670	0	Bart1	750	20	408	0	-	-	Yes
264				Braden, Yount,	2-27S-18E										
290				Davis, Booe, E.E. Johnson,	1-27S-18E										
514				Alma Braden,	6-27S-19E										
741				Russell,	2,11-27S-18E										
				Carmichael,	10-27S-18E										
				L. Wells,	10,11,15-27S-18E										
				Pitman,	12-27S-18E										
				F. Brinkmeyer,	14-27S-18E										
				C. Beach,	14,15-27S-18E										
				American, Don Beach, Huffman,											
				Rosenthal #1,	15-27S-18E										
				Ingraham,	22-27S-18E										
				Kaney,	22,27-27S-18E										

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1973

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl/well/day	Injected-water data			Date first inj.	Primary production mechanism	Primary oil-water ratio	API grav. deg.	Oil visc. cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks		
	Active	In-active	Drilled 1973	Abdl. 1973				Source	Depth, ft.	Thick., ft.						Type	Water Injection		Oil recovered by secondary methods				
																	Total 1973	Cum. 12-31-73	Total 1973			Cum. 12-31-73	
#=1973 Primary and Secondary Production																							
11712	4	0	0	0	5-spot	400	15	Prod	--	--	U	1965	Grav	1/2	29	--	23,000	218,000	1,800	18,100	45,200	#4,545	
13823	--	--	--	--	Peri	150	20	Prod	--	--	U	1967	Grav	1/2	30	--	6,000	47,500	400	2,011	5,615	*Sold 12-12-73, Layton Oil #794	
15264	1	0	0	0	5-spot	Grav	15	Prod	--	--	U	1969	Grav	1/2	29	--	5,500	21,300	400	1,520	8,809	*Was Amherst Oil Co. #2,019	
10949	1	--	--	--	Irreg	150	20	Prod	--	--	U	1964	Grav	1/2	31	--	7,000	--	--	--	--	*Was Gene Nunneley #3,138	
16035	1	--	0	--	5-spot	0	7300	Prod	--	--	U	1971	Grav	7/3	31	--	3,500	--	1,500	--	--	#14,600	
	<u>121</u>	<u>13</u>	<u>4</u>	<u>4</u>													<u>1,218,514</u>	<u>3,341,047</u>	<u>37,574</u>	<u>77,382</u>	<u>153,216</u>		
17028	1	0	0	0	Irreg	Grav	800	Prod	--	--	U	1973	Wat	1/4	25	--	58,767	58,767	0	0	20,433	#19,485	
15416	1	0	0	0	Irreg	0	236	Prod	--	--	T	1970	Wat	--	23	--	230,167	1,220,567	0	0	96,627	#2,115	
	<u>2</u>	<u>0</u>	<u>0</u>	<u>0</u>													<u>288,934</u>	<u>1,279,334</u>	<u>0</u>	<u>0</u>	<u>117,060</u>		
15918	1	--	0	--	Peri	700	436	Prod + Ogallala	225	400	F	1971	S Gas	--	40.4	2	159,101	299,344	5,570	7,502		7,502	
11602	9	0	0	0	Peri	470	2134	Prod + Ogallala	200	100	M	1965	S Gas	1600/1245	39	2.49	7,009,827	57,591,685	1,500,861	7,990,254		10,124,136	
15849	2	1	0	1	Peri	148	841	Ogallala	140	80	F	1971	S Gas	30/5	43.5	2	921,071	1,720,851	9,005	27,974		27,974	
	<u>12</u>	<u>1</u>	<u>0</u>	<u>1</u>													<u>8,089,999</u>	<u>59,611,880</u>	<u>1,515,436</u>	<u>8,025,730</u>	<u>10,159,612</u>		
15113	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
11382	5	11	0	4	Irreg	600	183	Prod + Canville	--	--	M	1963	S Gas	1/0	32	--	99,931	470,685	4,455	15,091		15,091	*Proj. shut down *Was Gordon Willis
15249	14	0	0	0	Irreg + Line	600	778	Prod + Canville	--	--	M	1969	S Gas	1/0	--	--	282,798	663,901	31,835	121,100		121,100	
15761	16	--	7	--	Irreg + Line	600	850	Surface	--	--	M	1970	S Gas	--	32	--	205,634	--	10,658	49,859		49,859	*Was Gordon Willis
15675	4	--	--	--	5-spot	475	5	Prod + Other	60	10	F	1970	Grav	9/1	32	--	7,300	20,900	--	--		3,573	
4121	1	0	0	0	Irreg	550	40	Prod	--	--	U	1963	--	1/18	33.6	--	2,000	--	0	--		--	*Disposal Well #795
14681	9	2	0	0	5-spot	660	18	Prod + Sd	400	60	U	1968	S Gas	1/8	33	--	29,674	289,562	898	15,724		15,724	*Down part of year
11	331	0	--	--	5-spot	800	24	Prod + River Gr	30	20	M	1937	S Gas	--	31	--	2,893,530	129,107,550	28,426	5,001,946*		5,001,946	*Corrected for error in 1972
264																							
290																							
514																							
741																							

County	Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has ini- been con- tinuous?	
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.		
NEOSHO COUNTY (concl.)																	
	11				E.B. Johnson, R. Johnson	7-27S-19E											
	264																
	290																
	514																
	741																
	(cont.)																
	13477	Humboldt-Chanute	Roy Willis*	(D) Cooper-Pierpont	Cooper, Pierpont	23-27S-18E	--	--	Bart1	775	8	1	0	0	0	Not	
	4612	St Paul-Walnut	Crystal Oil*	(-) Dent	T.D. Dent, H. Van Leeuwen	33-28S-21E	320	0	Bart1	395	21	16	9	-	-	--	
	8930																
	6713	St. Paul-Walnut	Crystal Oil	(W) Butler	Butler	30-28S-21E	85	0	Bart1	450	16	9	9	-	-	--	
	9986	St. Paul-Walnut	Dome Petroleum	(W) Casady	Madl, Mitchell, Morgan, Dowling	29-28S-21E	120	--	Bart1	380	20	41	-	0	0	Yes	
	16629	Thayer South	William S. Wright	(W) Wright-Erbe-Umbarger & Ross	Gildart & Gildart	11-30S-17E	160	--	Bart1	931	10	4	-	5	1	Yes	
	10766	Trent	Larry H. Bogle*	(D) Johnson Flood	Johnson	23-28S-20E	80	0	Bart1	480	8	8	9	0	0	Not	
	7073	Trent	Crystal Oil*	(-) Dagget-Hazen	Hazen, Roy L. Daggett	23-28S-20E	160	--	Bart1	--	--	9	11	-	-	--	
	8378	Trent	Dome Petroleum	(W) McDermed	McDermed, Metzger	22-28S-20E	10	0	Bart1	480	20	26	0	0	0	Yes	
	8145	Trent	Erie Oil Co., Inc.	(W) --	Edward Stanley	22-28S-20E	60	--	Bart1	475	16	10	-	0	-	Yes	
	NEOSHO COUNTY TOTALS (Reported)							3,215	100				588	51	11	3	
NESS COUNTY																	
	9920	Aldrich	Thornton E. Anderson*	(D) Edwards Lse.	Edwards	22-18S-26W	40	0	Miss	4500	10	1	0	0	0	Yes	
	14618	Aldrich	Continental Oil	(P) Aldrich	C.R. Aldrich	7,8-18S-25W	320	0	Miss	4350	12	3	0	-	0	Yes	
	2952	Aldrich	Hillenburg Oil Co.*	(W) Aldrich	Evertt,	22-18S-26W	100	60	Miss	4430	8	3	0	0	0	Yes	
	4276				Harkness, Lythe,	23-18S-26W											
	7632				Daisey Thompson, Bateman, Sutton	24-18S-26W											
	3740	Aldrich	Tenneco Oil Co.	(D) Louise Everett	Louise Everett	8-18S-25W	40	20	Miss	4390	37	1	0	0	0	Yes	
	13484	Aldrich Northeast	Barnett Oil Co.	(P) Shearer "B"	Shearer "B"	26-17S-25W	80	--	Miss	4300	30	2	-	-	-	Yes	
	16010	Dumler	Pickrell Drilling Co.	(W) Dumler Unit	Dumler Unit	2,11-17S-26W	120	80	Miss	4500	15	3	2	0	1	Yes	
	16851	McDonald NE	Palomino Petroleum*	(D) Crowell	Crowell	34-18S-24W	240	0	L-KC	3735	4	1	0	0	0	Yes	
	10676	Petersilie	Kewanee Oil Co.	(W) Petersilie	Petersilie	14-20S-24W	80	0	Miss	4388	22	2	1	0	0	Yes	
	NESS COUNTY TOTALS (Reported)							1,020	160				16	3	0	1	
NORTON COUNTY																	
	11002	Norton	Theodore Gore	(P) Lawson	Charles Lawson, Scott	36-3S-24W 1-4S-24W	320	0	Arb	3779	--	9	0	-	0	Yes	
PAWNEE COUNTY																	
	6115	Benson	Cities Service Oil Co.	(W) Benson S.E. Unit	Benson S.E. Unit	31,32-23S-15W	77	35	L-KC	3700	35	4	1	0	3	Yes	
	7552	Benson	Clinton Oil Co.*	(W) Benson	R.J. Benson	30-23S-15W	30	0	L-KC	3625	28	1	0	0	0	Not	
	8878	Garfield	A.L. Abercrombie, Inc.*	(D) Hutchinson #D	Hutchinson "D"	9-23S-17W	30	270	Miss	4228	26	2	0	0	0	Not	
	12007	Garfield	A.L. Abercrombie, Inc.*	(D) Hutchinson "E"	Hutchinson "E"	9-23S-17W	60	100	Miss	4216	34	2	0	0	0	Not	
	13433*	Garfield	A.L. Abercrombie, Inc.†	(-) Hutchinson "C"	Hutchinson "C"	9-23S-17W	--	--	--	--	--	-	-	-	-	--	

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl./ well/ day	Injected-water data				Date first ini.	Primary production mechanism	Primary oil-water ratio	API grav., deg.	Oil vis., cp. @ 60° F	Production and injection statistics (bbls)		Oil recovered by secondary methods		Total Oil from project Pri. & sec.	Remarks	
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.	Type						Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73			
11 264 290 514 741 (cont.)																							#=1973 Primary and Secondary Production
13477	3	0	0	0	Irreg	100	1	Prod + Oswego	450	40	U	1968	Grav	1/0	31	--	--	--	--	919			*Was C.A. Willis †Shut down part of year #120
4612	12	15	-	-	5-spot	280	10	Prod + Miss	800	--	M	1965	Wat	4/1	33	--	--	947	--	--			*Was Thomas P. Dent
8930																							
6713	9	24	0	0	5-spot	475	16	Prod + Miss	848	20	T	1958	Grav	2/1	31	--	--	2,471	8,562	8,562			
9986	24	2	-	-	Line	500	401	Prod + Arb	1280	20	T	1963	Grav	10/1	31	--	146,645	1,181,016	7,060	83,465	245,487	#20,169	
16629	4	-	5	-	5-spot	200	10	Prod + Oswego	620	--	M	1973	Grav	1/0	27	22.7	2,300	--	0	--	--	#327	
10766	2	17	0	0	Line	100	3	Prod	--	--	U	--	Grav	--	30	--	2,160	59,010	--	--	--	--	*Was Almo Corp. †Inj. produced water only #600
7073	2	-	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1,154	--	4,788		*Was CM&H Oil Co.
8378	3	1	0	0	5-spot	550	44	Prod + Arb	1200	10	T	1968	Grav	1/1	30	--	15,991	149,705	550	6,480	20,248	#1,570	
8145	9	-	0	-	5-spot	--	--	Prod + Other	--	--	M	--	S Gas	9/1	29	--	1,700	180,400	3,000	47,800	48,100	#3,300	
	448	72	12	4														3,689,663	132,122,729	91,454	5,350,027	5,535,397	
9920	1	0	0	0	Irreg	0	50	Prod	--	--	U	1963	Wat†	2/8	37	--	18,000	175,000	0	0	62,000		*Was High Plains Prod. Co. †Partial Water #1,461
14618	1	0	-	0	Line	500	630	Prod	--	--	U	1968	Wat	--	36.1	--	166,484	1,006,850	4,967	15,783	51,775	#10,997	
2952	1	2	0	0	5-spot	50	920	Prod	--	--	T	1956	Wat	44/56	36	--	831,200	--	14,404	--	--		*Was Terra Resources
4276																							
7632																							
3740	1	0	0	0	Irreg	150	200	Prod	--	--	T	1955	S Gas	--	--	--	72,718	247,657	0	0	293,427	#2,580	
13484	1	-	-	-	Irreg	380	650	Prod	--	--	U	1967	S Gas	2/8	37	--	115,000	953,600	5,000	26,400	405,757	#26,228	
16010	2	0	0	0	Line	360	400	Cheyenne	1075	20	U	1971	S Gas	68/73	36	2.5	273,619	565,663	670	1,977	259,772	#15,999	
16851	1	0	0	0	Irreg	0	55	Prod	--	--	U	1973	S Gas	89/11	43	--	17,600	17,600	0	0	156,189	#23,730	*Was Mull Drilling Co. #8,559
10676	1	0	0	0	Irreg	150	270	Prod	--	--	U	1964	Wat	80/81	38	--	98,550	956,030	0	0	372,562		
	9	2	0	0														1,593,171	3,922,400	25,041	44,160	1,601,482	
11002	1	-	-	-	Irreg	600	960	Prod	--	--	T	1964	Wat	--	29	--	366,825	3,048,101	0	0	--	#6,929	
6115	3	1	0	1	Peri	266	387	Prod + Sd	67	--	M	1958	S Gas	68/160	41	--	475,495	6,220,302	28,268	312,361	827,493		
7552	0	0	0	1	Irreg	--	--	Prod	--	--	U	1959	S Gas	1/9.4	25.8	--	0	1,440,633	0	114,633	--		*Was Pan American †Plugged & Abd. 4-25-73 #3,213
8878	1	0	0	0	Irreg	Vac	4	Prod	--	--	U	1965	S Gas	1/1	35	--	1,500	1,397,900	0	4,803	597,020		*Was Colorado Oil Co. †Lse. shut down before sale #1,902
12007	1	0	0	0	Irreg	Vac	25	Prod	--	--	U	1965	S Gas	11/24	36	--	9,100	703,541	0	14,427	322,501		*Was Colorado Oil Co. †Lse. shut down prior sale #666
13433	-	-	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*No production in 1973 †Was Colorado Oil Co.

County	Project no.	Field	Operator	Type and project name	Lease name	Location S — T — R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has ini- ben con- tinuous?	
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.		
PAWNEE COUNTY (concl.)																	
	13723	Garfield	A.L. Abercrombie, Inc.*	(D) Fertig	Fertig	15-23S-17W	20	140	Miss	4220	30	1	1	0	0	No†	
	10116 12708	Garfield	Maurice L. Brown Trust	(P) Garfield	Fergus "A", Fergus "C", Hutchinson B-C, Hutchinson D, Spence, Wilson	16-23S-17W 17-23S-17W 18-23S-17W 20, 21-23S-17W	480	960	Misener Miss	4300 4200	15 15	4	1	0	0	Yes	
	4616	Lovett	C.H. Todd, Inc.*	(D) Lovett	Lovett	35-22S-15W	40	20	KC	3685	8	2	0	0	0	Yes	
	13114 14134	Oro	NCRA	(W) Hagerman- Matoush	Matoush, Hagerman	9-20S-19W 10-20S-19W	60	10	Cherokee	4184	22	4	1	0	0	Yes	
	14971	Oro Northwest	NCRA	(W) Van Rensselaer	Van Rensselaer	5-20S-19W	160	0	Pawnee	4194	7	3	0	0	0	Yes	
	14328	Rutherford	Murfin Drilling Co.*	(W) Almquist	Almquist	5-20S-16W	160	120	Arb	3795	5	2	0	0	0	Yes	
	8460 12417	Shiley	Cities Service Oil Co.	(W) Shiley Water- flood	Jennings "C", Jennings "D", Risse "A"	13-20S-20W 14-20S-20W	70	130	B Penn	4170	7	2	0	0	4	Yes	
	9236	Shiley East	NCRA	(W) Eckert	Eckert	18-20S-19W	20	20	Cherokee	4224	35	1	0	0	1	Yes	
	13832	Steffen	Lario Oil & Gas Co.	(P) Steffen	Steffen	29, 30, 32-20S-20W	560	0	Miss	4330	50	3	0	0	1	No*	
PAWNEE COUNTY TOTALS (Reported)								1,767	1,805				31	4	0	9	
PHILLIPS COUNTY																	
	16225	Beckman	Petroleum Management	(W) Beckman South Project	Roeder, Beckman, Flanigan, Roeder, Clark	9-4S-19W 10-4S-19W	680	0	L-KC	3248	116	11	0	0	0	Yes	
	8011	Dayton	Sierra Petroleum Co.	(W) Dayton Unit	Schultz, Kaiser, R.L. Dusin, C.G. Eltiste, E.C. Garber	25-2S-19W 26-2S-19W 35-2S-19W 36-2S-19W	640	0	KC	3200	23	7	0	0	0	Yes	
	15283	Huffstutter	Good & Phillips Oil Co.	(P) O'Neill Pressure Maintenance	O'Neill	22-1S-18W	80	20	L-KC	3327	20	1	0	0	0	Yes	
	8461	Huffstutter	Petroleum Management	(W) Center Huff- stutter Unit	Unitized	31, 32-1S-18W 5, 6, 7-2S-18W	1220	280	L-KC	3365	235	37	9	-	-	Yes	
	13834	Huffstutter	Petroleum Management	(W) Huffstutter NW	W.A. Jackson, Rakestraw, Huffstutter "C"	31-1S-18W	130	0	L-KC	3350	235	5	0	0	0	Yes	
	8141	Huffstutter	Phillips Petroleum Co.	(W) Huffstutter Coop Unit	--	13-2S-19W	345	0	L-KC	3400	50	5	0	0	0	Yes	
	9984	Huffstutter	Phillips Petroleum Co.	(W) Huffstutter Unit	--	7-2S-18W 12-2S-19W	520	0	L-KC	3400	50	13	0	0	0	Yes	
	8195 9367	Huffstutter Logan	Sierra Petroleum Co. Bankoff Oil Co.*	(W) Kelly Unit (W) Logan Pool	Hopper, Kelly Hill "A", Hill "B", Bowman, Brown, Perry	23-2S-19W 2-5S-20W 3-5S-20W	80 120	160 280	L-KC Lans	3280 3180	176 25	2 8	1 2	0 0	1 1	Yes No†	
	13887 15291	Logan Logan	Dane G. Hansen Trust Palomino Petroleum*	(D) Stephens-Ross (D) Shaw-Wallgren	Stephens, Ross Shaw, Wallgren	35-4S-20W 34-4S-20W	200 20	0 0	L-KC L-KC	3200 3223	220 5	2 1	0 0	0 0	0 0	Yes Yes	
	6898	Mont Sol	Petroleum Management	(W) Mont Sol LKC Unit	Krause "A", Krause "B", Sophia Meyers	7-4S-18W 1-4S-19W 6-4S-18W 12-4S-19W	100	--	L-KC	3200	28	2	0	0	0	Yes	
	15704	Mont Sol	Phillips Oil Oper. Co.	(P) Meyer Pressure Maintenance	Meyer	7-4S-18W	160	20	L-KC	3150	20	1	0	0	0	Yes	
	15367	Slinker	Petroleum Management	(W) Slinker	Lutz, Boethin, White, Merklein, Slinker	17, 18-4S-19W 18-4S-19W 19-4S-19W 19-4S-19W 24-4S-20W	40	20	L-KC	3180	152	2	-	-	-	Yes	
	16645	Slinker	Petroleum Management	(W) Adee Unit	Schneider B, Schneider A, Adee, Schneider A	19, 29, 30-4S-19W 29-4S-19W 30-4S-19W	--	0	Lans	3162	150	0	0	0	0	Yes	
	13967	Slinker	C.H. Todd, Inc.*	(W) Slinker Toronto & Lansing KC	Lynch B, Slinker, Donahey, Fox, Lynch A, Radlaff	25-4S-20W 30-4S-20W 36-4S-20W	425	240	Toronto L-KC	3098 3118	20	7	3	0	0	Yes	

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water in- lbs./ well/ day	Injected-water data				Date first ini.	Primary production mechanism	Primary oil-water ratio	API grav., deg.	Oil visc., cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks
	Active	In-active	Drilled 1973	Abst. 1973				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73		
13723	1	0	0	0	Irreg	Vac	4	Prod	--	--	U	1967	S Gas	1/3	35	--	1,440	319,585	0	0	319,101	#=1973 Primary and Secondary Production
10116 12708	1	1	0	0	Irreg	0	101	Prod	--	--	T	1963	Limited Water	--	37	*	36,835	1,246,334	3,100	35,773	1,351,373	*Was Colorado Oil Co. †Shut down before sale #2,690 *5.61 @ 100° #9,343
4616	1	-	-	-	Irreg	Vac	15	Prod	3682	8	T	1964	Wat + S Gas	10/8	25.7	--	5,475	35,257	0	0	119,646	*Was R.W. Rine Drlg. Co. #5,565
13114	3	0	0	0	Irreg	900	231	Prod + Dakota	374	47	M	1966	S Gas	1395/0	39	--	252,405	1,302,763	13,203	69,404	101,323	
14134	1	0	0	0	Irreg	1250	222	Prod	--	--	U	1969	S Gas	1/0	45.4	--	81,190	215,306	0	0	257,627	#46,626
14971	1	0	0	0	Irreg	1200	175	Prod	--	--	T	1968	S Gas	--	42	--	63,875	434,491	2,760	44,231	338,107	*Was Sun Oil Co.
14328	1	0	0	2	Line	720	259	Prod + Dakota	362	--	M	1961	S Gas	1/1	36	5	130,367	1,777,145	9,209	284,302	506,682	
8460	1	0	0	0	Line	720	259	Prod + Dakota	362	--	M	1961	S Gas	1/1	36	5	130,367	1,777,145	9,209	284,302	506,682	
12417	1	0	0	0	Irreg	1100	237	Prod	--	--	T	1962	S Gas	1/.7	35.8	--	86,590	726,441	1,572	59,840	71,866	
9236	0	1	0	0	Irreg	--	--	--	--	--	--	--	--	--	--	--	--	413,313	--	0	--	*Shut down to plug 4-30-72
13832	0	1	0	0	Irreg	--	--	--	--	--	--	--	--	--	--	--	--	413,313	--	0	--	*Shut down to plug 4-30-72
	15	3	0	4													1,144,272	16,233,011	58,112	939,774	4,812,739	
16225	5	0	0	0	Irreg	600	99	Prod + Dakota	--	--	T	1971	Wat	2.2/1	36	--	196,814	335,221	38,275	74,778	205,806	#69,585
8011	6	0	0	0	Line	850	117	Prod + Cheyenne	1060	--	T	1960	S Gas	--	36	6	255,683	3,220,032	27,502	493,694	493,694	
15283	1	0	0	0	Irreg	340	74	Prod	--	--	T	1969	S Gas	4/6	34	--	26,280	107,650	2,100	4,890	13,300	#3,422
8461	13	-	-	-	Irreg	400	122	Prod + Dakota	1050	75	T	1961	S Gas	1/0	37.3	--	580,516	6,438,529	118,108	1,884,188	1,884,188	
13834	3	0	0	0	Irreg	300	136	Prod + Dakota	1050	75	T	1967	S Gas	1/0	37	--	149,014	860,365	15,981	202,713	202,713	
8141	2	3	1*	0	Irreg	35	117	Prod + Dakota	871	30	U	1972	S Gas	3/2	35	--	85,859	1,707,589	9,681	207,081	781,711	*Converted prod. well
9984	6	0	0	0	Irreg	275	199	Prod + Dakota	1000	--	U	1963	S Gas	1/1.7	36	9	437,160	2,780,115	37,388	377,038	800,081	
8195	1	0	0	0	Irreg	--	92	Prod	--	--	T	1961	S Gas	--	32	--	33,560	1,109,769	3,296	106,705	106,705	
9367	-	2	-	-	Irreg	250	80	Prod	--	--	T	1962	S Gas	5/95	34	--	38,541	2,949,434	10,000	228,670	--	*Was White Eagle †Temp. discontinued #13,834
13887	1	0	0	0	Irreg	Vac	65	Prod	--	--	T	1967	S Gas	1/1	*	--	22,999	129,020	--	--	30,844	*28-31, 33-36 #4,865
15291	1	0	0	0	Irreg	0	15	Prod	--	--	U	1969	S Gas	15/85	29	--	5,475	58,315	0	0	18,577	*Was Burch Drilling Co. #951
6898	1	-	-	-	Line	300	101	Prod + Dakota	1130	50	T	1960	S Gas	10/3	36	--	42,919	1,273,226	5,456	128,535	314,340	
15704	1	0	0	0	Irreg	245	46	Prod	--	--	T	1971	Gas Exp	3/6	33.5	--	15,330	41,610	0	0	922	#332
15367	1	-	-	-	Irreg	400	250	Prod	--	--	U	1970	S Gas	99/1	35	--	2,365	166,038	1,312	2,888	7,772	#3,489
16645	1	0	0	0	Irreg	50	120	Prod	--	--	U	1972	Wat	2/1	36	--	63,747	64,208	0	--	60,212	#20,298
13967	5	0	0	0	Peri	765	2056	Prod + Dakota	740	220	M	1967	Other†	1/1.09	59.3	3.6	750,463	3,409,529	52,308	302,378	701,179	*Was R.W. Rine Drlg. Co. †Other not indicated

County Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been con- tinuous?
						Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
PHILLIPS COUNTY (concl.)															
14228	Stoneman	T.W. Jackson	(W) Jackson	T.W. Jackson	19-4S-18W	240	--	L-KC	3120	220	-	-	-	-	Yes
14227	Stoneman	T.W. Jackson	(W) Elsie	Elsie Jackson	20,29-4S-18W	200	--	L-KC	3120	220	-	-	-	-	Yes
12729	Stoneman	Petroleum Management	(W) Stoneman Field	Stoneman,	20-4S-18W	1140	0	L-KC	3105	235	12	4	0	0	Yes
12730			Waterflood	Morgan, Sutley, Quanz, Van Der Wege	21-4S-18W 29-4S-18W										
12731	Stoneman	Santa-Fe Pipe & Supply*	(W) Bredemeier	Bredemeier	28-4S-18W	80	40	KC	3050	18	2	0	0	0	Yes
6112	Stuttgart	Petroleum Management	(W) Stuttgart	--	13,14,23-3S-19W	165	--	L-KC	3200	35	2	2	0	0	Yes
6131															
16728	Veeh	Petroleum Management	(W) Grau	Grau	35-3S-19W	160	--	Lans	3208	223	3	-	-	-	Yes
PHILLIPS COUNTY TOTALS (Reported)						6,745	1,060				123	21	0	2	
PRATT COUNTY															
14279	Barnes Southwest	Bowers Drilling Co.	(P) Barker B#2	Barker	35-27S-12W	100	60	L-KC	3798	6	4	0	0	0	Yes
16616	Chance	Clinton Oil Co.*	(-) Tregellas	Tregellas	32-26S-13W	40	0	Miss	4279	25	3	1	1	0	--
4080	Chitwood	Raymond Oil Co.*	(W) Chitwood	--	14,22,23,26, 27-28S-12W	1200	--	Simp	4390	23	5	-	-	2	Yes
16091	Cunningham	Braden-Deem, Inc.	(W) Cunningham	--	3-28S-11W	400	--	L-KC	3430	15	6	0	0	0	Yes
16624	Frisbie	Clinton Oil Co.	(W) A.E. Frisbie	A.E. Frisbie	5-26S-13W	80	0	L-KC	3948	50	2	0	0	0	Yes
5215	Frisbie	Range Oil Co.	(P) F. Smith	F. Smith	6-26S-13W	160	--	Lans	--	15	4	-	-	-	--
15235	Gereke West	Petrominerals Corp.	(W) Gereke	Neelly D, Curtis #6, Curtis F, Neelly C, Curtis C, Neelly #1, Neelly #2, Curtis, Piland	2-26S-15W 10-26S-15W 11-26S-15W	420	0	L-KC	3980	6	5	0	0	0	Yes
13600	Iuka-Carmi	Getty Oil Co.	(W) Miskimen- Simpson	V.E. Miskimen, L.R. Freymiller	32-26S-12W 5-27S-12W	160	0	Simp	4214	30	5	0	0	0	Yes
11041	Iuka-Carmi	Ronald Russ Prater, Inc.	(W) C.J. Binger	C.J. Binger	31-26S-12W	144	--	Simp	4175	30	3	-	0	0	Yes
6895	Iuka-Carmi	Skelly Oil Co.	(W) Iuka-Carmi Helmke Unit	Helmke "H", Helmke "J", Helmke "B", Beck "A", Luders "B", F.B. Wagner	6-27S-12W 7-27S-12W	680	100	Simp	4230	18	8	9	0	0	--
8202	Iuka-Carmi	Skelly Oil Co.	(W) South Iuka-Carmi Unit	Luders "B", F.B. Wagner, J.E. Brown, M.D. Burkner, M.A. Justice, S. Beck	7-27S-12W 18-27S-12W 12-27S-13W	680	0	Simp	4270	16	8	6	0	0	Yes
11297	Iuka-Carmi	Skelly Oil Co.	(W) V.E. Miskimen Waterflood	V.E. Miskimen	32-16S-12W	100	50	Simp	4200	25	3	1	0	0	Yes
15384	Iuka-Carmi	TGT Petroleum Corp.	(D) Knop (Hoeme)	Knop	25-26S-13W	200	0	Viola	4120	25	2	2	0	0	No*
11392	Iuka-Carmi	Terra Resources, Inc.	(P) Iuka-Carmi	Beck "A", Beck "B", McFadden, Calbeck "A"	6-27S-12W 1-27S-13W	160	130	Simp	4236	33	4	5	0	4*	Yes
4827	Iuka-Carmi	C.H. Todd, Inc.*	(P) --	Briggeman A #1, Briggeman B, Hoener B	34-26S-13W 35-26S-13W	30	0	L-KC	3992	7	3	0	0	0	Yes
16490	Moore West	Thornton E. Anderson*	(-) Henderson Lse.	Collins, Henderson	3-26S-14W 4-26S-14W	80	--	L-KC	3804	8	2	1	0	0	Yes
4170	Shriver	Skelly Oil Co.	(P) F.H. Kerr	F.H. Kerr	27-29S-14W	80	0	Simp	4550	5	2	1	0	0	Yes
PRATT COUNTY TOTALS (Reported)						4,714	340				69	26	1	6	
RAWLINS COUNTY															
15518	Cahoj	Halliburton Oil Prod.	(W) S.E. Cahoj Unit	Theiler, Fikan, Rosa Dozbaba, Cahoj "H", Micek, Richard Dozbaba	15-1S-34W 16-1S-34W 21,22-1S-34W	1120	0	L-KC	4047	20	16	0	0	0	Yes
16643	Cahoj	Skelly Oil Co.	(W) Cahoj LKC Water- flood	Cahoj (LKC) Unit	3,4,8,9,10,16,17, 18,20-1S-34W	2880	0	L-KC	4062	156	33	5	0	0	Yes

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water int. 104/ well/ day	Injected-water data				Date first ini.	Primary production mechanism	Primary oil-water ratio	API grav. deg.	Oil visc. cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth. ft.	Thick. ft.	Type						Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73		
14228	1	0	0	0	Irreg	475	178	Prod + Cheyenne	1000	90	T	1969	S Gas	7/3	--	--	26,548	317,116	--	--	--	
14227	1	0	0	0	Irreg	500	128	--	--	--	U	1969	--	--	--	--	46,862	406,637	--	--	--	
12729	8	-	-	-	Irreg	500	114	Prod + Dakota	960	100	T	1966	S Gas	1/1	38	--	333,568	2,294,642	70,167	195,575	780,265	
12731	1	0	0	0	Peri	550	20	Prod + Ced Hills	950	150	U	1966	S Gas	3/2	39.3	--	7,300	218,498	2,902	--	26,621	*Was Hershberger Expl.
6112	1	6	0	0	Irreg	500	320	Prod	--	--	U	1952	S Gas	2/1	35.3	--	143,030	5,944,190	2,603	243,928	243,928	
6131																						
16728	1	-	-	-	Irreg	200	125	Prod	--	--	U	1973	S Gas	--	--	--	38,069	38,069	18,000	18,000	43,487	#21,162
	61	11	1	0													3,302,102	33,869,802	415,079	4,471,061	6,716,345	
14279	4	0	0	0	Irreg	Grav	100	Prod	--	--	U	1968	Wat	8/2	36	--	28,000	134,000	6,000	42,000	259,000	#20,000
16616	1	0	0	0	Irreg	225	268	Sh Sd	49	--	F	1972	Wat	3/2	37	--	91,473	198,411	419	1,234	4,124	*Sold 12-1-73, Allen Oil
4080	4	-	-	-	Irreg	Vac	448	Prod	--	--	U	1955	S Gas	--	38	--	654,000	36,771,156	6,909	3,782,230	3,782,230	*Sold 1-3-73, Allen Oil
16091	3	0	0	0	Irreg	800	1650	Prod + Surface	40	60	M	1971	S Gas	1/1	36	--	610,625	1,819,047	2,000	2,000	30,215	#8,932
16624	1	0	0	0	Irreg	700	58	Prod	--	--	U	1972	S Gas	8/9	32.5	--	20,573	30,455	4,135	5,773	7,886	
5215	2	-	-	-	Peri	0	300	Prod	--	--	U	--	S Gas	2/8	36	--	--	--	--	--	15,648	#5,860
15235	6	0	0	0	Peri	300	466	Prod + Meade	50	100	M	1969	S Gas	8/2	38	--	850,755	2,614,620	--	--	--	
13600	1	0	0	0	Irreg	20	180	Prod	--	--	U	1967	S Gas	1.71/1	38	--	65,728	341,543	34,375	346,630	346,630	
11041	1	3	0	0	Peri	0	300	Sand	150	--	U	1964	S Gas	--	38	--	99,000	2,879,000	7,737	92,976	92,976	
6895	9	3	0	0	Irreg	220	458	Prod + Sh Sd	90	--	M	1961	S Gas	3314/347	38	--	1,337,547	14,514,184	55,068	1,609,015	3,745,815	
8202	6	0	0	0	Irreg	85	377	Prod + Sh Sd	90	--	M	1961	--	3929/2792	38	--	826,189	8,304,803	39,713	1,008,147	2,388,359	
11297	3	0	0	0	Irreg	0	342	Shallow Sand	90	--	F	1964	S Gas	236/334	40	--	374,438	3,034,879	9,375	202,960	796,129	
15384	0	1	0	0	Irreg	0	0	Surface Sand	35	10	F	--	S Gas	1/10	36	--	0	0	0	0	11,061	*Well sanded and not usable
11392	1	1	0	*	Line	Vac	609	Prod + Pleistocene	117	55	M + T	1959	S Gas	34/66	38.9	--	549,582	9,034,137	28,323	1,011,989	1,984,184	*Sold 4-16-73 Beck "A", "B" to Raymond Oil Co. No longer waterflood
4827	1	0	0	0	Peri	450	328	Prod	--	--	T	1965	S Gas	4/7	36	--	120,000	867,350	2,200	22,912	36,894	*Was R.W. Rine Drlg. Co.
16490	1	0	0	0	--	0	70	Prod	--	--	U	1972	S Gas	2/8	36	--	25,000	41,000	0	0	167,300	*Was Dunne-Gardner
4170	1	0	0	0	Irreg	0	514	Prod	--	--	U	1954	S Gas	--	39	--	187,665	2,122,946	7,489	73,435	552,993	#7,210
	45	8	0	0													5,840,575	82,707,531	203,743	8,201,301	14,221,444	
15518	1	0	0	0	Peri	300	280	Prod + Dakota	2215	335	T + S	1970	S Gas	3.5/1	36	--	90,500	242,475	2,000	4,000	665,106	#68,292
16643	18	0	0	0	5-spot	0	254	Prod + Dakota	2312	78	U	1973	S Gas	7104/8664	34.2	--	1,121,068	1,121,068	--	--	3,963,395	#81,303

TABLE 1—ENHANCED OIL RECOVERY PROJECTS, 1973—Continued

County	Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been continuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
RAWLINS COUNTY (concl.)																
11929	Cahoj West		Burch Exploration	(D) Cahoj	Sis, Chadderdon, Savage	12-1S-35W 13-1S-35W 14-1S-35W	400	0	L-KC	4154-4249	24	3	0	0	0	Yes
14615	R.H.P.		Empire Drilling Co.	(P) R.H. Palmer	R.H. Palmer, Cora Graves	6-1S-33W 7-1S-33W	100	40	L-KC	4078	6	6	0	0	0	Yes
15426	R.H.P.		Petroleum Management	(W) Palmer	Palmer "B", Palmer "C", Bucy	5-1S-33W 8-1S-33W	160	10	Oread	3825	8	4	0	0	0	Yes
16115	Waterman		Pack Oil Co.	(W) Ruda-Waterman	Waterman, Ruda	15-4S-33W 23-4S-33W	200	0	KC	3976	5	1	0	0	0	Yes
16985	Wilhelm		Donald C. Slawson	(P) Wicke "C"	Wicke "C"	17,18-1S-32W	240	0	L-KC	3900	6	3	0	0	0	Yes
RAWLINS COUNTY TOTALS (Reported)							5,100	50				66	5	0	0	
RENO COUNTY																
10925	Albion North		Harry A. Sprague	(D) Graber Pressure Maintenance Proj.	H.D. Graber, Martin Graber, Krehbiel "A", Krehbiel "B"	11-26S-6W	240	0	Viola-Simp	3990	10	3	2*	0	0	Yes
13754	Beck West		Santa-Fe Pipe & Supply*	(W) Roach	Roach	14-23S-9W	40	80	B Penn	3720	7	1	1	0	0	Yes
4385	Buhler		Schneider Oil Co.	(D) Dodge	Mary Dodge	25-22S-5W	160	80	Simp	3862	5	3	0	0	0	Yes
15881	Burrton		J.A. Allison	(P) Seedle "A"	Collins "A", Seedle "A"	16-24S-4W	--	--	Hunton	3318	--	3	0	0	0	Yes
13167	Burrton		R.L. Evans Estate	(D) Evans "B"	Evans "B"	23-23S-4W	160	120	Miss	3285	10	4	0	0	0	Yes
11107	Burrton		Excalibur Prod. Co.*	(D) Haven Waterflood Project	Welch A, Hoskinson, Vansickle, Carmichael	9-24S-4W 10-24S-4W	440	--	Miss	3320	60	7	--	--	--	Not
10414	Burrton		Harold J. Milburn*	(D) Haury	Haury, White	1-23S-4W	20	43	Miss	3243	40	2	0	0	0	Yes
11618	Burrton		Okmar Oil Co.	(P) Evans & Base W.F.	Evans, Base	36-23S-4W	80	0	Miss	3258	40	8	0	0	0	Yes
5368	Burrton		S & K Oil Co.*	(D) Teten	Teten	12-23S-4W	20	60	Miss	3400	15	6	0	0	1	Yes
12044	Burrton		S & K Oil Co.*	(D) Fast-Smith	Fast, P.C. Roberts	25-23S-4W	640	0	Miss	3308	52	6	0	0	4	Yes
14675	Burrton		TGT Petroleum Corp.	(P) Strawn	Miller, Miller A, Sabin A Banz, Harper, Hill	22-23S-4W 27-23S-4W	500	0	Miss	3330	12	18	0	1	0	Yes
15569	Burrton		TGT Petroleum Corp.	(P) Van Buren Input System	Harper, Hill, Van Buren	27-23S-4W 28-23S-4W	160	--	Miss	3330	12	7	0	0	0	No*
15373	Hilger Southwest		Woodman-Iannitti Oil Co.	(P) C.J. Genbelle	C.J. Genbelle, A.J. Genbelle	20-26S-4W 29-26S-4W	320	0	Misener	3970	5	4	0	0	0	Yes
5139	Nicklaus		Phillips Petroleum Co.	(P) Prough Lse.	Beltz "A", Prough	3-26S-4W	40	--	L-KC	2880	20	2	0	0	0	Yes
2754	Zenith-Peace Creek		Cities Service Oil Co.	(W) Peace Creek Unit	Peace Creek Unit	30,31-22S-9W 6-23S-9W 35,36-22S-10W 1,2,11,12-23S-10W	380	1840	Viola	3750	16	5	2	0	28	Yes
RENO COUNTY TOTALS (Reported)							3,200	2,223				79	5	1	33	
RENO-RICE COUNTIES																
6188	Sterling		Thos. H. Allan	(P) --	Mayer, Sylvia Mayer, Stubbs	4-22S-8W 9-22S-8W	400	--	Miss	3420+	10+	8	0	0	0	Yes
RENO-STAFFORD COUNTIES																
12893	Zenith-Peace Creek		Braden-Zenith, Inc.	(W) Zenith Waterflood Unit	--	6,7,18-24S-10W 1,2,3,10,11,12, 13,14,15,23, 24-24S-11W	1000	5235	Misener Viola	3760 3780	20 40	4	2	1	0	Yes
13339	Zenith-Peace Creek		Stelbar Oil Corp.	(W) Zenith Waterflood	--	21,29,30,32-23S-10W 25,36-23S-11W 5,6-24S-10W	320	160	Viola	3700	10	2	3	0	0	No*
RENO-STAFFORD COUNTIES TOTALS (Reported)							1,320	5,395				6	5	1	0	

Oros and Sale—Enhanced Oil-Recovery Operations in Kansas, 1973

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl/well/day	Injected-water data			Date first ini.	Primary production mechanism	Primary oil-water ratio	API grav. deg.	Oil visc. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks	
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.						Type	Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973			Cum. 12-31-73
#=1973 Primary and Secondary Production																						
11929	1	0	0	0	Irreg	0	170	Cedar Hills	2500	70	T	1964	S Gas	1/1	36	6	74,623	634,551	12,771	50,380	50,380	
14615	1	1	0	0	Irreg	225	220	Prod + L-KC	--	--	T	1968	Grav	67/33	38	--	82,091	445,137	25,000	99,000	329,635 #38,930	
15426	2	0	0	0	Irreg	100	189	Prod	--	--	T	1970	S Gas	8/24	25	--	69,062	165,532	11,443	35,347	151,638 #23,353	
16115	1	0	0	0	Irreg	0	15	Prod	--	--	U	1971	Wat	1/2	35	--	3,300	8,315	0	0	4,112 #1,335	
16985	1	0	0	0	Irreg	0	10	Prod	--	--	U	1973	S Gas	1.5/1	32	6	1,800	1,800	0	0	34,241 #5,123	
	<u>25</u>	<u>1</u>	<u>0</u>	<u>0</u>													<u>1,442,444</u>	<u>2,618,878</u>	<u>51,214</u>	<u>188,727</u>	<u>5,198,507</u>	
10925	1	0	0	0	Peri	0	800	Prod	--	--	U	1964	Wat	--	42	--	292,000	2,659,500	300	66,700	255,293 #9,367	
13754	1	1	0	0	Peri	Vac	50	Prod	--	--	U	1967	Wat	19/31	34	--	18,250	204,961	2,555	--	46,383 *Temp. shut down	
4385	1	0	0	0	Irreg	0	100	Prod	--	--	U	1954	Wat	2/8	36	--	32,000	--	0	0	*Was Shenandoah Oil Corp. #5,700	
15881	1	--	--	--	Peri	Vac	600	Hunton + Simpson	--	--	T	1970	Wat	6/4	40	--	219,000	435,000	--	--	--	
13167	1	1	0	0	Irreg	0	1200	Prod	--	--	U	1967	S Gas	1/9	36	--	325,000	2,331,000	0	0	-- #3,200	
11107	4	7	--	--	Irreg	0	1100	Prod	--	--	T	--	Wat + Gas Exp	5/95	35	--	400,000	--	--	--	*Was Homestake Prod. Co. +Shut down part of year #9,924	
10414	1	0	0	0	Irreg	0	145	Prod	--	--	U	1963	S Gas	--	36	--	39,425	481,292	0	0	-- *Was Tomlinson Oil Co. #1,670	
11618	1	0	0	0	Peri	Vac	520	Prod + Alluvium	15	--	M	1965	--	--	34	--	189,800	864,335	44,000	130,129	395,235 #56,016	
5368	1	0	0	0	Irreg	Vac	884	Prod	--	--	U	1961	Wat	1/26	38	--	235,790	3,248,139	7,275	1,003,064	1,003,064 *Was General American	
12044	1	0	0	0	Irreg	Vac	886	Prod	--	--	U	1966	Wat	1/12	38	--	323,555	3,100,756	830	7,875	-- *Was General American #26,435	
14675	1	0	0	0	Irreg	0	1846	Prod	--	--	U	1970	Wat + S Gas	1/30	38	--	673,790	2,106,939	10,000	50,000	244,839 #87,424	
15569	0	1	--	--	Irreg	0	0	Prod	--	--	U	1970	Wat + S Gas	1/30	38	--	0	0	0	40,000	126,898 *Formation plugged, Sulfur #17,768	
15373	1	0	0	0	Irreg	0-25	25	Prod	--	--	T	1969	S Gas	98/2	--	--	8,100	25,390	2,500	4,300	-- #6,530	
5139	1	0	0	0	Irreg	15	62	Prod	--	--	U	1956	S Gas	1/0.8	35	10	22,736	785,579	0	0	299,399 #2,293	
2754	8	0	0	1	Line	4	998	Prod + Water Sd	185	--	U + F	1951	S Gas	175/950	39	--	2,538,715	39,038,370	41,424	1,575,967	7,969,190	
	<u>10</u>	<u>5</u>	<u>0</u>	<u>0</u>													<u>4,361,464</u>	<u>56,199,324</u>	<u>32,215</u>	<u>289,536</u>	<u>281,176</u>	
6188	1	0	0	1	Peri	500	132	Surface Sd	50	20	M	1968	S Gas	9/1	35	--	48,200	992,087	3,423	72,182	-- #6,846	
12893	9	2	0	0	Line	40	1290	Prod + Meade	40	60	M	1966	S Gas + Grav	7/93	41.5	5	4,230,994	43,608,664	31,325	255,205	281,176	
13339	1	3	0	0	Peri	Grav	350	Prod	--	--	F	1967	S Gas	--	39	--	130,470	12,590,660	890	34,331	-- *Shut down for repairs	

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1973—Continued

Kansas Geol. Survey Energy Resource Series 3, 1974

County	Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been continuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
RICE COUNTY																
	16326	Calf Creek	Range Oil Co.	(P) Buehler "B"	Buehler "B"	33-18S-10W	90	--	Lans	2850	7	5	-	-	-	Yes
	13524	Chase-Silica	Icer Addis	(W) Schubert	Schubert	9-20S-10W	160	--	Simp	3400	5	1	0	0	0	Yes
	15792	Chase-Silica	Icer Addis	(W) Merrill J. Behnke	Brandenstein, Ott, Appleton, Behnke	10-19S-10W 11-19S-10W 14-19S-10W 15-19S-10W	480	--	Douglas	2842	7	9	1	0	-	Yes
	7885	Chase-Silica	Bergman Oil Co.	(W) Eatinger	Eatinger	20-19S-10W	80	20	L-KC	2975	50	2	0	0	0	Yes
	9634	Chase-Silica	Bergman Oil Co.	(W) Soeken	Soeken	11-19S-9W	40	--	Simp	3303	12	2	1	0	0	Yes
	11507	Chase-Silica	Ralph G. Bowen	(D) Specht A & B	Specht A & B	16-20S-10W	120	--	L-KC	3300	20	2	0	0	0	Yes
	16251	Chase-Silica	Cities Service Oil Co.	(W) DeWitt	DeWitt	33-19S-9W	125	20	Arb	3195	31	5	0	0	0	Yes
	7692	Chase-Silica	Clinton Oil Co.*	(W) Heinrich Roth	Heinrich Roth	29-19S-10W	160	0	L-KC	2957	107	2	0	0	0	Yes
	10470	Chase-Silica	Fell & Wolfe Oil Co.*	(D) Bayer "B"	Bayer "B"	20-20S-10W	160	--	L-KC	3005	--	1	0	0	1	Yes
	13843	Chase-Silica	Fell & Wolfe Oil Co.*	(D) Sledd	Sledd	34-19S-9W	80	--	Arb	3222	3	1	0	0	0	Yes
	16477	Chase-Silica	Fell & Wolfe Oil Co.*	(D) Tatlock Unit	H. Drews, Steuder, A.J. Bayer	5-20S-10W 7-20S-10W	490	--	Arb	3264	8	3	0	0	0	Yes
	7836	Chase-Silica	Don Fox*	(D) Wolf	Wolf	20-19S-10W	160	--	KC	2950	10	1	-	-	-	Yes
	12543	Chase-Silica	F.G. Holl	(W) Wenke	Wenke, Hirsch	18-20S-10W 19-20S-10W	60	0	L-KC	3106	8	1	0	0	0	Yes
	15838	Chase-Silica	Isern-Wells	(W) Flora	Flora	12-19S-10W	320	0	L-KC	2989	20	4	0	0	0	Yes
	13588	Chase-Silica	Richard L. Mai	(D) Link	Link "A", Link "B"	18-19S-9W	140	20	L-KC	2962	--	3	1	0	0	Yes
	15526	Chase-Silica	Meltzer Oil Co.*	(P) Layton Project	Layton	29-19S-9W	80	--	KC	2937	4	1	0	1	0	Yes
	15609	Chase-Silica	Phillips Petroleum Co.	(P) Kate Lease	--	18-19S-9W	40	0	Arb	3270	10	2	0	0	0	Yes
	6043	Chase-Silica	Range Oil Co.*	(W) Bernstorf "D"	Bernstorf "D"	23-19S-10W	80	--	L-KC	3140	12	3	-	-	-	Yes
	16354	Chase-Silica	Rocket-Schusterman Oil*	(D) Houston Community	Houston Community	19-20S-10W	0	--	Lans	3020	6	0	0	0	0	Yes
	6043	Chase-Silica	Skelly Oil Co.	(W) Bernstorf Area	Bernstorf "B"	23-19S-10W	80	0	L-KC	3140	12	4	1	0	0	Yes
	6044	Chase-Silica	Skelly Oil Co.	(W) Knop "A" Lse.	Knop "A"	21-19S-10W	80	0	L-KC	3110	39	5	0	0	0	No*
	7360	Chase-Silica	Skelly Oil Co.	(W) Knop "A" Lse.	Knop "A"	21-19S-10W	80	0	L-KC	3110	39	5	0	0	0	No*
	11993	Chase-Silica	Southern States Oil Co.*	(P) Altenbaumer	Brandenstein, Altenbaumer	11-19S-10W 12-19S-10W	160	--	L-KC	2956	50	6	4	0	0	Yes
	14299	Chase-Silica	Southern States Oil Co.*	(P) Feldman	Feldman	15-19S-10W	160	--	L-KC + Douglas	2870	18	6	0	0	0	Yes
	10600	Chase-Silica	Everett Swander	(W) B.G. Proffitt	B.G. Proffitt	25-19S-10W	0	0	L-KC	3020	18	1	0	0	0	No*
	11795	Frederick	NCRA *	(P) Staatz-Schroeder Unit	Schroeder, Staatz "A"	10-18S-9W 11-18S-9W	320	0	Simp	3252	12	7	0	0	0	Yes
	17026	Geneseo-Edwards	Clinton Oil Co.	(W) Geneseo Field WFS (Congl.)	A.H. Johnson, R. Michells, C. Wood, J.A. Williams, J.A. Lewis "A",* J.A. Lewis	12-18S-8W 13-18S-8W 14-18S-8W	480	0	Penn-Congl	3150	10	4	5	0	1	Yes
	7243	Geneseo-Edwards	Continental Oil Co.	(W) Geneseo Simp. Snd. Un.	Geneseo Simp. Snd. Un.	30,31-18S-7W 25,30,36-18S-8W	290	0	Simp	3170	16	11	7	0	0	Yes
	12620	Geneseo-Edwards	Continental Oil Co.	(P) Geneseo Jt. LKC Repr.	S. Ainsworth, J.R. Lansing, J.R. Lansing "A"	25-18S-8W	260	0	L-KC	2875	50	21	3	-	-	Yes
	15763	Geneseo-Edwards	Continental Oil Co.	(P) Lansing "A" Pilot	J.R. Lansing "A"	25-18S-8W	160	0	Arb	3163	35	--	-	-	-	No*
	15998	Geneseo-Edwards	Continental Oil Co.	(P) Gray-Hamilton "A"	B.C. Gray, Wm. Hamilton "A"	19-18S-7W	320	0	L-KC	2850	8	5	0	-	0	Yes
	9585	Geneseo-Edwards	Fell & Wolfe Oil Co.*	(D) Bolton	Ira O. Bolton	31-18S-7W	80	40	Simp	3216	8	2	0	0	0	Yes
	11875	Geneseo-Edwards	Kaiser-Francis*	(P) Zajic	Zajic	13-18S-8W	--	--	Lans	2789	250	5	0	0	0	Yes
	12712	Geneseo-Edwards	Murfin Drilling Co.	(W) Geneseo Unit W.F.	Geneseo Unit	3,4,9,10-18S-8W	720	360	B Penn	3200	9	7	6	0	0	Yes
	14234	Lyons West	Champlin Petroleum Co.*	(W) J.M. Speck Lse.	J.M. Speck	18-20S-8W	320	0	Kinder	3300	8	1	3	0	0	Yes

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl/well/day	Injected-water data				Date first ini.	Primary production mechanism	Primary oil-water ratio	API grav. deg.	Oil visc., cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks			
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Oil recovered by secondary methods						
																	Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73					
																				#=1973 Primary and Secondary Production					
16326	1	-	-	-	Irreg	--	200	Prod	--	--	U	1971	S Gas	2/8	34	--	--	--	0	--	7,852	#3,211			
13524	1	0	0	0	Irreg	0	272	Prod	--	--	U	1967	Gas Exp	1/9	52	--	99,352	520,382	1,560	16,460	--	#3,138			
15792	2	-	-	-	Irreg	200	206	Prod	--	--	U	1970	Gas Exp	7/3	25	--	150,326	460,209	6,585	21,585	181,488	#18,814			
7885	-	-	-	-	Irreg	0	50	Prod	--	--	-	1960	S Gas	1/0	38	--	18,000	195,000	3,075	27,175	279,150	#6,150			
9634	1	-	-	-	Irreg	700	75	Prod	--	--	T	1962	S Gas	1/0	38	--	27,000	328,650	660	49,360	123,402	#1,100			
11507	1	0	0	0	Irreg	Vac	365	Prod	--	--	-	1965	S Gas	--	40	--	136,130	1,225,108	3,960	16,375	17,667	#5,254			
16251	4	0	0	0	Irreg	197	299	Prod	--	--	U	1971	S Gas	46/279	47.7	--	61,009	183,990	5,667	11,993	2,400,891	#19,911			
7692	1	1	0	0	Irreg	0	161	Prod	--	--	U	1960	S Gas	1/1	44.6	--	58,840	592,761	7,972	78,054	652,016	*Was Pan American			
10470	1	0	0	1	--	940	160	Prod	--	--	U	1963	S Gas	--	33.2	--	--	--	--	--	--	*Was NCRA			
13843	1	0	0	0	Irreg	Vac	30	Prod	--	--	U	1967	--	--	38.8	--	--	--	--	--	--	#100 *Was Texaco, Inc.			
16477	1	0	0	0	Irreg	Vac	600	Prod + Arb	3325	--	U	--	Wat	--	40.6	--	--	--	--	--	--	*Was Herman Geo. Kaiser			
7836	1	-	-	-	Irreg	0	--	Prod	--	--	U	1972	S Gas	1/3	40	--	15,000	--	200	--	--	*Was Clinton Oil Co.			
12543	1	0	0	0	Peri	0	250	Prod	--	--	T	1966	S Gas	6/30	38.6	--	91,250	790,750	700	--	189,415	#1,400 #2,006			
15838	1	-	-	-	Irreg	20	295	Prod	--	--	T	1970	S Gas	1/1	40	--	107,822	311,782	4,844	20,236	376,446	#11,084			
13588	1	0	0	0	Irreg	0	50	Prod	--	--	U	1967	Grav	2/8	35	--	18,250	118,000	300	1,500	--	#2,000			
15526	0	0	0	0	Irreg	550	200	Prod + Arb	3300	--	U	1969	--	7/3	46	--	36,500	--	--	--	--	*Was Siegrist Oil Co.			
15609	1	0	0	0	Irreg	0	264	Prod	--	--	U	1970	Wat	1/34	47	--	96,427	403,837	0	0	216,696	#2,274			
6043	-	-	-	-	Irreg	0	253	Prod	--	--	U	1958	S Gas	--	37	--	250	--	--	--	--	32,386	*Was Skelly Oil Co.		
16354	1	0	0	0	Irreg	0	98	Prod	--	--	U	1972	S Gas	1/50	39	--	35,710	72,675	0	0	405,406	#1,058 *Was Union Texas			
6043	1	0	0	0	Irreg	0	32	Prod	--	--	U	1958	S Gas	--	37	--	6,700	4,127,616	1,231	333,274	571,956	#9,120 *Sold 8-1-73 to A. Scott Ritchie			
6044																						*Lse. watered out			
7360	0	1	0	0	--	0	0	Prod	--	--	U	1960	S Gas	--	37	--	0	212,916	0	324,367	448,706	#7,887 *Was Westrans Petroleum			
11993	1	0	0	0	Irreg	1200	420	Prod	--	--	T	1965	Grav	--	38	--	117,345	610,593	9,058	61,046	61,046				
14299	2	1	0	0	Irreg	100	306	Prod	--	--	F	1967	Grav	--	27	--	197,597	773,912	13,744	85,967	85,967	*Was Westrans Petroleum			
10600	1	0	0	0	Irreg	180	250	Prod	--	--	U	1963	S Gas	5/95	45	--	82,500	--	0	--	--	*Irr. or random #1,577			
11795	1	0	0	0	Irreg	0	140	Prod	--	--	T	1963	Limited Water S Gas	--	46	2.4	52,000	340,978	0	0	823,291	*Was Maurice L. Brown Tr. #23,725			
17026	2	0	0	0	--	1300	169	Prod	--	--	U	1973	S Gas	1/2.5	36	--	35,981	35,981	0	0	5,882,210	*J.A. Lewis "A" P&A 1-7-74 #20,905			
7243	5	8	0	0	Line	2000	361	Prod + Arb + Lans Prod	3200	50	T	1960	S Gas	--	36.2	--	652,044	8,627,992	23,189	1,072,760	1,256,544				
12620	3	1	-	-	Irreg	1250	639	Prod	--	--	U	1966	Wat	--	36.2	--	233,454	4,219,691	--	--	--				
15763	-	-	-	-	Irreg	--	--	Prod	--	--	U	--	--	--	36.1	--	--	579,800	--	--	--	*Ceased oper. 6-1-72			
15998	2	0	-	-	--	150	25	Prod	--	--	U	1971	S Gas	--	32.9	--	32,500	460,421	--	--	--				
9585	2	0	0	0	--	400	300	Prod + Simp	3230	12	U	--	S Gas	--	33.1	--	--	--	--	--	--	*Was Sinclair Oil & Gas #3,387			
11875	5	1	0	0	Irreg	380	1081	Prod	--	--	T	1965	Gas Exp	--	32	--	394,565	2,503,615	2,000	14,800	3,457,449	*Was Shell Oil Co. #8,747			
12712	5	8	0	0	Peri	1400	250	Prod + Arb	3250	10	T	1967	S Gas + Grav	33.5/ 66.5	38	--	306,456	2,695,529	9,488	136,282	--				
14234	3	0	0	0	Irreg	350	91	Sh Sd	12	45	F	1968	S Gas	25/5	40	10	100,000	1,159,255	2,780	37,491	191,397	*Sold 8-6-73 to Frank J. Black			

TABLE 1—ENHANCED OIL RECOVERY PROJECTS, 1973—Continued

Kansas Geol. Survey Energy Resource Series 3, 1974

County Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has ini. been con- tinuous?
						Prod.	Abd.	Name	Depth, ft.	Thick- ft.	Active	In- active	Drilled	Abd.	
RICE COUNTY (concl.)															
14729	Lyons West	Champlin Petroleum Co.*	(W) George Habiger Lse.	George Habiger	24-20S-9W	160	0	Kind	3300	7	1	0	0	0	Not
13839	Lyons West	Kewanee Oil Co.	(W) West Lyons Unit	West Lyons Unit	16, 17, 20, 21, 28, 29, 30, 31, 32, 33-19S-8W	1980	1540	Kind	3320	15	12	37	0	0	Yes
12960	Mary Ida South	Pioneer Oper. Co.	(W) Mooney-Manke Unit	Mooney-Manke Unit	6, 7, 8-19S-10W	640	0	L-KC	2950	150	17	0	0	0	Yes
4823	Odessa	Atlantic Richfield Co.	(W) Odessa Unit	Odessa Field Unit	28, 29, 32, 33-18S-6W	800	220	Marm	3090	8	9	0	0	1	Yes
8206	Orth	Meltzer Oil Co.*	(D) Habiger	Habiger	4-19S-6W	80	--	Topeka	2434	250	3	-	-	-	Yes
3875					27-18S-10W										
3953	Orth	Skelly Oil Co.	(W) Volkland "A"	Volkland "A"	27-18S-10W	60	0	Topeka	2670	16	3	0	0	0	Yes
2047	Orth	Sun Oil Co.*	(D) Orth	Roelfs	26-18S-10W	--	--	--	--	--	--	--	--	--	--
14317	Orth West	J.A. Allison	(P) Feist	Feist	20-18S-10W	100	20	Lans	3218	10	5	1	0	0	Yes
14786	Orth West	R.M. Edwards	(P) --	Reichuber, Heinz, Poppelreiter, Oberle	16, 17-18S-10W	880	0	Lans	3200	20	14	0	0	0	Yes
7522	Ringwald	Rocket-Schusterman Oil*	(W) Ringwald WF	Gemeinhart, Ringwald	29-18S-10W	140	40	Lans	2930	30	3	1	0	0	Yes
14300	Ringwald	Skelly Oil Co.	(W) Buehler "A" Waterflood	Buehler "A"	32-18S-10W	80	70	L-KC	2280	15	1	0	0	0	Yes
3502					33-18S-10W										
10813	Rino	NCRA*	(W) Rino Pressure Maintenance	Wellman "G", Wellman "I"	33-21S-9W	40	0	Simp	3499	10	4	1	0	0	Yes
15207	Shumway	Ben C.W. Hyde, Jr.	(W) Potwin	Potwin, Shumway	9-20S-8W	320	--	Kind	3459	10	3	-	-	-	Yes
16771	Tobias	Aspen Drilling Co.	(W) Southwest Tobias Lansing Unit	Shuyler, Altman, Mosher, Lipp, Werner	3-21S-9W	476	0	L-KC	2958	4	4	0	0	0	Yes
13650	Tobias	I.O. Miller Estate	(D) Lipp	Lipp	3, 4-21S-9W	320	--	L-KC	2920	8	5	0	8	2	Yes
10096	Tobias	Thunderbird Drilling, Inc.	(W) Tobias Simpson Unit	Caskey, Fair A, B, C, Faler, Gillen, Harrison, Koons, Pulliam, Schafer, Tobias	11-21S-9W	830	420	Simp	3300	16	21	3	0	2	Yes
10559	Tobias Northwest	Lebsack Oil Co.	(W) Griffie	--	2-21S-9W	80	--	Simp	3335	10	2	-	1*	-	Yes
14464					23-20S-9W										
15817	Welch-Bornholdt	J.W. Braden	(D) Braden Farms	Braden Farms	1-20S-6W	170	150	Miss	3340	40	2	0	0	0	Yes
13199	Welch-Bornholdt	Cardinal Petroleum Co.*	(P) Welch-Bornholdt	Unit A, Unit B, Bengston, Fry "G", Fry "C", Fry "E", Fry "J", Hubenett, Ekholm, Hokr, Malm, Malm "D", Mattson, Johannsen, Lindholm "C", Lee, Lindholm "B", Wernet, Johnson "D", Belden, Fair "B", Duvall "A", Duvall "B", Moll, Libby, Alexander	11-20S-6W	1400	840	Miss	3300	--	35	9	0	0	Yes
13203					13-20S-6W										
9071					15-20S-6W										
10733					22-20S-6W										
12187					23-20S-6W										
12367					24-20S-6W										
					25-20S-6W										
					26-20S-6W										
					27-20S-6W										
					28-20S-6W										
					33-20S-6W										
					34-20S-6W										
					4-21S-6W										
12151*	Welch-Bornholdt	Fell & Wolfe Oil Co.†	(W) Braden	Braden	1-20S-6W	80	--	Miss	3352	26	1	0	0	1	Yes
6848	Welch-Bornholdt	Shade & Berry	(D) --	Mattson, Anderson	25-19S-6W	--	--	Miss	3435	14	11	0	0	0	Yes
13204	Welch-Bornholdt	Shade & Berry*	(D) --	Braden #5	1-20S-6W	--	--	Miss	3430	14	1	-	-	-	Yes
16994	Wherry	Francis Oil & Gas, Inc.*	(D) Gossman	Gossman	8-21S-7W	80	50	Miss	3352	18	2	0	0	3	Not
RICE COUNTY TOTALS (Reported)						14,691	3,810				292	84	10	11	

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl./ well/ day	Injected-water data				Date first inj.	Primary production mechanism	Primary oil-water ratio	API grav., deg.	Oil visc., cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73		
14729	1	0	0	0	Irreg	350	0	Sh Sd	12	45	F	1969	S Gas	8/2	37	10	0	557,954	400	8,863	94,186	#=1973 Primary and Secondary Production
13839	10	5	0	0	9-spot	950	478	*	--	--	F	1968	S Gas	1363/475	40	--	1,745,490	11,787,554	40,297	586,040	4,662,675	*Sold 8-1-73, F.J. Black †Shut in inj. well *Purch.-City of Lyons #125,810
12960	5	0	0	0	Irreg	810	225	Prod + Arb	3200	30	T	1966	S Gas	4/6	38	--	427,415	3,361,851	20,000	--	--	#22,522
4823	7	0	0	0	Irreg	240	150	Prod + L-KC	2900	90	U	1959	S Gas	70/36	28	--	318,818	7,106,328	26,925	927,930	1,273,015	
8206	0	0	0	0	Peri	Vac	330	Prod + Topeka	24	250	U	1954	Wat	--	29	--	--	--	0	0	--	*Was Artnell #6,015
3875	1	0	0	0	Irreg	400	594	Prod	--	--	U	1954	S Gas	442/882	30	--	216,932	2,600,109	6,596	197,806	281,772	
2047	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*Sold 7-1-72, D & P Oil Co.
14317	1	--	0	--	Peri	9	180	Arb	3266	20	T	1968	Gas Exp	99/1	39	--	65,700	284,150	20,677	119,677	278,619	
14786	4	1	0	0	Irreg	1850	278	Prod	--	--	T	1969	S Gas	--	41	--	406,992	1,023,089	60,456	--	437,913	#80,896
7522	2	0	0	0	Irreg	1000	540	Prod	--	--	U	1961	S Gas	1/4	40	--	194,440	2,231,887	20,060	184,203	907,126	*Was Union Texas #20,886
14300	1	0	0	0	Irreg	200	135	Prod	--	--	U	1953	S Gas	--	40	--	49,322	2,216,051	3,069	71,828	404,483	
3502	1	0	0	0	Irreg	0	103	Prod	--	--	T	1973	S Gas	19/463	39	--	37,633	37,633	1,811	1,811	6,750	*Was Thunderbird Drlg. #6,750
10813	1	--	1*	1	Irreg	70	53	Sh Sd	60	10	F	1969	S Gas	20/2	39	--	19,302	292,891	850	5,865	274,333	*Converted prod. to inj. #3,574
15207	1	0	0	0	Irreg	0	40	Prod + Fr Wtr Sd	46	--	M	1972	S Gas	1/0	38.7	3.6	55,867	60,448	0	0	138,226	#6,031
16771	1	0	1	0	Irreg	0	40	Prod	--	--	U	1967	Gas Exp	--	--	--	14,600	--	--	--	--	#4,380
13650	6	0	0	0	Peri	150	500	Prod	--	--	U	1968	S Gas	698/11	43	1.88	1,225,400	6,162,275	411,077	2,354,885	4,049,855	
10096	1	--	--	--	Line	800	100	Chase	30	20	F	1970	S Gas	8/2	45	--	35,000	123,360	0	0	--	*Re-completed #8,075
10559	1	0	0	0	Irreg	0	96	Prod	--	--	U	1967	S Gas	1/4	33	--	60,000	384,000	1,560	5,266	500,000+	#2,644
14464	8	6	0	0	Irreg	500	170	Prod	--	--	U	1958	S Gas + Grav	--	36	--	496,400	11,367,112	15,327	226,413	1,510,843	*Was Plains Expl. Co. #47,899
15817	0	0	0	1	Irreg	Vac	180	Prod	--	--	--	1965	--	--	30.7	--	--	--	--	--	--	*Lse. has been plugged †Was Sun Oil Co. #97
13199	1	0	0	0	Irreg	Vac	180	Prod	--	--	U	1959	Wat	--	33.6	--	60,000	858,000	--	--	--	
13203	--	--	--	--	Irreg	0	150	Prod	--	--	U	1966	Wat + S Gas	--	33.6	--	3,650	--	200	--	--	*Was J.W. Braden Trust #900
9071	2	0	0	--	Irreg	0	6	Prod	--	--	U	1973	--	3/6	35	--	1,095	1,095	0	0	655,081	*Was Grace Oil Co. †7-17-73 Date of first inj. #4,341
10733																						
12187																						
12367																						
12151	0	0	0	1	Irreg	Vac	180	Prod	--	--	--	1965	--	--	30.7	--	--	--	--	--	--	
6848	1	0	0	0	Irreg	Vac	180	Prod	--	--	U	1959	Wat	--	33.6	--	60,000	858,000	--	--	--	
13204	--	--	--	--	Irreg	0	150	Prod	--	--	U	1966	Wat + S Gas	--	33.6	--	3,650	--	200	--	--	*Was J.W. Braden Trust #900
16994	2	0	0	--	Irreg	0	6	Prod	--	--	U	1973	--	3/6	35	--	1,095	1,095	0	0	655,081	*Was Grace Oil Co. †7-17-73 Date of first inj. #4,341
	108	33	2	3													8,597,064	82,007,230	726,318	6,999,312	33,136,258	

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1973—Continued

Kansas Geol. Survey Energy Resource Series 3, 1974

County	Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been continuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
ROOKS COUNTY																
	14067	Andreson	Davis Bros.	(W) Andreson Waterflood	Andreson C, Gasaway D, Gasaway E, Gasaway F	31-10S-18W	120	60	L-KC	3500	75	2	0	0	0	Yes
	13518	Barry	Continental Oil Co.	(W) Barry LKC	Barry LKC	35-8S-19W 1,2,3,10,11 12-9S-19W	1540	0	L-KC	3200	12	18	4	-	0	Yes
	16334	Barry Southeast	Rocket-Schusterman Oil*	(D) Bedard WI	Cabbage	7-9S-18W	0	0	Arb	3495	--	0	0	0	0	Yes
	6815	Barry Southeast	Skelly Oil Co.	(W) Cora A. Hilgers Waterflood	C.A. Hilgers	12-9S-19W	--	--	L-KC	3200	--	-	-	-	-	No*
	16521	Baumgarten	Myrlin Monroe	(W) Sollenberger	Sollenberger, Hilgers Unit	30-9S-18W	240	0	L-KC	3280	3	4	0	0	0	Yes
	9767	Carmichael	Petroleum, Inc.	(W) Carmichael Unit	Carmichael-Mosher "A", Welch "A-C"	33-8S-18W	480	480	L-KC	3175	10	2	1	0	3	No*
	9977	Chesney	Herman Geo. Kaiser*	(P) Chesney	Chesney	12-8S-17W	60	0	L-KC	3060	13	3	1	0	0	Yes
	12545	Dopita	Cities Service Oil Co.	(W) Reeder Lse.	Reeder,	19-8S-17W	40	0	Tor +	3090	20	4	0	0	0	Yes
	16960	Dopita	Clinton Oil Co.*	(W) Pearl McMillen	Pearl McMillen	25-8S-18W	80	0	L-KC							
	4089	Dopita	Clinton Oil Co.*	(W) Pearl McMillen	Pearl McMillen	24-8S-18W	80	0	Tor +	3136	197	3	0	0	0	Yes
	8544	Dopita	Okmar Oil Co.	(W) Moos	Moos	6-9S-17W	0	--	Arb	3370	3	-	-	-	-	--
	15831*	Dopita	Schusterman Oper. Co.*	(W) Krug WF	Krug	19-8S-17W	150	0	Tor +	3100	6	5	0	0	0	Yes
	11324	Dopita	Sun Oil Co.*	(W) Thompson Waterflood	J.H. Thompson	5-9S-17W	--	--	--	--	--	-	-	-	-	--
	2957	Dorr	Cities Service Oil Co.	(W) Dorr Unit	Dorr Unit	16,17,20,21-9S-16W	620	0	Dodge +	3141	45	20	3	0	0	Yes
	9161	Dorr	Theodore Gore	(P) Casey	Meyers,	16-9S-16W	320	0	L-KC	3445	251	4	0	-	0	Yes
	13728	Dorr	Theodore Gore	(P) Casey	Meyers,	21-9S-16W										
	15586	Dorr	Harold Krueger	(P) Overholser	Overholser,	20-9S-16W	20	0	KC	3350	4	1	1	0	0	Yes
	15048	Eilers	Davis Bros.	(P) Eilers	Eilers B, Shepard I, Eilers A, Eilers C	21-9S-16W 22-10S-18W	100	40	L-KC	3500	75	3	0	0	0	Yes
	7789	Finnesy South	Davis Bros.	(W) South Finnesy Waterflood	Shepard A, Shepard C	27-10S-18W 23,24-10S-18W	200	370	L-KC	3500	75	4	0	0	0	Yes
	14007	Finnesy South	Davis Bros.	(P) Shepard B	--	24-10S-18W 23-10S-18W	80	55	L-KC	3376	22	1	0	0	0	Yes
	16707	Gra-Rook	R.P. Nixon Operations	(P) Paul Miller	Paul Miller	18-9S-20W	10	0	Arb	3827	20	1	0	0	0	Yes
	12595	Grover	A.L. Abercrombie, Inc.	(D) Roy "B"	Roy "B", Grover, Roy S	22-7S-19W	120	300	L-KC	3085	10	5	1	0	0	Yes
	10258	Kruse	Cities Service Oil Co.	(W) Kruse Unit	Kruse Unit	2,11-10S-16W	93	12	Dodge +	3050	34	4	0	0	0	Yes
	3504	Laton	Cities Service Oil Co.	(W) Laton Pool Coop. Waterflood	Adams "A", "B", "C", Dennis, Hodson, Adams "D", Holy Cross	33-8S-16W 34-8S-16W 4-9S-16W	370	0	Dodge +	3070	53	16	1	0	2	Yes
	6619	Laton	Co-Co, Inc.*	(W) Doane-Swisher Cooperative W.F.	Doane, Swisher	34-8S-16W	160	160	Tor +	3020	52	6	0	0	1+	Yes
	7166	Laton	Co-Co, Inc.*	(W) Gamble-McFadden "E" Cooperative Waterflood	Gamble, McFadden "E"	3-9S-16W	120	200	L-KC	3070	52	7	0	0	0	Yes
	7831	Laton	Co-Co, Inc.*	(W) Luhman Cooperative W.F.	Co-Co-Luhman, Jones, Campbell, Sarver	11-9S-16W 12-9S-16W	160	160	Tor +	3180	34	3	0	0	1+	Yes
	12702	Laton	Co-Co, Inc.*	(W) Blank Cooperative W.F.	Blank	14-9S-16W	100	60	Tor +	3190	45	2	0	0	1+	Yes
	10499	Laton	Harold Krueger	(P) Laton Flood Project	Buell, Beardmore, Luhman Johnson, Tatkenhorst B, Tatkenhorst E, Tatkenhorst C, Home	10-9S-16W	420	0	KC	3240	3-6	16	0	0	0	Yes
	6050	Laton	Murfin Drilling Co.*	(W) Li-Be-Bax	Beardmore, Baxter "A", "B", "D", "E", Livingood	11-9S-16W 2-9S-16W 11-9S-16W	800	300	L-KC	3100	0	15	5	0	0	Yes
	11184	Laton	Murfin Drilling Co.	(W) North Laton Unit W.F.	North Laton Unit	27,28-8S-16W	400	160	L-KC	3060	50	6	0	0	0	Yes
	11185	Laton	Murfin Drilling Co.	(W) North Laton Unit W.F.	North Laton Unit	27,28-8S-16W	400	160	L-KC	3060	50	6	0	0	0	Yes
	11333	Laton	Murfin Drilling Co.	(W) North Laton Unit W.F.	North Laton Unit	27,28-8S-16W	400	160	L-KC	3060	50	6	0	0	0	Yes
	13043	Laton	Murfin Drilling Co.	(W) North Laton Unit W.F.	North Laton Unit	27,28-8S-16W	400	160	L-KC	3060	50	6	0	0	0	Yes
	14469	Lone Star	Okmar Oil Co.	(W) Luther-Arndts Coop	Luther, Arndts	8-8S-17W 9-8S-17W	40	0	L-KC	3037	5	1	0	0	0	Yes

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl/well/day	Injected-water data				Date first inj.	Primary production mechanism	Primary oil-water ratio	API grav., deg.	Oil visc., cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks	
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Oil recovered by secondary methods				
																	Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73			
																						#=1973 Primary and Secondary Production	
14067	2	0	0	0	Peri	625	174	Prod	--	--	T	1968	Grav	6/4	34	5	127,057	709,441	8,443	83,128	185,109		
13518	8	18	-	0	Peri	500	218	Prod	--	--	U	1968	S Gas	--	35.3	--	1,412,780	10,121,788	37,073	354,073	529,073	#62,927	
16334	1	0	0	0	Irreg	0	1820	Prod	--	--	U	1972	Wat	1/50	28	--	662,000	1,085,000	0	0	1,133,190	*Was Union Texas #13,037	
6815	-	-	-	-	--	--	--	--	--	--	-	--	--	--	--	--	--	--	--	--	--	*Proj. has not started	
16521	1	0	0	0	Irreg	0	88	Prod	--	--	T	1972	Wat	13/220	30	45	32,120	47,498	365	365	9,875	#4,747	
9767	0	0	0	1	Line	--	0	--	--	--	-	--	S Gas	279/3373	35.6	--	0	772,323	384	50,297	50,297	*Plugged and Abd. 11-2-73	
9977	3	1	0	0	Irreg	206	750	Prod + Dakota	512	--	T	1963	S Gas	1/1	36	--	196,370	2,238,243	8,665	8,665	126,722	*Was Cities Service Oil	
12545	2	0	0	0	Irreg	40	36	Prod	0	0	T	1966	S Gas	21/23	27	--	28,557	111,262	7,593	37,029	168,860		
16960																							
4089	1	0	0	0	Irreg	0	268	Prod	--	--	U	1965	S Gas	1/8.6	29.5	--	98,089	873,124	7,593	86,293	294,575	*Was Pan American	
8544																							
15831	-	-	-	-	--	--	--	--	--	--	-	--	--	--	30	--	--	--	--	--	--	--	*Proj. not started
11324	3	1	0	0	Irreg	0	300	Prod	--	--	T	1965	S Gas	1/3	29	--	110,918	2,073,589	1,382	151,848	716,941	*Was Shell Oil Co.	
16100	-	-	-	-	--	--	--	--	--	--	-	--	--	--	--	--	--	--	--	--	--	--	*Sold 6-1-73, Murfin Drlg.
2957	15	0	0	0	5-spot	55	318	Prod + Dakota	800	--	T	1962	S Gas	148/209	38	--	1,674,250	15,189,584	74,580	1,024,171	2,815,079		
9161																							
9185	2	-	-	-	Irreg	200	330	Prod	--	--	T	1962	Wat	--	39	--	235,790	2,034,926	1,284	60,397	--	#5,664	
13728																							
15586	1	0	0	0	Line	Vac	50	Prod	--	--	T	1970	S Gas	1/2	37	--	18,250	66,750	0	0	59,203	#2,576	
15048	1	0	0	0	Irreg	70	191	Prod	--	--	T	1969	Grav	3/7	32	15	69,737	310,831	4,753	19,034	541,916	#19,013	
7789	2	0	0	0	Peri	550	584	Prod + Dakota	450	300	T	1960	Grav	9/1	34	6	426,044	5,675,493	15,026	303,971	355,812		
14007	1	0	0	0	Peri	540	582	Prod	--	--	T	1967	Grav	1/2	34.5	--	212,280	1,555,412	2,744	78,139	78,139		
16707	1	0	0	0	Irreg	0	72	Prod	--	--	T	1972	S Gas + Wat	1/1	28	--	26,280	31,680	1,419	1,995	--		
12595	1	1	0	0	Irreg	200	170	Prod	--	--	U	1966	S Gas	--	33	--	62,000	512,056	5,000	77,412	228,368	#9,896	
10258	3	1	0	1	Peri	433	282	Prod + Dakota	730	--	T	1963	S Gas	50/75	37	--	251,618	1,648,242	14,609	169,695	533,070		
3504	7	0	0	1	Irreg	203	316	Prod + Dakota	850	--	T	1953	S Gas	124/55	33	--	780,196	7,743,054	56,485	1,081,622	1,987,907		
6619	3	0	1	0	Irreg	575	268	Prod + Dakota	800	50	M	1962	S Gas + Grav	3/7	39-40	--	293,384	2,727,752	17,350	551,715	551,715	*Was Max Cohen +Conv. from oil	
7166	5	0	0	0	Irreg	205	280	Prod + Dakota	870	50	M	1963	S Gas + Grav	3/7	39-40	--	510,881	3,755,114	22,134	322,210	322,210	*Was Max Cohen	
7831	2	0	1	0	Irreg	138	148	Prod + Dakota	950	50	M	1965	S Gas + Grav	3/7	39-40	--	108,277	703,276	3,384	43,374	43,374	*Was Max Cohen +Conv. from oil	
12702	2	0	1	0	Irreg	150	119	Prod + Dakota	950	50	M	1966	S Gas + Grav	35/65	39	--	87,112	563,154	8,719	63,761	63,761	*Was Max Cohen +Conv. from oil	
10499	3	1	0	0	Irreg	Vac	150	Prod	--	--	T	1965	S Gas	1/1	38-40	--	155,917	1,582,010	24,196	374,605	1,176,931	#36,293	
6050	10	3	0	0	Irreg	250	250	Prod + Dakota	650	50	M	1956	S Gas	--	38	--	912,500	13,113,454	29,680	1,223,685	--	*Was Clinton Oil Co.	
11184																							
11185																							
11333																							
13043	4	1	0	0	Irreg	250	200	Prod + Dakota	600	200	M	1966	S Gas + Grav	6/94	38	--	349,939	2,322,600	20,272	161,781	--		
14469	1	0	0	0	Irreg	0	225	Prod + Arb	3500	10	U	1969	S Gas	3/60	33	--	82,125	274,245	1,825	2,731	200,730	#5,083	

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1973—Continued

Kansas Geol. Survey Energy Resource Series 3, 1974

County Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been con- tinuous?
						Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
ROOKS COUNTY (concl.)															
15302	McClellan	Clinton Oil Co.*	(D) McClellan	Velma McClellan	9-9S-19W	80	0	L-KC	3267	180	2	1	0	0	Yes
15529	McClellan	R.E. Davis*	(W) McClellan Flood Project	Bayard, McClellan, Stull, Whisman	8-9S-19W	320	0	L-KC	3500	5	13	0	0	0	Yes
9412*	Marcotte	B-J Oil Co.	(W) Tribble	Tribble	28-10S-20W	--	--	--	--	--	--	--	--	--	--
16628	Marcotte	Francis Oil & Gas, Inc.	(D) Gish "C"	Gish "C"	36-9S-20W	80	60	Arb	3825	4	1	0	0	2	No*
12517	Marcotte	Nadel and Gussman	(W) Stithem-Eliza	Stithem & Eliza	14-10S-20W	60	30	L-KC	3693	17	20	13	0	--	No
15992	Marcotte	Nadel and Gussman	(W) Gish	Gish	6-10S-19W	0	0	L-KC	3480	10	2	--	--	--	No*
9848	Marcotte	Okmar Oil Co.	(P) Rode	Rode, Veatch	9-10S-20W	--	--	L-KC + Arb	3440 3740	12 5	1	0	0	0	Yes
10570	Marcotte	Okmar Oil Co.	(W) Marcotte	Marcotte "A"	18-10S-19W	74	30	L-KC	3500	5	1	1	0	0	Yes
16483	Natoma	Cities Service Oil Co.	(W) Natoma L-KC Unit	Natoma L-KC Unit	14,15-10S-16W	92	0	L-KC	3250	8	4	0	0	0	Yes
11849	Nettie	Phillips Petroleum Co.	(W) Nettie Unit	--	33,34-9S-17W 3,4-10S-17W	560	0	Top + Tor + L-KC + Arb	3225- 3525	60- 5	29	1	1	0	Yes
15389	Nettie Northwest	Davis Bros.	(D) Rempe A & B Leases	--	28,29-9S-17W	80	40	L-KC	3289	30	2	0	0	0	Yes
11302	Nyra	Southern States Oil Co.*	(P) Thompson	Thompson	9-9S-17W	160	--	Arb + KC	3194 3479	10	5	0	0	0	Yes
15129	Paradise Creek	Paul H. Williams*	(P) Paradise Creek	South Paradise Creek	27,28-9S-18W	50	0	L-KC	3324	5	1	0	0	0	Yes
15855	Plainville	Davis Bros.	(W) Plainville Water- flood Unit	Bice Unit, Collins E, Kleinschmidt B, Ross C, Ross D	6-10S-17W	800	390	L-KC	3500	75	17	0	0	0	Yes
12384	Plainville	Davis Bros.	(W) Winters-Plante Unit No. 2	Plante B, Winters C, White A, White B	7-10S-17W	560	244	L-KC	3500	75	8	0	0	0	Yes
13187	Plainville	Davis Bros.	(W) Winters-Plante Unit No. 2	Plante A, Vohs E, Ganoung A, Garvert O, Hoffman D	8-10S-17W	560	244	L-KC	3500	75	8	0	0	0	Yes
14009	Plainville	Davis Bros.	(P) So. Plainville Unit No. 3	Plante A, Vohs E, Ganoung A, Garvert O, Hoffman D	17-10S-17W 18-10S-17W	400	560	L-KC	3500	75	9	0	0	0	Yes
16341	Riffe	Sierra Petroleum Co.	(W) Riffe Unit	Riffe, Dryden, Desmarteau	4-7S-19W 5,8-7S-19W 9-7S-19W	460	0	L-KC + Tor	3180	7	9	0	0	0	Yes
16831	Simons	Thornton E. Anderson	(P) Simons Lease	Simons	11-7S-17W	60	0	L-KC + Top	2758	20	2	0	0	0	Yes
16056	Trico	Cities Service Oil Co.	(W) Trico L-KC Arbuckle Unit	Trico L-KC Arbuckle Unit	33-10S-20W	280	0	L-KC + Arb	3580	24	8	0	0	5	Yes
7906*	Trico	Colorado Oil Co.	(P) Williams Lease	Williams	27-10S-20W	0	50	L-KC	3400	200	1	0	0	0	Yes
13998	Trico	Kaiser-Francis	(D) Williams	Williams	28-10S-20W	80	0	Arb	3747	6- 11	2	0	0	0	Yes
10794	Trico	Murfin Drilling Co.	(P) Briggs	Briggs	34-10S-20W	40	20	L-KC	3500	37	1	0	0	0	Yes
12298	Vohs	Atlantic Richfield Co.	(W) H.J. Vohs "A"	H.J. Vohs "A"	13-10S-19W	120	--	L-KC	3280	32	5	0	0	0	Yes
13602	Vohs	Clinton Oil Co.*	(W) Felix Senecal	Felix Senecal	12-10S-19W	40	0	Lans	3303	105	1	0	0	0	Yes
14335	Webster	Phillips Petroleum Co.	(W) Fidelis Lse.	--	33-8S-19W	100	0	L-KC	3180	20	4	0	0	0	Yes
10080	Westhusin	Atlantic Richfield Co.	(W) Robert J. McClay	Robert J. McClay	12-9S-17W	80	--	L-KC	3130	254	4	1	0	0	Yes
13645	Westhusin	Harold Krueger	(P) Colahan	Colahan, Dougherty B	18-9S-16W	80	0	KC	3150	3- 5	3	1	0	0	Yes
13647	Westhusin	Harold Krueger	(P) Mary Dougherty	Mary Dougherty	13-9S-17W	120	0	KC	3150	3- 6	8	0	0	0	Yes
10108	Westhusin	Terra Resources, Inc.	(D) Westhusin	Westhusin Unit, J. Westhusin, Baxa, Dora Smith, McClay	11-9S-17W 12-9S-17W	80	70	L-KC	3130	20	10	4	0	0	Yes
6557	Zurich	Veeder Supply & Devel.	(D) Casey	Casey	35-10S-19W	160	--	L-KC	3300	*	1	0	0	0	Yes
6581	Zurich	Veeder Supply & Devel.	(D) McCullough	Johnson "A", McCullough, Johnson "B"	26-10S-19W 35-10S-19W	380	--	L-KC	3300	*	3	0	0	0	Yes
17039	Zurich Townsite	Cities Service Oil Co.	(W) Zurich Townsite Unit	Zurich Townsite Unit	27-9S-19W	560	0	Tor + L-KC	3360	50	7	1	0	0	No*
ROOKS COUNTY TOTALS (Reported)						12,799	3,851				340	40	1	15	

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water in: bbl/well/day	Injected-water data			Date first ini.	Primary production mechanism	Primary oil-water ratio	API grav., deg.	Oil visc., cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks	
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.						Type	Water Injection	Oil recovered by secondary methods	Total 1973			Cum. 12-31-73
15302	1	0	0	0	Irreg	0	96	Prod	--	--	T	1970	S Gas	1/6.9	33	--	35,050	220,516	2,622	13,230	34,559	#=1973 Primary and Secondary Production
15529	3	0	0	0	Peri	200	--	Prod + Dakota	922	248	T	1969	Wat	4/6	35	--	675,000	1,379,692	14,728	28,245	321,291	*Was O.A. Sutton *Was Kathol Petroleum #33,928
9412	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*Not active in 1973
16628	1	0	0	1	Irreg	0	108	Prod	--	--	U	1972	Gas Exp	9/226	27	--	7,001	7,001	0	0	235,888	*First inj., 11-30-72 #3,697
12517	0	2	--	--	Peri	0	0	Prod + Dakota	700	100	T	1966	S Gas	8/2	29	--	0	296,750	0	7,400	--	*Proj. not started #54,700
15992	0	--	--	--	Irreg	0	0	Prod + L-KC	3480	10	T	--	S Gas + Wat	1/3	29	--	0	--	0	0	0	*Proj. not started #4,875
9848	0	1	0	0	--	--	--	Prod + L-KC	3440	12	--	1968	S Gas	2/20	29	--	0	407,710	0	1,835	288,081	#5,193
10570	--	--	--	--	Peri	Vac	450	Prod + Arb	3770	10	U	1969	S Gas	--	33	--	164,250	1,075,075	865	31,557	499,431	#3,258
16483	4	0	0	0	Peri	57	289	Prod + Cheyenne	690	62	T	1972	S Gas	27/167	35	--	381,792	491,637	23,684	47,008	364,022	
11849	7	0	0	0	Irreg	105	533	Prod	--	--	U	1965	Wat + S Gas	1/4.3	35	10	1,362,010	8,406,875	91,153	758,340	1,638,542	#98,742
15389	1	0	0	0	Peri	0	137	Prod	--	--	T	1969	Grav	6/4	30.4	--	50,354	243,654	1,795	13,135	80,386	#3,490
11302	1	0	0	0	Irreg	--	361	Prod	--	--	T	1965	Grav	--	29	--	131,958	510,620	9,418	255,475	255,475	*Was Westrans Petroleum
15129	3	--	--	--	Peri	10	180	--	--	--	T	--	S Gas	3/20	36	--	220,000	598,552	4,240	12,404	248,878	*Purch. 6-1-73 from CSO
15855	5	0	0	0	5-spot	1025	292	Prod + Dakota	700	300	T	1966	Grav	3/1	34	5	533,664	5,728,050	46,089	631,529	631,529	
12384	5	0	0	0	5-spot	690	335	Prod + Dakota	700	300	T	1967	Grav	3/1	34	6	366,497	1,718,564	28,154	281,521	281,521	
13187	3	0	0	0	5-spot	740	45	Prod	--	--	T	1968	Grav	3/1	34	5	92,923	1,458,382	9,238	112,414	112,414	
14009	2	0	0	0	5-spot	740	45	Prod	--	--	T	1968	Grav	3/1	34	5	92,923	1,458,382	9,238	112,414	112,414	
16341	2	0	0	0	Line	500	620	Prod + Cheyenne	945	50	T	1972	Grav	17/83	34.5	--	242,235	372,666	--	--	37,571	#22,425
16831	1	0	0	0	Irreg	150	70	Prod	--	--	U	1973	S Gas	3/7	38	--	25,000	25,000	2,000	2,000	78,000	#13,972
16056	5	0	0	0	Peri	500	255	Prod + Dakota	650	40	T	1972	S Gas	34/94	31	--	617,064	976,341	26,604	69,090	1,094,224	
7906	1	0	0	0	Irreg	100	87	Prod	--	--	U	1960	Wat	--	30	--	31,819	993,367	0	15,692	--	*Primarily SWD #5,877
13998	2	0	0	0	--	Grav	35	Prod	--	--	U	1968	Gas Exp	--	29.5	--	43,800	110,134	0	0	285,004	#7,052
10794	1	0	0	0	Irreg	Vac	75	Prod	--	--	T	1964	S Gas + Grav	6/4	28	--	27,375	169,965	--	--	64,729	#3,252
12298	2	0	0	0	Irreg	200	600	Prod + Arb	3596	6	U	1966	Gas Exp + Grav + Wat	32/68	34	--	457,155	2,873,200	21,401	188,955	200,779	
13602	1	0	0	0	Irreg	0	95	Prod	--	--	T	1967	S Gas	1/5.8	35.5	--	34,637	265,187	7,462	63,151	353,120	*Was Pan American
14335	2	0	0	0	5-spot	0	170	Prod + Cedar Hills	830	--	U	1968	S Gas	1/6.3	36	9	124,506	787,532	0	2,003	301,965	#5,166
10080	4	0	0	0	Irreg	Vac	425	Prod	--	--	U	1963	S Gas	4/10	35	--	760,553	8,434,744	13,281	272,771	1,020,997	
13645	1	0	0	0	Line	Vac	110	Prod	--	--	T	1967	S Gas	8/2	37	--	37,043	378,975	3,260	18,816	181,318	#9,780
13647	1	0	0	0	Irreg	Vac	290	Prod	--	--	T	1967	S Gas	7/3	37	--	105,562	592,131	4,978	42,756	232,213	#14,933
10108	3	1	0	0	Irreg	201	481	Prod	--	--	T	1963	S Gas	34/66	35.6	--	526,524	6,413,596	32,628	422,943	1,293,970	
6557	1	0	0	0	Line	0	50	Prod + Dakota	600	150	T	1958	S Gas	1/10	31	--	18,250	471,036	--	14,469	14,469	*4 zones 25 ft. #647
6581	1	0	0	0	4-spot	0	150	Prod + Dakota	698	150	T	1958	S Gas	2/5	32	--	54,750	689,165	--	77,214	77,214	*4 zones 25 ft. #3,344
17039	0	0	0	0	Peri	0	0	Prod + Other not indicated	--	--	M	--	S Gas	1/7	--	--	0	0	0	0	419,015	*Proj. not started #7,116
144	31	3	4														16,051,243	123,937,018	718,558	9,715,949	22,819,462	

TABLE 1—ENHANCED OIL RECOVERY PROJECTS, 1973—Continued

Kansas Geol. Survey Energy Resource Series 3, 1974

County	Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been continuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
RUSH COUNTY																
	16776	Basgall West	Clinton Oil Co.	(W) D.R. Roth	D.R. Roth	4-16S-17W	70	0	L-KC	3200	13	3	0	0	0	No*
	16358	Pleasant View	Frontier Oil Co.	(P) Basgall-Burgardt-Urban "J"	Basgall "C", Urban "J", Burgardt "A"	10-16S-17W 14-16S-17W 15-16S-17W	480	0	L-KC	3300	6	5	0	0	0	Yes
RUSH COUNTY TOTALS (Reported)							550	0				8	0	0	0	
RUSSELL COUNTY																
	14534	Baxter	Cities Service Oil Co.	(W) Baxter "A"	Baxter "A"	33-14S-15W	24	0	Tor + L-KC	3082 3118	28	2	0	0	0	Yes
	12723	Davidson	Duke Drilling Co.	(D) Pelz-Schreiber	Pelz-Schreiber	34-15S-11W	0	0	Lans	3045	4	3	-	0	0	Yes
	14451	Eulert	Atlantic Richfield Co.	(W) Eulert Unit	Eulert Unit	35-11S-15W	400	100	Top + L-KC	2990	14-30	9	0	0	0	Yes
	16754	Eulert West	Shields Oil Prod., Inc.	(D) Eulert	Eulert	34-11S-15W	80	0	Arb	3260	10	1	0	0	0	Yes
	11553	Fairport	Aylward Drilling Co.	(P) Booth	Booth	32-11S-15W	80	0	L-KC	2850	22	6	0	0	0	Yes
	4976	Fairport	Clinton Oil Co.*	(W) Frank H. Booth	Frank H. Booth "A"	32-11S-15W	80	0	Dodge + Lans	2875	10	3	0	0	0	Yes
	15009	Fairport	Clinton Oil Co.*	(W) Ed Oswald Unit	Ed Oswald	8-12S-15W	130	30	Lans	2911	31	13	0	0	0	Yes
	14502*	Fairport	John O. Farmer, Inc.	(-) Fairport Water-flood	C. Miller, Driscoll	20-12S-15W	160	--	L-KC	--	--	--	-	-	-	--
	11438	Fairport	Harold Krueger	(P) Reich, Keeney & Meckel Unit	Reich, Keeney, Meckel A, Meckel B	28-12S-15W 29-12S-15W	85	0	KC	2975	3-6	15	0	0	0	Yes
	12911	Fairport	Louis M. Mai Oper.	(W) Beller Water Flood	Beller "A", Beller "C", Beller "B"	10-12S-15W 15-12S-15W 16-12S-15W	160	20	L-KC	2970	6	11	0	0	0	Yes
	13149	Fairport	Louis M. Mai Oper.	(W) Sutton "B"	Sutton "B"	9-12S-15W	80	0	L-KC	2961-2963 2986-2988	6	6	0	0	0	Yes
	16012	Fairport	Louis M. Mai Oper.	(W) Milke-Krug	Milke, Krug	20-12S-15W	120	0	L-KC	3000	6	10	0	0	0	Yes
	15693	Fairport	R.P. Nixon Oper.	(D) Gibbs	Gibbs	20-12S-15W	160	0	L-KC	3001	30	3	4	0	0	Yes
	17122	Fairport	Shields Oil Prod., Inc.	(W) Holland Water-flood	Holland	17-12S-15W	80	--	L-KC	3000	20	3	0	0	0	No*
	13056	Fairport	Sohio Petroleum Co.	(W) Deckert	Deckert	30-12S-15W	46	--	L-KC	3020	36	3	1	0	0	Yes
	13057	Fairport	Sohio Petroleum Co.	(W) Rusch "A"	Rusch "A"	19-12S-15W	50	--	L-KC	3020	36	2	2	0	0	Yes
	13058	Fairport	Sohio Petroleum Co.	(W) Rusch "B"	Rusch "B"	19-12S-15W	29	--	L-KC	3020	36	3	0	0	0	Yes
	16180	Fairport	Sohio Petroleum Co.	(W) Oswald Wilcox Coop	Sutton A, Sutton B, Ed Oswald A, Ed Oswald B, Oswald Wilcox A, C.C. Oswald, Oswald Wilcox B, American Investment Co.	5-12S-15W 8-12S-15W 17-12S-15W	--	--	L-KC	2954	--	37	5	0	0	--
	6472	Fairport	Texaco Inc.	(W) P. Jacobs	P. Jacobs	31-12S-15W	155	--	Lans	3000	34	5	-	0	-	Yes
	13775	Gorham	Am. Petrofina Co. of Texas*	(P) Boxberger	Boxberger	32-13S-14W	0	50	L-KC	3042	12	0	0	0	0	Not
	13077	Gorham	C.L. Hanes	(P) VonFeldt	VonFeldt	6-15S-14W	80	0	KC	2964	5	2	0	0	0	--
	9137	Gorham	Home-Stake Prod. Co.	(W) Gorham Water-flood	Carter, Linenberger, Baxter, Mermis "C" & "D", Mills "B", Witt "D", Foster "A", Foster "B", Witt E, Marg Dortland, Mermis "B", J. Dortland, Dortland "C"	32,33-13S-15W 3,4-14S-15W 4,5-14S-15W	1080	720	L-KC	3050	28	30	1	0	0	Yes

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water ini. bbl/well/day	Injected-water data			Date first in.	Primary production mechanism	Primary oil-water ratio	API grav., deg.	Oil visc., cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks		
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.						Type	Water Injection		Oil recovered by secondary methods				
																	Total 1973	Cum. 12-31-73	Total 1973			Cum. 12-31-73	
																				#=1973 Primary and Secondary Production			
16776	1	0	0	0	Line	968	130	Prod + Dakota	268	75	M	1973	S Gas	9/1	35.3	--	29,644	29,644	0	0	119,891	*Proj. Started in May, 1973	
16358	1	0	0	0	Irreg	0	100	Prod	0	0	U	1972	S Gas	9/1	36	--	36,500	73,000	2,290	4,845	14,054	#38,360 #6,548	
	<u>2</u>	<u>0</u>	<u>0</u>	<u>0</u>													<u>66,144</u>	<u>102,644</u>	<u>2,290</u>	<u>4,845</u>	<u>133,945</u>		
14534	1	0	0	0	Irreg	0	10	Prod	--	--	-	1968	S Gas	8/6	32.2	--	842	21,203	0	2,555	37,517	#2,992	
12723	1	-	0	-	Irreg	0	230	Prod	--	--	U	1966	S Gas	--	37	--	83,950	528,300	0	--	47,960	#2,161	
14451	7	0	0	0	Peri	Vac	650	Prod + Arb + L-KC	3290	14-400	U	1968	S Gas	104/771	38.8	--	1,465,179	7,019,221	49,852	251,258	327,224		
16754	1	0	0	0	Irreg	0	300	Prod	--	--	U	1972	Wat	--	33	--	108,000	135,000	0	0	6,436	#6,436	
11553	1	0	0	0	Irreg	Vac	400	Prod	--	--	T	1965	S Gas	--	32	--	146,000	1,504,650	10,270	96,039	297,343		
4976	1	1	0	0	Irreg	0	268	Prod	--	--	U	1956	S Gas	1/4.1	33.4	--	97,676	2,852,319	8,274	263,876	1,024,843	*Was Pan American	
15009																							
11344	4	0	0	0	Irreg	150	540	Prod + Dakota	325	233	U	1964	S Gas	2.6/1	35.7	--	790,469	5,268,633	42,506	325,992	3,091,087	*Was Pan American	
14502	-	-	-	-	--	--	--	--	--	--	-	--	--	--	--	--	--	--	--	--	--	*Waterflood inactive	
11438	3	0	0	0	Line	0	175	Prod	--	--	T	1962	S Gas	8/2	35-39	--	194,686	1,785,154	11,279	229,657	599,441	#22,558	
12911	4	0	0	0	Irreg	400	206	Prod	--	--	T	1966	S Gas	1/2	36	--	299,274	2,058,917	23,135	227,041	1,120,165	#25,705	
13149	1	0	0	0	Irreg	500	457	Prod	--	--	T	1970	S Gas	2/1	37.6	--	166,779	385,613	10,307	38,067	158,656	#13,957	
16012	2	0	0	0	Irreg	0	362	Prod	--	--	T	1971	S Gas	1/4	36	--	264,547	513,982	8,412	16,793	364,452	#16,412	
15693	0	0	0	0	Irreg	0	478	Prod	--	--	U	1970	S Gas	6/4	38	--	174,470	486,965	10,727	35,201	--	#21,453	
17122	2	0	0	0	Irreg	--	--	Dakota Cheyenne	400	100	T	1974	S Gas	--	34	--	--	--	--	--	--	6,631	*Proj. started 2-4-74 #6,631
13056	1	0	0	0	Irreg	0	277	Prod + Fr	409	24	M	1967	S Gas	1/15	34.9	--	100,974	732,649	15,629	65,114	163,877*	*Data from start of flood	
13057	1	0	0	0	Irreg	0	408	Prod + Fr	409	24	M	1967	S Gas	1/14	37.8	--	144,851	643,610	12,082	90,236	141,308*	*Data from start of flood	
13058	2	0	0	0	Irreg	0	337	Prod + Fr	409	24	M	1967	S Gas	1/11	38.6	--	246,157	1,358,945	8,857	35,991	60,937*	*Data from start of flood	
16180	1	0	0	0	Irreg	0	204	Prod	--	--	T	1972	S Gas	1/11	37	--	74,478	138,911	36,843	62,843	211,693*	*Data from start of flood #142,954	
6472	1	-	0	-	--	--	395	Prod	--	--	U	1958	S Gas	3000/223	33	--	144,369	5,569,767	19,868	281,599	454,673		
13775	0	0	0	-	Irreg	200	113	Prod + Arb	3291	16	U	1967	S Gas	1/29	30.9	--	13,570	979,531	0	0	318,071	*Was El Dorado Refg. Co. +P&A, 9-73 #212 #16,755	
13077	1	0	0	0	Peri	600	470	Prod	--	--	T	1966	--	66/33	34	--	660,800	--	8,754	--	--		
9137	11	1	0	0	5-spot	360	728	Prod	--	--	T	1962	S Gas	--	36	--	2,924,313	43,926,498	65,980	1,967,337	1,967,337		
9846																							

County	Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has int. been continuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
RUSSELL COUNTY (cont.)																
	11631	Gorham	Okmar Oil Co.	(W) Rexroat Coop	Rusch Seeley, Hummel, Rexroat B, Rusch, Rexroat C, Solbach S, Solback N, Solbach E	30-14S-14W	--	--	L-KC	3235	12	3	0	0	0	Yes
	12345	Gorham	Okmar Oil Co.	(W) Vaughn	Vaughn	17-14S-14W	90	0	L-KC	3180	8	5	1	0	0	Yes
	1354	Gorham	Phillips Petroleum Company	(W) Carroll Lse.	--	18-14S-14W	70	0	L-KC	3100	50	4	1	0	0	Yes
	4105	Gorham	Terra Resources, Inc.	(P) Reinhardt	Reinhardt "D"	19-14S-14W	50	80	L-KC	3055	18	2	1	0	0	Yes
	4098	Gorham	Texaco Inc.	(W) D. Brandenburg	D. Brandenburg	20-14S-14W	160	--	Lans	3100	--	1	-	0	-	Yes
	10618															
	7370	Gorham	Roy Vonfeldt*	(W) Dumler Unit	Dumler Unit	11-14S-15W	160	0	KC	3033	--	4	3	0	-	Yes--
	6968	Hall-Gurney	Am. Petrofina Co. of Texas*	(W) Tarkio Unit	Ehrlich "B", Rein "C", Rein "F"	17-14S-13W 20-14S-13W	210	0	Tarkio	2315	10	9	5	0	0	Yes
	9395	Hall-Gurney	Am. Petrofina Co. of Texas*	(W) J. Blehm	J. Blehm	11-14S-14W	160	0	Tarkio	2380	10	3	0	0	0	Yes
	9516	Hall-Gurney	Am. Petrofina Co. of Texas*	(W) Rein	G. Rein, H. Rein, G. Rein	17-14S-13W 19-14S-13W 20-14S-13W	320	120	Tarkio	2410	10	5	0	0	0	Yes
	14923	Hall-Gurney	Am. Petrofina Co. of Texas*	(D) Kuhnle	Kuhnle	4-15S-12W	80	0	L-KC	2953	28	2	0	0	0	Yes
	4543	Hall-Gurney	Aylward Drilling Co.	(P) Holl "A"	Holl "A"	22-14S-14W	60	40	L-KC	3000	22	7	0	0	0	Yes
	7165	Hall-Gurney	Aylward Drilling Co.	(P) Herbel "B"	Herbel "B"	26-14S-14W	80	0	L-KC	2924	20	3	0	0	0	Yes
	7167	Hall-Gurney	Aylward Drilling Co.	(P) J. Boxberger	J. Boxberger	26-14S-14W	80	0	L-KC	2292	18	4	0	0	1	Yes
	7946	Hall-Gurney	Aylward Drilling Co.	(P) Holl "A"	Holl "A"	22-14S-14W	10	50	Tarkio	2425	22	7	0	0	0	Yes
	7947	Hall-Gurney	Aylward Drilling Co.	(P) Holl "B" Lse.	Holl "B"	22-14S-14W	80	10	Tarkio	2425	22	1	0	0	0	Yes
	7950	Hall-Gurney	Aylward Drilling Co.	(P) Holl "B" Lse.	Holl "B"	22-14S-14W	140	20	L-KC	2950	22	9	0	0	1	--
	9425	Hall-Gurney	Aylward Drilling Co.	(D) Anschutz	Anschutz	21-14S-14W	150	10	L-KC	3127	20	8	0	0	0	Yes
	13157	Hall-Gurney	Aylward Drilling Co.	(P) Holl "C"	Holl "C"	21-14S-14W	80	0	L-KC	3027	60	4	0	0	0	Yes
	15814	Hall-Gurney	Carl W. Boxberger	(D) Boxberger B	Boxberger B	14-14S-14W	160	0	L-KC	3000	200	4	0	0	0	Yes
	2030	Hall-Gurney	Cities Service Oil Co.	(W) Hall-Gurney	Ebel "A", Ebel "B", Strecker "B"	24-14S-14W 36-14S-14W	259	191	L-KC	2880	66	10	3	0	6	Yes
	4724															
	4738															
	7524															
	2328	Hall-Gurney	Cities Service Oil Co.	(W) Carter-Graham	Graham, Carter	28-14S-13W 29-14S-13W	150	30	L-KC	2880	23	3	1	0	0	Yes
	6101	Hall-Gurney	Cities Service Oil Co.*	(-) Kastrup	Kastrup	15-15S-12W	160	--	--	--	--	-	-	-	-	--
	16582	Hall-Gurney	Cities Service Oil Co.	(D) Weimeister	Weimeister	25-14S-13W	120	0	L-KC + Tarkio	2862	26	0	0	0	0	--
	4587	Hall-Gurney	Clinton Oil Co.	(W) Krug-Olson	Frederick Krug "A", Frederick Krug "B", Jerry E. Driscoll, A.J. Olson "A", A.J. Olson "C", A.J. Olson "B"	27-14S-14W	640	0	L-KC	3000	136	22	3	0	0	Yes
	4595															
	14620															
	5437	Hall-Gurney	Clinton Oil Co.*	(W) Ben Rein	Ben Rein	28-14S-14W 25-14S-14W	160	0	L-KC + Tarkio	2950	20	6	1	0	0	Yes
	8926															
	12386	Hall-Gurney	Clinton Oil Co.*	(W) Solomon Boxberger	Solomon Boxberger	10-14S-14W	160	0	L-KC	2290	60	10	0	0	0	Not
	12387	Hall-Gurney	Clinton Oil Co.*	(W) C.L. Newcomer	C.L. Newcomer	10-14S-14W	160	0	L-KC	3000	60	5	0	0	0	Yes
	9985	Hall-Gurney	Colorado Oil Co.	(W) Weimaster-LKC	Weimaster	36-14S-13W	40	40	L-KC	2850	150	1	1	0	0	Yes
	4592	Hall-Gurney	Continental Oil Co.	(W) Hall Lansing	Wm. Letsch, A.C. Rogg, R.S. Hall, R. Lepprand	26-14S-13W 35-14S-13W	275	--	L-KC	2800	20	10	7	0	0	Yes
	9407	Hall-Gurney	Continental Oil Co.	(W) Rein Area	H. Rein, H. Rein "A"	27-14S-13W	160	0	L-KC	2860	13	4	0	0	0	Yes
	14758	Hall-Gurney	Continental Oil Co.	(W) Hall Tarkio	R.S. Hall, Wm. Letsch	26-14S-13W	80	0	Tarkio	2250	9	5	0	-	0	Yes
	9693	Hall-Gurney	Dreiling Oil, Inc.	(D) Krug	Krug	4-14S-14W	160	0	L-KC	--	--	4	-	-	-	Yes
	10265	Hall-Gurney	Dreiling Oil, Inc.	(-) H. Boxberger	--	3-14S-14W	160	0	--	--	--	5	-	-	-	Yes
	9963*	Hall-Gurney	Carl A. Dumler	(-) --	Graham	21-14S-13W	--	--	--	--	--	-	-	-	-	--
	9974*	Hall-Gurney	Carl A. Dumler	(-) --	Dumler	16-14S-13W	--	--	--	--	--	-	-	-	-	--
	9415	Hall-Gurney	John O. Farmer, Inc.	(P) Rein Waterflood	Rein	27-14S-13W	80	--	L-KC	2850	6	4	-	-	-	Yes
	10485	Hall-Gurney	John O. Farmer, Inc.	(P) Kaps	Kaps	32-14S-12W	120	20	L-KC	2910	10	3	1	-	-	Yes

Oros and Suite—Enhanced Oil-Recovery Operations in Kansas, 1973

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl/well/day	Injected-water data			Date first inj.	Primary production mechanism	Primary oil-water ratio	API grav. deg.	Oil visc. cp @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks		
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.						Type	Water Injection		Oil recovered by secondary methods				
																	Total 1973	Cum. 12-31-73	Total 1973			Cum. 12-31-73	
#=1973 Primary and Secondary Production																							
11631	1	0	0	0	Irreg	375	135	Prod + Arb	3160	5	U	1965	S Gas	--	34	--	49,275	2,242,208	4,650	44,249	1,499,103	#24,208	
12345	-	-	-	-	Peri	550	1750	Prod	--	--	U	1966	S Gas	--	40	--	638,750	5,382,071	10,356	156,129	657,524		
1354	3	0	0	0	--	0	676	Prod	--	--	U	1957	S Gas	1/11.5	41	5	740,570	9,804,539	13,776	350,866	1,221,290		
4105	1	1	0	0	Irreg	Vac	1733	Prod	--	--	T	1954	S Gas	42/58	38.9	--	632,698	8,065,579	8,427	294,021	1,092,455		
4098	2	-	0	-	Peri	80	262	Prod	--	--	U	1954	S Gas	759/	34	--	191,251	6,919,127	6,178	219,820	258,166	#6,393	
10618																							
7370	1	-	-	1	Line	0	275	Prod + Gorham	3300	--	T	1969	Grav	1/6	38	--	91,800	--	--	--	--	*Was Sun Oil Co. #4,987	
6968	4	7	0	0	Irreg	1350	230	Prod + Dakota	356	30	U	1967	S Gas	1/3	41	--	334,913	4,480,136	9,243	64,203	64,203	*Was El Dorado Refg. Co.	
9395	1	0	0	0	5-spot	1200	406	Prod + Dakota	336	25	U	1962	S Gas	1/9	36	--	148,056	988,981	1,687	22,949	79,985	*Was El Dorado Refg. Co.	
9516	3	2	0	0	5-spot	800	181	Prod + Dakota	232	50	U	1962	S Gas	1/5	38	--	198,535	3,468,449	4,780	182,535	567,042	*Was El Dorado Refg. Co.	
14923	1	0	0	0	Irreg	810	117	Prod + Gorham	3204	4	U	1969	S Gas	1/6	38.3	--	42,876	199,476	6,357	17,972	356,755	*Was El Dorado Refg. Co.	
4543	4	0	0	0	Irreg	350	386	Prod	--	--	T	1954	S Gas	--	37	--	563,738	981,885	16,904	830,853	990,961		
7165	1	0	0	0	Irreg	490	72	Prod	--	--	T	1959	S Gas	--	38	--	26,153	408,451	3,656	85,036	99,368		
7167	1	0	0	0	Irreg	200	791	Prod	--	--	T	1959	S Gas	--	39	--	288,885	2,226,658	17,981	208,087	220,276		
7946	1	0	0	0	Irreg	100	470	Prod	--	--	T	1957	S Gas	--	37	--	171,708	372,901	1,200	48,846	48,846		
7947	1	0	0	0	Irreg	450	308	Prod + Dakota	275	65	T	1960	S Gas	1/1	37	--	112,417	1,026,450	3,200	36,210	69,200		
7950	2	0	0	1	Irreg	500	632	Prod + Dakota	275	65	T	1970	S Gas	--	37	--	461,429	1,375,462	14,335	482,216	571,060		
9425	1	0	0	0	Irreg	840	559	Prod	--	--	T	1962	S Gas	--	38	--	203,869	1,854,554	7,440	51,026	72,540		
13157	2	0	0	0	Irreg	1000	332	Prod + Cheyenne	175	90	M	1966	S Gas	1/1	37	--	242,104	1,048,692	20,931	316,303	526,633		
15814	2	0	0	0	Irreg	1100	350	Prod	--	--	U	1970	S Gas	1/5	--	38	127,750	182,950	2,200	5,561	379,914	#3,224	
2030	6	0	0	2	Peri	590	651	Prod	--	--	T	1948	S Gas	18/10	39	--	1,464,726	19,306,742	40,434	1,416,791	3,170,656		
4724																							
4738																							
7524																							
2328	2	1	0	0	Irreg	640	150	Prod + Dakota	300	--	M	1950	S Gas	1/1	37	--	144,612	2,963,559	4,939	489,799	1,195,637		
6101	-	-	-	-	--	--	--	--	--	--	-	--	--	--	--	--	--	--	--	--	--	*Purch. from Theodore Gore 8-1-73	
16582	0	0	0	0	Irreg	0	0	Prod	0	0	F	1972	S Gas	25/15	39.1	--	0	0	0	0	0	219,374	#8,250
4587	10	2	0	2	Irreg	950	399	Prod	--	--	U	1953	S Gas	1/.25	37.4	--	1,601,082	13,383,999	165,381	3,672,399	5,804,283	#212,703	
4595																							
14620																							
5437	2	0	0	0	Irreg	525	269	Prod	--	--	U	1957	S Gas	1/6.1	37.7	--	196,593	3,211,984	6,584	341,774	1,043,908	*Was Pan American	
8926																							
12386	2	1	0	1	Irreg	875	511	Prod	--	--	U	1966	S Gas	1/3.3	37.2	--	186,573	2,374,094	15,796	322,802	1,251,065	*Was Pan American †Water inj. ended 8-73 #23,292	
12387	1	1	0	0	Irreg	1000	453	Prod	--	--	U	1966	S Gas	1/1.5	37.6	--	165,435	1,768,584	12,148	103,588	690,144	*Was Pan American	
9985	1	0	0	0	Irreg	240	546	Prod	--	--	U	1963	Wat	20/66	37	--	199,375	2,184,522	1,389	39,182	--	#2,677	
4592	7	3	0	0	Irreg	1300	75	Water Sd + Granite	40-26	25-40	F	1956	S Gas	--	39.2	--	515,895	7,586,335	24,099	799,929	869,188		
9407	4	0	0	0	Irreg	550	338	Cheyenne	88	242	U	1972	S Gas	--	38.9	--	786,928	4,506,081	8,547	319,609	466,423	#16,773	
14758	2	0	-	0	--	800	150	Water Sd	40	26	F	1969	S Gas	--	37	--	111,635	525,447	7,453	28,307	46,095	#8,176	
9693	1	-	-	-	--	0	1300	Prod	--	--	T	1962	S Gas	--	40	--	460,000	4,090,000	9,795	477,995	477,995		
10265	1	-	-	-	--	0	1396	Prod	--	--	T	1962	S Gas	--	37	--	120,000	3,629,000	10,390	519,930	519,930		
9963	-	-	-	-	--	--	--	--	--	--	-	--	--	--	--	--	--	--	--	--	--	*Temp. Abd.	
9974	-	-	-	-	--	--	--	--	--	--	-	--	--	--	--	--	--	--	--	--	--	*Temp. Abd.	
9415	1	-	-	-	Irreg	650	400	Prod	--	--	U	1962	Grav	1/3	37	--	115,821	1,940,781	5,600	--	--	#8,220	
10485	2	-	-	-	Irreg	300	800	Prod	--	--	U	1964	Grav	1/8	38	--	381,450	3,708,255	5,000	--	207,411	#7,980	

County Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been con- tinuous?
						Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
RUSSELL COUNTY (cont.)															
16068	Hall-Gurney	John O. Farmer, Inc.	(P) Smoky Unit Flood	Cook (CS), Kuhnle (JOF), Kuhnle (Sohio), Major (Shelburne)	4-15S-12W	560	--	L-KC	2990	5	17	-	-	1	Yes
4032	Hall-Gurney	Theodore Gore	(P) Boxberger SWDS	Gurney "A", Gurney "B", J. Boxberger	23-14S-14W 26-14S-14W	480	0	L-KC Tarkio	3000 2300	100 100	14	0	0	0	Yes
4499															
13980															
12581	Hall-Gurney	Theodore Gore	(P) Kaufman "B"	Kaufman "B", Luerman	22, 27-15S-12W 28-15S-12W	320	0	L-KC	2774	300	6	0	-	0	Yes
13036	Hall-Gurney	Theodore Gore	(P) Ruby A	Ruby A	36-14S-13W	80	0	L-KC	2835	90	3	0	-	0	Yes
16088	Hall-Gurney	Theodore Gore	(P) Miller	Miller	15-15S-12W	160	--	L-KC	2865	100	2	0	-	0	Yes
16112	Hall-Gurney	Theodore Gore	(P) Weber	Weber, Luerman	28-15S-12W	200	--	L-KC	3000	150	2	0	-	0	Yes
8293	Hall-Gurney	Gulf Oil Corp.	(W) Fink	Fink	15-14S-14W	160	0	L-KC	3000	--	3	-	0	-	Yes
12992	Hall-Gurney	Gulf Oil Corp.	(W) Abraham Heard	Abraham Heard	30-14S-12W	160	0	L-KC	2850	--	2	0	0	0	No*
15078	Hall-Gurney	J.J. Hall Operating Co.	(P) Miller	Elizabeth Miller #1,A,B,C,D,E,F; Guy O. Miller A,B,C,D; Lavon Miller A	30, 31-14S-13W	320	0	L-KC	2859	25	8	0	0	0	Yes
7366	Hall-Gurney	Jayhawk Well Service, Inc.	(D) Michel B	Michel B	2-15S-14W	160	--	KC	2900	4	3	-	-	-	Yes
8456	Hall-Gurney	Jayhawk Well Service, Inc.	(D) Cody	Cody	16-14S-14W	160	--	KC	2900	4	6	-	-	-	Yes
9078	Hall-Gurney	Jayhawk Well Service, Inc.	(D) Holl	Holl	21-14S-14W	80	--	KC	2900	4	4	-	-	-	Yes
11860	Hall-Gurney	Jayhawk Well Service, Inc.	(D) Holl B	Holl B	21-14S-14W	80	--	KC	2900	4	1	-	-	-	Yes
17046	Hall-Gurney	K & P Oil Co.	(D) Rusch	Rusch	33-14S-14W	160	0	Tarkio	2350	8	2	0	0	0	Yes
4691	Hall-Gurney	Kaiser-Francis*	(W) Strecker Tarkio	Strecker "A", Strecker "B"	25-14S-14W	45	115	Tarkio	2257	7	3	5	0	2	Yes
6727															
15052	Hall-Gurney	Koch Exploration Co.	(W) Ney Pool Unit	Hilgenberg, Hafeman	32-15S-12W	80	--	L-KC	3020	--	6	0	0	0	Yes
3181	Hall-Gurney	Chester Loving	(D) Michel	Henry Michel	33-14S-13W	--	--	Tarkio	3024- 3029 KC 2973- 2976	--	-	-	-	-	--
4732	Hall-Gurney	Chester Loving	(D) Carter	--	29-14S-13W	--	--	Tarkio	2269- 2289	--	-	-	-	-	Yes
5559	Hall-Gurney	Chester Loving	(D) Kepka	--	29-14S-12W	--	--	KC	2813- 3071	--	-	-	-	-	--
8115*	Hall-Gurney	Chester Loving	(-) Anschutz	--	10-15S-13W	--	--	--	--	--	-	-	-	-	--
11569*	Hall-Gurney	Chester Loving	(D) Luerman	Luerman	10-15S-13W	--	--	KC	3018	--	-	-	-	-	--
12641	Hall-Gurney	Chester Loving	(D) Henry Rein	Rein	22-14S-13W	--	--	Tarkio	2235- 2240	--	-	-	-	-	--
15865	Hall-Gurney	Chester Loving	(D) Kepka-Heim	--	29-14S-12W	--	--	KC	2840- 2866	--	-	-	-	-	--
8345	Hall-Gurney	Louis M. Mai Operations	(D) Rudiger-Shaffer	Rudiger-Shaffer	3-15S-13W	80	0	L-KC	2970	6	5	0	0	0	Yes
9091	Hall-Gurney	Louis M. Mai Operations	(W) Campbell-Graham	Graham, Campbell	21-14S-13W 22-14S-13W	240	0	Tarkio	2275	20	9	0	0	0	Yes
11296															
11301															
9417	Hall-Gurney	Louis M. Mai Operations*	(P) Wm. Letsch	Wm. Letsch	26-14S-13W	160	110	Tarkio	2280	28	5	0	0	0	Yes
13594															
11509	Hall-Gurney	Louis M. Mai Operations*	(W) Bond-Jones	Anna Bond, Jones "A"	22-14S-13W	120	20	Tarkio	2265	20	7	0	0	0	Yes
11111															
11620	Hall-Gurney	Louis M. Mai Operations*	(P) Shaffer "C"	Shaffer "C"	26-14S-13W	80	0	Tarkio	2200	8	10	0	0	0	Yes
15796	Hall-Gurney	Louis M. Mai Operations*	(W) Rogg-Rein	Rogg, Rein	27-14S-13W	120	0	Tarkio	2890 2265	25 8	3	0	0	0	Yes
13313	Hall-Gurney	Mobil Oil Corp.	(W) Smoky Hill River Unit	Marsh "C", Marsh "B", Hupfer, Trapp, Pekarek, Steinle	29-14S-12W 30-14S-12W 31-14S-12W 32-14S-12W	520	0	L-KC	2860 2880	18	20	6	0	0	Yes
8566	Hall-Gurney	Carl Motzkus*	(D) --	Major	4-15S-12W	160	0	Lans	2940	8	2	-	-	-	Yes
13536	Hall-Gurney	Murfin Drilling Co.	(P) Carter W.F.	Carter	33-14S-13W	20	0	L-KC	2868	48	1	0	0	0	Yes
11738	Hall-Gurney	NCRA	(W) Mai	Mai	34-14S-14W	20	0	Lans	2920	8	2	0	0	0	Yes
10610	Hall-Gurney	R.P. Nixon Operations	(W) Dumler	Dumler	24-14S-14W	100	0	Tarkio	2300	10	6	0	0	0	Yes
11459	Hall-Gurney	R.P. Nixon Operations	(P) Boxberger	Boxberger	2-14S-14W	20	0	L-KC	3050	25	2	0	0	0	Yes
8022	Hall-Gurney	Okmar Oil Company	(W) Bond	Bond A, Bond B	23-14S-13W	125	10	Tarkio	2275	10	4	1	0	0	Yes

Project no.	Injection Wells				Injection Pattern	Well-head press. psf	Water ini. bbl/well/day	Injected-water data				Date, first ini.	Primary production mechanism	Primary oil-water ratio	API grav., deg.	Oil visc., cp. @ 60° F	Water Injection		Oil recovered by secondary methods		Total Oil from project Pri. & sec.	Remarks		
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.	Type						Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73				
																							#=1973 Primary and Secondary Production	
16068	6	-	-	-	Irreg	650	2200	Prod + Dakota	488	90	M	1971	Grav	--	38.5	--	1,126,176	3,184,329	--	--	174,811	#42,493		
4032	3	0	-	-	Irreg	850	583	Prod	--	--	T	1955	Wat	--	37	--	638,750	2,302,530	11,571	444,336	--	#23,251		
4499																								
13980																								
12581	1	-	-	-	Irreg	750	300	Prod	--	--	T	1967	Wat	--	40	--	99,500	712,971	0	0	--	#14,563		
13036	1	0	-	0	Irreg	1025	280	Prod	--	--	T	1966	Wat	--	37	--	113,665	1,439,691	8,770	87,898	146,500	#13,703		
16088	1	0	-	0	Irreg	0	117	Prod	--	--	T	1971	Wat	--	38	--	43,700	83,335	877	1,597	7,111	#2,337		
16112	1	0	-	0	Irreg	0	215	Prod	--	--	T	1971	Wat	--	40	--	78,475	207,434	0	0	--	#4,422		
8293	3	0	3	0	5-spot	1500	258	Prod	--	--	U	1960	S Gas	--	--	--	368,418	3,129,481	7,908	127,017	127,017			
12992	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	278/ 13253	--	--	--	--	--	*Proj. not started	
15078	2	0	0	0	Irreg	875	330	Prod	--	--	T	1967	Grav	3/8	38	--	223,584	1,211,366	32,530	167,681	316,374*	#3,498 *Start of Water injection #46,470		
7366	1	-	-	-	Irreg	500	100	Prod	--	--	U	1959	Gas Exp	1/9	38.5	--	3,000	71,000	2,000	4,000	16,000	#3,000		
8456	1	-	-	-	Irreg	300	200	Prod	--	--	U	1961	Gas Exp	1/9	38.6	--	7,000	355,000	4,000	9,000	76,000	#6,000		
9078	1	-	-	-	Irreg	300	100	Prod	--	--	U	1961	Gas Exp	1/9	38.6	--	3,000	34,000	2,000	30,000	34,000	#3,000		
11860	1	-	0	-	Irreg	400	300	Prod	--	--	U	1965	Gas Exp	1/9	39.2	--	10,950	94,000	900	2,900	23,800	#1,800		
17046	1	0	0	0	Irreg	0	80	Prod	--	--	U	1973	Wat	1/3	36	--	21,600	21,600	3,589	3,589	56,382	#4,229		
4691	3	5	0	0	Irreg	820	288	Prod	--	--	U	1959	S Gas	1/12.5	38.5	--	105,120	3,830,392	6,169	33,700	252,860	*Was Sunray Oil		
6727																								
15052	2	1	0	0	Irreg	--	400	Cedar Hills	446	60	F	1969	Gas Exp	1/1	39.3	--	235,271	943,585	14,253	192,681	96,177	#20,362		
3181	-	-	-	-	--	--	--	Prod	--	--	U	--	--	--	--	--	--	--	--	--	--	--		
4732	-	-	-	-	Irreg	--	--	Prod	--	--	-	--	--	--	--	--	--	--	--	--	--	--		
5559	-	-	-	-	Irreg	--	--	Prod	--	--	U	--	--	--	--	--	--	--	--	--	--	--		
8115	-	-	-	-	--	--	--	--	--	--	-	--	--	--	--	--	--	--	--	--	--	--	*Lease has been plugged	
11569	-	-	-	-	--	--	--	Prod	--	--	-	--	--	--	--	--	--	--	--	--	--	--	*Lease has been plugged	
12641	-	-	-	-	--	--	--	Prod	--	--	U	--	--	--	--	--	--	--	--	--	--	--		
15865	-	-	-	-	Irreg	--	--	Prod	--	--	U	--	--	--	--	--	--	--	--	--	--	--		
8345	1	0	0	0	Irreg	Vac	23	Prod	--	--	T	1960	S Gas	1/4	39	--	8,395	78,710	2,587	25,319	--	#4,587		
9091	5	0	0	0	Irreg	1100	156	Prod + Dakota	294	35	T	1964	S Gas	1/4	39	--	284,796	2,101,117	11,978	138,212	381,954	#13,308		
11296																								
11301																								
9417	3	0	0	0	Irreg	700	305	Prod	--	--	T	1962	S Gas	5/24	38	--	334,135	2,469,160	3,356	98,887	--	*Was Sun Ray DX #11,186		
13594																								
11509	2	4	0	0	Irreg	0	88	Prod	--	--	T	1965	S Gas	--	38	--	64,079	1,416,058	4,182	99,289	--	*Was CRA		
11111																								
11620	2	0	0	0	Line	800	164	Prod	--	--	T	1967	S Gas	1/4	36	--	119,486	2,571,495	2,520	33,832	--	*Was Continental Oil Co. #8,398		
15796	1	0	0	0	Line	1250	94	Prod	--	--	-	1970	S Gas	1/4	36	--	34,354	204,430	4,780	11,460	--	*Was Magnolia Petroleum #15,933		
13313	7	0	0	0	Peri	1700	630	Prod + Alluvial Plains	80	20	M	1967	S Gas	--	36.4	9	1,615,498	8,763,378	79,175	917,684	--			
8566	1	-	-	-	5-spot + Irreg	100	156	Prod	--	--	U	1967	Wat + Gas	14/86	37.1	--	47,400	--	--	--	--	--	*Was Amoco Prod. Co. #4,740	
13536	1	0	0	0	Irreg	Vac	50	Prod + Tarkio	2250	8	T	1967	S Gas + Grav	73/27	37	--	18,250	88,164	2,246	13,877	--	#3,472		
11738	1	0	0	0	Irreg	650	124	Prod + Dakota	420	--	U	1965	S Gas	1/1	37.6	--	45,419	484,400	1,821	11,682	49,467	#4,931		
10610	3	0	0	0	Irreg	750	200	Prod	--	--	T	1963	S Gas	3/7	38	--	21,900	685,275	5,348	149,273	--	#16,043		
11459	1	0	0	0	Irreg	625	147	Prod	--	--	T	1964	S Gas	3/1	34	--	53,655	435,175	2,417	35,205	--			
8022	2	1	0	0	Irreg	800	125	Prod + Alluvium	80	--	M	1960	S Gas	--	36	--	91,250	1,831,856	4,695	75,210	271,975			

County Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has ini- been con- tinuous?
						Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
RUSSELL COUNTY (cont.)															
15415	Hall-Gurney	Okmar Oil Co.	(W) Boxberger A-B-D	Boxberger A-B, Boxberger D	15-14S-14W	40	0	L-KC	2980	10	6	0	0	0	Yes
5033	Hall-Gurney	Petroleum Management, Inc.	(W) Boxberger	Boxberger	22-14S-14W	70	70	L-KC	2960	20	0	0	0	0	No*
8420	Hall-Gurney	Lee Phillips Oil Co.	(W) Letsch	Letsch	34-14S-13W	160	0	L-KC	2810	20	-	0	0	0	Yes
8615								Tarkio	2240	10					
9511															
13121															
8065	Hall-Gurney	Pioneer Operations Co.	(P) Flegler	Flegler	28-14S-14W	160	0	L-KC	2950	150	1	0	0	0	Yes
1552	Hall-Gurney	Shields Oil Producers*	(W) G.C. Ehrlich	Ehrlich	32-14S-13W	160	0	KC	2800	30	3	0	1	0	Yes
6847	Hall-Gurney	Shields Oil Producers	(D) Gustason Estate	Gustason Estate, Kastrup	14-15S-12W	160	80	Toronto	2840	15	2	0	0	0	Yes
7750	Hall-Gurney	Shields Oil Producers	(W) Miller Water- flood	Miller "A"	31-14S-13W	160	0	KC	2800	30	3	0	0	1	Yes
9408	Hall-Gurney	Shields Oil Producers	(W) Rein Area Waterflood	Letsch, Rogg "E", Giese, Rogg "B"	27-14S-13W 28-14S-13W	480	80	KC	2800	25	20	1	0	0	Yes
13128	Hall-Gurney	Shields Oil Producers	(W) Rogg "G" Waterflood	Rogg "G"	29-14S-13W	80	--	KC	2800	25	2	0	0	0	Yes
13476	Hall-Gurney	Shields Oil Producers	(W) Owens "A" Waterflood	Owens "A"	34-14S-13W	80	--	Tarkio	2210	10	2	0	0	1	No*
1088	Hall-Gurney	Skelly Oil Co.	(P) T.B. Carter Lse.	T.B. Carter	33-14S-13W	160	0	L-KC	2885	10	6	0	0	0	Yes
2969	Hall-Gurney	Skelly Oil Co.*	(-) E.N. Hickey (L-KC) Waterflood	E.N. Hickey	30-14S-13W	40	0	L-KC	2891	19	1	0	0	0	Yes
2439	Hall-Gurney	Skelly Oil Co.	(W) Hall-Gurney	Ben Rein, C. Colliver, W. Opdycke	25-14S-14W 28-14S-13W 29,32-14S-13W	890	0	L-KC	2890	18	23	3	0	0	Yes
5195															
5781															
6524	Hall-Gurney	Skelly Oil Co.	(W) Hall-Gurney	E.N. Hickey*, Ben Rein	30-14S-13W 25-12S-14W	120	0	Tarkio	2250	10	4	3	0	0	No†
8010															
16911	Hall-Gurney	Skelly Oil Co.	(W) A. Ehrlich L-KC	A. Ehrlich	25-14S-15W	160	0	L-KC	2944	84	3	1	0	0	Yes
3059	Hall-Gurney	Terra Resources, Inc.	(P) C.E.P.-L.-K.C.	Clyde, Ehrlich, Phinney, Phinney "S"	19-14S-13W 30-14S-13W	300	0	L-KC	2950	8	15	2	0	0	Yes
6527															
7567															
14872															
5396	Hall-Gurney	Terra Resources, Inc.	(W) Fink	Herbert Fink, Horace Fink	15-14S-14W 15,16-14S-14W	240	0	L-KC	3020	15	8	0	0	0	Yes
7566	Hall-Gurney	Terra Resources, Inc.	(P) Berrick	Berrick	6-15S-13W	30	30	L-KC	2990	20	3	1	0	0	Yes
10571	Hall-Gurney	Terra Resources, Inc.	(P) Krug	Albert Krug, Harry Krug	9-14S-14W	40	10	L-KC	3000	45	4	0	0	0	Yes
10671															
12707															
3771	Hall-Gurney	Texaco Inc.	(-) C.W. Shaffer	C.W. Shaffer	18-14S-13W	--	--	Tarkio	--	--	1	-	0	-	*
4517	Hall-Gurney	Texaco Inc.	(W) G. Boxberger A & B	G. Boxberger "A" G. Boxberger "B"	22-14S-14W	240	--	Lans	3100	--	4	-	0	-	Yes
5073															
5858	Hall-Gurney	Texaco Inc.	(P) Keil & Schnoor	N. Schnoor, D. Keil	31-14S-13W 36-14S-14W	320	--	L-KC	2875	122	3	-	0	-	Yes
4219	Hall-Gurney	Texaco Inc.	(W) H.L. & S. Box- berger	S. Boxberger, L. Boxberger, H. Boxberger	10-14S-14W	480	--	Reagan + Lans	3050	--	13	-	0	-	Yes
4220															
4504															
5445															
10948															
10284	Hall-Gurney	Texaco Inc.	(W) Goodheart-Ruby	W.S. Goodheart, E.Z. Ruby	25-14S-13W 36-14S-13W	240	--	Lans	2900	23	10	-	0	-	Yes
10725															

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1973

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water int. bbl./well/day	Injected-water data			Date first ini.	Primary production mechanism	Primary oil-water ratio	API grav. deg.	Oil visc. cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks	
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth. ft.	Thick. ft.						Type	Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973			Cum. 12-31-73
																					#=1973 Primary and Secondary Production	
15415	2	0	0	0	Peri	400	560	Prod	--	--	U	1970	S Gas*	73/870	34	--	408,800	961,366	2,680	8,680	583,678	#17,300 *Plus dump flood
5033	0	0	0	0	--	--	--	--	--	--	-	--	--	--	--	--	0	2,524,120	0	284,756	284,756	*Shut down - to be plugged
8420 8615 9511 13121	2	0	0	0	Irreg	650	324	Prod + River Sd	70	10	M	1961	S Gas	93/7	38	--	11,690	1,811,650	52,000	495,372	2,809,425	#59,265
8065	1	0	0	0	Irreg	570	385	Prod	--	--	T	--	S Gas	4/6	39	--	140,525	--	3,100	--	--	#4,144
1552	1	0	0	0	Irreg	800	470	Prod + Dakota + Cheyenne	220	20	M	1971	S Gas	--	37	--	171,600	295,375	10,750	14,750	18,500	*Was Skelly Oil Co. #13,750
6847	1	0	0	0	Irreg	0	250	Prod + Arb	3300	100	U	1957	S Gas	--	37	--	90,000	625,000	2,500	37,000	40,000	#5,500
7750	3	0	0	0	Irreg	800	330	Prod + Dakota + Cheyenne	220	20	M	1964	S Gas	--	37	--	364,250	1,483,900	30,000	62,500	79,100	#32,450
9408	8	0	0	3	--	750	220	Prod + Dakota + Cheyenne	2800	25	T	1963	S Gas	--	39.3	--	893,900	11,854,700	50,000	1,338,000	1,449,000	#57,800
13128	2	0	0	0	Irreg	800	215	Prod + Dakota + Cheyenne	200	50	T	1967	S Gas	--	39.3	--	157,850	872,350	1,000	26,800	36,500	#1,144
13476	1	0	0	0	Irreg	450	135	Dakota + Cheyenne	220	20	T	1967	S Gas	--	37	--	49,700	675,800	2,000	52,500	76,500	*Shut down three months-- pump trouble #2,740
1088	2	0	0	0	Irreg	1350	402	Prod + Dakota + Cheyenne	200	--	T	1944	S Gas	--	34	--	293,480	1,690,554	30,779	194,758	430,676	
2969	1	0	0	0	Irreg	470	447	Prod	--	--	U	1952	S Gas	--	38.7	--	94,861	927,655	917	94,830	568,773	*Sold 8-1-73 to Arvada Oil Co.
2439 5195 5781 6524 8010 16911	16	1	0	0	Irreg	1100	253	Dakota + Cheyenne	200	--	T	1950	--	2421/3670	39	--	1,477,352	18,559,466	68,193	2,440,912	3,500,346	
	0	2	0	0	--	0	0	Prod + Dakota	200	--	T	1959	--	--	38	--	0	607,975	2,161	123,990	270,709	*Sold 8-1-73 to Arvada Oil +Waterflood failure #6,736
3059 6527 7567 14872 5396	5	1	0	0	--	1043	207	Prod + Dakota	134	30	T	1959	S Gas	358/669	32	--	86,555	86,555	0	0	425,642	#6,736
	3	0	0	0	Irreg	1446	374	Prod + Cheyenne	480	18	M	1957	S Gas	39/61	37.4	--	377,520	3,649,971	56,043	746,418	1,324,956	
7566	1	0	0	0	Irreg	Vac	695	Prod	0	0	T	1960	Wat + S Gas	53/47	37	--	410,067	4,829,371	21,577	405,913*	696,172	*Corrected figure #24,179
10571 10671 12707 3771	2	1	0	0	Irreg	1083	725	Prod	0	0	T	1963	--	11/89	36.2	--	253,497	2,519,323	4,303	138,658	272,595	
	--	--	--	--	--	--	--	--	--	--	U	1959	Wat	15/85	35.9	--	529,093	4,997,551	4,827	101,637	173,951	#8,087
4517 5073 5858	1	--	0	--	Irreg	250	575	Prod	--	--	U	1953	--	2418/8804	37	--	209,866	4,850,639	91,964	504,025	504,025	
	2	--	0	--	Irreg	--	--	Cheyenne	280	100	F	1958	Wat	--	--	--	--	--	0	--	--	#4,597
4219 4220 4504 5445 10948 10284 10725	3	0	0	--	Peri	500	214	Prod	--	--	U	1954	S Gas	73/118	36	--	233,805	8,649,719	23,871	635,465	1,888,042	
	5	--	0	--	Irreg	500	175	Prod + Arb	--	--	U	1963	S Gas	1944/3621	36	--	318,732	7,056,853	17,043	377,569	503,807	

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1973—Continued

Kansas Geol. Survey Energy Resource Series 3, 1974

County	Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has ini- been con- tinuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
RUSSELL COUNTY (concl.)																
	10433	Hall-Gurney	Texaco Inc.	(W) Borell-Vejl	E.A. Borell, F. Vejll	32-14S-12W 5-15S-12W	480	--	Lans	2900	10	4	-	0	-	No*
	10434															
	11915															
	7619	Hall-Gurney	Southern States Oil Co.*	(P) Boxberger	Boxberger	26-14S-14W	160	--	L-KC	2928	79	4	2	0	0	Yes
	5955	Hall-Gurney	Clarence H. Wilhelm*	(D) Ray Shaffer	Ray Shaffer	26-14S-13W	80	--	Tarkio	2222	12	2	1 ⁺	4	0	Yes
	14969	Kraft-Prusa	Isern-Wells	(P) Durr	Durr AB, Sellens B*	31-15S-12W 36-15S-13W	160	0	Quartzite sand	3374	20	5	0	0	1	Yes
	8871	Nuss	Duke Drilling	(D) Nuss	Nuss	32-15S-14W	0	--	Lans	3120	25	2	0	0	0	Yes
	16992	Roosevelt	Shields Oil Prod.	(D) Morgenstern	Morgenstern	23-15S-15W	40	0	L-KC	3300	10	1	0	0	0	Yes
	15953	Russell	Okmar Oil Co.	(W) Holland-Killian	Holland, Killian	28-13S-14W	160	0	L-KC	3020	5	2	0	0	0	Yes
	15949	S & S	Glenn W. Peel Oil Oper.	(D) Shaffer Lse.	Shaffer	1-13S-15W	--	--	L-KC	2804- 2841	45	5	0	0	0	Yes
	5472	Trapp	Cities Service Oil Co.	(W) Eichman "A"	Eichman "A", Tittel "A", Krug "G", Krug "F"	12-15S-14W 13-15S-14W	91	75	L-KC	3090	12	4	0	0	11	Yes
	13257			(W) Rogg "D"	Rogg "D"	9-15S-13W	196	36	L-KC	3090	28	3	1	0	1	Yes
	7631	Trapp	Cities Service Oil Co.	(W) Maag LKC Coop- erative W.F.	Maag	7-15S-13W	15	0	L-KC	3020	21	1	0	0	0	Yes
	8707	Trapp	Cities Service Oil Co.	(W) Maag LKC Coop- erative W.F.	Maag	7-15S-13W	15	0	L-KC	3020	21	1	0	0	0	Yes
	7589	Trapp	Clinton Oil Co.*	(W) Northeast Trapp	John Letsch "A", John Letsch "B", John A. Heffernan, R. Roesner	4-15S-13W 9-15S-13W	520	0	L-KC	3010	55	12	2	0	0	Yes
	7590															
	7604															
	13776	Trapp	Colorado Oil Co.	(W) Maag Lse.	Maag	7-15S-13W	30	10	L-KC	3000	8	1	1	0	0	Yes
	13777	Trapp	Colorado Oil Co.	(W) Krug Lse.	Krug	7-15S-13W	70	0	L-KC	3000	8	5	0	0	0	Yes
	7606	Trapp	Continental Oil Co.	(W) Trapp Lansing	J.W. Meharg	17-15S-13W	160	0	L-KC	2950	21	5	2	0	1	Yes
	7553	Trapp	Exxon Corporation	(W) N. Trapp Coop. Waterflood	D. Josephine, J. Detrich, J. Letsch, L. Sellens	7-15S-13W 8-15S-13W 17-15S-13W	400	60	KC	2986	28	15	3	0	0	Yes
	14141	Trapp	Kewanee Oil Co.	(W) Berrick, Piester A & B	Berrick, Piester A, Piester B	23,24-15S-13W 24-15S-13W	80	0	KC	3028	18	3	0	0	0	Yes
	15070	Trapp	Kewanee Oil Co.	(W) Berrick	Berrick	23,24-15S-13W	40	0	Tarkio + Willard	2301	45	1	0	0	0	Yes
	14364	Trapp	Murfin Drilling Co.	(W) Ber-Sel-Es Unit W.F.	Ber-Sel-Es Unit	22,27-15S-13W	70	0	L-KC	3060	36	7	0	0	0	Yes
	5183	Trapp	NCRA	(W) Flegler "B" Tarkio	Flegler "B"	2,11-15S-14W	10	60	Tarkio	2298	20	1	0	0	0	Yes
	6038	Trapp	NCRA	(W) Flegler "C"	Flegler "C"	11-15S-14W	60	40	Lans	3057	7	7	0	0	0	Yes
	9108*	Trapp	NCRA	(W) Krug	Krug	3-15S-14W	--	--	--	--	--	--	--	--	--	--
	9131	Trapp	NCRA	(W) Flegler "B" Lansing	Flegler "B"	11-15S-14W	30	30	Lans	2966	26	3	0	0	0	Yes
	10484	Trapp	NCRA	(W) Boxberger "B"	Boxberger "A", Boxberger "B"	10-15S-14W	40	40	Lans	2976	6	4	0	0	0	Yes
	7568	Trapp	Phillips Petroleum Co.	(W) Roesner Lse.	--	9-15S-13W	50	0	L-KC	3100	50	1	0	0	0	Yes
	10920	Trapp	Pioneer Operations Co.	(D) Ben Rein	Ben Rein	8-15S-13W	80	0	L-KC	2950	150	2	0	0	0	Yes
	7570	Trapp	Shields Oil Producers	(W) Northeast Trapp	Rogg "A"	9-15S-13W	160	0	KC	2800	25	4	0	0	2	Yes
	5952	Trapp	R.H. Siegfried, Inc.	(W) Ross Lse.	Ross	11-15S-13W	20	20	Lans	3000	12	2	0	0	0	Yes
	7765	Trapp	Skelly Oil Co.	(W) Anderson-Rein Unit	M.E. Anderson, George Rein, Jr.	7,8-15S-13W 8-15S-13W	480	0	L-KC	2900	50	13	4	0	0	Yes
	7565	Trapp	Sohio Petroleum Co.	(W) Anschutz Lse.	Anschutz	10-15S-13W	100	--	L-KC	3050	18	3	0	0	0	Yes
	16047	Trapp	Sun Oil Company	(W) Trapp Unit Waterflood	--	25,26,36-15S-13W	360	0	L-KC	3074	3- 5	8	1	0	2	Yes
	7607	Trapp	Terra Resources, Inc.	(W) North Trapp W.F.S.	Bitter, Holland, L. Sellens, Tom Sellens	16-15S-13W 17-15S-13W	370	80	L-KC	3000	25	18	2	0	0	Yes
	11977	Stricker	Am. Petrofina Co. of Texas*	(W) Stricker	Stricker, Stricker "B", Stricker "C"	16-15S-14W	200	0	L-KC	3041	--	2	1	0	0	Yes
	15539	Wilson Creek	L.G. Stephenson & Co.*	(P) --	Sebesta, J. Kratky	24-14S-11W	--	--	Lans	2820	20	7	0	0	0	Yes
	16710	Wilson Creek	L.G. Stephenson & Co.	(P) --	Small	23-14S-11W	80	0	Tarkio	2100	5	2	0	0	0	Yes
	16282	Wilson Creek	L.G. Stephenson & Co.	(P) --	Stoppel	24-14S-11W	160	0	Lans	2800	20	4	0	0	0	Yes
RUSSELL COUNTY TOTALS (Reported)							22,835	2,507				802	84	5	31	

Project no.	Injection Wells				Injection Pattern	Well-head pres. psi	Water inj. bbl./ well/ day	Injected-water data			Date, first inj.	Primary production mechanism	Primary oil-water ratio	API grav. deg.	Oil visc. cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks		
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.						Type	Water Injection		Oil recovered by secondary methods				
																	Total 1973	Cum. 12-31-73	Total *1973			Cum. 12-31-73	
																				#=1973 Primary and Secondary Production			
10433	0	-	0	-	Irreg	0	0	Prod	--	--	U	1963	S Gas	1261/2640	36.5	--	0	4,059,827	9,264	274,947	364,407	*No inj. since 8-1-71 #9,600	
10434																							
11915	2	0	0	0	Irreg	500	300	Prod + Dakota	1520	30	M	1960	Grav	--	37	--	208,238	3,114,306	4,215	155,546	155,546	*Was Westrans Petroleum	
7619	1	-	-	-	4-spot	Grav	71	Prod	--	--	U	--	Gas Exp	--	35	--	25,941	--	1,134	--	--	*Was Louis M. Mai	
5955																						†1-SWD & 1-SWI #5,671	
14969	1	-	-	-	Irreg	0	1190	Prod	--	--	T	1969	S Gas	10/1	35	--	436,323	1,809,012	0	0	140,095	*Sellens B sold & plugged July, 1973 #7,499	
8871	1	0	0	0	Irreg	200	350	Prod + Dakota	305	--	U	1961	S Gas	--	35	--	127,750	1,589,850	0	--	116,271	#3,719	
16992	1	0	0	0	Irreg	0	100	Prod	--	--	T	1973	S Gas	--	38	--	21,000	--	0	--	--	#3,465	
15953	1	0	0	0	Irreg	Vac	485	Prod + Arb	3600	5	U	1971	S Gas	36/154	35	--	173,375	465,748	4,700	14,530	872,678	#11,262	
15949	1	0	0	0	Irreg	Grav	15	Prod	--	--	U	1971	Wat	14/65	37.5	--	27,375	72,837	4,951	12,545	12,545		
5472	2	0	0	5	Irreg	520	97	Prod	--	--	T	1957	S Gas	60/85	38	--	165,681	6,152,031	13,285	537,261	1,563,181		
13257																							
7631	4	0	0	1	Irreg	683	364	Prod + Dakota	400	--	U	1960	S Gas	22/10	37	--	624,486	4,856,770	45,025	331,035	1,332,299		
8707	1	0	0	0	Irreg	380	75	Prod + Dakota	490	--	T	1961	S Gas	10/8	37	--	26,530	284,554	2,168	60,420	140,753		
7589	10	2	0	1	Irreg	900	232	Prod + Dakota	600	180	U	1960	S Gas	1/1.5	40.5	--	847,744	8,139,137	80,398	1,172,795	3,347,718	*Was Pan American	
7590																							
7604																							
13776	1	0	0	0	Irreg	1200	143	Prod + Arb	3316	8	U	1967	Wat	12/53	37	--	52,034	313,889	0	6,853	--	#1,724	
13777	2	0	0	0	Irreg	775	200	Prod + Arb	3306	4	U	1967	Wat	21/37	37	--	146,333	702,207	9,303	81,874	--	#12,207	
7606	8	12	0	0	Irreg	965	137	Cheyenne + Dakota	550	72	U	1961	S Gas	--	38.5	--	1,853,519	5,881,112	44,165	719,224	791,435		
7553	13	2	0	0	5-spot	735	230	Dakota	240	87	T	1962	S Gas	1/1.43	39	6	1,323,679	11,843,508	116,280	1,811,828	1,984,956		
14141	2	0	0	0	Irreg	650	176	Prod	--	--	U	1968	S Gas	27/32	38	--	128,821	999,941	3,773	29,359	495,037	#5,498	
15070	1	0	0	0	Irreg	650	307	Prod	--	--	U	1969	S Gas	5/23	38	--	112,169	327,550	0	0	36,084	#730	
14364	3	0	0	0	Irreg	400	165	Prod + Dakota	250	154	M	1969	S Gas	44/56	38	--	218,454	1,229,722	29,258	90,000	--		
5183	1	0	0	0	Irreg	800	201	Prod	--	--	U	1956	S Gas	1/.29	38.3	--	100,701	2,464,489	4,545	178,306	342,279		
6038	2	0	0	0	Irreg	700	254	Prod + Arb	3322	4	T	1958	S Gas	1/3.7	27.7	--	185,150	4,282,557	15,418	196,700	275,295		
9108	-	-	-	-	--	--	--	--	--	--	--	--	--	--	--	--	--	--	853,522	--	30,409	--	*Abandoned June 1972
9131	1	1	0	0	Irreg	1100	670	Prod + Arb	3177	3	U	1962	S Gas	1/2.5	38.3	--	244,386	3,603,759	5,285	132,870	218,221		
10484	1	0	0	0	Irreg	0	321	Prod + Arb	--	--	U	1963	S Gas	1/.25	36.3	--	117,299	2,028,960	6,991	76,248	125,808		
7568	1	0	0	0	Irreg	52	564	Prod*	--	--	U	1960	S Gas	1/0.5	39	6	205,785	2,809,473	4,255	119,537	299,713	*Produced water from other leases #9,990	
10920	1	0	0	0	Irreg	0	73	Prod	--	--	T	--	S Gas	1/1	38	--	26,645	--	5,200	--	--	#29,000	
7570	4	0	0	0	--	750	190	Prod	--	--	T	1960	S Gas	--	37.2	--	267,800	3,493,700	27,000	272,600	299,271		
5952	2	0	0	-	Irreg	Vac	375	Prod + Arb	3286	8	T	1958	S Gas	4/1	41.3	--	130,800	2,069,739	11,079	247,500	247,500		
7765	9	2	0	0	Irreg	1400	214	Prod + Dakota	337	32	T	1961	S Gas	1896/1026	37	--	703,195	8,306,506	59,358	1,038,081	2,421,430		
7565	3	1	0	0	Irreg	950	229	Prod + Dakota	450	55	T	1960	S Gas	1/1.5	40.7	--	250,759	2,474,349	23,596	206,005	--		
16047	4	0	0	0	Irreg	825	922	Prod	--	--	U	1971	S Gas	8/92	38.4	--	559,826	1,524,836	22,436	47,157	47,157		
7607	13	2	0	0	5-spot	717	220	Prod + Dakota	240	50	T	1961	S Gas	56/44	37.2	--	1,045,852	11,449,625	106,077	2,213,299	6,747,643		
11977	1	0	0	0	Irreg	Vac	945	Prod	--	--	U	1965	S Gas	1/1	40	--	80,093	581,593	11,879	46,777	46,777	*Was El Dorado Refg. Co.	
15539	1	0	0	0	Peri	--	--	Prod	--	--	U	1969	S Gas	92/8	38	--	29,000	331,000	0	0	389,182	*Was Will P. Ash #57,076	
16710	1	0	0	0	Peri	600	400	Prod + Lans	2830	20	U	1972	S Gas	9/1	38	--	55,000	76,000	0	0	77,655	#42,125	
16282	1	0	0	0	--	400	200	Prod	--	--	U	1970	S Gas	92/8	38	--	24,000	96,000	0	0	82,620	#13,604	
342	58	3	17																				
															42,753,998	414,685,754	2,180,049	36,841,154	76,077,218				

County Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has in- been con- tinuous?
						Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
SALINE COUNTY															
10664	Lindsborg	Ray Perera	(D) Robinson- Martinson- Johnson	Robinson, Martinson, Johnson	32-15S-3W	80	0	Maq	3400	5	2	0	0	0	Yes
11513	Pihl	Tomlinson Oil Co.	(D) Pihl	Krauss "A"	24-15S-2W	400	30	Miss	2750	10	6	1	0	0	Yes
9740*	Salina	Tom Brown Construction	(D) Muir	Muir	13-15S-3W	0	680	Maq	3264	8	1	0	0	1	Yes
9817	Salina South	Shenandoah Oil Corp.*	(W) Swigart	Swigart, Riddle, Wauhob	6-15S-2W 7-15S-2W 8-15S-2W	170	20	Maq	3225	15	4	-	-	-	Yes
13808	Salina	Art Small & Co.*	(D) Airport City of Salina	Airport City of Salina, Burkholder	20-14S-2W	160	0	Maq	3224	20	2	0	0	-	Yes
6631	Smolan	Ray Perera*	(D) Ostenberg	Ostenberg	30-15S-3W	120	0	Maq	3415	5	3	1	0	0	Yes
14385	Smolan	Arvel C. Smith*	(W) Smolan Field Waterflood Proj.	Larson "B", Frost, Gustafson, Bengtson, Lofgren	30-15S-3W 25-15S-4W 36-15S-4W	800	--	Maq	3400	6	14	2	0	0	Yes
SALINE COUNTY TOTALS (Reported)						1,730	730				32	4	0	1	
SCOTT COUNTY															
4383	Shallow Water	Maurice L. Brown Trust	(P) Mark "B"	Mark "B"	14-20S-33W	120	0	Miss	4595	80	2	3	0	0	Yes
SEDGWICK COUNTY															
16044	Buzzi	Am. Petrofina Co. of Texas*	(P) Hemme	Hemme	31-25S-1E	100	0	Hunton	3445	5	3	0	0	1	Yes
8324	Gladys	Kewanee Oil Co.	(W) Gladys Unit	--	29,30,31, 32-28S-1E 25,36-28S-1W	1060	551	Miss	3200	10- 78	55	11	0	7	Yes
8325	Gladys	Kewanee Oil Co.	(W) East Gladys Unit	Blood, Parton, Tucker	29-28S-1E	160	70	Miss	3200	10- 40	7	0	0	1	Yes
15691	Goodrich	Albert A. Bouse*	(P) Rowley	Rowley	17-25S-1E	160	0	KC	2690	30	1	0	0	0	Yes
13037	Goodrich	Cities Service Oil Co.	(W) Goodrich Unit	Goodrich Unit, Smith "A"	16-25S-1E	87	0	KC	2730	11	9	0	0	0	Yes
16157	Kuske West	TGT Petroleum Corp.	(P) Korber Input System	Korber, Korber A, Lewis	14-25S-1E	320	--	Burg	3014	38	5	0	0	0	Yes
15105	O.S.A.	Continental Oil Co.	(W) O.S.A.	O.S.A.	10,11,14,15, 22-29S-1W	1520	0	Simp	2884	8	21	6	-	0	Yes
1704	Robbins	J. & L. Oil Company*	(-) Robbins Field Waterflood	Cook, Heath, Nolan	20-28S-1E	--	--	--	--	--	-	-	-	-	--
2641	Robbins	Stelbar Oil Corp.	(-) Robbins	Brookings, Nolan	16-28S-1E 21-28S-1E	240	200	Miss	3140	30	3	0	0	0	Yes
2055	Robbins	Stelbar Oil Corp.	(-) Robbins	Brookings, Nolan	16-28S-1E 21-28S-1E	240	200	Miss	3140	30	3	0	0	0	Yes
4182	Robbins	Stelbar Oil Corp.	(-) Robbins	Brookings, Nolan	16-28S-1E 21-28S-1E	240	200	Miss	3140	30	3	0	0	0	Yes
4626	Robbins	Stelbar Oil Corp.	(-) Robbins	Brookings, Nolan	16-28S-1E 21-28S-1E	240	200	Miss	3140	30	3	0	0	0	Yes
16303	Ulmer South	Crowe Drilling Co.	(D) Greenup	Greenup, Miller	33-25S-2E	160	0	Burg	2902	8	3	0	0	0	Yes
12272	Valley Center	Bankoff Oil Co.	(W) Bright Inl.	Sam Bright	1-26S-1W	40	120	Lans	2555	--	2	0	0	0	Yes
11419	Valley Center	Schusterman Operating Co.*	(W) Valley Center WF	Shawver, Reed, Corr, Wright	7-26S-1E 1-26S-1W 12-26S-1W	220	0	KC	2500	--	5	0	0	0	Yes
SEDGWICK COUNTY TOTALS (Reported)						4,067	941				114	17	0	9	
SEWARD COUNTY															
16786	Evalyn-Condit	Anadarko Prod. Co.	(W) Condit Unit	Condit, Dodd, Etzenhouser, Cady, Worthington, M., Worthington, Eubanks, McAhren	7,18-34S-32W 18-34S-32W 19-34S-32W 12-34S-33W 13-34S-33W 24-34S-33W	1031	0	Miss	6236	13	3	3	0	0	Yes

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl/well/day	Injected-water data				Date first inj.	Primary production mechanism	Primary oil-water ratio	API grav. deg.	Oil vis. cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks
	Active	In-active	Drilled 1973	Abd. 1973				Source									Water Injection		Oil recovered by secondary methods			
								Depth, ft.	Thick., ft.	Type	Total 1973						Cum. 12-31-73	Total 1973	Cum. 12-31-73			
10664	1	0	0	0	Irreg	0	110	Prod	--	--	*	1958	S Gas	--	35+	--	100,000	--	1,400	14,100	15,000	#=1973 Primary and Secondary Production
11513	1	0	0	0	Peri	Vac	402	Prod	--	--	U	1965	Wat + S Gas +	--	35.5	--	146,730	2,061,703	8,151	91,967	165,004	*Bacteriacide #3,300
9740	1	0	0	1	Irreg	0	86	Prod	--	--	U	1962	Wat	3/7	35	--	22,390	455,978	978	26,235	14,667	*Depleted 12-8-73
9817	1	-	-	-	Irreg	350	714	Prod	--	--	U	1962	Wat	3/7	35	--	260,735	2,792,394	10,691	1,976,183	2,500,000	*Was Solar Oil Co.
13808	-	-	-	-	Irreg	Vac	150	Prod	--	--	U	1967	Grav	1/4	33-34	--	100,000	--	7,000	--	--	*Was Don McKellar #7,965
6631	1	0	0	0	Irreg	0	50	Prod	--	--	T	--	S Gas	--	35+	--	--	787,000	--	49,000	--	*Was Amos Ostenberg #4,574
14385	6	1	0	0	Irreg	Vac	400	Prod + McPherson	250	--	U	1962	--	--	--	35	800,000	--	9,000	--	--	*Was Mobil Oil Corp. #12,831
	11	1	0	1													1,429,855	6,097,075	37,220	2,157,485	2,694,671	
4383	1	0	0	0	Irreg	0	200	Prod	--	--	T	1968	Wat	--	26	--	72,000	617,544	1,462	12,498	2,050,881	#5,847
16044	1	0	0	0	Irreg	800	814	Prod	--	--	U	1971	--	1/40	41	--	297,127	969,811	0	0	242,571	*Was El Dorado Refg. Co. #3,708
8324	34	9	0	4	Peri	1550	308	Gravel	50	--	F	1961	S Gas	1658/1687	42	--	3,672,881	93,896,529	145,645	6,334,414	7,661,354	
8325	7	0	0	1	Peri	1550	338	Gravel	50	--	F	1961	S Gas	153/24	42	--	863,611	13,596,194	25,132	941,322	1,866,384	
15691	1	0	0	0	Line	300	25	Prod	--	--	U	1970	Grav	1/4+	35	--	9,000	36,000	0	--	5,715	*Was Isern Oil Co. #1,076
13037	5	0	0	1	Peri	1150	201	Prod + Miss	3000	5	U	1966	S Gas	18/9	33	--	274,433	1,967,952	23,601	226,168	657,322	
16157	1	0	0	0	Irreg	175	400	Prod	--	--	-	1971	Wat + S Gas	1/50	39	--	234,220	452,220	2,600	17,316	43,832	#6,528
15105	6	1	-	0	Irreg	900	400	Stal	2450	100	U	1970	Wat	--	45.5	--	867,384	2,305,428	183,581	557,130	614,668	
1704	-	-	-	-	--	--	--	--	--	--	-	--	--	--	--	--	--	--	--	--	--	*Sold 3-1-73 to J. & L. Oil formerly Icer Addis
2641	-	-	-	-	--	--	--	--	--	--	-	--	--	--	--	--	--	--	--	--	--	
2055	2	0	0	0	Irreg	200	260	Prod + Sh Sd	--	20	F + T	1954	S Gas	--	43	--	190,000	4,939,000	13,400	1,184,740	--	
4182	-	-	-	-	--	--	--	--	--	--	-	--	--	--	--	--	--	--	--	--	--	
4626	-	-	-	-	--	--	--	--	--	--	-	--	--	--	--	--	--	--	--	--	--	
16303	3	0	0	0	Peri	Vac	40	Prod	--	--	U	1971	S Gas	--	--	--	--	--	--	--	--	
12272	2	0	0	0	Irreg	250	190	Prod	--	--	U	1965	Grav	1/15	35.6	--	68,818	746,806	3,925	12,880	42,277	
11419	2	0	0	0	Irreg	0	300	Prod	--	--	U	1966	S Gas	--	33	--	107,022	2,331,813	4,224	40,641	3,849,766	*Was Kathol Petroleum
	64	10	0	6													6,584,496	121,241,753	402,108	9,314,611	14,983,889	
16786	1	0	0	0	Irreg	380	4326	Prod + Sh	202	138	F	1973	S Gas	86/50	41.9	2.2	844,598	844,598	0	0	29,612	#29,612

County	Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has ini. been con- tinuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
SEWARD—STEVENS COUNTIES																
	13902	Cutter	Mobil Oil Corp.	(-) Cutter Unit Area (Morrow)-WFP	G.B. Strong Unit, M. Rooney, Wm. I. Cutter, G.B. Strong Unit	6-31S-34W 7-31S-34W 1-31S-35W 12-31S-35W	880	--	Morrow	5200	15	6	1	0	1	Yes
SHERIDAN COUNTY																
	8906	Adell	Continental Oil Co.	(W) Adell Lans-KC	Adell Lansing-KC Un.	1,2,3,11, 12-6S-27W	584	0	L-KC	3500	23	20	15	0	1	Yes
	9881	Adell	Petroleum Management	(W) Adell Lansing- Kansas City Unit	Adell	7,18-6S-26W 12,13-6S-27W	190	0	L-KC	3530	12	1	5	0	-	*
	10188	Hortonville	Kaiser-Francis*	(D) Hardesty	Hardesty	20-6S-26W	80	40	Lans	3744	94	1	0	0	0	Yes
	16389	Hortinville East	A.L. Abercrombie, Inc.	(D) Glasgow	Glasgow, Glasgow "B", Brandt	21-6S-26W 23-6S-26W	320	100	L-KC	3775	5	2	0	0	0	Yes
	16164	Hoxie	John O. Farmer, Inc.	(P) Hoxie Unit Flood	Mosier, Mosier B, Decker, Pratt B	36-8S-29W 6-9S-28W 1-9S-29W	--	--	Tor	3856	5	3	-	-	-	Yes
	15224	Hoxie West	Koch Exploration Co.	(W) --	Pratt	35-8S-29W	40	0	Shawnee	3816	14	1	0	0	0	Yes
	15349	Jerome	Okmar Oil Co.	(W) Jerome WF	Jerome	35-8S-27W	100	0	L-KC	3930	5	4	0	0	0	Yes
	6322	Studley	K.R.M. Petroleum Corp.	(D) Pratt	Pratt	22,23-8S-26W	640	0	L-KC	3740	20	3	0	0	0	Yes
SHERIDAN COUNTY TOTALS (Reported)							1,954	140				35	20	0	1	
STAFFORD COUNTY																
	15826	Bayer	Phillips Petroleum Co.	(P) Lincoln "A"	--	29-21S-14W	10	0	Simp	3750	14	1	0	0	0	Yes
	15211	Brenn	Sterling Drilling Co.	(P) Brenn Unit	--	19-23S-13W	320	--	L-KC	3654	8	2	0	0	0	Yes
	12237	Centerview	Ladd Petroleum Corp.	(P) E. Toland & O. Toland Repressuring	E. Toland, O. Toland	28-24S-13W	120	0	L-KC	3590	20	2	1	0	1	Yes
	11941	Centerview	White Hawk Oil Co.*	(D) Van Lieu Unit	Van Lieu	28-24S-13W	60	0	L-KC	3580	12	2	0	0	0	Yes
	9481	Chase-Silica	Parrish Oil Co.	(P) Spacil Lse.	Spacil	4-21S-12W	30	50	Arb	3321	10	2	0	0	0	Yes
	13792	Crissman	Atlantic Richfield Co.	(W) Welsh-Beaver Unit	George Walls, Beaver, R.J. Welsh	15-23S-14W 16-23S-14W	480	200	Simp	3950	8	6	0	0	0	Yes
	15378	Dell East	White Hawk Oil Co.*	(P) Reed Unit	White Hawk, Cities Service	8-21S-13W	160	0	L-KC	3450	10	5	0	0	0	Yes
	16314	Fanshier	Icer Addis	(W) Fanshier	Fanshier	9-21S-13W	160	--	L-KC	3318	5	3	0	0	0	Yes
	16704	Fanshier	Icer Addis	(W) Harms	Harms	16-21S-13W	120	--	L-KC	3319	5	2	0	0	0	Yes
	16034	Gartung	Robert E. Davis	(P) --	Gartung	4-22S-14W	160	--	Viola + Arb	3822	25	3	0	0	0	Yes
	12284	Gates	Atlantic Richfield Co.	(W) Gates Unit	Gates	27-21S-13W	80	0	L-KC	3350	130	5	0	0	4	Yes
	16179	Gates	Clinton Oil Co.	(W) Chapman	Chapman	32-21S-13W	160	0	L-KC	3500	20	3	0	0	0	Yes
	15785	Gates	Nadel and Gussman	(W) Fischer Unit	Fischer	25,36-21S-13W	20	0	L-KC	3300	20	27	4	0	0	Yes
	13744	Gates	Okmar Oil Co.	(W) Fischer-Weiszbrod	Fischer Estate, Weiszbrod	36-21S-13W 1-22S-13W	50	0	L-KC	3300	5	3	0	0	0	Yes
	16109	Gates	Phillips Petroleum Co.	(W) Stafford Lse.	--	33-21S-13W	25	0	L-KC	3371	24	4	0	0	0	Yes
	14491	Glasscock	Petroleum, Inc.	(W) Glasscock L-KC Unit	Harris "D", Belote, Glasscock "B", Barstow, Barstow "B"	32-24S-13W 5-25S-13W	300	0	L-KC	3837	15	5	0	0	0	Yes
	15604	Green Ridge	Oklahoma Fracturing Services	(W) Cadman Unit	Kachelman, Shepherd, Birdsall, Cadman	19-23S-14W 29-23S-14W 30-23S-14W	340	20	L-KC	3600	10	5	0	0	0	Yes
	12915	Hazel West	Joe Brougher Oil Co.	(D) Grow Lse.	G.H. Grow	17-21S-13W	40	--	KC	3325	175	2	0	0	0	Yes
	10320	Hickman	Herman George Kaiser	(D) --	Gates "B", Pile	27-21S-14W	240	40	Lans	3412	200	8	1	0	0	--
	16263	Jordan	Cities Service Oil Co.	(W) Jordan	Neeland "A", Neeland "B", Jordan, Stimatze	15-25S-14W 16-25S-14W	108	0	L-KC	3630	35	5	0	0	0	Yes
	1419	Kipp	Earl M. Knighton*	(P) Kipp Re-pressure System	Kipp "F", Kipp "C", Kipp "E"	22-25S-14W 26-25S-14W	160	40	L-KC	3836	73	4	0	0	0	Yes
	14970	Kipp Northeast	Cities Service Oil Co.	(W) Kipp N.E. Water- flood	Tanner, Kipp "A", Kipp "B"	14-25S-14W 23-25S-14W 24-25S-14W	40	0	L-KC	3650	21	2	0	0	0	Yes

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl/well/day	Injected-water data			Date first inj.	Primary production mechanism	Primary oil-water ratio	API grav. deg.	Oil visc. cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks	
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth. ft.	Thick. ft.						Type	Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973			Cum. 12-31-73
13902	4	0	0	0	Irreg	202	1333	Prod + Ogallala	250	250	M	1968	S Gas	417/50	40	--	1,946,553	10,257,667	264,907	1,888,420	3,180,021	#=1973 Primary and Secondary Production
8906	9	29	0	0	Peri	400	318	Cedar Hills	1875	50	U	1972	S Gas	--	39	--	1,242,800	21,229,393	82,403	1,548,101	1,774,842	
9881	0	5	--	--	Irreg	0	204	Prod + Cedar Hills	1900	--	T	1963	S Gas	1/1	38	--	55,328	4,795,926	3,574	264,898	303,420	*Well shut down Oct. 1973 #3,996
10188	--	--	--	--	Irreg	Grav	20	Prod	--	--	U	1963	S Gas	1/.26	34.5	--	7,300	89,967	1,452	26,739	111,824	*Was NCRA
16389	1	0	0	0	Irreg	Vac	190	Prod	--	--	U	1972	S Gas	3/7	38	--	63,350	79,211	7,900	7,900	104,872	#10,341
16164	3	--	--	--	Irreg	175	250-90-250	Prod + Fr	155	20	M	1971	Grav	2/8	39	--	192,052	602,142	17,148	--	72,391	#23,898
15224	1	0	0	0	Irreg	500	300	Prod	--	--	U	--	Gas Exp	2/1	38.8	--	109,500	332,961	0	--	49,172	#21,900
15349	1	0	0	0	Peri	650	125	Prod + Alluvium	50	--	U	1970	S Gas	30/142	39	--	45,625	143,526	5,360	11,976	110,414	#17,026
6322	--	--	--	--	Irreg	800	750	Prod	--	--	U	1958	S Gas	1/9	39	--	180,000	1,930,000	3,174	49,191	--	
	15	34	0	0													1,895,955	29,203,126	121,011	1,908,805	2,526,935	
15826	1	0	0	0	Irreg	0	3	Prod	--	--	U	1970	Wat*	1/0.2	32	--	1,166	5,873	0	0	258,677	*Plus S Gas #8,176
15211	1	0	0	0	Irreg	1200	250	Prod + Sh	50-	17-	M	1969	S Gas	--	31	--	91,250	370,500	9,659	50,286	50,286	
12237	2	1	0	1	Irreg	Vac	137	Prod + Sr	30	--	M	1966	S Gas	17/20	26	25	99,825	693,001	4,746	68,242	279,054	
11941	1	0	0	0	Irreg	0	42	Prod + L-KC	3692	24	U	1965	Wat	--	25	--	15,330	122,595	2,076	16,976	--	*Was Natural Gas & Oil
9481	1	0	0	0	Irreg	0	240	Prod	--	--	U	1962	Wat	1/9	37	--	87,600	846,934	1,950	29,400	359,493	#5,977
13792	2	0	0	0	Irreg	2500	200	Prod + Ter	60	25	M	1966	S Gas	16/0	33	18	177,869	1,774,373	15,068	173,133	177,910	
15378	1	0	0	0	Irreg	650	528	Prod	--	--	U	1970	Wat	--	38	--	192,734	640,251	10,486	36,176	77,598	*Was Natural Gas & Oil #16,913
16314	1	0	0	0	Irreg	50	170	Prod + Fr	--	--	M	1972	Gas Exp	4/6	32	--	61,897	136,147	11,273	27,431	152,567	
16704	1	0	0	0	Irreg	50	160	Prod + Fr	--	--	M	1972	Gas Exp	35/65	33	--	48,375	69,375	1,460	3,460	134,687	#10,220
16034	1	0	0	0	3-spot	0	400	Prod	--	--	T	1971	Wat	8/30	28	--	146,000	446,000	15,151	68,150	--	
12284	1	0	0	0	Irreg	Vac	643	Prod + Arb	3660	--	U	1966	S Gas	38/916	38	--	234,716	1,716,440	7,250	64,750	64,750	
16179	1	0	0	0	Irreg	0	473	Prod	--	--	U	1971	S Gas	1/11.9	28	--	172,475	265,277	15,047	23,571	575,406	
15785	3	0	0	0	Peri	0	370	Prod + Sh	60	20	F + T	1970	S Gas	1/1	34.5	--	313,700	685,700	0	--	--	#36,000
13744	1	0	0	0	Peri	Vac	80	Prod + Arb	3670	5	U	1967	S Gas	28/58	34	--	29,200	295,765	2,920	7,180	466,867	#11,039
16109	1	0	0	0	Irreg	0	248	Prod	--	--	U	1971	S Gas	1/4.4	--	--	90,662	192,893	18,887	18,887	303,706	#26,567
14491	2	0	0	0	Line	633	688	Quat	100	50	F	1968	S Gas	52/35	30.1	--	502,506	1,846,754	42,170	182,722	182,722	
15604	3	1	0	0	Peri	200	115	Alluvium	90	20	F	1970	S Gas	7/3	32	--	170,750	709,450	11,957	55,570	0	
12915	1	0	0	0	Peri	Vac	60	Prod	--	--	U	--	Grav	--	32	--	21,600	--	1,200	--	--	#4,160
10320	--	--	--	--	Irreg	Vac	348	Prod	--	--	T	1963	Gas Exp	43/57	29	--	127,020	496,710	8,300	8,300	1,058,824	#50,038
16263	6	0	0	0	Peri	165	208	Prod + Water Sd	80	--	M	1956	S Gas	15/21	33	--	616,101	5,061,718	18,654	426,023	1,502,704	
1419	1	0	0	0	Irreg	Vac	86	Prod	--	--	U	1946	S Gas	--	35	--	32,070	1,091,485	6,582	--	126,680	*Was Skelly Oil Co.
14970	2	0	0	0	Irreg	430	220	Prod + Water Sd	80	--	M	1969	S Gas	16/25	32	--	246,401	1,131,210	7,610	49,338	399,673	#9,962

County Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been con- tinuous?
						Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
STAFFORD COUNTY (cont.)															
14623	Knoche South	Palomino Petroleum*	(D) Jordan	Jordan "B"	8-24S-12W	80	0	Viola	3871	--	1	0	0	0	Yes
16107	Knoche South	Willie E. Schultz	(P) Teichman	Teichman	17-24S-12W	160	0	Viola	3870	5	2	-	-	-	Yes
15408	Koelsch West	Nadel and Gussman	(W) Koelsch	Koelsch	23-24S-14W	50	0	L-KC	3700	8	2	0	0	0	Yes
11122	Leesburg	Continental Oil Co.	(W) Leesburg, No.	Leesburg, No.	12-25S-13W	386	0	Lans + Simp	3710- 4070	83- 13	6	1	0	0	Yes
11123	Leesburg	Continental Oil Co.	(W) Leesburg, So.	Leesburg, So.	13-25S-13W	246	0	Lans + Simp	3708- 4064	84- 12	3	3	0	0	Yes
14032*	McCandless	Atlantic Richfield Co.	(W) McCandless	McCandless	30-25S-13W	--	--	L-KC	3701	280	5	0	0	0	--
12796	McCandless	Richard Duncan	(-) Goodman	Goodman	30-25S-13W	--	--	--	--	--	-	-	-	-	No*
15562	Max	Thos. H. Allan	(D) Siefkes	Siefkes	34-21S-12W	40	0	Arb	3615	20+	2	0	0	0	Yes
8551	Merle	Southern States Oil Co.*	(P) Williams	Williams	32-23S-13W	160	--	KC	3699	10	1	4	0	0	Yes
15347	Moody	Nadel and Gussman	(W) Moody	--	7,8-25S-14W	230	80	Miss	4200	20	9	-	-	-	Yes
13909	Mt. View	Petroleum, Inc.	(W) Walls "A" Water Flood Project	Walls "A"	29-22S-13W	160	0	L-KC	3429	7	2	0	0	0	Yes
6117	Mueller	Joe Holman	(D) J. Welsh "A"	J. Welsh "A"	18-21S-12W	50	0	Arb	3570	14	2	0	0	0	Yes
6062	Mueller	Herman George Kaiser	(D) Batman B	Batman B	12-21S-13W	80	40	Arb	3570	--	3	0	0	0	Yes
13180*	Omlor	Sun Oil Co.	(W) Omlor-Bushnell LKC Unit	Omlor, Bushnell	10-22S-14W, 11-22S-14W	--	--	--	--	--	-	-	-	-	--
15248	Oscar North	Palomino Petroleum*	(W) Williams	Williams	12-22S-14W	80	-	L-KC	3553	5	3	0	0	0	Yes
5948	Oscar South	Petroleum, Inc.	(*) Oscar South	Smith "J"	26-22S-14W	80	0	L-KC	3456	10	1	0	0	0	Yes
6336	Oscar West	Cities Service Oil Co.	(W) Oscar West Unit	Oscar West Unit	15,16,21, 22-22S-14W	314	132	L-KC	3600	7	8	7	0	1	Yes
6910	Pleasant Grove	John S. Martin*	(D) --	--	26-22S-12W	40	10	KC	3468	15	2	0	0	0	Yes
13372	Pundsack	Cities Service Oil Co.	(W) Pundsack Unit	Pundsack Unit, Schartz "B"	19-29-30-21S-13W 20-21S-13W	107	38	L-KC	3270	27	7	5	0	1	Yes
16232	Radium Townsite	H.A. Chapman	(W) Bauer-Strobel Waterflood	Bauer, Strobel	32-21S-14W 33-21S-14W	320	--	L-KC	3569	7	3	-	-	-	Yes
8232	Rattlesnake SE	White Hawk Oil Co.*	(D) McConaughay Unit	Harrison	13-24S-14W	60	0	L-KC	3700	10	1	0	0	0	Yes
16654	Richardson	Clinton Oil Co.	(W) V. Komarek	V. Komarek, C.J. Heyen "B"	30-22S-11W 31-22S-11W	480	0	L-KC	3386	28	5	0	0	2	Yes
12286	St. John	Atlantic Richfield Co.	(W) McNaughten "B"	McNaughten "B"	27-24S-13W	160	--	L-KC	3711	300	2	0	0	0	Yes
12920	Sand Hills	Bergman Oil Co.	(W) Mellies	Mellies	31-21S-11W 36-21S-12W	40	--	Simp	3104	4	1	0	0	0	Yes
17119	Sand Hills	H.A. Chapman	(W) Duggan Water- flood	Duggan	30-21S-11W	160	--	L-KC	3236 3329	3 3	1	-	-	-	Yes
15780	Sandra	Southern States Oil Co.*	(P) Christiansen	Christiansen	15-21S-12W	160	--	KC	3361	25	2	3	0	0	Yes
13406	Seevers Northwest	Thornton E. Anderson*	(D) Bowker	Bowker	36-24S-14W	60	0	Miss	4030	20	2	0	0	0	Yes
13617	Seevers Northwest	Ladd Petroleum Corp.	(P) Sanders	Sanders	1-25S-14W	160	0	L-KC	3664	21	2	0	0	0	Yes
14994	Seevers Northwest	Petroleum, Inc.	(W) Seevers N.W. L-KC Unit	Bowker "I", Bowker "J", Long "C", Seevers, Goodman (Wallingford), Neill, Goodman (Pet. Inc.), Turner "E", Goodman "B", Bowker "L", Bowker "B"	6-25S-13W 1-25S-14W 12-25S-14W	860	0	L-KC	3760	15	10	5	0	0	Yes
8784	Shaeffer-Rothgarn	Herman George Kaiser	(D) Willcut B	Willcut "A" & "B"	4-21S-13W	160	0	Lans	3270	200	1	0	0	0	Yes
11894	Shaeffer-Rothgarn	Petroleum, Inc.	(W) Shaeffer Unit	Tucker, Fanshier "A", Sharp	4-21S-13W	120	0	Cong	3500	7	3	3	0	0	Yes
14211	Shaeffer-Rothgarn	Texaco Inc.	(W) C.D. Koopman	C.D. Koopman	4-21S-13W	160	--	Cong	3540	11	2	-	0	-	Yes
15937	Silver Bell	Woodman-Iannitti Oil Co.*	(W) Silver Bell Pilot Flood	Soeken, Besthorn	9-22S-13W	160	--	L-KC	3530	3- 4	3	0	0	0	Yes
11775	Smallwood	White Hawk Oil Co.*	(D) Wetig Unit	Wetig	2-22S-14W	80	0	L-KC	3412	20	2	0	0	0	Yes
11857	Smallwood	White Hawk Oil Co.*	(W) Smallwood L-KC Unit	Keenan, Strobel, Adams	2-22S-14W 11-22S-14W	80	0	L-KC	3550	6	3	1	0	0	Yes
13889	Snider	F.G. Holl	(D) Schafer	Schafer	11-21S-11W	100	0	Cong	3350	25	4	0	0	0	Yes

Project No.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl/well/day	Injected-water data			Date first inj.	Primary production mechanism	Primary oil-water ratio	API grav., deg.	Oil visc., cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks		
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.						Type	Water Injection		Oil recovered by secondary methods				
																	Total 1973	Cum. 12-31-73	Total 1973			Cum. 12-31-73	
																		#=1973 Primary and Secondary Production					
14623	1	0	0	0	Irreg	0	35	Prod	--	--	U	1968	S Gas	6/70	34	--	12,775	23,725+	0	0	90,753	*Was Terra Resources #1,358	
16107	1	-	-	-	Irreg	100	200	Prod	--	--	U	1971	S Gas	15/85	35	--	36,000	--	--	--	--	--	
15408	1	0	0	0	Irreg	300	90	Prod + Sh Sd	75	35	M	1970	S Gas	1/1	31	--	32,190	119,340	5,530	11,630	--		
11122	6	2	0	0	Peri	1800	658	Water Sd	91	23	F	1964	S Gas	--	33.5	--	803,596	5,335,855	51,398	637,689	759,119		
11123	5	5	0	0	Peri	1500	493	Water Sd	99	23	F	1964	S Gas	--	33.5	--	432,709	4,224,972	10,757	178,711	220,198		
14032	-	-	-	-	Irreg	--	--	--	--	--	-	--	--	--	--	--	--	--	--	--	--	552,831 *Proj. not started #10,459	
12796	-	-	-	-	--	--	--	--	--	--	-	--	--	--	--	--	--	--	--	--	--	*Temp. Abandoned	
15562	1	0	0	0	Peri	0	26	Prod	--	--	U	1970	S Gas	1/1	38	--	9,490	32,290	0	0	--	#4,421	
8551	1	0	0	0	Irreg	--	360	Prod	--	--	T	1965	Grav	--	33	--	131,400	895,043	2,524	--	--	*Was Westrans Petroleum	
15347	1	3	0	0	Peri	280	900	Prod + Sh Sd	80	50	F + T	1970	S Gas + Wat	1/12	35	--	328,500	1,001,400	2,500	6,700	--	#10,200	
13909	1	0	0	0	Line	Vac	110	Prod + Quat	100	50	M	1967	S Gas	63/19	30.6	--	40,110	194,830	11,621	102,962	102,962		
6117	2	0	0	0	Irreg	120	150	Prod	--	--	U	1958	Wat	3/1	36.8	--	69,800	994,200	5,773	85,382	85,382		
6062	1	0	0	0	Irreg	Grav	62	Prod	--	--	T	1958	Gas Exp	2/6	37	--	22,630	233,520	1,200	12,300	--	#5,840	
13180	-	-	-	-	--	--	--	--	--	--	-	--	--	--	--	--	--	--	--	--	--	*No data received	
15248	1	0	0	0	Irreg	0	290	Sh Sd	80	--	F	1969	S Gas	8/2	30	--	105,400	411,400	3,000	13,100	471,306	*Was Shell Oil Co. #7,439	
5948	1	0	0	0	Irreg	Vac	1/3	Prod	--	--	T	1957	S Gas	881/536	32.4	--	124	40,713	0	48,753	124,192	*SWD #1,996	
6336	9	0	0	0	Peri	820	200	Prod + Fr	60	--	M	1958	S Gas	45/11	33	--	885,846	10,967,735	48,941	1,580,604	2,399,115		
6910	2	0	-	1	Irreg	Vac	160	Prod	--	--	T	1959	S Gas	5.5/3	32.5	--	57,600	--	2,631	--	--	*Was Shelly Miller	
13372	7	0	0	0	Peri	696	105	Prod + Sh Sd	35	53	M	1967	S Gas	44/67	30	--	461,208	3,936,777	18,510	172,389	1,049,783		
16232	3	-	-	-	Peri	Vac	350	Arb*	--	--	T	1973	S Gas	3/1	36	--	87,792	87,792	--	--	887,419	*Prod. from other wells #28,345	
8232	1	0	0	0	Irreg	0	10	Prod	--	--	U	1961	Wat	--	28	--	3,650	223,895	1,564	28,700	--	*Was Natural Gas & Oil	
16654	1	0	0	0	Irreg	770	192	Prod	--	--	U	1973	S Gas	1/3	35	--	54,434	61,883	13,340	13,340	--	#38,081	
12286	2	0	0	0	Irreg	400	325	Prod + Ter	63	23	M	1968	S Gas	30/58	32.2	--	302,301	1,087,536	20,295	51,628	51,628		
12920	1	-	-	-	Irreg	0	20	Prod	--	--	T	1966	S Gas	1/0	42	--	5,000	88,200	0	13,342	33,355	#165	
17119	1	-	-	-	Irreg	Vac	80	Prod From Arb wells	--	--	T	1973	S Gas	1/3	36	--	9,460	--	0	0	185,267	#15,097	
15780	1	0	0	0	Irreg	--	150	Prod	--	--	T	1971	Grav	--	31	--	54,650	115,379	3,738	16,563	16,563	*Was Westrans Petroleum	
13406	1	0	0	0	Irreg	0	60	Prod	--	--	U	1967	S Gas	16/2	34	--	21,603	222,000	500	1,900	133,650	*Was Dunne-Gardner #2,776	
13617	2	0	0	0	Irreg	Vac	123	Prod	--	--	U	1967	S Gas	50/79	29	25	89,870	683,942	3,877	32,903	339,616		
14994	7	0	0	0	Peri	769	278	Quat	100	50	F	1969	S Gas	139/136	32	--	709,052	1,836,429	50,132	232,164	232,164		
8784	1	0	0	0	Irreg	485	346	Prod	--	--	U	1961	Gas Exp	3/2	38	--	126,290	707,165	0	--	209,911	#3,410	
11894	2	0	0	0	Line	465	212	Prod + Quat	73	50	M	1965	S Gas	258/2	43.8	--	88,561	1,468,966	8,432	113,771	113,771		
14211	2	-	0	-	Irreg	Vac	269	Prod + River Gravel	100	--	M	1969	S Gas + Liquid Exp	680/5	44.5	*	196,700	1,093,936	14,417	54,561	80,652	*3.18 @ 80°F.	
15937	1	0	0	0	4-spot	500	380	Prod	--	--	T	1967	S Gas	6/4	31	--	138,700	830,450	1,900	15,400	--	*Was Petroleum Inc. #4,210	
11775	1	0	0	0	Irreg	0	100	Prod + Top	3140	65	U	1965	Wat	--	31	--	36,500	235,465	7,759	41,695	--	*Was Natural Gas & Oil #10,629	
11857	3	0	0	0	Peri	750	349	Prod + Fr	70	--	M	1957	S Gas	4.7/1	36	--	382,020	2,950,023	12,100	158,169	158,169	*Was Sun Oil Co.	
13889	1	0	0	0	Peri	0	25	Prod	--	--	U	1967	S Gas	1/1	45	--	9,125	74,875	0	0	85,100	#4,601	

County	Project no.	Field	Operator	Type and project name	Lease name	Location		Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been continuous?
						S—T—R		Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
STAFFORD COUNTY (concl.)																	
	15587	Zenith-Peace Creek	Fell & Wolfe Oil Co.*	(D) Volker	Volker		36-23S-11W	80	--	Viola	3744	6	1	0	0	0	--
	4338	Zenith-Peace Creek	Santa-Fe Pipe & Supply*	(D) McComb SWD	McComb, Richardson, McComb		21-24S-11W 22-24S-11W	--	--	Viola	3800	--	-	-	-	-	Yes
STAFFORD COUNTY TOTALS (Reported)								8,846	650				208	38	0	9	
SUMNER COUNTY																	
	11093	Anson Southeast	Phillips Petroleum Co.*	(P) Anson East Unit	Anson East Unit		6,7,18-31S-1W	220	60	Miss	3750	10	8	1	0	0	Yes
	13989	Anson Southeast	Phillips Petroleum Co.*	(P) Anson West Unit	Anson West Unit		6,7-31S-1W 1,12-31S-2W	340	560	Miss	3750	10	7	1	0	0	Yes
	12774	Ashton Northwest	Lario Oil & Gas Co.	(P) Williamson	Lario-Williamson		13,14-34S-1E	320	0	Miss	3484	--	2	0	0	0	Yes
	13900	Bates	Phillips Petroleum Co.*	(P) Bates Unit	Bates Unit		31-30S-1W 36-30S-2W	520	120	Miss	3750	10	11	0	0	0	Yes
	15716	Caster	Basin Petroleum Corp.	(P) Caster Unit	Melick, Caster, Long, Caster "A", Dunbar		33-33S-2E 35-33S-2E 2-34S-2E 35-33S-2E 2-34S-2E 3-34S-2E	160	15	Layton "A"	2680	10	15	0	0	0	Yes
	12381	Conway Springs	Texaco Inc.	(P) Conway Springs Unit	M. Lies, E.H. Zerner, R. Stoehr, M. Games, J. Orr, R.C. Frantz		5-31S-3W 8-31S-3W	880	--	Simp	4252	15	3	-	0	-	Yes
	11686	Duncan	Laura Jane Oil Co.	(P) Duncan-Orr	Duncan, Orr		18-30S-2W	40	0	KC	3263	4	1	0	0	0	--
	14630	Fall Creek	Texaco Inc.	(W) Fall Creek K.C. Unit	S. Hobbsiefken, I.E. Showalter, N.J. Peter, F.A. Hudson		3-35S-3W 4-35S-3W 4,9-35S-3W 10-35S-3W	380	--	KC	3700	6.5	5	-	0	-	Yes
	17006	Guelph	Herndon Drilling Co.	(P) --	Gurley		6-35S-1E	140	--	Simp	3908	19	5	-	-	-	Yes
	10738	Interchange	Lario Oil & Gas Co.	(P) Ashton-Lynch Unit	Lario-Lynch, Lario-Ashton		18-32S-1E 19-32S-1E	480	0	Simp	4050	--	3	0	0	0	Yes
	11426	Kerschen	Raymond Oil Co.*	(W) Kerschen	Andra, Grabendike, Kerschen		7,17,18-31S-3W	10	390	L-KC	3300	10	1	-	-	-	No†
	15035	Latta	Okmar Oil Co.	(W) Latta Coop	Latta A, Latta B		8-30S-2W 9-30S-2W	60	0	L-KC	3045	5	4	0	0	0	Yes
	15195	Love-Three	Continental Oil Co.*	(P) Love	Love, Orie, Ruth		13-32S-4W	--	--	Simp	4378	12	8	3	-	0	Yes
	14498	Murphy	Terra Resources, Inc.	(W) Vernon North Unit	Kemp, Callender, Callender "B", Waggoner, McClasky		8-35S-2E 9-35S-2E 16-35S-2E 17-35S-2E	288	0	Miss	3392	11	6	0	0	0	Yes
	9106	O'Hara	Stelbar Oil Corp.	(-) O'Hara	O'Hara		18-32S-1W	160	--	KC	3250	10	4	2	0	-	Yes
	13051	Oxford	D.T. Donley*	(-) Oxford Townsite	Rothwell, Emrick, Oxford Community		14-32S-2E	100	--	Layton	2400	16- 17	8	0	2	0	--
	"	"	" " " *	(-) Oxford West-Churchill	Churchill, Oxford West		31-31S-2E 17-32S-2E	300	--	Stal + Hoover	1900 1685	--	8	0	-	0	--
	9209	Padgett	Stelbar Oil Corp.	(W) Norrish-Shawver	Shawver Fee, Spence, Norrish, Shawver Fee B, Shawver Fee A		26-34S-2E 27-34S-2E 34-34S-2E	320	0	Miss	3450	30	5	0	0	0	Yes
	10688	Padgett	Stelbar Oil Corp.	(W) Post	Post		34-34S-2E	80	--	Miss	3450	30	3	0	0	0	Yes
	12773	Rutter Southwest	Lario Oil & Gas Co.	(P) King (D) King	Lario-King		29-33S-2E	160	0	Simp	3525	15	1	0	0	0	Yes
	15888	Seydell	Petroleum, Inc.	(P) Forney Lse.	Forney		8-30S-1E	40	40	Simp	3772	8	0	0	0	1	No*
	11612	Seydell	E. Morris Seydell*	(W) Seydell	Seydell "B"		17-30S-1E	80	80	Simp	3800	13	3	0	0	0	Yes
	14742	Seydell	Shenandoah Oil Corp.*	(W) Stunkel	Stunkel		9-30S-1E	20	0	Simp	3766	7	1	-	-	-	Yes
	16485	Slick-Carson	J.A. Allison	(W) Conrod	Conrod		24-32S-2E	80	40	Bartl	3124	13	1	0	0	0	No*
	11012	Trekell	Phillips Petroleum Co.*	(P) Anson South Unit	Anson South Unit		18,19-31S-1W	40	40	Miss	3750	7	2	0	0	0	Yes
	15952	Voils	Donald C. Slawson	(D) Bell "B" & Kraft "B"	Bell "B", Kraft "B"		16-30S-1W 17-30S-1W	320	0	Miss	3500	20	2	0	0	0	Yes

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water in. bbl/well/day	Injected-water data			Date first in.	Primary production mechanism	Primary oil-water ratio	API grav. deg.	Oil visc. cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks	
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth. ft.	Thick. ft.						Type	Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973			Cum. 12-31-73
15587	1	0	0	0	--	150	60	Prod	--	--	U	1970	S Gas	--	39.3	--	--	--	--	--	--	#=1973 Primary and Secondary Production
4338	1	0	0	0	Irreg	--	1200	Prod	--	--	T	--	Wat	--	38	--	438,000	--	--	--	--	*Was Republic Natural Gas *Was Hershberger Expl. #1,100
	108	12	0	2													9,662,333	58,778,187	514,885	4,933,951	14,554,510	
11093	1	0	0	0	Peri	250	1460	Wellington	50	20	F	1964	S Gas	--	41	--	532,209	2,670,476	72,974	582,827	1,431,770	*Was Beardmore Oil #109,522
13989	3	0	0	0	Peri	180	1290	Prod + Wellington	50	20	M	1968	S Gas	--	41	--	468,885	2,419,618	32,257	167,409	1,013,716	*Was Beardmore Oil #57,946
12774	1	0	0	0	Irreg	Grav	--	Prod + Layton + Arb	2863	--	U	1966	S Gas	37/149	40	--	--	--	0	0	72,986	*Was Beardmore Oil #6,223
13900	2	0	0	0	Peri	260	2120	Prod + Stal	2700	60	U	1967	Gas Exp	--	41	--	773,004	3,368,573	43,051	61,972	681,039	*Was Beardmore Oil #81,487
15716	3	0	0	0	Irreg	100	--	Prod	--	--	U	1970	Gas Exp + 7/3 Limited Wat	41	1.5	112,000	318,000	10,000	10,000	300,000	#55,000	
12381	2	-	0	-	Peri	Vac	361	Prod	--	--	U	1967	Wat	29,572/16,450	44	1.13	263,233	3,730,768	0	0	1,153,227	#8,820
11686	1	0	0	0	Irreg	0	10	Prod	--	--	U	1963	S Gas	2/1	37	--	1,900	19,700	1,500	16,500	51,415	#3,551
14630	6	-	0	-	Peri	230	164	Prod + Stal	3225	90	U	1969	S Gas	559/2572	36	3.6	359,233	1,721,858	16,904	96,701	123,137	#16,892
17006	1	-	-	-	Irreg	0	--	Prod	--	--	U	1973	Wat	1/12	45	--	291,950	291,950	2,010	2,010	2,456,888	#27,388
10738	1	0	0	0	Irreg	Grav	245	Prod	--	--	U	1964	Wat	3524/630	43	--	89,581	219,363	0	0	643,716	#61,193
11426	0	-	-	-	Irreg	0	0	Sh Sd	40	--	F	1965	S Gas	5/8	38	--	0	1,764,000	3,702	91,188	91,188	*Was Sohio Oil Co. +Inj. stopped in 1969
15035	2	0	0	0	--	150	240	Prod	--	--	U	1969	S Gas	3/32	37	--	175,200	575,630	158	158	516,359	#9,307
15195	1	0	-	0	Irreg	--	--	Prod	--	--	U	1969	S Gas	--	--	--	--	--	--	--	--	*Was Oasis Pet., Inc.
14498	5	0	0	0	Peri	Vac	305	Prod + Stal	2293	138	T	1961	S Gas	0.26/1.0	41	--	556,610	5,247,931	22,037	239,208	609,757	
9106	2	1	0	0	Peri	100	65	Prod + Stal	2750	100	T	1961	S Gas	--	36	--	46,366	1,405,654	10,760	231,370	--	*Was Green Pipe & Supply
13051	-	-	-	-	--	--	--	--	--	--	-	--	--	--	--	--	--	--	--	--	--	*Was Green Pipe & Supply
9209	2	0	0	0	Line	100	115	Prod	--	--	U	1960	Wat + S Gas	--	39	--	84,000	560,400	21,377	93,173	--	
14030																						
10688	1	0	0	0	Irreg	100	200	Prod + Stal	2350	150	U	1965	Wat	--	40	--	73,000	505,486	5,022	35,847	--	#6.696
12773	2	0	0	0	Peri	Grav	--	Arb	3544	--	U	1964	S Gas	31/0	38	--	--	--	0	15,292	109,092	
15888	0	0	0	1	Line	--	431	Prod	--	--	T	1971	S Gas	83/91	48.7	--	9,051	378,883	193	24,261	209,883	*P&A 4-26-73
11612	3	1	0	0	Irreg	275	200	Prod + Fr	26	--	M	1963	S Gas + Wat	1/0	40	--	182,734	1,324,120	2,881	119,699	509,674	*Was Sam P. Wallingford
14742	1	-	-	-	Peri	0	253	Prod	--	--	T	1969	S Gas	1/2	47+	--	92,345	373,122	4,125	28,696	235,930	*Was Solar Oil +To 48°
16485	1	0	0	0	Irreg	Vac	98	Prod + Surface	10	100	F	1972	S Gas	1/0	42	--	36,000	72,000	8,619	11,437	90,115	*Inj. periodically
11012	1	1	0	0	Peri	400	--	Prod	--	--	U	1964	S Gas	--	41	--	280,121	2,839,881	12,129	85,571	322,383	*Was Beardmore Oil Co. #17,615
15952	1	0	0	0	Irreg	50	100	Prod + Stal	2600	90	U	1971	S Gas	2/1	46	1.5	36,500	144,700	8,668	23,934	154,618	#14,668

County Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has in- been con- tinuous?
						Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
SUMNER COUNTY (concl.)															
3396	Wellington	Terra Resources, Inc.	(W) Wellington Unit	Boam, Manahan, Curtis, Kamas, Markley, Hennigh, Ludwig, Riddell, Miller, Gaskill, Neel, Frankum "A", Frankum, Murphy, Peasel, Barlow, Erker, Barlow "A", Barlow "B", Rothrock, Rothrock "A", Deturk, Deturk "A", Nelson, Carr, Moore, White, McKee, Stone, McDowell, Cole, Caples	20-31S-1W 28-31S-1W 29-31S-1W 32-31S-1W 33-31S-1W 4-32S-1W 5-32S-1W 6-32S-1W 7-32S-1W 8-32S-1W 9-32S-1W	2240	0	Miss	3650	20	64	9	0	0	Yes
5718	Wellington Northeast	Aladdin Petroleum Corp.	(P) Miller	Miller	23-31S-1W	60	60	Miss	3640	18	2	2	0	0	Yes
7955	Zyba Southwest	Petroleum Management*	(W) Chitwood-Snyder	Chitwood, Snyder	15-30S-1W	160	0	Simp	3880	--	-	-	-	-	--
SUMNER COUNTY TOTALS (Reported)						7,998	1,405				183	18	2	1	
TREGO COUNTY															
16437	Garner West	Benjamin Tepper	(P) Brown	Shearer, Connor, Brown	13-11S-25W 23-11S-25W 24-11S-25W	120	0	L-KC	3771	22	2	0	0	0	Yes
10154	Groff	John O. Farmer, Inc.	(P) Holtsinger	Holtsinger	35-14S-21W	--	--	Penn	3830	6	8	-	-	-	Yes
13935	Groff	Earl M. Knighton*	(W) Holtzinger	Holtzinger	35-14S-21W	80	0	Cher	3795	16	2	1	0	0	Yes
13976	Kutina West	Shields Oil Prod.	(W) Dickman-Philip Waterflood	Dickman	24-15S-22W	80	0	Cher	4200	20	1	0	0	0	Yes
15870	Madden	Raymond Oil Co.	(W) Madden	Madden	17-14S-21W	40	0	Cher	3971	11	1	-	-	1	Yes
11229	Mong	W.E. Wickizer	(D) Mong	Mong	24,25-11S-23W	320	40	KC	3616	220	1	0	0	0	Yes
8278	Newcomer	A.L. Abercrombie, Inc.*	(D) Rasek A	Rasek A	12-12S-23W	60	--	L-KC	3700	35	1	2	0	0	No†
10092	Newcomer	Petroleum Management	(W) Newcomer Coop- Hixon, LKC Unit	Hixson LKC Unit, Newcomer A, Newcomer B, Morgan C	2,11-12S-23W 12-12S-23W	1280	0	L-KC	3660	12	5	5	-	-	Yes
16356	Newcomer	Texaco Inc.	(W) Newcomer Unit	Sarah Losee, F. Rinker	1-12S-23W	480	--	L-KC	3650	3.3	5	-	0	-	Yes
14633	Ogallah	Colorado Oil Co.	(W) Schoenthaler	Schoenthaler	26-12S-22W	30	10	L-KC	3580	82	2	1	0	0	Yes
14666	Ogallah	Texaco Inc.	(P) Ogallah Unit	Monroe, Christian Church, Powers, Kellogg-Wynn, J.F. Stickline, E.A.Scott, A. Schoenthaler, V.G. Powers, C. Scott, G. Bittel, Anderson "C", P. Hendrickson, U.S. Government, Kellogg-Wynn, C. Scott, E.M. Monroe, Benson	31-12S-21W 25-12S-22W 26-12S-22W 27-12S-22W 34-12S-22W 35-12S-22W 36-12S-22W	1690	--	Arb	3950	24	33	-	0	-	No*
17094*	Trico	Cities Service Oil Co.	(W) Spaulding "B" W.F.	Spaulding "A", Spaulding "B"	1-11S-21W	260	0	L-KC	3366	8	5	4	0	4	No
15938	Voda	John O. Farmer, Inc.	(P) Voda	Strus, Malinosky, Martin, Wolf	21-11S-24W 28-11S-24W	320	160	L-KC	3989	6	4	-	-	2	No*
6045	Wakeeney	Okmar Oil Co.	(W) Kraus-Lemke	Kraus, Lemke	15-11S-23W	120	0	L-KC	3500	5	2	0	0	0	Yes
14181	Wakeeney East	Okmar Oil Co.	(W) Mong	Mong	24-11S-24W	50	0	L-KC	3539	5	2	0	0	0	Yes
14887	Walz	Continental Oil Co.	(W) Walz LKC	J.J. O'Connor, J.J. O'Connor "A"	13-11S-21W	100	0	L-KC	3400	17	5	0	-	0	Yes
TREGO COUNTY TOTALS (Reported)						5,030	210				79	13	0	7	

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl/well/day	Injected water data				Date first inj.	Primary production mechanism	Primary oil-water ratio	API grav. deg.	Oil visc. cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks	
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth. ft.	Thick. ft.	Type						Water Injection		Oil recovered by secondary methods				
																	Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73			
3396	41	11	0	0	--	197	449	Prod + Stal	2650	100	U	1953	S Gas	98/1	42.6	--	6,718,988	102,218,241	210,990	8,267,504	8,882,244	#=1973 Primary and Secondary Production	
5718 7955	2 -	2 -	0 -	0 -	Irreg --	160 --	200 --	Prod --	-- --	-- --	T -	1957 --	S Gas --	-- --	38 --	-- --	66,709 --	2,123,236 --	7,311 --	354,906 --	354,906 --	*Sold 3-1-73 to J & L Oil	
	86	16	0	0													11,249,619	134,293,590	496,668	10,559,663	20,014,043		
16437	1	0	0	0	Irreg	Vac	300	Prod	--	--	U	1972	S Gas	3/1	29	--	99,000	131,850	0	0	53,248	#18,679	
10154 13935	1 1	- 0	- 0	- 0	Irreg Peri	-- 700	200 200	Prod Prod + Fr	-- 18	-- 35	U M	1963 1967	Grav S Gas	-- 1/.9	40 39.4	-- --	-- 72,700	-- --	-- --	-- --	-- --	-- --	#3,985 *Was Sun Oil Co. #3,627
13976	1	0	0	0	Irreg	1600	185	Prod + Cedar Hills	1100	250	T	1968	Grav	--	38	--	66,650	375,850	9,000	85,500	113,900	#10,500	
15870 11229	1 1	- 0	- 0	- 0	Irreg Irreg	400 20	330 40	Prod + Arb Prod	4000 --	-- --	T U	1970 1964	S Gas Wat + Gas	1/0 3/7	37 35	-- --	-- 500	157,307+ --	4,288 --	24,925 --	24,925 --	-- --	#353
8278	1	3	0	0	Irreg	0	25	Prod	--	--	U	1960	S Gas	5/29	39	6	5,575	802,990	1,620	94,425	194,965	*Was Phillips Petroleum +Shut down before sale	
10092	3	2	-	-	Irreg	125	615	Prod	--	--	U	1960	--	--	36	--	224,461	3,580,251	10,253	403,138	548,630		
16356	3	-	0	-	Irreg	400	408	Prod + Cedar Hills	1380	220	U	1972	S Gas	58/12512	38.4	3.2	446,734	767,401	11,848	11,848	33,321	#20,964	
14633 14666 14667 14948	1 0 0 0	0 - 0 -	0 - 0 -	0 - 0 -	Irreg -- -- --	Vac 0 0 0	148 0 0 0	Prod + Arb -- -- --	3972 -- -- -	24 -- -- -	U - - -	1969 -- -- -	Wat Wat Wat	52/17 2860/ 880	39 37 2.6	-- -- --	54,200 0 0	355,263 0 0	7,188 0 0	42,006 0 0	-- 0 0	2,391,474	*Proj. not started yet #174,397
17094	0	1	0	0	Irreg	0	0	Prod	--	--	U	--	S Gas	16/21	--	--	0	0	0	0	782,319	*Inj. not started yet #15,050	
15938	-	-	-	-	Irreg	--	--	Prod	--	--	U	1970	--	--	36	--	28,579	341,883	3,000	--	31,085	*Discontinued inj. water #6,975	
6045 14181 14887	1 1 2	0 0 0	0 0 -	0 0 0	Irreg Irreg Line	150 330 250	300 430 485	Prod Prod Prod	-- -- --	-- -- --	- U U	1958 1968 1969	-- S Gas S Gas	-- 15/5 --	40 36 33.6	-- -- --	109,500 156,950 312,345	--* 1,143,938 1,316,546	2,229 530 7,337	--* 2,030 26,751	517,067 212,625 89,641	*No previous data #1,036 #17,330	
	18	6	0	0													1,577,194	8,973,279	57,293	690,623	4,993,200		

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1973—Continued

Kansas Geol. Survey Energy Resource Series 3, 1974

County		Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been continuous?
Project no.	Field					Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
WABAUNSEE COUNTY															
13504	Ashburn	Mack Oil Co.	(P) Ashburn Droll	Ashburn, Droll	29-14S-10E	40	--	Viola	3250	15	3	1	0	0	Yes
14051	Davis Ranch	Exxon Corporation	(W) Davis Ranch Waterflood	G.H. Davis "C", G.H. Davis "A", G.H. Davis "B"	28-13S-10E 33-13S-10E 4-14S-10E	144	0	KC	1828	6	2	1	0	0	No*
13124	Mill Creek	Frank Small Oil Co.*	(P) Thowe Lse.	Carl Thowe	2,3-13S-10E	150	--	Viola	2930	3-4	2	0	0	0	Yes
WABAUNSEE COUNTY TOTALS (Reported)						334	0				7	2	0	0	
WILSON COUNTY															
12711	Altoona	John T. Davis	(W) Umbarger	Umbarger	36-28S-16E	40	0	Squirrel	660	16	7	0	0	0	Yes
12954	Altoona	Davis & Bel Const.	(P) Folger	Folger	36-28S-16E	40	0	Squirrel	690	10	3	0	0	0	Yes
13022	Altoona	Paul Lamb*	(P) Anderson & Stover	Anderson, Stover, Anderson	3-28S-17E 4-28S-17E	320	0	Bartl	1010	18	10	0	11	0	No
7516	Altoona	Nicholas Sage*	(W) Arthur Mullen	Arthur Mullen	21-29S-16E	40	0	Bartl	780	12	5	2	0	2	Yes
8983	Altoona	Wimsett & Thompson	(W) Short	Short	31-28S-17E	160	20	Squirrel	700	720	5	1	-	-	Yes
10348	Benedict	C.F. Jones	(W) Roberts Lse.	Roberts	11-28S-15E	120	0	Squirrel	940	15	6	7	0	0	Yes
10473	Benedict	Layton Oil Co.	(-) Employer Reinsurance Lse.	Employers Reinsurance	9-28S-15E	--	--	Bartl	980	6	-	-	-	-	--
11290	Benedict	Layton Oil Co.	(-) Manderscheid & Pierpoint	Manderscheid, Pierpoint	4-28S-15E 9-28S-15E	--	--	--	--	--	-	-	-	-	--
12901	Buffalo-Vilas	Baker Oil Co.	(-) Milligan-Payne	Milligan, Payne	14-27S-15E	40	--	Bartl	899	7	7	-	0	-	Yes
11983	Buffalo-Vilas	Miller Oil Co.	(D) --	Mattix	1-28S-15E	80	15	Bartl	1074	15	3	-	0	-	Yes
5749	Buffalo-Vilas	George A. Hoffman*	(W) Vilas	C.A. Hulteen, J.A. Larson, etux, C.E. Ecklund, etux, Enoch & Etta Wiggans, Freidline A, B, C, Reece, etux, etal A, B, Bessie M. Randles, etux,	8-28S-17E 17-28S-17E 17,20-28S-17E 20-28S-17E	1200	250	Bartl Bartl	905 905	15 15	- -	- -	- -	- -	--
11377	Buffalo-Vilas	Marland No. 1*	(W) Uhren Flood	--	16-28S-17E	200	0	Bartl	960	20	10	2	3	2	Yes
9674	Buffalo-Vilas	Wimsett & Thompson	(W) Carlson	Carlson	11,12-27S-16E	160	30	Bartl	990	15	6	1	-	-	Yes
8283	Fredonia	R.R. Abderhalden*	(W) Van Camp	Hamilton, Mikesell, Van Camp	27,28,34, 35-29S-15E	150	0	Bartl	1160	40	24	1	0	0	Yes
9971	Fredonia	King Resources Co.	(W) Stryker-Holdeman	Holdeman, Stryker	27,34-28S-14E 34-28S-14E	--	--	New Albany	250	30	0	48	0	0	No*
9559	Neodesha	A.W. Bailey	(-) Unit #2	Franklin P. Graham	7-30S-16E	--	--	Neodesha	950	20	0	6	0	0	No*
12549	Neodesha	A.W. Bailey	(W) Unit #1	Greer, Mann, Holmberg, Bowman, Irvine-Wilson, Fee #2, Clegg, J.W. Sutherland, R.M. Jones, Theo. Johnson, Keys Heirs, Skiles-Rankin, Wolfe (East), C.W. Long, Ellis, Mong-Kimball, Mong-Skiles, City Sewage, Borceaux, Skiles-Sweeney, Belle Keys, Kimball, Rogers, Cook-Kimball, Hutchins, Wolfe (West), Cramer, Holland, Scott	20-30S-16E 20,21-30S-16E 20,21,28-30S-16E 21-30S-16E 28-30S-16E 28,29-30S-16E 28,33-30S-16E 28,32,33-30S-16E 29-30S-16E 29,32-30S-16E 32,33-30S-16E 33-30S-16E	350	0	Neodesha	800	0	70	0	0	0	Yes
10231	Neodesha	A.W. Bailey	(W) Barnes	Barnes	21-30S-16E	--	--	Neodesha	750	12	3	0	0	0	No
10232	Neodesha	A.W. Bailey	(-) Kimball-Dunn	Kimball-Dunn, Wilhelm, H.H. Kimball	19-30S-16E	--	--	Neodesha	850	15	5	-	0	0	No*

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1973

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl./well/day	Injected-water data				Date first inj.	Primary production mechanism	Primary oil-water ratio	API grav. deg.	Oil visc. cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks
	Active	In-active	Drilled					Source	Depth. ft.	Thick. ft.	Type						Water Injection		Oil recovered by secondary methods			
			1973	Abd. 1973													Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73		
#=1973 Primary and Secondary Production																						
13504	1	-	-	-	Peri	0	1125	Prod	--	--	U	1967	Wat	2/98	22	--	410,625	1,057,250*	3,762	9,276*	226,887	*Since 11-1-1970
14051	0	3	0	1	Irreg	--	--	Prod	--	--	U	1968	S Gas	50/1	29	27	0	416,725	7,300	59,105	59,105	*Inj. terminated
13124	1	0	0	0	Irreg	175	1000	Prod	--	--	U	1966	Wat	--	23.5	--	365,100	--	0	0	--	*Was Skelly Oil Co. #11,382
	<u>2</u>	<u>3</u>	<u>0</u>	<u>1</u>													<u>775,725</u>	<u>1,473,975</u>	<u>11,062</u>	<u>68,381</u>	<u>285,992</u>	
12711	4	0	0	0	5-spot	600	20	Prod + Bartl	800	20	T	1972	S Gas	9/1	29	--	28,000	50,000	955	1,205	--	#2,005
12954	1	0	0	0	Irreg	500	10	Prod + Bartl	800	20	U	1966	S Gas	9/1	26	--	3,500	96,000	150	3,600	--	#650
13022	4	-	15	-	Line	700	40	Prod + KC	350	400	M	--	Wat	1/4	24	--	--	--	--	--	--	*Was Willis Inds. Inc. #420
7516	2	-	0	-	Irreg	400	30	Prod + Oswego	640	8	U	1964	S Gas	95/5	36	--	18,000	180,000	717	12,119	22,119	*Was Crest Oil Co.
8983	2	-	-	-	5-spot	650	50*	Prod	--	--	U	1965	Grav	1/1	29	--	18,000	--	2,000	--	--	*+ 25 MCF
10348	6	0	0	0	5-spot + Line	450	35	Prod + Miss	1200	40	T	1963	Gas Exp	0.5/0	33	--	10,800	--	980	--	--	#1,154
10473	-	-	-	-	--	--	--	--	--	--	-	--	--	--	--	--	--	--	--	--	--	--
11290	-	-	-	-	--	--	--	--	--	--	-	--	--	--	--	--	--	--	--	--	--	--
12901	1	0	0	0	Irreg	--	--	Prod	--	--	-	--	Grav	--	31.5-	--	--	--	--	--	--	--
11983	-	-	-	-	Irreg	--	--	Prod	--	--	U	1965	Grav	1/10	29	--	27,375	--	--	--	--	#1,825
5749	-	-	-	-	--	--	--	Prod + Arb	--	--	T	--	S Gas	--	28	--	--	--	--	--	--	#10,618 *Sold 7/1/73 to Dr. Roy J. Lindgren, Jr.
11377	7	2	0	1	5-spot	400	35	Prod + Creek	--	--	M	1964	Gas Exp	95/5	29	--	70,500	452,078	14,421	113,035	113,035	*Was Murco Prod. Co.
9674	2	-	-	-	5-spot	600	50	Prod	--	--	U	1965	Grav	9/1	30	--	1,800	--	1,200	--	--	#1,450
8283	11	4	0	0	Irreg	450	180	Prod + Oswego	350	50	T	1961	S Gas	--	25	--	730,000	6,215,355	12,701	230,363	230,363	*Was Sun Oil Co.
9971	0	48	0	0	5-spot	--	--	Prod + Lans	150	20	F	1962	S Gas	--	24	129	0	500,000	0	5,000	70,000	*In process of selling
9559	0	11	0	-	5-spot	0	0	--	--	--	-	1963	--	--	--	--	0	1,339,311	--	35,086	--	*Temp. stopped
12549	69	0	0	0	5-spot	700	40	Prod + Surface	--	--	F + T	1961	S Gas	*	38	4	729,352	9,706,373	17,642	429,801	429,801	*Ranged from 3-30%
10231	-	4	-	-	5-spot	0	0	--	--	--	-	1964	--	--	38	4	0	240,000	0	4,240	--	#98
10232	-	7	0	0	5-spot	0	0	Sh Sd	60	15	-	1963	--	--	38	4	0	564,425	0	24,901	27,360	*Temp. stopped #1,181

County Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has ini- been con- tinuous?
						Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
WILSON COUNTY (concl.)															
11508	Neodesha	George J. Hempen*	(P) Thompson	Thompson	12-30S-15E	120	0	Bart1	1020	16	8	4	12	-	Not
7521	Neodesha	Nicholas Sage	(W) Susie Phillips	Susie Phillips	26-30S-16E	60	30	Bart1	780	20	8	4	-	-	Yes
WILSON COUNTY TOTALS (Reported)						3,080	345				180	76	26	4	
WOODSON COUNTY															
6103	Big Sandy	Woodson Pipe Line and Prod. Co.	(W) Big Sandy	Allen, Cobble, Pendley, Schafer, Scott, Louk, West Lauber, Lauber, Duncan	14-26S-14E 22-26S-14E 23-26S-14E	30	0	Bart1	1200- 1300	20- 50	28	11	0	0	Yes
14889	Durand	Dunigan Operating Co.	(W) Earl Davidson	Earl Davidson	6-25S-16E	18	0	Squirrel	965	10	4	0	0	0	Yes
15067	Durand	N & B Enterprises	(P) Durand Water Supply Inc.	Marvin Chambers	7-25S-16E	320	--	Squirrel	990	6- 12	6	1	0	0	Yes
9075	Humboldt-Chanute	Floyd Dotson	(W) Moon Pribbernow	Pribbernow, Tebbens, Reno, Moon, Bennett A, Bennett B, Orth, Williams	20-25S-17E 20,29-25S-17E 21-25S-17E 27-25S-17E 27,28-25S-17E 28-25S-17E	1750	0	Squirrel	800	10	98	0	7	0	Yes
13220	Neosho Falls- LeRoy	Leedy Beaman*	(-) Leedy Beaman	Leedy, Entz, Street	25-23S-16E	20	6	Squirrel	924	12	9	3	1	1	Not
15417	Owl Creek	Tec Drilling Co.	(P) --	Fred Coffield, Kenneth Stockebrand, Tom Smith, Marie Yohon	16-25S-16E 17-25S-16E 20-25S-16E 21-25S-16E	190	0	Squirrel	911	12	19	0	0	0	No*
8990	Perry-Halligan	Layton Oil Co.	(-) Rose Flood	--	16,17,18,19,20,21, 29,31-26S-17E	--	--	Squirrel	--	--	-	-	-	-	--
727 10584 10634	Quincy	Bird & Hanley	(W) Batesville	Mills, Eades, Nordmeyer, Akins, Klick, R.W. Tipton, J.W. Tipton, Lee, Enloe, A.W. Tipton	24-25S-13E 19-25S-14E 20-25S-14E 21-25S-14E 28-25S-14E 29-25S-14E	2080	0	Bart1	1500	30	34	21	1	0	Yes
10770	Quincy	Marion Myers*	(P) Corkery Lse.	Corkery	29-25S-14E	160	--	Bart1	1400	20	5	-	0	-	Yes
11604	Silver City	Steinforth Well Service*	(W) Silver City Water Flood Unit B	Adams, Hill "A", Hill "C"	20-26S-15E 29-26S-15E	55	0	Bart1	1400	20	4	0	0	0	Yes
12198	Silver City	Steinforth Well Service*	(W) Silver City Water Flood Unit A	Lauber, Lauber A, Lauber B, Steinforth	18,19-26S-15E	100	0	Bart1	1400	20	9	0	0	0	Yes
13137	Tichenor	Tec Drilling Co.	(-) Dearinger B	R.E. Dearinger "B"	19-23S-16E	160	0	Squirrel	1037	9	6	0	0	0	Yes
14285	Vernon	TAP Oil Co.	(-) Vernon	Carl Keske	5-24S-16E	200	--	Squirrel	1092	35	17	1	18	1	Yes
17126	Vernon	L.C. Bodemann, Jr*	(W) John F. Wingrave Lse.	John F. Wingrave	16,17-24S-16E	480	0	Squirrel	1015	20	9	4	0	0	Yes
10670	Vernon	Crystal Oil Co.*	(W) Sturlong	Sturlong Unit, Keske, Long, Sturdivan	34-23S-16E	100	20	Squirrel	1020	14	9	8	-	-	--
12385	Vernon	Long-Tye Oil Co.	(W) Glades-Fuller	Robison, Glades, Fuller, Sturdivan	29-23S-16E 33-23S-16E	540	--	Squirrel	1039	15	23	1	0	-	Yes
6887	Vernon	James E. Russell Pet.*	(W) Aljo Flood	Butler, Riley, Alexander, Alexander	35-23S-16E 2-24S-16E	116	0	Squirrel	1000	21.6	28	19	0	0	Yes
12706	Vernon	James E. Russell Pet.*	(W) South Vernon	Wilson-Dunne, Mathigs Strahm, D.W. Long, A.I. Link	1-24S-16E 11-24S-16E 12-24S-16E	15	0	Squirrel	1000	20	13	2	0	0	Yes
7103	Winterscheid	Atlantic Richfield Co.	(W) Winterscheid Waterflood	J.W. Maclaskey "A", W.P. Headley "A", "B", "C" Henry G. Collins	29,30-23S-14E 29,32-23S-14E 30-23S-14E	560	--	Miss	1700	20	25	13	0	0	Yes
7949	Winterscheid	Barnett Oil Company	(D) Bahr	Bahr	23-23S-13E	160	--	Arb	2200	5	3	-	-	-	Yes

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl/ well/ day	Injected-water data				Date first inj.	Primary production mechanism	Primary oil-water ratio	API grav., deg.	Oil visc., cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73		
11508	3	-	3	-	Line	400	30	Prod + Oswego	700	20	U	1973	Grav	6/4	37	5	8,000	8,000	700	700	900	#=1973 Primary and Secondary Production *Was Jeanbro Oil Co. †Shut in part of yr. #900
7521	5	1	0	0	5-spot	400	20	Prod + Salt Sd	900	50	U	1962	S Gas	99/1	38	--	36,000	720,000	1,023	40,242	90,242	
	117	77	18	1													1,681,327	20,071,542	52,489	900,292	983,820	
6103	4	0	0	0	5-spot	0	72	Prod + Cher	1100	30-50	T	1957	Grav	3/1	21	--	105,634	1,454,691	19,500	487,065	--	#23,175
14889	1	-	0	-	5-spot	500	47.5	Prod + KC	500	--	T	1969	S Gas	5/95	22	243	17,345	70,166	2,434	12,807	12,807	#3,673
15067	1	0	0	0	5-spot	600	25	Prod	--	--	U	1970	Grav	1/0	24	--	--	--	--	--	--	
9075	30	0	1	0	--	540	520	Prod + KC	350	40	U	--	Grav	--	27	--	189,800	3,105,622	20,668	236,167	236,167	
13220	1	0	0	0	7-spot	50	5	KC	100	20	U	1967	Grav	19/1	26	--	1,600	--	--	2,500	3,313	#Was Eugene N. Leedy †Shut down part of year *Temp. shut down †74 MCF †72° #7,899
15417	0	0	0	0	Irreg	180	0+	--	--	--	-	1970	S Gas	99/1	24	80+	0 9,000 MCF	0 42,800 MCF	983	16,908	148,280	
8990	-	-	-	-	--	--	--	--	--	--	-	--	--	--	--	--	--	--	--	--	--	--
727 10584 10634	14	36	0	0	Irreg	700	147	Prod + KC	670	--	T	1942	S Gas	1/0	40	5	749,721	30,153,620	54,447	4,986,141	4,986,141	
10770	2	-	0	-	Line	200	150	Prod	--	--	-	1972	Wat	--	40	--	45,000	--	0	--	--	#Was H.T. Uhl #3,150
11604	5	3	0	0	Line	190	25	Prod	--	--	U	1967	Wat	1/2	28	21	15,000	165,450	2,091	20,192	20,192	*Was Pauley Petroleum
12198	4	7	0	0	Line	200	15	Prod	--	--	U	1965	Wat	2/1	29	21	9,000	653,069	1,605	22,953	22,953	*Was Pauley Petroleum
13137	1	0	0	0	Irreg	300	32	Prod + KC	350	--	-	1969	Wat + S Gas	1/3	24	--	11,544	80,407	339	1,025	38,000	#2,159
14285	4	-	4	-	5-spot	550	35	Prod + KC	440	10	T	1969	Grav	9/1	24	--	47,000	--	4,996	--	--	#Was J.F. Williams and P.J. Gibbs #1,771 *Was Sturlong Oil Co.
17126	3	0	0	0	Irreg	90	21	Prod + KC	360	60	T	1973	S Gas	8/4	25.5	--	1,301	1,301	0	0	57,858	
10670	10	-	-	-	Irreg	300	16	Prod + KC	420	--	U	--	S Gas	1/1	24	--	--	--	4,396	108,310	108,310	
12385	6	-	0	-	Peri	Grav	--	Prod + KC	565	35	U	1966	Grav	9/1	24	--	15,000	--	200	--	--	#7,000
6887	34	17	0	0	5-spot	567	26	KC	550	40	T	1963	S Gas	--	26	70	317,232	3,313,767	40,149	504,460	646,095	*Was Russell-LeClair, Inc.
12706	3	6	0	0	Irreg	278	34	KC	500	40	T + S	1966	S Gas	--	26	70	36,607	324,311	5,507	45,958	91,715	*Was Russell-LeClair, Inc.
7103	14	4	0	0	5-spot	450	225	Prod + Douglas	700	30	U	1960	Wat + Solution	82/380	39	--	1,195,115	14,527,710	36,270	683,307	767,296	
7949	1	-	1	-	Irreg	Vac	400	Prod	--	--	U	1960	S Gas	2/8	34.5	--	110,000	1,447,260	2,000	73,150	298,253	#22,146

County	Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been continuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
WOODSON COUNTY (concl.)																
	416	Winterscheid	French Oil Co.	(P) Dewey	Dewey	32-23S-14E	100	0	Miss	1600	6	7	0	0	0	Yes
	1056	Winterscheid	French Oil Co.	(P) Maclaskey	Maclaskey	31-23S-14E	40	0	Miss	1700	4	4	0	0	0	Yes
	3902	Winterscheid	French Oil Co.	(P) W.P. Headley	Headley	29,32-23S-14E	90	0	Miss	1700	6	11	0	0	0	Yes
	5646	Winterscheid	French Oil Co.	(P) South Peek	Peek	20-23S-14E	100	0	Miss	1700	6	8	0	0	0	Yes
	5662	Winterscheid	French Oil Co.	(P) Headley (541)	Headley	29-23S-14E	70	0	Miss	1700	6	6	0	0	0	Yes
	6222	Winterscheid	French Oil Co.	(P) Quartet	Quartet	21-23S-14E	40	0	Miss	1700	6	2	1	0	0	Yes
	7898	Winterscheid	French Oil Co.	(P) Arnold	Arnold	35-23S-14E	40	0	Miss	1700	5	4	0	0	0	Yes
	8459	Winterscheid	French Oil Co.	(P) Floyd Jones	Floyd Jones	24-23S-13E	50	0	Miss	1700	3	5	0	0	0	Yes
	12149	Winterscheid	French Oil Co.	(P) Rhea	Rhea	24-24S-13E	120	0	Miss	1650	6	6	0	0	0	Yes
	12189	Winterscheid	French Oil Co.	(P) Knox	Knox	24-24S-13E	40	0	Miss	1600	4	4	0	0	0	Yes
	1055	Winterscheid	French & Winterscheid, Inc.	(P) Estes	Estes	7-24S-14E	40	20	Miss	1700	6	5	0	0	0	Yes
	3892	Winterscheid	French & Winterscheid, Inc.	(P) Winterscheid	Winterscheid	6-24S-14E	60	20	Miss	1700	5	6	1	0	0	Yes
	3893	Winterscheid	French & Winterscheid, Inc.	(P) Smith Jobe	Smith Jobe	7-24S-14E	40	20	Miss	1700	6	5	0	0	0	Yes
	5645	Winterscheid	French & Winterscheid, Inc.	(P) Emma Otto	E. Otto	21-23S-14E	20	0	Miss	1700	4	2	0	0	0	Yes
	6021	Winterscheid	French & Winterscheid, Inc.	(P) Kimble	Kimble	18-24S-14E	60	10	Douglas	1700	6	3	0	0	0	Yes
	6088	Winterscheid	French & Winterscheid, Inc.	(P) W. Jones	W. Jones	30-23S-14E	70	10	Miss	1700	6	4	0	0	0	Yes
	16395	Winterscheid	French & Winterscheid, Inc.	(P) E. Otto (B) (Throgmorton)	Otto B, Throgmorton	21-23S-14E	--	--	Miss	1685	5	9	0	0	0	Yes
	16396	Winterscheid	French & Winterscheid, Inc.	(P) Eby (Figge)	Figge	28-23S-14E	640	0	Miss	1685	7	16	0	0	0	Yes
	13109	Winterscheid	Houston-Oklahoma Oil Co.	(W) Kimbell-Rhea	Rhea,	13-24S-14E	40	0	Miss	1675	10	10	0	0	0	Yes
	13162				Kimbell	18-24S-14E										
	1054	Winterscheid	Kewanee Oil Co.*	(-) Maclaskey Lse.	Maclaskey	29-23S-14E	160	0	Miss	1670	15	12	2	0	0	Yes
	12212															
	11700	Winterscheid	Kraft Oil Co.*	(W) Rich "A" and Owens	Rich "A", Owens	24-23S-14E	50	0	Miss	1600	20	4	0	0	1	Yes
	13047	Winterscheid	Kraft Oil Co.*	(W) Weide	Weide	31-23S-15E	100	0	Miss	1550	14	4	1	0	0	Yes
	13070	Winterscheid	Arnold E. Kraft*	(W) Weide Lse.	Weide	6-24S-15E	50	0	Miss	1550	20	3	1	0	0	Yes
	14365	Winterscheid	Arnold E. Kraft*	(W) Figge	Figge	34-23S-14E	80	0	Miss	1650	20	5	1	0	0	Yes
	1436	Winterscheid	Tesoro Petroleum Corp.	(W) Emery	Ehrhardt,	33-23S-14E	500	0	Miss	1680	20	29	2	-	-	Yes
	6143				Ryser,	33,34-23S-14E										
	10251	Winterscheid	Union Oil Co. of Calif.	(W) W.P. Headley Lse.	W.P. Headley	32,33-23S-14E	520	0	Miss	1700	20	17	3	0	0	Yes
	4218	Winterscheid	Lee Wells*	(-) --	H.D. Stevenson	5-24S-14E	--	--	Miss	1704	16	8	3	14	3	Yes
	1474	Yates Center	Bird & Hanley	(W) Yates Center	Krueger,	22-25S-15E	400	0	Miss	1500	5	5	1	2	1	Yes
					Aetna, Aetna A,	27-25S-15E										
					Degree of Honor	28-25S-15E										
	729	Yates Center	L.M. McCormick	(-) --	Wallace, Degler	21-25S-15E	--	--	Miss	1500	6	3	2	0	-	No*
	11592	Yates Center	Tesoro Petroleum Corp.	(-) Lauber	Lauber, Degler,	21-25S-15E	280	0	Miss	1480	15	14	0	-	-	Yes
					Harder	22-25S-15E										
WOODSON COUNTY TOTALS (Reported)							10,854	106				570	102	43	7	

SUPPLEMENTARY LISTING OF QUESTIONNAIRES RECEIVED AFTER CUT OFF DATE

BARTON COUNTY

12012	Clarence	KRM Petroleum Corp.	(D) Button	Button	35-19S-15W	160	0	L-KC	3246	4	2	0	0	0	0	Yes
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BUTLER COUNTY

2551	El Dorado	Gear Operating Co.*	(W) Page Lse.	--	9-26S-5E	30	--	Simp	3000	10	2	0	0	0	--
7763	El Dorado	Gear Operating Co.*	(W) Robison Lse.	--	18-25S-5E	100	--	Miss	2570	35	5	0	0	0	--
16632	Keighley	Lee Phillips Oil Co.	(P) Keighley North-east Flood Unit	Saco-Drumm,	30-26S-8E	--	--	Bart1	2700	42	25	0	0	2	Yes
				Drumm Institute, Gray "B",	31-26S-8E										
				Ballew, Gray "A", Gray "C"	6-27S-8E										

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water ini. bbl/well/day	Injected-water data				Date first ini.	Primary production mechanism	Primary oil-water ratio	API grav., deg.	Oil visc., cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks		
	Active	In. active	Drilled 1973	Abd. 1973				Source									Total 1973	Cum. 12-31-73	Total 1973	Cum. 12-31-73				
								Depth. ft.	Thick. ft.	Type														
																								#=1973 Primary and Secondary Production
416	1	0	0	0	Irreg	75	100	Prod	--	--	T	1956	S Gas	55/45	37	--	24,000	244,000	4,216	69,849	--	--	#16,866	
1056	1	0	0	0	Irreg	Vac	100	--	--	--	T	1960	S Gas	45/55	36	--	10,000	120,000	634	16,183	--	--	#2,537	
3902	--	--	--	--	Irreg	75	200	Prod	--	--	T	1955	S Gas	1/1	37	--	35,000	1,010,000	4,587	57,715	--	--	#13,108	
5646	1	0	0	0	Irreg	75	125	Prod	--	--	T	1956	S Gas	51/49	37	--	30,000	900,000	3,112	91,850	--	--	#10,375	
5662	1	0	0	0	Irreg	80	200	Prod	--	--	T	1955	S Gas	1/1	37	--	12,000	332,000	1,920	39,091	--	--	#4,802	
6222	1	0	0	0	Irreg	75	50	Prod	--	--	T	1955	S Gas	6/4	36	--	4,000	24,000	1,710	25,814	--	--	#4,277	
7898	1	0	0	0	Irreg	60	50	Prod	--	--	T	1960	S Gas	45/55	36	--	15,000	340,000	662	16,006	--	--	#2,207	
8459	1	0	0	0	Irreg	100	180	Prod	--	--	T	--	Wat	1/1	36	--	38,000	1,028,000	993	16,489	--	--	#4,966	
12149	1	0	0	0	Irreg	100	125	Prod	--	--	T	1963	S Gas	55/45	33	--	18,000	188,000	445	24,076	--	--	#2,967	
12189	1	0	0	0	Irreg	70	75	Prod	--	--	T	1965	S Gas	48/52	33	--	8,000	58,000	767	19,861	--	--	#3,069	
1055	1	0	0	0	Irreg	125	150	Prod	--	--	T	1950	S Gas	45/55	36	--	58,000	450,000	1,608	66,872	--	--	#3,217	
3892	1	0	0	0	Irreg	50	100	Prod	--	--	T	1950	S Gas	52/48	36	--	25,000	750,000	1,179	55,610	--	--	#2,357	
3893	1	0	0	0	Irreg	90	110	Prod	--	--	T	--	S Gas	49/51	36	--	28,500	821,000	1,331	64,066	--	--	#1,775	
5645	1	0	0	0	Irreg	25	50	Prod	--	--	T	1956	S Gas	1/1	35	--	14,000	319,000	466	17,943	--	--		
6021	1	0	0	0	--	150	200	Prod	--	--	T	1955	S Gas	45/55	35	--	20,000	80,000	1,045	4,425	--	--	#2,089	
6088	1	0	0	0	Irreg	80	100	Prod	--	--	T	--	Wat	4/6	37	--	32,500	925,000	1,465	45,695	--	--	#2,931	
16395	1	0	0	0	Irreg	0	20	Prod	--	--	T	1960	Wat	6/4	36	--	2,000	4,000	2,266	4,913	12,282		#5,664	
16396	--	--	--	--	Irreg	50	15	Prod	--	--	T	--	Wat	6/4	36	--	5,000	10,000	5,837	12,178	30,446		#14,593	
13109	2	0	0	0	Irreg	100	100	Prod	--	--	U	1966	Wat	1/3	--	--	73,000	535,000	3,800	77,000	26,340		#6,340	
13162																								
1054	1	1	0	0	Irreg	650	428	Prod	--	--	U	1944	S Gas	8/5	39	--	156,083	2,356,083	6,680	181,301	876,007		*Was Barbara Oil Co. #12,642	
12212																								
11700	1	0	0	0	4-spot + Peri	150	35	Prod	--	--	U	1965	Wat	15/85	38	--	12,775	--	400	--	--	--	--	*Was Vannocker Oil Co. #1,095
13047	1	1	0	0	5-spot + Peri	250	300	Prod	--	--	T + S	1965	Wat	2/8	39	--	109,500	--	1,460	--	--	--	--	*Was Vannocker Oil Co. #3,650
13070	1	0	0	0	4-spot + Peri	100	50	Prod	--	--	U	1967	Wat	2/8	36	--	18,250	--	730	--	--	--	--	*Was Vannocker Oil Co. #1,825
14365	1	1	0	0	Peri + 5-spot	250	1200	Prod	--	--	T	1968	Wat	1/3	38	--	438,000	--	1,095	--	--	--	--	*Was Vannocker Oil Co. #4,380
1436	10	2	--	--	Peri	500	1900	Prod + Arb	2030	500	T	--	S Gas	2/8	38	--	1,900,438	9,032,152	31,606	709,292	--	--	--	
6143																								
10251	8	2	0	0	5-spot	950	259	Arb	2011	439	T	1963	Grav	17/63	38.5	--	756,047	8,372,823	26,587	294,556	294,556			
4218	--	--	--	--	--	Grav	--	Prod	--	--	--	--	Grav	1/75	--	36.5	--	--	25,000	0	0	2,000		*Was Union Oil Co. of Calif
1474	2	0	0	0	Irreg	450	262	Prod	--	--	T	1946	Gas Exp	50/1	32	--	191,453	1,534,964	9,181	306,022	306,022			
729	--	--	--	--	--	200	175	--	--	--	M	--	Wat	1/3	31	--	--	--	--	--	--	--	--	*SWD into KC #3,600
11592	8	1	--	--	--	700	586	Prod + Arb	1850	311	U	1961	S Gas	1/1	35	--	1,713,109	12,748,328	18,184	350,336	--	--	--	
	<u>189</u>	<u>81</u>	<u>6</u>	<u>0</u>													<u>8,614,554</u>	<u>97,504,724</u>	<u>329,551</u>	<u>9,768,086</u>	<u>8,985,033</u>			
12012	1	0	0	0	Irreg	0	250	Prod	--	--	U	1965	S Gas	1/49	25.4	--	72,000	561,000	3,863	32,819	--	--	--	
2551	2	0	0	0	Irreg	200	120	Prod	--	--	U	--	S Gas	--	36	--	105,850	--	3,334	--	--	--	--	*Was R.R. Abderhalden
7763	1	0	0	0	Irreg	50	319	Prod	--	--	U	1960	S Gas	--	43	--	116,435	--	7,079	--	--	--	--	*Was R.R. Abderhalden
16632	4	0	0	1	Irreg	Vac	1770	Prod + Douglas	1580	20	U	1971	S Gas	11/89	37	--	646,050	1,573,650	0	0	696,955		#72,748	

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1973—Concluded

Kansas Geol. Survey Energy Resource Series 3, 1974

County	Project no.	Field	Operator	Type and project name	Lease name	Location S—T—R	Acres in project		Oil producing zone			Oil producing wells (1973)				Has inj. been continuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
SUPPLEMENTARY LISTING (concl.)																
CHAUTAUQUA-ELK COUNTIES																
	13888 15710	Hale-Inge	Fairway Petroleum Corp.	(W) Inge Waterflood	Burford, Clymer, Frankson, Guthrie, Howell, Inge, Kimzey, Marmont, Mustoe, Vestal	26,27,34,35-31S-12E 3-32S-12E	127	0	Stray	660	10	26	0	0	0	Yes
COWLEY COUNTY																
	8007	David	Gear Operating Co.*	(W) North David Unit	--	25,26,35-30S-4E	273	--	Bart1	2975	18	8	0	0	0	Not
GREENWOOD COUNTY																
	8109	Thrall-Aagard	J. & T. Cooper*	(W) Bratton- Mansfield	Bratton, Mansfield	13-24S-9E	600	0	Bart1	2300	20	9	43	0	0	Yes
	14342	Thrall-Aagard	J. & T. Cooper*	(W) Zimmerman	Zimmerman	13-24S-9E	50	0	Bart1	2300	20	3	0	0	0	Yes
LINN COUNTY																
	3150	Cadmus-LaCygne	Moray Oil Co.	(*) Baker	Burnett, Stroup, Baldwin, Baker, Light, Harvey, Croxton, Crisler, Snyder, Burnett	21,31,33-19S-23E 4,5,8,9-20S-23E	1885	0	Peru	260	18	33	187	-	-	Not
	"	"	"	(W) Scott	Wilbur Scott	34,35-19S-23E 2,3-20S-23E	80	0	Peru	250	20	20	24	-	-	No*

Project no.	Injection Wells				Injection Pattern	Well-head press. psi	Water inj. bbl/well/day	Injected-water data			Date first inj.	Primary production mechanism	Primary oil-water ratio	API grav. deg.	Oil visc. cp. @ 60° F	Production and injection statistics (bbls)				Total Oil from project Pri. & sec.	Remarks	
	Active	In-active	Drilled 1973	Abd. 1973				Source	Depth, ft.	Thick., ft.						Type	Water Injection		Oil recovered by secondary methods			
																	Total 1973	Cum. 12-31-73	Total 1973			Cum. 12-31-73
13888 15710	20	0	0	0	5-spot	450	30	Prod + Salt Sd	445	20	U	1967	S Gas	1/25	32	20*	227,210	1,930,387†	11,513	82,047	82,047	*cp @ 77° F. †Corrected figure
8007	7	1	0	0	Irreg	450	73	Prod + Stal	1950	100	T	1960	S Gas	2/1	39	--	186,515	6,486,339	1,472	794,258	--	*Was R. R. Abderhalden †Shut down 11-1-73
8109	7	0	0	0	Irreg	1000	1800	Prod + Douglas	1100	100	T	--	Gas Exp	98/2	40	--	655,000	--	12,775	--	--	*Was R. R. Riss
14342	1	0	0	0	Line	900	150	Prod + Douglas	1050	100	T	1968	--	98/2	40	--	45,000	--	4,380	--	--	*Was R. R. Riss
3150	34	186	-	-	Line	140	---†	--	--	--	-	1970	S Gas	3/1	29	53.6	--	--	2,179	19,359	19,359	*Inert Gas †Not enough fuel gas ‡2.5 MCF
"	20	26	-	-	5-spot	260	24	Prod + Miss	1068	--	T	1940	S Gas	3/1	29	53	44,505	--	1,176	264,760	264,760	*Pump down for repairs

#=1973 Primary and Secondary Production

TABLE 2. --COUNTY SUMMARY OF ENHANCED RECOVERY PROJECTS IN KANSAS --1973.

COUNTY	TOTAL OIL	OIL RE-	WATER	CURRENT	ACTIVE	ACTIVE	WELLS		NUMBER
	FROM PROJECT	COVERED BY					INJECTED	PRODUCING	
	AREA	SECONDARY	bbl.	ACRES	WELLS	TION	OIL	INJ.	PROJECTS
	bbl.	METHODS				WELLS			
		bbl.							
ALLEN	346,710	310,674	5,421,352	5,660	862	619	13	10	36
ALLEN-ANDERSON	832	832	50,706	150	40	20	--	--	1
ALLEN-BOURBON	542	--	--	--	--	--	--	--	1
ALLEN-NEOSHO	--	--	--	--	--	--	--	--	1
ANDERSON	175,095	138,945	2,339,723	3,543	776	693	15	1	21
BARBER	231,863	205,687	8,646,275	3,524	68	26	1	--	12
BARTON	736,710	547,091	15,496,267	9,757	270	124	16	7	81
BARTON-ELLSWORTH	--	--	--	620	--	--	--	--	1
BARTON-RICE	46,917	46,917	733,112	370	7	8	--	--	1
BARTON-RUSSELL	59,240	30,718	776,020	400	16	9	--	2	1
BARTON-STAFFORD	26,372	19,950	362,322	170	9	4	--	--	2
BOURBON	53,712	52,570	1,246,141	515	70	71	--	--	9
BUTLER	1,211,491	873,134	51,121,879	16,656	631	300	20	3	98
BUTLER-COWLEY	35,074	3,306	29,200	1,600	15	2	2	--	2
CHASE	11,347	3,404	91,250	30	4	1	--	--	1
CHASE-GREENWOOD	17,004	8,502	146,000	250	13	2	--	--	1
CHASE-LYON	16,980	3,000	85,000	80	6	3	--	--	1
CHAUTAUQUA	324,841	278,764	1,857,517	17,263	634	137	31	--	51
CHAUTAUQUA-ELK	11,513	11,513	227,210	127	26	20	--	--	1
CLARK	6,223	6,223	90,088	1,280	3	1	--	--	1
COFFEY	29,030	10,641	300,115	600	55	15	1	--	11
COFFEY-WOODSON	16,052	16,052	803,109	220	23	17	1	--	2
COMANCHE	1,315	--	9,000	480	3	1	--	--	1
COWLEY	792,435	619,977	13,082,900	15,182	278	127	88	13	61
CRAWFORD	24,041	16,921	462,030	430	113	115	1	--	6
DECATUR	296,010	257,994	2,903,990	4,927	68	32	--	--	11
DICKINSON	8,336	--	325,000	320	9	1	--	--	1
DOUGLAS	1,847	1,400	5,400	125	2	1	--	--	2
DOUGLAS-FRANKLIN	18,870	18,870	456,250	157	23	20	--	--	1
EDWARDS	3,139	3,004	72,000	100	2	2	--	--	2
ELK	74,225	40,915	866,206	770	47	13	1	--	9
ELLIS	616,159	573,057	12,887,272	8,325	234	80	6	2	67
ELLIS-ROOKS	89,546	89,546	1,712,877	352	21	10	--	--	1
ELLIS-RUSSELL	38,572	38,572	700,986	450	13	3	--	--	1
ELLSWORTH	413,009	30,982	1,056,391	1,866	69	15	2	--	11
FINNEY	260,651	25,732	285,565	2,080	29	4	--	--	3
FINNEY-HASKELL	671,614	--	896,446	--	64	7	--	--	1
FRANKLIN	40,859	26,470	607,722	504	107	59	3	--	8
GOVE	71,455	2,133	206,180	1,000	13	5	--	--	6
GRAHAM	1,070,942	783,424	11,771,020	17,456	253	124	--	--	50
GRAHAM-SHERIDAN	75,072	24,000	146,000	130	4	1	--	--	1
GRAHAM-TREGO	11,283	11,283	564,299	390	8	4	--	--	1
GREENWOOD	774,099	559,211	18,143,674	19,614	665	269	9	7	99
HARPER	16,360	--	16,320	80	2	1	--	--	1
HARVEY	260,448	184,662	9,501,909	3,752	96	28	1	--	3
HARVEY-MCPHERSON	34,764	34,764	--	1,310	10	--	--	--	2
HODGEMAN	181,793	72,785	1,803,965	2,640	29	14	--	--	10
JACKSON	7,000	--	60,000	400	4	1	--	--	1
JOHNSON	5,900	3,400	31,353	30	10	4	--	--	3
KEARNY	8,076	--	5,762	--	1	1	--	--	1
KINGMAN	372,022	101,729	1,744,867	2,440	30	16	--	--	6
KINGMAN-PRATT	21,729	21,729	997,130	800	12	8	--	--	1
KINGMAN-SEDGWICK	14,416	--	--	--	11	--	--	--	1
KIOWA	26,414	--	45,000	6,440	14	1	1	--	2
LABETTE	3,174	72	7,750	265	23	6	15	--	5
LABETTE-MONTGOMERY	2,981	--	--	280	28	11	--	--	2
LANE	60,324	--	60,621	--	5	1	--	--	1
LINN	15,011	4,495	457,670	2,615	192	170	5	1	6
LINN-MIAMI	3,600	3,600	76,000	40	11	10	--	--	1
LYON	7,315	4,000	71,175	510	9	3	1	--	2
MCPHERSON	216,318	137,398	15,910,918	6,840	114	48	--	--	37
MARION	9,169	--	137,839	1,440	11	6	--	--	5
MEADE	13,838	2,930	204,900	1,400	13	6	--	--	4
MIAMI	32,111	18,179	775,184	1,524	173	122	7	--	9
MONTGOMERY	111,814	37,574	1,218,514	3,326	242	121	9	4	25
MORRIS	21,600	--	288,934	280	6	2	4	--	2
MORTON	1,515,436	1,515,436	8,089,999	5,180	44	12	--	--	3
NEOSHO	107,725	91,454	3,689,663	3,215	588	448	11	12	17
NESS	103,958	25,041	1,593,171	1,020	16	9	--	--	8
NORTON	6,929	--	366,825	320	9	1	--	--	1
PAWNEE	96,749	58,112	1,144,272	1,767	31	15	--	--	14
PHILLIPS	483,330	415,079	3,302,102	6,745	123	61	--	1	22
PRATT	193,124	203,743	5,840,575	4,714	69	45	1	--	17
RAWLINS	231,107	51,214	1,442,444	5,100	66	25	--	--	7
RENO	277,581	108,884	5,318,161	3,200	79	24	1	--	15
RENO-RICE	6,846	3,423	48,200	400	8	1	--	--	1
RENO-STAFFORD	32,215	32,215	4,361,464	1,320	6	10	1	--	2
RICE	1,037,249	726,318	8,597,064	14,691	292	108	10	2	58
ROOKS	985,966	718,558	16,051,243	12,799	340	144	1	3	62
RUSH	42,618	2,290	66,144	550	8	2	--	--	2
RUSSELL	2,748,282	2,180,049	42,753,998	22,835	802	342	5	3	155
SALINE	48,490	37,220	1,429,855	1,730	32	11	--	--	7
SCOTT	5,847	1,462	72,000	120	2	1	--	--	1
SEDGWICK	410,820	402,108	6,584,496	4,067	114	64	--	--	12
SEWARD	29,612	--	844,598	1,031	3	1	--	--	1
SEWARD-STEVENS	264,907	264,907	1,946,553	880	6	4	--	--	1
SHERIDAN	164,190	121,011	1,895,955	1,954	35	15	--	--	8
STAFFORD	761,012	514,885	9,662,333	8,846	208	108	--	--	60
SUMNER	773,884	496,668	11,249,619	7,998	183	86	2	--	29
TREGO	298,474	57,293	1,577,194	5,030	79	18	--	--	16
WABAUNSEE	12,636	11,062	775,725	334	7	2	--	--	3
WILSON	68,805	52,489	1,681,327	3,080	180	117	26	18	21
WOODSON	460,469	329,551	8,614,554	10,854	570	189	43	6	50
TOTALS	21,361,177	14,712,913	339,372,839	305,664	10,496	5,408	354	95	1,402

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Many of the publications are out of print; see local library for report. (Thirty-day lending service is also available from the Extension Library, The University of Kansas.)

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