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ENERGY RESOURCE SERIES 5

ENHANCED OIL-RECOVERY IN KANSAS, 1974

ABSTRACT

Data for 1,358 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; these include 1 with air injection and 1 fire flood. Three hundred sixty-six are identified as pressure maintenance projects, 264 as dump floods, and most of the remaining 726 are waterflood operations. During 1974, 79 repressuring applications were approved.

Crude oil production in Kansas totaled 61,692,000 barrels during 1974; of this, 13,334,252 (21.6%) were recovered from the projects listed. County and project summaries shown include totals of acreage, oil producing and input wells, 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; much 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 more oil from known accumulations in Kansas which have already undergone considerable production is reflected in the title change for the accompanying report. "Enhanced Oil Recovery Operations" covers all methods of production used after ordinary 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 Geochemistry and

Subsurface Geology 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 oilfield areas. Kansas may see another cycle of increased oil production in the near future. A good example of this renewed activity in research to determine the best enhanced recovery techniques for application to Kansas oil fields is the El Dorado Micellar-Polymer Project being operated by Cities Service Oil Company, in cooperation with the Energy Research and Development Administration (ERDA). This field demonstration test, in the "650' Admire Sand" of the El Dorado Field, Butler County, Kansas, if successful, could result in the future recovery of large amounts of otherwise unrecoverable oil.

This project, not designed to produce a profit, is expected to cost about seven million dollars, 60 percent of these funds being furnished by Cities Service and 40 percent by ERDA. In addition Cities Service will make other contributions worth about 1.9 million dollars.

The El Dorado Project is designed to allow side-by-side comparison of two micellar-polymer floods in the same field so that reservoir conditions for the two floods are as nearly identical as possible. Each test area will cover 25.6 acres, but, if the tests are successful, the project might be expanded to effect tertiary recovery of oil from all of the 6,200 acres of abandoned reservoir. The "650' Admire Sand" originally contained 108 million barrels of oil. Production during primary and secondary operations amounted to 36.5 million barrels. A successful tertiary project applied field-wide could recover approximately half of the remaining 71.5 million barrels. This is certainly a significant target.

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 foreword 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. This 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 unproduced oil, hopefully will bring the flood tide of production back to Kansas.

1974 PROJECT DATA

Data for 1,358 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 1974 total of 61,692,000 barrels is just under half of the production 18 years earlier, and the 13,334,252 barrels reported produced by enhanced recovery methods last year was about 21.6 percent of the oil produced during the year (Table 2).

The types of projects used in Kansas fields in 1974 are indicated in this report. Table 1 lists 1 air-repressuring, and 1 fire-flood project, among the more unusual. Three hundred sixty-six are identified as pressure maintenance, 264 as dump floods, and most of the remaining 726 are called water flood operations. Some projects were not identified as to type, and several are called salt-water disposal operations.

During 1974, 79 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 1974; 13,334,252 barrels of oil to 299,593,259 barrels of water. An average of 10,368 oil wells and 5,163 injection wells were operating on the 320,438 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 decrease 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 thickness of the beds and with their average depth below the surface. 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-most portions of Kansas.

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

This report covers only projects that were in operation during 1974. 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 small 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 waterflooding 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. Linda Shifflett, Gina King, and Byron Jackson assisted in preparation of material for the tables.

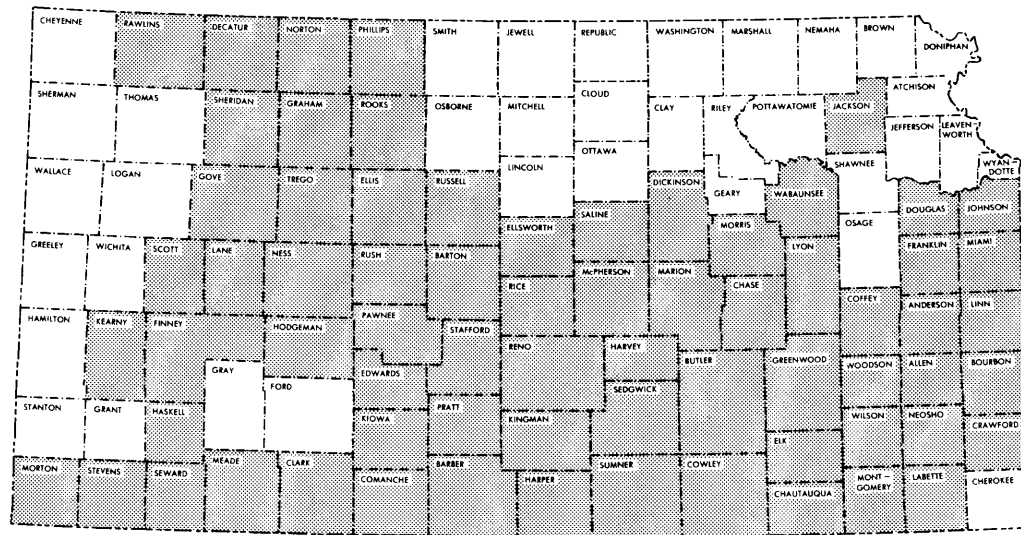


Fig. 1--Map of Kansas showing counties with enhanced recovery projects.

EXPLANATION
 ● Oil zone
 ♀ Water source
 X Marker bed

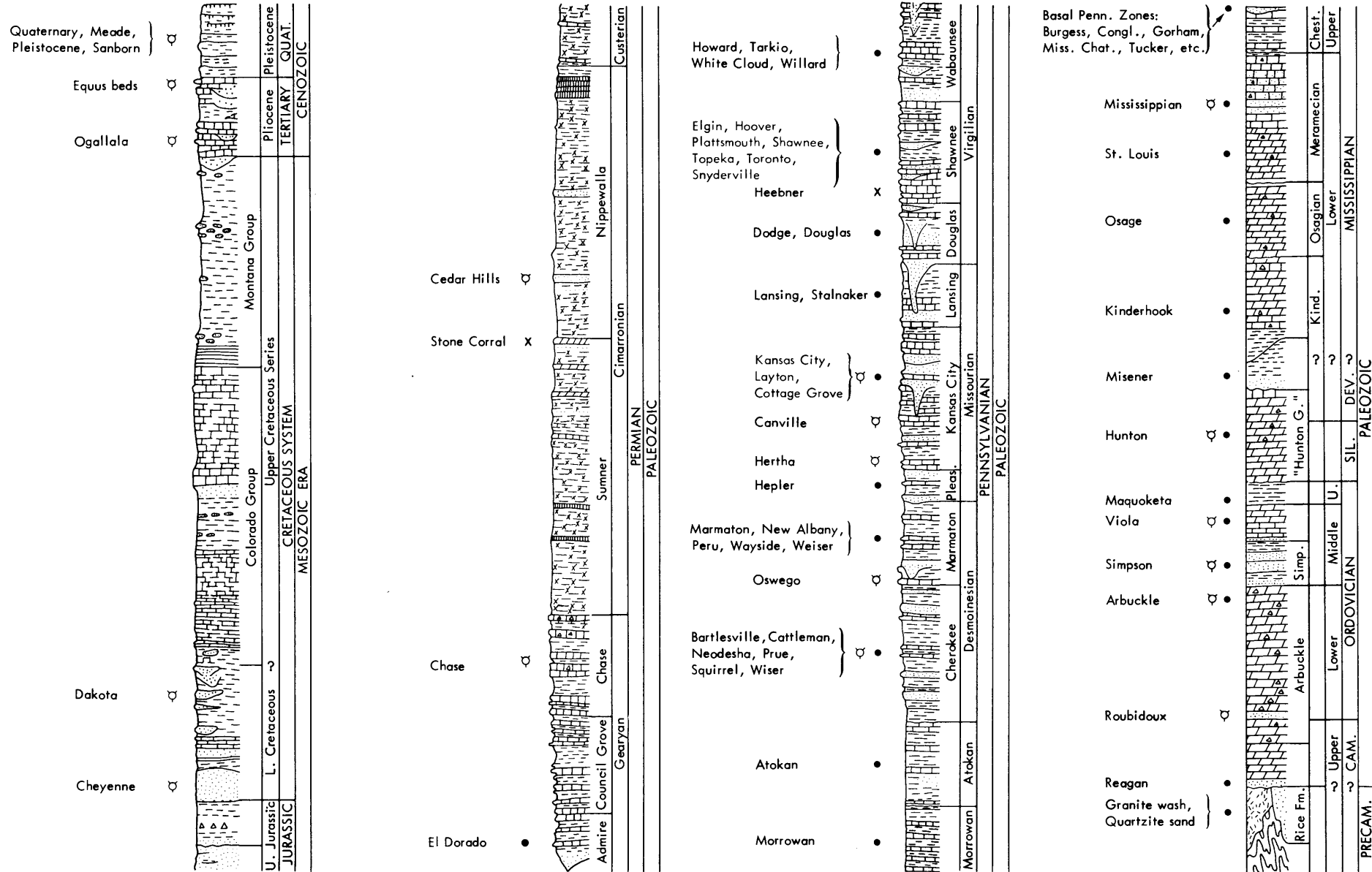


Fig. 2--Classification of rocks in Kansas (Oros, 1971, modified from D.E. Zeller (Ed.), 1968). Stratigraphic positions of oil producing zones, water sources, and marker beds are indicated.

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 (Zeller, D. E. (Ed.) 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.

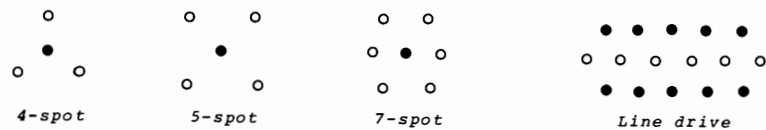
In addition to the indicated water source beds, a number of the projects depend on fresh water from streams, lakes, and municipal water supplies.

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

- | | | |
|---|---|--|
| <p>TYPE OF PROJECT</p> <p>(A) = Air injection
(D) = Dump flood
(F) = Fire flood
(P) = Pressure maintenance
(S) = Steam flood
(SWD) = Salt water disposal
(W) = Controlled waterflood
(-) = Not identified</p> | <p>Inert gas
Natural gas
F = Fresh water
M = Mixture of fresh water and brine
T = Treated brine
U = Untreated brine</p> <p>Special additives:
MS = Micellar solution
P = Polymer
S = Surfactant</p> | <p>AVERAGE WELL-HEAD INJECTION PRESSURE</p> <p>Pounds per square inch, as indicated, and:</p> <p>Grav = Gravity
Vac = Vacuum</p> |
|---|---|--|

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

- | | |
|--|--|
| <p>Arb = Arbuckle
Bartl = Bartlesville
B Penn, Basal Penn = Basal Pennsylvanian
Burg = Burgess
Cattle = Cattleman
Ced H = Cedar Hills
Congl = Conglomerate
Ch = Chat, Chert
Chey = Cheyenne
Cher = Cherokee
Ches = Chesteran
Cott Gr = Cottage Grove
Dak = Dakota
Doug = Douglas
El Dor = El Dorado
Fr = Unnamed fresh water source
Gr = Gravel
Hunt = Hunton
KC = Kansas City
Kind = Kinderhook
LKC = Lansing-Kansas City
Lay = Layton
Lans = Lansing
Lo = Lower
Lm = Lime
Ls = Limestone
McPher = McPherson
Maq = Maquoketa
Marm = Marmaton
Mise = Misener</p> | <p>Miss = Mississippian
Morr = Morrow
Ogal = Ogallala
Penn Congl = Pennsylvanian Conglomerate
Platt = Plattsmouth
Pleist = Pleistocene
Perm = Permian
Pleas = Pleasanton
Prod = Produced
Quat = Quaternary
Reag = Reagan
Salt Sd = Unnamed salt water sand
Sd = Sand
Sh Grav = Unnamed Shallow gravel bed
Sh Sd = Unnamed shallow sand
Shaw = Shawnee
Simp = Simpson
Snyder = Snyderville
St L = St. Louis
Stal = Stalnaker
Squir = Squirrel
Tark = Tarkio
Tuck = Tucker
Ter = Tertiary
Top = Topeka
Tor = Toronto
Up = Upper
Wat = Water
Way = Wayside
White Clid = White Cloud</p> |
|--|--|

TABLE 1--ENHANCED OIL-RECOVERY PROJECTS, 1974

County	Project no.	Is proj. uni- tized?	Field	Operator	Type and project name	Lease name	Location	Acres in project		Oil producing zone		Oil producing wells (1974)				Has inj. been con- tinuous?	
							S - T - R	Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled		Abd.
ALLEN COUNTY																	
	9546	--	Bronson-Xenia	Harold T. Beck	(W) Allen County 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) Richard W. Booth	Richard W. Booth	3,4-25S-21E 18-25S-21E	10	0	Bart1	762	24	0*	4	0	4	No
	3091	--	Bronson-Xenia	Colt Oil Company, Inc.	(W) KBC-KBN	North Holeman, Stewart-Holeman, Lamb, Isenhart-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	75	45	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	No	Colony West	Welda Recovery, Inc.	(W) Colony B South Unit	Colony B South Unit	21,22,27-23S-18E	150	0	Squirrel	815	25	15	0	4	0	Yes
	6814	--	Davis-Bronson	Harold T. Beck	(W) Allen County Flood	Steiner	10,15-24S-21E	160	0	Bart1	650	15	13	0	0	0	Yes
	6851	No	Davis-Bronson	Dee Eastwood	(W) Dawson	Dawson	15-24S-21E	80	0	Bart1	650	10	7	0	1	0	Yes
	13975	--	Davis-Bronson	Dorwin Jackson*	(W) 85465	Melvin Stewart	22-23S-21E	80	50	Bart1	630	15	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	Hoffman Oil Company	(W) Elsmore Pool	Warren Sisson, et ux, W.R. Ludlum, et ux, David Roy Perry, et ux James F. Pavlicek	22-25S-21E 34-25S-21E	280	--	Bart1	720	16	19	--	2	--	--
	17350	--	Elsmore Shoestring	Rainbow Oil, Inc.	(W) Don R. Nelson	Marvin Sander, Don R. Nelson	16-26S-21E 21-26S-21E	360	0	Bart1	625	15	14	0	18	0	Yes*
	11183	--	Humboldt-Chanute	Bucane Oil & Research Co.*	(W) ---	Hayworth, Yount, Brachuer	36-26S-18E	160	0	Bart1	825	8	7	0	0	0	No
	3802	No	Humboldt-Chanute	Jones & Campbell, Inc.*	(D) Wolf-Tebay	Wolf-Tebay Unit	24-26S-17E 19-26S-18E	320	--	Bart1	820	40	11	10	3	0	No
	8170	Yes	Humboldt-Chanute	Jones & Campbell, Inc.*	(-) Monarch	Monarch Unit	9-26S-18E	10	0	Bart1	800	10	4	10	0	0	Yes
	5397	No	Humboldt-Chanute	Layton Oil Company	(W) Project 503	Project 503	1,12,13-26S-18E	60	0	Bart1	820	16	13	0	4	1	Yes
	8647					Project 503	6,7-26S-19E										
	596	--	Humboldt-Chanute	Minn Kan Oil Company	(W) Humboldt-Petrolia	Hamm, Shultz, R.L. Work, D. Work, Mathias, Middendorf, Wadley, Armel, Campbell, McKinley, Morris, Grother, Trabue, Wilson-Dickerson	4-26S-18E 5-26S-18E 5,8-26S-18E 7-26S-18E 19-26S-18E 20-26S-18E 29-26S-18E	488	0	Bart1	750	20	135	--	0	0	Yes
	2698																
	3183																
	3435	--	Humboldt-Chanute	Minn Kan Oil Company	(W) Matson Group	Wadley, Fussman, Morris, McCarty, McKinley, Burtiss, Fraker	16-26S-18E 17-26S-18E 18-26S-18E	--	--	Bart1	800	*	150	--	0	0	Yes
	1858	--	Humboldt-Chanute	Texaco, Inc.*	(W) Henrichs Block	Henrichs Block	22,23,26, 27-26S-18E	464	--	Bart1	725	†	42	--	--	--	Yes
	5717*	--	Humboldt-Chanute	Roy Willis	(-) Heavy Oil	Hoepker C Krouse C, McKaska C*	25-26S-18E 36-26S-18E	4	--	Bart1	825	15	4	3	0	0	Yes
	3617																
	10579	--	Humboldt-Chanute	Roy Willis	(D) Townsend	Townsend	31-26S-19E	20	--	Bart1	830	10	4	--	0	1	No*
	16718	--	Humboldt-Chanute	Kenneth J. Wimsett	(W) Kenneth J. Wimsett	C. Johnson	18-26S-20E	160	50	Bart1	725	10	15	0	0	0	Yes
	9014	No	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- Dolecek*	Miller, Teats Dolecek	36-24S-17E 31-24S-18E	520	0	Squirrel	801	12	4	0	0	0	Yes
	8717	--	Iola	Layton Oil Company	(A) Cross-Clinkenbeard	Cross, Clinkenbeard	3-24S-18E	15	0	Bart1	860	50	7	16	0	0	Yes
	9017	No	Iola	Layton Oil Company	(F) Carlyle Thermal Unit	Gregg, Wiggans B, Riggs, Javaux	10-24S-18E 11-24S-18E	10	10	Bart1	850	20	9	75	0	0	No*
	9089																
	3246	No	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.	(D) Lorance	Lorance	21-24S-18E	10	0	Squirrel	668	9	8	0	0	0	Yes
	7469	No	Iola (LaHarpe)	Tech-American Resources Corp.*	(W) Scott-Sallee	Otis Sallee, H.E. Scott	14-25S-19E	320	0	Bart1	808	35	10	16	1	0	Yes
	14322	No	Iola (LaHarpe)	Tech-American 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

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

Project no.	Injection Wells					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)						Remarks	
	Active	In-active	Drilled 1974	Abd. 1974	Injection Pattern			Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods			
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974	Cum. 12-31-74		
9546	10	0	0	0	Irreg	--	--	---	--	--	U	--	---	--	24	--	--	--	234	--	234	--		
13452	0	1	0	1	5-spot	0	0	Miss lime	1020	--	U	1967	S Gas	1/3	21.1	533	0	32,290	0	612	0	0	*Temp. Abd. lack of production	
3091	62	50	0	0	Line	350	49	Prod + Miss lm	--	--	T	1951	Grav	1/0	30	--	1,101,929	31,125,586	34,430	2,982,641	34,430	2,982,641		
9440	3	12	0	0	5-spot	410	23	Prod + Miss lm	940	--	T	1962	Grav	1/0	26	--	25,588	998,429	1,067	--	1,067	74,427		
15815	8	0	2	0	Line	250	43	Sh lime above Big Shale	350	35	T	1971	Grav	1/0	32	--	124,354	340,204	16,472	45,317	16,472	45,317		
6814	3	5	0	0	Irreg	--	--	---	--	--	U	--	---	--	28	--	--	--	551	--	551	--		
6851	6	--	--	--	Irreg	550	20	Prod + Surface	--	--	F	1972	Grav	3/1	25	--	43,000	129,000	1,753	5,434	1,000	--		
13975	4	3	0	0	Irreg	600	80	Miss	980	15	M	1968	Grav	1/50	26	24	--	--	22,000	--	1,007	--	*Was Jackson Bros.	
11082	7	0	0	0	Line	650	51	Prod + Miss	950	68	F	1964	S Gas	--	32.5	--	99,784	1,752,376	3,170	127,841	3,170	--		
8152	8	--	--	--	---	600	300	Prod + Arb	1800	16	T	--	S Gas	--	30	--	--	--	--	5,268	--	--	--	
17350	4	0	3	0	5-spot	650	50	Prod + Surface	--	--	M	1974	Grav	4/1	30	--	41,491	41,491	12,427	12,668	2,000	2,000	*Since June 1974	
11183	0	0	0	0	Irreg	200	5	Prod	--	--	U	--	Grav	1/0	32	--	10,000	59,000	1,700	4,360	1,000	2,930	*Was F. Merton Jeanes	
3802	6	5	0	0	Irreg	550	240	Prod + Oswego	525	100	M	--	S Gas	--	28	--	48,000	--	596	--	596	--	*Was John Anderson	
8170	6	8	0	0	Irreg	400	40	Prod + Oswego	500	25	M	--	Wat	--	31	--	14,800	427,450	1,460	6,793	--	6,793	*Was R. R. Riss	
5397	25	0	1	0	5-spot	260	42	Prod + Miss lm	1061	--	T	1970	S Gas	1/5	32	--	385,231	1,251,549	23,156	97,383	23,156	97,383		
8647	596	159	59	0	Irreg	600	--	Prod + Neosho	--	--	M	1950	S Gas	--	28	80	242,618	25,550,390	19,752	1,139,150	19,752	1,139,150		
2698																								
3183																								
3435	140	9	0	0	Irreg	780	12	Neosho	--	--	M	1936	S Gas	--	27-28	--	--	--	8,884	--	8,884	--	--	*8-60 ft.
1858	23	--	--	--	5-spot	700	--	Prod + Arb	1500	--	M	1974	S Gas	--	29.1	--	--	--	--	--	--	--	--	*Was Ross-Keas Oil Inc. †0-40 ft.
5717	3	0	0	0	Irreg	400	5	Prod + Oswego lm	450	30	U	1953	Grav	1/0	31	--	7,000	690,000	--	186,400	--	--	*C-6370 Inactive	
3617																								
10579	5	--	0	3	Irreg	250	5	Prod + Oswego lm	450	30	U	1963	Grav	1/2	32	--	2,000	213,000	358	--	358	28,198	*Shut down winter months	
16718	6	0	0	0	5-spot	500	20	Prod + KC	200	5	M	1972	Grav	1/1	32	--	14,600	27,689	3,000	17,600	4,500	--		
9014	3	--	--	--	5-spot	70	100	Prod	--	--	M	--	Grav	9/1	30	--	36,000	--	2,100	--	2,100	--		
13992	1	0	0	0	5-spot	600	52	Salt Wat Well	137	350	U	1968	Grav	9/1	28	--	17,000	97,400	640	9,040	580	2,780	*Ling Lse Abd. 1971	
8717	3	1	1	0	Irreg	450	30*	Surface	--	--	F	1974	S Gas	--	21	700	18,300	18,300†	1,377	--	1,377	--	*+ 20 MCF †+10,980MCF	
9017	0	5	0	0	---	--	--	---	--	--	-	1963	S Gas	--	21	700	0	1,145,300†	1,746	113,757	0	112,011	*Thermal proj. shut down †+4,188,950MCF	
9089																								
3246	1	0	0	0	Irreg	200	131	Prod	--	--	U	1952	S Gas*	--	19	--	47,815	618,769	8,101	--	--	--	*+ Water drive	
6633	2	1	0	0	5-spot	--	3	River gravel	20	6	F	1962	Grav	1/0	33	--	1,647	--	1,882	--	425	--		
7469	1	24	0	0	Irreg	100	4	Prod	--	--	U	1968	S Gas	99/1	17.8	650	1,411	75,686	2,821	119,516	0	0	*Was Tenneco Oil Co.	
14322	4	0	0	0	Irreg	384	34	Prod + KC	170	30	M	1968	S Gas	99/1	21.7	--	45,738	303,535	10,798	99,544	10,798	57,295	*Was Tenneco Oil Co.	

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1974—Continued

County Project no.	Is proj. uni- tized?	Field	Operator	Type and project name	Lease name	Location S - T - R	Acres in project		Oil producing zone			Oil producing wells (1974)			Has inj. been con- tinuous?	
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled		Abd.
ALLEN COUNTY (concl.)																
14357	Yes	Iola (LaHarpe)	Tech-American Resources Corp.*	(W) H.P. Morrison Unit	H.P. Morrison Unit	22-25S-19E	320	0	Bartl	861	35	9	2	0	0	Yes
14897	No	Iola (LaHarpe)	Tech-American Resources Corp.*	(W) D.L. Jarred & A.H. Setter "B"	D.L. Jarred, Andrew H. Setter "B"	21-25S-19E 22-25S-19E	320	0	Bartl	800	25	5	1	0	0	Yes
16534	No	Iola (LaHarpe)	Tech-American Resources Corp.*	(W) A.W. Wade	A.W. Wade	23-25S-19E	80	0	Bartl	845	24	3	1	0	0	Yes
10334	No	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	52	0	10	0	Yes
9952	--	Moran	Colt Oil Company, Inc.	(W) Moran Group	Bowen	35-24S-20E	25	0	Bartl	800	15	6	2	0	0	Yes
11361	--	Savonburg	Hoffman Oil Company	(W) Savonburg	Donald R. Nelson, et ux, Joseph Lowe, et ux(now Nelson) Guy Shirley, et ux	21,29-26S-21E 28-26S-21E 29-26S-21E	640	--	Bartl	690	13	16	--	2	--	Yes
ALLEN COUNTY TOTALS (Reported)							6,481	330			731	213	45	6		
ALLEN-ANDERSON COUNTIES																
4401	--	Colony West & Iola	Colt Oil Company, 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	---	--	--	30	37	0	0	Yes
ALLEN-NEOSHO COUNTIES																
4444	--	Humboldt-Chanute	Roy Willis	(P) Seefeldt	Seefeldt	34-26S-18E 3-27S-18E	20	--	Bartl	760	30	0	2	0	0	No*
4919	--	Humboldt-Chanute	Texaco, Inc.*	(-) K. T. Block	K.T. Block	32,33-26S-18E 4-27S-18E	745	--	Bartl	730	+	124	-	-	-	Yes
ALLEN-NEOSHO COUNTIES TOTALS (Reported)							765	0			124	2	0	0		
ANDERSON COUNTY																
3151	Yes	Bush City Shoestring	Glacier Petroleum Co.*	(W) Reed Group	Reed Group	4,5-21S-21E	--	--	Squirrel	620	+	150	-	-	-	Yes
3177	Yes	Bush City Shoestring	Glacier Petroleum Co.*	(W) Connelly & Lorfaux	C & L Unit	4,5-21S-21E	--	--	Squirrel	620	+	125	-	-	-	Yes
1111 852	--	Bush City Shoestring	Kewanee Oil Company	(W) Dengo	Brownrigg, Jackson, Bandy & Daniel, McCrabb, Litle & Oko, Woods, Cleveland, Kretchmer, Victor	4-20S-21E 28-20S-21E 33-20S-21E	346	17	Squirrel	614	5	122	5	0	0	Yes
5985	--	Bush City Shoestring	Kewanee Oil Company	(W) Dengo W.F.	Bandy, Victor, Daniel	32-20S-21E 33-20S-21E 4-21S-21E	0	30	Bartl	740	11	1	2	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	0	Squirrel	800	30	129	5	0	0	Yes
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	6	17	5	0	No*
5363	--	Colony-Welda	James E. Russell Petroleum	(W) Unit No. 3	Unit No. 3	2,3-22S-19E	146	0	Squirrel	800	19	30	11	11	0	No*
10781	--	Colony-Welda	James E. Russell Petroleum	(W) Martin and Strain	Martin, Strain	4-22S-19E 9-22S-19E	55	0	Squirrel	800	21	17	5	0	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	No*
8945	--	Colony West	James E. Russell Petroleum	(W) West Colony	West, Wolfe, McGhee, Brecheisen, Lacy, Kelley	36-22S-17E 31-22S-18E 5-23S-18E 6-23S-18E	214	0	Squirrel	850	18	46	19	0	0	Yes

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

Project no.	Injection Wells					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 (bbl)						Remarks	
	Active	In-active	Drilled 1974	Abd. 1974	Injection Pattern			Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods			
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974	Cum. 12-31-74		
14357	7	0	0	0	Irreg	459	49	Prod + KC	170	30	M	1968	S Gas	99/1	23.7	100	124,986	797,313	10,506	138,020	10,506	71,257	*Was Tenneco Oil Co.	
14897	3	0	0	0	Irreg	618	68	Prod + KC	170	30	M	1969	S Gas	99/1	23.5	--	74,734	457,112	6,368	50,346	6,368	16,450	*Was Tenneco Oil Co.	
16534	3	0	0	0	Irreg	440	42	Prod + KC	170	30	M	1972	S Gas	99/1	21.9	--	46,211	125,784	746	12,915	746	1,215	*Was Tenneco Oil Co.	
10334	35	0	6	0	5-spot	500	16.5	Prod + Miss	1010	65	T	1963	Grav	98/2	24.6	--	210,758	--	51,183	--	51,183	--	--	
9952	6	1	0	0	5-spot	600	48	Prod + Miss	1m	960	--	T	1953	Grav	1/0	22	--	105,220	1,138,525	2,997	80,882	2,997	80,882	
11361	-	-	-	-	---	600	400	Prod + Arb	1600	16	T	--	S Gas	--	30	--	127,891	12,601,122	7,105	739,769	--	--	--	
	557	184	13	4													3,018,106	80,039,300	242,648	5,990,995	204,250	4,720,729		
4401	12	47	0	0	Line	600	20	Prod + Miss	1m	1260	--	T	1955	Grav	1/0	32	--	86,553	7,025,255	7,011	--	7,011	1,313,405	
4444	0	-	0	-	Irreg	400	5	Prod + Oswego	525	20	U	1955	Grav	1/0	32	--	--	152,500	--	29,366	--	--	--	*Shut down
4919	61	-	-	-	5-spot	700	--	Prod + Arb	1500	--	M	1974	S Gas	--	32.5	--	--	--	--	--	--	--	--	*Was Ross-Keas Oil Inc. †0-40 ft.
	61	0	0	0													0	152,500	0	29,366	0	0		
3151	150	-	-	-	Irreg	580	1370	Prod	--	--	U	--	Wat	--	29	--	500,468	--	--	--	--	--	--	*Was Marmon Oil Co. †20-30 ft.
3177	100	-	-	-	Line	650	1345	Prod	--	--	U	--	Wat	--	32	--	490,236	--	--	--	--	--	--	*Was Marmon Oil Co. †20-30 ft.
1111 852	116	5	0	1	5-spot	775	9	Prod + Miss + Arb	907 1451	--	T	1944	S Gas	--	36	*	379,154	10,125,048	23,185	2,128,225	23,185	1,489,923	*6.3 @ 75°	
5985	0	0	0	0	Irreg	0	0	Prod	1451	--	*	1958	S Gas	--	38	--	0	86,882	180	--	0	0	0	*T + M
3098	106	5	0	0	5-spot	800	14	Prod + Arb + Miss	1625 & 1450	--	T	1951	S Gas	--	36	--	540,697	18,453,852	43,559	--	43,559	1,745,033		
4389	0	17	0	0	5-spot	0	0	Prod + Miss	1m	1200	--	T&S	1955	S Gas	--	33	13	0	2,502,786	2,455	315,874	0	191,254	*Shut down while re-drilling
5363	0	24	0	0	5-spot	0	0	Prod + Miss	1200	--	T&S	1957	S Gas	--	36	7.5	0	2,301,116	7,089	195,039	0	0	0	*Shut down while re-drilling
10781	18	1	0	0	5-spot	567	32	Prod + Oswego	lime	700	60	T&S	1964	S Gas	--	36	7.5	197,965	1,307,457	18,250	231,459	18,250	137,244	
11165	0	41	0	0	5-spot	0	0	Prod + Miss	1200	--	T&S	1948	S Gas	--	33.1	13	0	6,458,240	31	1,320,345	0	579,789	*Shut down	
8945	43	45	0	0	Line	604	32	Prod + Salt	Sd	1100	35	T&S	1961	S Gas	--	30	22	497,504	5,881,171	19,833	655,031	19,833	480,320	

TABLE 1--ENHANCED OIL-RECOVERY PROJECTS, 1974--Continued

County	Project no.	Is proj. uni- tized?	Field	Operator	Type and project name	Lease name	Location			Acres in project			Oil producing zone		Oil producing wells (1974)			Has inj. been con- tinuous?
							S - T - R	Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.		
ANDERSON COUNTY (concl.)																		
	10327	--	Colony West	James E. Russell Petroleum	(W) Chas. 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	0	Squirrel	660	20	9	4	0	0	Yes	
	12120	No	Garnett West	H & G Pulling Company	(D) H & G Pulling Co.	Macklin, White, Hermick	25,26-20S-19E	220	--	Prue	610	8	7	0	3	1	Yes	
	13952	--	Selma	James E. Russell Petroleum	(W) Vernon Croan Lease	Vernon Croan	21-21S-21E	10	12	Bartl	650	12	0	5	0	0	No*	
ANDERSON COUNTY TOTALS (Reported)								(includes projects in supplemental list.)			2,117	79		694	170	24	1	
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	3	0	0	3	Yes	
	5362	--	Bloom	American Petrofina Co. of Texas*	(D) Bloom	Bloom	23-32S-12W	20	20	Miss	4321	17	1	0	0	0	Yes	
	6939	--	Highway	Aylward Drilling Company	(P) Gilbert	Stone	23-32S-11W	80	10	Snyder*	3586	6	2	0	0	0	Yes	
	15010	No	Medicine Lodge- Boggs	Skelly Oil Company	(W) Boggs "C"	Boggs "C"	17-33S-12W	160	0	Simp	4794	12	9	4	0	0	Yes	
	14776	Yes	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	
	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 Company	(P) L.M. Lee "A" & "B"	L.M. Lee "A" & "B"	8,9-30S-15W	40	0	Viola	4646	30	1	2	0	0	Yes	
	15630	--	Rhodes	Bowers Drilling Co., Inc.	(P) Gilmore Chapin	Gilmore Chapin	19-33S-11W	160	--	Miss	4480	30	4	0	0	0	Yes	
	6584	--	Rhodes	Clinton Oil Company	(W) W.A. Newkirk	W.A. Newkirk, C.M. Calvin "A"	20-33S-11W 29-33S-11W	571	409	Miss	4433	10	7	1	0	19	Yes	
	10102	No	Rhodes	Gulf Oil Corp.	(W) W.A. Newkirk	W.A. Newkirk	17-33S-11W	160	0	Miss	4450	--	7	1	0	0	Yes	
	9123	Yes	Rhodes	Kewanee Oil Company*	(W) Rhodes Unit	Page A, Page C, Newkirk, Page B, Page D	15-33S-11W 16-33S-11W 21-33S-11W 22-33S-11W	1533	320	Miss	4550	20	19	10	0	0	Yes	
	10266																	
	17372	No	Rhodes	Kewanee Oil Company	(W) Forester A	Forester A	28-33S-11W	120	0	Miss	4433	200	1	0	0	0	Yes	
	16262	No	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	No	Skinner	Robert F. White	(D) Skinner "B"	Skinner "B"	17-31S-17W	40	0	Viola	4400	30	1	--	--	--	Yes	
BARBER COUNTY TOTALS (Reported)								3,614	759			71	18	0	22			
BARTON COUNTY																		
	15252	Yes	Ames	Clinton Oil Company	(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	7	1	0	0	Yes	
	17142	--	Ames	Kaiser-Francis	(-) Drews	Drews A, Drews B	15-18S-11W	60	0	Lans	3036	189	4	0	0	0	Yes	
	6929	--	Ames	Pioneer Operations Co., Inc.	(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	1	0	0	Yes	
	16938	No	Beaver	Colorado Oil Company	(D) Kramer Lease	Kramer	15-16S-12W	60	40	Lans Arb	3051 3318	181 2	2	0	0	0	Yes	
	11244	No	Beaver	Keener Oil Company*	(W) Feltes	N. Feltes	8-16S-12W	50	0	Lans	3050	8	2	1	0	0	Yes	
	2259																	
	14631	No	Beaver	Phillips Petroleum Co.*	(P) Christian "D"	Christian "D"	10-16S-12W	40	--	L-KC	3060	12	1	0	0	0	Yes	
	15418	Yes	Bernard	Graybol Oil Corp.	(W) Musenberg Unit	Musenber	10-19S-11W	60	0	Lans	3192	8	5	0	0	0	Yes	
	8475	No	Bloomer	Stepco, Inc.*	(D) ---	Bloomer	36-17S-11W	160	--	L-KC	--	--	2	--	--	--	Yes	
	8376	--	Bottoms	Hillenburg Oil Co.*	(W) Zink A	Zink A, Birzer B	35-18S-12W 36-18S-12W	20	0	L-KC	3130	10	3	1	0	0	Yes	
	15841	--	Boyd	Clinton Oil Company	(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*	
	17564	No	Carrol North	Phillips Petroleum Co.*	(P) Borchers	Borchers "A", Demel "A"	8-17S-14W 17-17S-14W	20	0	Arb	3400	--	2	0	0	0	Yes	

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

Project no.	Injection Wells				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 vsc., cp. @ 60° F	Production and injection statistics (bbls)						Remarks																
	Active	In-active	Drilled 1974	Abd. 1974			Injection Pattern	Source	Depth, ft.	Thick., ft.						Type	Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods																	
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974		Cum. 12-31-74															
10327	0	5	0	0	5-spot	0	0	Prod + Hertha	500	--	T&S	1963	S Gas	--	27	38	0	87,600	0	2,511	0	2,511	*Shut down for future development															
7361	5	0	0	0	---	0	6	Prod	--	--	U	1959	S Gas	--	35	--	8,760	719,500	1,120	74,020	--	--																
12120	2	-	0	-	5-spot	600	--	Prod	--	--	U	1965	Wat	--	32.6	--	--	3,000	--	940	--	--																
13952	0	5	0	0	5-spot	0	0	Prod + Surface	--	--	F	1968	S Gas	--	32	8	0	334,200	0	9,934	0	9,934	*Shut down for future development															
																567	154	1	1													2,776,984	49,854,442	138,440	4,933,378	119,273	4,636,008	
13209	1	0	0	0	Irreg	200	800	Prod	--	--	T	1967	Wat	9/1	37	--	292,000	2,295,850	4,356	126,161	4,356	126,161																
5362	1	0	0	0	Irreg	300	58	Prod	--	--	U	1957	S Gas	1/2	33	--	21,177	197,374	8,671	130,959	0	0	*Was El Dorado Refg. Co.															
6939	1	0	0	0	Irreg	Grav	47	Prod	--	--	U	1959	Gas Exp†	4/1	28	--	17,155	403,949	3,061	107,296	3,061	70,911	*Snyderville (Douglas) †+ Water Drive															
15010	3	0	0	0	Irreg	*	338	Prod	--	--	U	1969	S Gas	73/352	26.2	--	306,953	1,066,224	19,984	2,862,700	19,984	57,466	*0-125 psi															
14776	3	0	0	0	Peri	1800	350	Prod + KC	4000	--	T	1969	S Gas	9/7	30	--	378,000	2,013	15,446	626,341	15,446	45,515																
16556	1	0	0	0	Irreg	1800	400	Prod + KC	4000	--	T	1972	S Gas	9/7	30	--	126,000	--	376	3,272	0	0																
15203	1	0	0	0	Irreg	0	50	Prod	--	--	T	1968	Grav	--	--	--	4,455	86,130	18,250	86,015	0	0																
15630	4	0	0	0	Irreg	Grav	100	Prod	--	--	U	1970	Wat	4/1	25	--	3,600	18,000	9,279	40,860	1,000	5,500																
6584	1	4	0	6	Irreg	1900	60	Prod	--	--	U	1958	S Gas	--	25	--	7,565	591,617	21,900	9,609,619	0	0																
10102	2	0	0	4	Irreg	1200	225	Prod	--	--	U	1963	S Gas	59/38	25.4	--	82,384	9,046,801	8,946	332,235	8,946	332,235																
9123	15	4	0	0	Peri	2000	434	Prod + Medicine Lodge River Wells	14	16	M	1962	Gas Exp	1/13.3	26	†	2,376,754	61,644,189	115,545	5,358,713	115,545	1,758,713	*Was Barbara Oil Co. †4.7 @ Reservoir press. and temp.															
10266																																						
17372	1	0	0	0	Irreg	0	50	Prod	--	--	U	1974	Gas Exp	0/50	26	--	12,500	12,500	0	0	0	0																
16262	1	0	0	0	Irreg	100	80	Prod	--	--	U	1971	S Gas	35/30	26	--	29,200	74,750	9,349	201,039	1,000	1,000																
15863	1	-	-	-	Irreg	0	40	Prod	--	--	U	1971	S Gas	1/2	40	--	15,000	60,000	5,400	517,000	0	0																
																36	8	0	10													3,672,743	75,499,397	240,563	20,002,210	169,338	2,397,501	
15252	3	0	0	0	Irreg	1589	217	Arb	3300	20	U	1971	S Gas	1/8	33	--	228,935	731,399	22,490	673,374	22,490	81,533																
17142	1	0	0	0	Irreg	Grav	440	Prod	--	--	T*	1974	Gas Exp	18/224	--	--	146,000	146,000	10,000	667,877	1,000	1,000	*+ S															
6929	2	0	0	0	Irreg	585	260	Prod + Red Bed	375	80	M	1971	S Gas	1/1	40	--	94,900	352,647	6,100	--	2,450	--																
11512	1	0	0	0	Irreg	1100	125	Prod + Sh River Gravel	40	20	M	1972	S Gas	52/45	42.5	--	46,867	138,631	25,336	48,891	11,030	11,869																
16938	1	0	0	0	Irreg	400	486	Prod	--	--	U	1973	Wat	16/369	39	--	177,330	247,491	6,089	354,355	0	0																
11244	1	1	0	0	Line	325	750	Prod	--	--	T	--	Wat	--	38	--	273,750	--	6,599	--	5,930	--	*Was Mobil Oil Corp.															
2259																																						
14631	1	0	0	0	Perit	0	24	Prod	--	--	U	1968	S Gas	1/3	39	--	8,748	71,638	1,562	77,589	0	0	*Was Thomas H. Allan															
15418	3	0	0	0	4-spot	850	103	Prod + Fr Wat Sd	20	30	M	1970	S Gas	16/70	40	3.2	117,538	845,804	17,257	112,471	17,257	112,471	†+ Irreg															
8475	1	0	-	6	Irreg	--	70	Prod	--	--	U	--	---	8/70	36	--	--	--	--	--	--	--	*Was Skelly Oil															
8376	1	0	0	0	3-spot	15	120	Prod	--	--	T	1961	Wat	73/27	40.3	--	38,152	--	3,519	--	3,519	--	*Was Terra Resources, Inc.															
15841	1	0	0	0	Irreg	0	509	Prod	--	--	U	1971	S Gas	1/4.6	39.1	--	185,750	349,404	22,103	953,887	22,103	36,853	*Not injecting															
7810	0	1	0	0	Irreg	0	0	Prod	--	--	T	1960	S Gas	15/85	38.7	--	--	--	--	--	4,636	--	*Was Birmingham Bartlett															
17564	1	0	†	0	Irreg	0	200	Prod	--	--	U	1974	Grav	1/63	--	--	19,244	19,244	298	205,610	0	0	†Converted 1 prod. well to water inj.															

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1974—Continued

County	Project no.	Is proj. uni-tized?	Field	Operator	Type and project name	Lease name	Location			Acres in project			Oil producing zone		Oil producing wells (1974)				Has inj. been con-tinuous?
							S - T - R	Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.			
BARTON COUNTY (cont.)																			
	14333	No	Chaffee	H. A. Chapman	(W) Panning-Russell-Grunwald WF	Panning, Russell, Grunwald	31-19S-13W	40	200	L-KC	3252	6	2	-	-	1	Yes		
	15218	--	Cheyenne	NCRA	(W) Lucas	Lucas	4-19S-12W	30	0	Lans	3104	15	2	0	1	0	No*		
	16052	--	Cheyenne	NCRA*	(D) Miller "A"	Miller "A"	4-19S-12W	10	0	Lans	3100	15	1	0	0	0	Yes		
	4344	No	Cheyenne View	Aladdin Petroleum Corp.	(P) Schartz	Schartz	14-19S-12W	20	60	KC	3050	30	5	-	0	0	Yes		
	5561	No	Cheyenne View	Aladdin Petroleum Corp.	(P) Rinker B	Rinker B	12-19S-12W	40	40	KC	3060	30	2	-	0	0	Yes		
	5387	--	Cheyenne View	George H. Hannum (Isern Petroleum Co.)	(W) Lanterman Waterflood	Lanterman "A"	23-19S-12W	160	0	KC	3142	49	7	-	0	-	Yes		
	14846	Yes	Cheyenne View	Nadel and Gussman	(W) Cheyenne View Unit	Lucas, Schartz, Wess, Eppstein	10-19S-12W	140	0	L-KC	3100	15	2	1	0	0	Yes		
	3272	No	Cheyenne View	Sohio Petroleum Company	(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	Achatz, Kultgen	11-19S-12W 12-19S-12W	240	--	L-KC	3100	19 to 20	12	2	0	0	Yes		
	12012	No	Clarence	KRM Petroleum Corp.*	(D) Button	Button	35-19S-15W	160	0	L-KC	3246	4	2	0	0	0	Yes		
	17192	--	Dartmouth	W.L. Hartman	(W) Kohler	Kohler	30,31-19S-12W	140	--	L-KC	3118	240	5	-	-	-	Yes		
	8476	--	Ellinwood North	American Petrofina Co. of Texas*	(W) Schwamborn	Schwamborn	28-19S-11W	100	40	L-KC	3065	12	3	0	0	0	Yes		
	17067	No	Erna Northwest	Icer Addis	(W) Nordman	Nordman "B", Nordman, Ralph Nordman, Sophia Bahr	19-18S-14W 24-18S-15W	480	--	L-KC	3300	10	8	0	1	0	Yes		
	8604	No	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	(W) Harris	Harris	30-19S-12W	30	0	L-KC	3139	60	2	-	-	-	Yes		
	17199	--	Ft. Zarah	Ladd Petroleum Corp.*	(W) Harris "A"	Harris "A"	30-19S-12W	80	0	L-KC	3128	70	2	1	0	0	Yes		
	15942	--	Frank	Raymond Oil Company, Inc.	(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	No	Hammeke West	Nadel and Gussman	(W) Hammeke	Hammeke	18-19S-11W	20	10	L-KC	3142	10	2	2	0	0	Yes		
	9812	No	Hammer	Ladd Petroleum Corp.*	(W) Hammer Water Flood	Hammer "B", Johanning, Birzer	35-19S-12W 36-19S-12W	160	20	L-KC	3100	220	10	0	0	0	Not		
	12894	No	Hiss	Baruch-Foster Corp.	(W) McGreevy	McGreevy	30-20S-13W	0	0	Lans	3290	20	0	0	0	0	Yes		
	5970	No	Hiss	Brougher Oil, Inc.	(D) ---	Murphy	29-20S-13W	160	--	KC	3150	225	2	0	0	0	Yes		
	13046	No	Kimpler	Icer Addis	(W) Kimpler Waterflood	Kimpler "C"	31-18S-11W	80	--	L-KC	3150	5	1	1	1	1	Yes		
	8421	--	Klepper	C.L. Hanes	(D) Klepper	Klepper	2-19S-11W	20	0	KC	3040	5	1	0	0	0	Yes		
	16524	--	Knop	Clinton Oil Company	(W) Knop Field WFS	Knop, Fox-Rusco "B", Wess	9-19S-12W	470	0	L-KC	3130	20	5	0	0	0	Yes		
	9560	No	Kraft-Prusa	Colorado Oil Company	(W) Esfeld	Esfeld	29-16S-11W	90	70	Doug	2960	15	3	3	0	0	Yes		
	12275	No	Kraft-Prusa	Gulf Oil Corporation	(W) Joseph	Joseph	29-16S-11W	160	0	Doug	2995	--	7	5	0	0	Yes		
	6187	--	Kraft-Prusa	NCRA	(W) Paul Dolechek	Paul Dolechek	24-16S-12W	40	0	Gorham	3352	26	4	0	0	0	No*		
	9163	--	Kraft-Prusa	NCRA	(W) Dolechek Estate	Dolechek Estate	24-16S-12W	30	10	Gorham	3339	20	3	0	0	0	Yes		
	12483	--	Kraft-Prusa	NCRA	(W) Schneweis	Schneweis	5-17S-11W	20	0	Lans	3070	18	2	0	0	0	Yes*		
	16846	--	Kraft-Prusa	Petroleum Management, Inc.	(W) North Oeser	North Oeser	30-16S-11W	160	--	L-KC	3057	--	9	0	0	0	Yes		
	12991	No	Kraft-Prusa	Samson Resources Co.*	(W) Krier WF	Krier A & C	30-16S-11W	160	0	Doug	2980	8	5	0	0	0	Yes		
	13453	No	Kraft-Prusa	Skelly Oil Company	(W) E. F. Esfeld	E.F. Esfeld	30-16S-11W	50	0	Doug-Lans	2965	15	4	3	0	0	Yes		
	15196	--	Kraft-Prusa	Tenneco Oil Company	(D) John Riemann "B"	John Riemann "B"	22-16S-12W	40	0	L-KC	3108	85	1	0	0	0	Yes		
	13853	No	Lanterman	Lario Oil & Gas Company	(P) Rehme	Rehme	15-19S-11W	40	0	L-KC + Arb	3050	--	2	0	0	0	Yes		
	14882	No	Mary A.	Murfin Drilling Company*	(W) Mary Axman W.F.	Mary Axman	23-17S-15W	80	40	L-KC	3414	12-14	3	0	0	0	Yes		
	17144	No	Mater	Murfin Drilling Company*	(W) Mater W.F.	Ed Mater, Max Mater	11-17S-15W	160	0	Tor + L-KC	3142	20	4	2	0	0	Not		
	11059	--	Ney Southwest	Ralph R. Rhyne*	(D) Rude	Rude E	2-16S-13W	20	13	Lans	3100	5	1	-	-	-	Yes		
	13049	No	Prairie View	Icer Addis	(W) John Schartz Water-flood	Ahrens, Kowalsky, John Schartz	20-19S-11W	160	--	L-KC	3200	150	4	0	0	0	Yes		
	7104	Yes	Pritchard	Phillips Petroleum Co.	(W) West Hiss LKC Unit	West Hiss LKC Unit	36-20S-14W	130	--	L-KC	3350	50	4	1	0	0	Yes		
	17155	Yes	Putnam West	Murfin Drilling Company	(W) Williams Unit W.F.	Williams Unit	12-17S-14W	160	0	L-KC	3214	30	1	0	0	0	Yes		
	13249	No	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 Company	(W) Kaiser	Kaiser	15-18S-11W	160	0	L-KC	3025	225	5	0	0	0	Yes		

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

Project no.	Injection Wells					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)						Remarks
	Active	In-active	Drilled 1974	Abd. 1974	Injection Pattern			Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods		
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974	Cum. 12-31-74	
14333	2	-	-	1	Peri	Vac	50	Prod + Fresh	50	65	M	1968	S Gas	15/1	36	--	36,577	271,305	12,998	183,805	12,998	37,998	
15218	1	0	0	1	Irreg	100	150	Prod + Gravel Bed	60	30	T	1969	S Gas	1/1	44	--	47,118	363,587	6,880	68,907	1,584	11,004	*Temp. shut down in Jan. & Feb., 1974
16052	1	0	0	0	Irreg	0	65	Prod	--	--	T	1972	S Gas	2/1	40	--	23,407	118,311	2,834	9,737	0	0	*Was Thunderbird Drlg.
4344	-	-	0	-	Irreg	200	200	Fresh	50	20	F	1972	S Gas	--	40	--	112,960	273,255	16,273	38,839	15,000	--	
5561	1	-	0	-	Irreg	150	180	Prod + Fr Wat Sd	--	--	M	1959	---	--	38	--	77,040	1,952,040	5,673	336,200	--	--	
5387	1	-	-	-	Irreg	650	171	Prod	--	--	T	1966	S Gas	1/1	40	--	62,413	212,476	8,525	427,836	3,125	12,437	
14846	4	0	0	0	Peri	0	89	Prod + Sh Fr Wat	*	50	M	1969	S Gas	54/46	42	2.5	131,300	743,500	5,168	--	5,168	56,444	*50-100 ft.
3272	1	0	0	0	Irreg	0	250	Prod	--	--	T	1960	S Gas	1/5.1	40.1	--	91,164	1,281,802	1,979	79,934	1,979	75,919	
7208	3	0	0	0	Irreg	740	345	Prod	--	--	T	--	Grav	--	40	--	364,529	1,824,941	33,270	--	33,270	--	
12012	1	0	0	0	Irreg	Vac	200	Prod	--	--	U	1965	S Gas	1/49	25.4	--	44,000	605,000	3,179	--	3,179	82,000	*Was Crown Oil Co.
17192	1	-	-	-	Irreg	400	910	---	--	--	T	1974	S Gas	--	36.5	--	36,138	36,138	250	250	0	0	
8476	2	1	0	0	Peri	0 to Vac	202	Prod	--	--	U	1961	S Gas	1/2	42	--	147,524	3,336,231	4,479	59,683	4,479	59,683	*Was El Dorado Refg. Co.
17067	2	0	0	0	Irreg	50	360	Prod	--	--	U	1973	Gas Exp	--	40	--	132,523	257,587	21,352	59,952	--	16,080	
8604	1	0	0	0	Irreg	20	190	Prod	--	--	U	1961	S Gas	23/13	39	--	69,350	311,335	4,242	154,510	2,782	6,797	
11427	1	-	-	-	Irreg	60	60	Wat Sd	20	15	M	1964	S Gas	--	40	--	18,920	231,492	1,825	36,073	1,000	18,370	
17199	1	0	0	0	Irreg	0	145	Prod	--	--	T	1974	S Gas	1/32	43	--	34,228	34,228	3,666	159,435	0	0	*Was LVO Corp. 11/1/74
15942	1	-	-	-	Irreg	60	350	Prod + Dak	360	--	T	1971	S Gas	1/0	41	--	126,264	508,573	5,214	32,844	5,214	32,844	
5366	1	0	0	0	Irreg	0	110	Prod	--	--	U	1957	S Gas	--	--	--	29,200	1,439,521	1,228	56,827	1,228	56,827	
8335	1	0	0	0	Irreg	0	35	Fresh	--	--	F	1961	S Gas	4/1	38	--	12,775	424,525	2,700	--	700	64,100	
9812	5	1	0	0	Irreg	225	177	Fresh Wat (Well)	50	--	F	1963	S Gas	58/549 to 39	38	--	236,858	3,548,236	31,129	304,372	14,549	287,792	*Was LVO Corp. 11/1/74 †Shut down part of year
12894	1	0	0	0	Irreg	0	15	Prod	--	--	U	1966	S Gas	15/18	34	--	5,475	55,875	3,328	38,437	0	200	
5970	1	0	0	0	Irreg	Vac	150	Prod	--	--	T	--	Gas Exp	--	39	--	45,000	--	1,850	--	--	--	
13046	1	0	0	0	Irreg	0	45	Prod	--	--	T	1961	S Gas	--	41	--	16,400	500,400	1,515	6,962*	500	64,006	*Since 1/1/71
8421																							
10802	1	0	0	0	Line	0	120	Prod	--	--	U	1964	Grav	2/3	42	--	43,800	243,925	713	12,656	0	0	
16524	3	0	1	1	Irreg	1266	302	Dakota	95	155	U	1971	S Gas	1/3	41.7	--	331,030	640,134	10,957	603,211	10,957	99,459	
9560	1	1	0	0	Irreg	800	281	Prod	--	--	U	1963	S Gas	16/19	36	--	102,669	1,763,630	6,721	--	6,721	146,471	
12275	1	0	0	0	Irreg	780	539	Prod	--	--	U	1966	S Gas	86/1845	40.1	--	196,609	1,691,448	17,842	225,877	17,842	225,877	
6187	0	0	0	1	Irreg	--	--	Prod	--	--	U	1958	S Gas	1/3.8	42.4	--	125,240	2,894,392	4,267	165,148	3,896	106,891	*Terminated 10/7/74
9163	1	0	0	1	Irreg	375	285	Prod + Chey	525	50	M	1962	S Gas	1/3.2	42.1	--	103,781	1,569,152	6,484	162,146	3,601	84,095	
12483	0	0	0	1	Irreg	--	--	Prod + Arb	3331	7	U	1966	S Gas	1/0	40.5	--	34,929	810,653	903	41,567	474	20,320	*Terminated 5/74
16846	1	-	-	-	Irreg	0	187	Prod	--	--	U	1972	S Gas	2/1	--	--	62,907	189,786	28,666	1,046,238	28,666	982,280	
12991	1	0	0	0	Irreg	650	550	Prod	--	--	T	1966	S Gas	--	36	--	200,914	1,859,794	5,158	789,055	3,100	74,700	*Was Kathol Petroleum
13453	1	0	0	0	Irreg	350	596	Prod	--	--	T	1967	S Gas	--	40	--	217,645	1,858,455	16,968	601,277	16,968	101,755	
15196	1	0	0	0	Peri	0	150	Prod	--	--	U	1969	S Gas	64/120	--	--	54,750	292,026	1,254	207,586	0	0	
13853	1	0	0	0	Irreg	Grav	401	Prod	--	--	U	1967	S Gas	14/145	37	--	146,234	703,801	3,600	32,571	0	0	
14882	1	0	0	0	Irreg	245	400	Prod + Dak	410	30	M	1969	S Gas	99/1	40	--	140,000	892,366	3,928	35,258	3,928	19,258	*Was 3-G Oil Company
17144	1	1#	-	-	Irreg	20	145	Prod + Dak	300	40	M	1974	S Gas	9/1	37	--	1,300	1,300	6,847	281,209	--	--	*Was 3-G Oil Company †First inj. 12/22/74 #Being converted *Was K & E Drlg. Co.
11059	1	-	-	-	Irreg	0	40	Prod	--	--	U	1964	S Gas	1/4	38	--	14,600	251,800	841	11,242	530	5,990	
13049	1	1	0	0	Irreg	900	510	Prod + Surface	40	10	M	1956	S Gas	--	38	--	175,950	1,712,650	9,117	--	--	--	
7104	2	1	0	0	Irreg	0	740	Prod + Fr Wat Sd	150	--	M	1959	S Gas	1/4.3	40	5.5	540,033	5,889,821	14,187	1,108,721	9,547	151,355	
17155	1	0	0	0	Irreg	250	140	Prod + Dak	250	20	M	1973	S Gas	9/1	37	--	50,721	52,574	1,205	38,769	200	200	
13249	1	0	0	0	Irreg	0	36	Sh Fr Wat	100	40	F	1967	S Gas	9/1	45	--	13,300	197,500	5,200	--	5,200	21,035	
16593	3	0	1*	0	Irreg	1030	242	Dakota	35	168	U	1972	S Gas	1/1.2	42.5	--	264,917	522,251	48,769	324,497	48,769	102,161	*Recompleted

TABLE 1-ENHANCED OIL-RECOVERY PROJECTS, 1974-Continued

Kansas Geol. Survey Energy Resource Series 5, 1975

County	Is proj. unit- ized?	Field	Operator	Type and project name	Lease name	Location	Acres in project		Oil producing zone		Oil producing wells (1974)				Has inj. been con- tinuous?	
							S - T - R	Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active		Drilled
BARTON COUNTY (concl.)																
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	Yes	St. Peter	Shelley Oil Company	(D) Robl Unit	Robl, Musenberg, Hickel	32-18S-11W 33-18S-11W 5-19S-11W	240	40	Platt + L-KC	2912	216	8	0	0	3	No*
11909	--	St. Peter	Texaco Inc.	(W) St. Peter Pool Unit	H. Schlochtermeyer, T. Schlochtermeyer	32-18S-11W	240	--	Lans + Platt	2900	--	6	1	0	-	Yes
12861	No	St. Peter East	Nadel and Gussman	(W) Johannning	Johannning	34-18S-11W	110	10	KC	3060	10	7	3	0	0	Yes
14055	No	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*	(W) Sandrock Unit	Weathers, Morrison, Jackson	27-20S-13W 28-20S-13W	60	0	L-KC	3400	20	4	0	0	0	Yes
13215	Yes	Sandrock	Phillips Petroleum Co.	(W) Pursel Unit	Pursel Unit	28-20S-13W	55	0	L-KC	3300	15	3	0	0	0	Yes
6478	--	Sandrock Southeast	Kewanee Oil Company	(W) Engleman-McDonald	Engleman, McDonald	27-20S-13W 34-20S-13W	80	0	KC	3261	54	4	0	0	0	Yes
5560	No	Trapp	Aladdin Petroleum Corp.	(P) Soderstrom	Soderstrom	21-17S-13W	40	40	KC	3145	10	2	-	0	0	Yes
12144	Yes	Trapp	Allen Oil Company*	(P) F.J. Schreiber	F.J. Schreiber	32-16S-13W	80	0	KC	3092	180	3	0	0	0	Yes
16089	No	Trapp	Colorado Oil Company	(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	Yes	Trapp	Petroleum, Inc.	(W) Trapp Unit	Sausen "B", Reif "I", Nettlingham, Karst "B"	13-16S-14W 14-16S-14W	440	0	L-KC	3130	27	2	1	0	1	Yes
14759	No	Trapp	Lee Phillips Oil Company	(W) Oltmann	Oltmann	15-17S-13W	10	0	Arb + KC	3150 3350	10	3	0	0	0	Yes
11517	No	Trapp	Samson Resources Company*	(W) Schneider C WF	Schneider "C"	2-16S-14W	160	0	Lans	3082	0	1	0	0	0	Yes
16787	--	Trapp	Sierra Petroleum Co., Inc.	(W) Wilborn-Lansing K.C. Unit	Thorne "C", Wilborn, Thorne "B"	22-16S-13W 27-16S-13W	360	--	L-KC + Top	3121	64	6	0	0	0	Yes
12252	--	Trapp	Shell Oil Company	(W) N.A. Hoffman "A&B", J. Ehrlich "A"	N.A. Hoffman "A", N.A. Hoffman "B", J. Ehrlich "A"	7,12,18-16S-13W	360	0	Top + Lans + KC	2962	100	7	10	0	-	No*
15821	--	Two-Eighty-One	Cities Service Oil Company	(D) Eveleigh "C"	Eveleigh "C", Streck "A"	27-16S-14W	32	0	L-KC	3188	12	2	1	0	0	Yes
11972	No	Workman Northwest	Kewanee Oil Company	(W) Buckbee	Buckbee	14-20S-12W	20	10	Arb	3373	28	1	0	0	0	Yes
17247	No	Workman Northwest	Murfin Drilling Company	(P) Buckbee/Hulme W.F.	Buckbee, Hulme	15-20S-12W	240	0	Arb	3370	51	5	0	0	0	No*
15842	No	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 projects in supplemental list.)							9,927	853				286	44	10	8	
BARTON-RICE COUNTIES																
9151	Yes	Mary Ida	Sohio Petroleum Company	(W) Mary Ida Unit	Reif "A", Reif "B", Manke, Buehler, Mooney, Doll, Musenberg	31-18S-10W 36-18S-11W	370	--	L-KC	3100	21	8	5	0	0	Yes
BARTON-RUSSELL COUNTIES																
14582	--	Hall-Gurney	NCRA	(W) Northwest Beaver Unit	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 + Top	2980 2835	15	16	0	0	0	Yes
BARTON-STAFFORD COUNTIES																
9942	--	Bart-Staff	NCRA	(W) Dorfshaffer- McGreevy	McGreevy "A", McGreevy "B", Dorfshaffer	33-20S-14W 5-21S-14W	70	60	Lans	3330	15	6	1	0	0	Yes
10131																
13810	No	Shaeffer-Rothgarn	Kewanee Oil Company	(W) Sharp A & B	Sharp A, Sharp B	35-20S-13W 3-21S-13W	100	40	KC	3267	206	2	1	0	1	Yes
BARTON-STAFFORD COUNTIES TOTAL (Reported)							170	100				8	2	0	1	

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

Project no.	Injection Wells				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)						Remarks	
	Active	In-active	Drilled 1974	Abd. 1974			Injection Pattern	Source	Depth, ft.	Thick., ft.						Type	Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods		
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974		Cum. 12-31-74
15193	1	0	0	0	Irreg	--	36	Prod	--	--	T	1969	Grav	--	37	--	13,140	77,269	3,053	24,814	3,053	24,814	
11630	0	1	0	3	Irreg	0	0	Prod	--	--	T	1965	S Gas	--	38	--	0	1,879,737†	26,506	--	23,221	262,764	*No water inj. in 1974 †Corrected
11909	4	1	--	--	Peri	0	118	Prod	--	--	U	1962	Wat	2384/3649	42	--	129,608	4,208,023	9,410	343,709	9,410	190,804	
12861	3	0	0	0	Peri	0	42	Prod + Sh	100	20	M	1966	S Gas + Wat	85/15	40	--	46,400	1,493,450	12,200	--	12,200	115,575	
14055	3	0	0	1	Peri	0	145	Prod + Sh Fr	100	0	M	1968	S Gas + Wat	1/4	30	--	160,500	1,035,500	2,700	--	2,700	29,200	
9838	2	0	0	0	Irreg	50	249	Prod + Ter Sd	60 to 100	16	F	1962	S Gas	+	30	--	90,904	1,640,872	5,506	--	5,506	141,158	*Was Schermerhorn †Trace
13215	2	1	0	0	Line	280	296	Prod + Sh Fr	60	--	M	1967	S Gas	1/0.5	30	18	216,063	1,630,335	13,492	345,405	10,804	89,997	
6478	2	0	0	0	Irreg	Vac	256	Prod	--	--	U	1966	S Gas	68/59	30	--	187,533	940,563	4,762	282,368	1,360	28,665	
12586	2	0	0	0	Irreg	Vac	256	Prod	--	--	U	1966	S Gas	68/59	30	--	187,533	940,563	4,762	282,368	1,360	28,665	
5560	1	2	0	0	Irreg	125	180	Prod	3050	30	T	1957	S Gas	--	38	--	74,276	1,996,524	1,363	463,444	--	--	
12144	1	0	0	0	Irreg	450	400	Prod	--	--	T	1965	S Gas	1/1	37	--	144,000	1,296,000	9,410	84,690	7,057	63,513	*Was Continental Oil Co.
16089	1	0	0	0	Irreg	400	652	Prod + Arb	3349	3	U	1971	Wat	6/70	35	--	237,842	905,882	3,569	--	0	0	
11190	0	0	0	1	Irreg	--	--	Prod + Arb	3413	2	U	1964	S Gas	2.79/0	39.8	--	--	364,713	--	205,723	--	42,696	*Was Thunderbird Drlg. †Terminated 5/74
16882	1	0	0	0	Line	Vac	139	Prod + Cedar Hills	247	44	T	1973	S Gas	17/36	41	--	50,680	59,628	4,755	9,323	4,755	9,323	
14759	1	0	0	0	Irreg	Vac	320	Prod	--	--	U	1969	S Gas	31/69	40	--	116,800	501,456	7,655	392,311	--	--	
11517	1	2	0	0	Irreg	0	60	Prod	--	--	U	1965	S Gas	1/10	37	--	22,000	338,900	3,171	912,719	1,585	6,585	*Was Shell Oil Co.
16787	1	0	0	0	Peri	400	290	Prod + Dak (Top)	312	30	M	1973	Wat	34/66	39	--	106,595	175,275	6,131	12,471	0	0	
12252	0	4	0	--	---	--	--	Prod	--	--	U	--	S Gas	--	36	--	15,000	5,600,000	0	388,000	--	--	*Temp. Abd.
15821	1	0	0	0	Irreg	0	71	Prod	--	--	U	1970	S Gas	55/28	37.6	--	26,000	99,000	17,155	246,553	0	0	
11972	1	0	0	0	Irreg	Vac	8	Prod	--	--	U	1965	Wat	10/16	39	--	2,920	77,372	1,107	48,026	0	0	
17247	1	0	0	0	Irreg	10	90	Prod + Sh Fr	15	20	M	1974	S Gas	1/4	38	--	13,200	13,200	7,742	233,015	--	--	*First inj. 8/74
15842	1	0	0	0	Line	713	225	Prod	--	--	T	1971	S Gas	61/163	40.1	--	81,949	228,987	15,246	58,783	15,246	58,783	
	106	19	4	17													7,942,516	70,650,199	656,036	15,489,751	457,563	4,339,392	
9151	8	5	0	0	Peri	945	235	Prod + Fr	130	10	M	1962	S Gas	1/4.25	39.6	--	688,027	8,209,059	40,308	928,527	40,308	764,664	
14582	8	0	0	1	Peri	300	290	Prod + Dak	360	40	T	1968	S Gas	13/70	41.3	--	844,334	5,013,520	54,898	438,208	27,487	226,973	
9942	2	0	1*	2	Irreg	0	175	Prod + Arb	3550	--	T	1963	S Gas	1/2.6	30.5	--	99,694	2,632,082	14,802	339,809	12,561	204,594	*Converted
10131	1	0	0	0	Irreg	350	318	Prod	--	--	U	1967	S Gas	40/46	34	--	116,210	638,816	2,660	300,337	0	0	
13810	1	0	0	0	Irreg	350	318	Prod	--	--	U	1967	S Gas	40/46	34	--	116,210	638,816	2,660	300,337	0	0	
	3	0	1	2													215,904	3,270,898	17,462	640,146	12,561	204,594	

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1974—Continued

County	Project no.	Is proj. uni- tized?	Field	Operator	Type and project name	Lease name	Location			Acres in project		Oil producing zone			Oil producing wells (1974)				Has inj. been continuous?
							S - T - R	Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.			
BOURBON COUNTY																			
	17316	--	Bronson Southeast	Hillenburg Oil Company*	(W) ---	Humphrey	36-24S-21E	80	0	Bart1	661	18	10	2	0	0	Yes		
	14503	No	Bronson Southeast	Terra Resources, Inc.*	(W) Humphrey Waterflood	Humphrey	36-24S-21E	140	0	Bart1	650	8	10	0	0	1+Yes			
	12914	No	Bronson Southeast	Terra Resources, Inc.*	(W) Woodward "A" Water-flood	Woodward "A", Woodward "A"	12-25S-21E 13-25S-21E	90	0	Bart1	661	18	10	0	0	0	Yes		
	"	--	Bronson Southeast	Hillenburg Oil Co.*	(W) Woodward "A"	Woodward "A"	12,13-25S-21E	90	0	Bart1	661	18	10	0	0	0	Yes		
	17329	No	Bronson-Xenia	Dee Eastwood*	(W) Bronson Unit	Bronson Unit	1-25S-21E	640	0	Bart1	650	10	12	0	0	0	Yes		
	5545	--	Bronson-Xenia	Trico Oil Company*	(-) Zeigler	Arthur Zeigler	7,8,17-24S-22E	160	--	Bart1	600	15	0	7	-	-	---		
	8780	--	Hepler	Walter Duncan	(W) Hepler	Freeman, Jackson, Shireman, Johnson	24-27S-21E 19-27S-22E	140	0	Tuck	675	14	34	0	0	0	Yes		
BOURBON COUNTY TOTALS (Reported)								1,340	0				86	9	0	1			
BUTLER COUNTY																			
	9719	--	Augusta	Cities Service Oil Company	(W) Skaer-Starkey Water-flood	Skaer, Starkey	35-27S-4E	265	0	KC	2030	5	10	5	0	0	Yes		
	10415	--	Augusta	Cities Service Oil Company	(W) Augusta Unit	Augusta Unit	2,10,11,14, 15-28S-4E	732	28	KC	2050	6	17	7	0	14	Yes		
	"	--	Augusta	Cities Service Oil Company	(W) Augusta Unit Simpson	Augusta Unit	2-28S-4E	6	0	Simp	2568	11	1	0	0	0	Yes		
	12240	No	Augusta	Hammer & Maclean	(P) Ambler & Moyle	Moyle, Ambler	35-27S-4E 2-28S-4E	160	0	KC	2062	10	7	2	0	0	Yes		
	16242	--	Augusta	Hammer & Maclean*	(D) Safford-Mann	---	26-27S-4E	160	0	KC	2032- 2040	10	1	0	0	0	Yes		
	15786	--	Augusta	Leland Prier*	(W) ---	Lee Prier	2-28S-4E	120	--	KC	2390	15	4	-	1	1	Yes		
	"	--	Augusta	Leland Prier*	(W) Bohannon	Bohannon	2-28S-4E	29	--	KC	2390	15	1	1	-	-	Yes		
	2120		Augusta North	Robert F.White*	(D) ---	Foster	21-27S-4E	160	80	KC	2000	20	6	0	0	0	Yes		
	2187																		
	2672	No	Blankenship	Eureka Drilling Company	(P) Dunne	Dunne	9-26S-8E	80	0	Bart1	2400	20	2	1	0	0	Yes		
	17561	No	Blankenship	Dick Hess	(D) Keighley Northeast	Pike, Gray Estate	31-26S-8E	240	0	Bart1	2670	50	6	2	8	-	No*		
	16166	No	Blankenship	Lee Phillips Oil Company	(P) Keighley Northeast Flood Unit	Keighley NE Flood	30,31-26S-8E 6-27S-8E	--	--	Bart1	2700	42	23	2	0	0	Yes		
	6105	--	Brandt-Sensenbaugh	J.E. Morris	(D) Brewer	Brewer, Seeley	23-28S-7E	60	0	Peru	2350	10	3	0	0	0	Yes		
	15259	--	Brandt-Sensenbaugh	White & Ellis Drilling, Inc.	(D) Ramp	Ramp	23,26-28S-7E	160	0	Peru	2450	10	2	0	0	0	Yes		
	7926	No	Combs Northeast	Kewanee Oil Company	(W) Gate Lease	Gate	34-29S-5E	40	0	Bart1	2817	8	1	0	0	0	Yes		
	11136	No	De Moss	Rex & Morris Drilling Co.	(W) De Moss	De Moss "A", De Moss "B", Sutter, Farner	5,8-28S-7E 5-28S-7E 7-28S-7E 8-28S-7E	400	0	Bart1	2650	40	11	0	0	0	Yes		
	13958	No	Eckel Northeast	Rex & Morris Drilling Co.	(W) Henn Unit	Vernon, Lill, Henn	5-27S-7E 6-27S-7E	110	0	KC "A" zone	2025	10	6	0	0	0	Yes		
	11895	No	Elbing	Aladdin Petroleum Corp.	(P) Furman	Furman	8-23S-4E	120	0	KC	1925	30	5	0	0	0	Yes		
	--	No	Elbing	Dorman A. Ball	(W) Webreck	Webreck	18-23S-4E	80	--	Miss	2400	35	1	1	0	1	Yes		
	7145	No	Elbing	Hillenburg Oil Company*	(P) North Lathrop	North Lathrop	17-23S-4E	80	0	KC	1950	30	4	0	0	0	Yes		
	8005	No	Elbing	Hillenburg Oil Company*	(P) South Lathrop	South Lathrop	17-23S-4E	80	0	KC	1950	30	3	3	0	0	No†		
	11973	No	Elbing	Phillips Petroleum Co.	(W) J.C. Scully Lease	Scully	17-23S-4E	60	0	L-KC	2020	30	2	0	0	0	Yes		
	13622	No	Elbing & Elbing East	Richard B. Morris*	(P) Everrt-Ferrier	Parris, Everrt-Ferrier, Neer-Ferrier	20-23S-4E 29-23S-4E	70	0	KC	2020	30	3	0	0	0	Yes		
	4575	No	El Dorado	R.R. Abderhalden	(P) Pollard Waterflood	Pollard	25-25S-4E	80	--	El Dor	700	20	1	4	0	0	Yes		
	6672	No	El Dorado	R.R. Abderhalden	(W) Deming Waterflood	---	19-25S-5E	80	--	El Dor	650	13	0	4	0	0	No		
	7084	No	El Dorado	R.R. Abderhalden*	(W) Jackson "C" Water-flood	Jackson "C"	24-25S-4E	160	0	El Dor	650	20	2	0	0	0	Yes		
	14985	No	El Dorado	Aikman & Braden	(D) Turner	Turner	15-26S-4E	40	0	Simp	2420	15	3	0	0	0	Yes		

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

Project no.	Injection Wells				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)						Remarks	
	Active	In-active	Drilled 1974	Abd. 1974			Injection Pattern	Source	Depth, ft.	Thick., ft.						Type	Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods		
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974		Cum. 12-31-74
17316	7	0	0	0	Line	600	100	Miss	840	--	F + T	1966	S Gas	30/1	30	--	72,344†	--	4,362	--	4,362	--	*Was Terra Resources, Inc. †Prod. for 4 months
14503	7	0	0	0	Irreg	327	95	Miss lime	850	--	F	1968	S Gas	100/9	31	--	160,801#	1,619,670	9,692	164,297	9,692	104,966	*Sold to Hillenburg Oil Effective 9/1/74
12914	10	0	0	0	Line	183	92	Miss ls	832	--	F + T	1966	S Gas	32.1/1	33.6	--	219,821†	3,221,599	9,681	291,788	9,681	220,860	*T.A. #Prod. to 9/1/74 *Sold to Hillenburg Oil Effective 9/1/74
"	10	0	0	0	Line	600	70	Miss ls	832	--	F + T	1966	S Gas	32.2/1	31	--	77,980†	--	4,337	--	4,337	--	†Prod. to 9/1/74 *Was Terra Resources, Inc. †Prod. for 4 months
17329	4	-	-	-	Irreg	350	60	Prod	--	--	M	1966	Grav	5/1	31	--	81,000	--	6,000	--	--	--	*Was Terra Resources, Inc.
5545	-	1	-	-	---	--	--	---	--	--	---	---	---	--	--	--	--	--	0	0	--	--	*Was Crystal Oil Co.
8780	40	0	0	0	5-spot	498	11	Prod + Miss	830	30	F	1961	S Gas	--	26	--	209,479	4,009,411	8,124	459,122	8,124	--	
	78	1	0	0													821,425	8,850,680	42,196	915,207	36,196	325,826	
9719	13	1	0	0	5-spot	221	264	Prod + Arb	2600	--	U	1962	S Gas	43/143	36	--	1,192,252	14,264,389	20,513	665,697	20,513	663,297	
10415	17	2	0	2	5-spot	425	264	Prod	--	--	T	1963	S Gas	69/232	36	--	1,979,219	25,236,372	24,896	2,924,835	24,896	995,806	
"	1	0	0	0	Irreg	0	270	Prod	--	--	-	1974	S Gas	--	--	--	10,759	10,759	1,713	156,117	8	8	
12240	2	1	0	0	Irreg	250	139	Prod + KC lm	2062	10	U	1965	Grav	7/3	35	0	202,041	4,020,399	9,235	118,774	9,235	118,774	
16242	1	0	0	0	Irreg	0	230	Prod	--	--	U	1971	Grav	96/4	32	0	84,017	319,315	1,623	5,859	1,623	500	*Was Wilbur Skaer
15786	-	-	-	-	4-spot	--	--	Prod	--	--	U	1963	Grav	--	38	--	--	--	--	--	--	--	*Was Farm & Ranch Uni.
"	1	-	-	-	---	--	--	Prod	--	--	U	1963	---	--	38	--	--	--	--	--	--	--	* Inv. Corp.
2120	1	0	0	0	Irreg	400	1000	Prod	--	--	U	--	Wat + S Gas	1/9	36	--	350,000	7,100,000	5,200	--†	3,500	130,500	*Was Mobil Oil †57 yrs. old
2672	1	1	0	0	---	0	50	Prod	--	--	T	--	S Gas	6/4	35	--	10,950	95,150	2,314	--	--	--	
17561	-	-	-	-	Irreg	--	--	Prod + Arb	3300	200	U	--	S Gas	4/50	38	--	--†	--	0	--	--	--	*Not started yet †4 bbls/day
16166	6	0	0	0	Irreg	Vac	2240	Prod + Doug	1580	20	U	1971	S Gas	11/89	37	--	151,455	817,600	61,209	758,164	5,200	5,200	
6105	1	0	0	0	Irreg	140	230	Prod + Miss	2700	30	U	1958	S Gas	--	--	--	82,800	--	--*	--*	--*	--*	*Prod. with Miss oil
15259	1	0	0	0	Irreg	0	4	Prod	--	--	T	1969	S Gas	3/2	38	--	1,440	6,940	1,648	65,648	0	0	
7926	1	0	0	0	Irreg	Vac	5	Prod	--	--	U	1960	S Gas	1/1.5	38	0	1,825	732,785	633	61,823	0	20,280	
11136	2	2	0	0	Irreg	120	242	Prod	--	--	U	1964	S Gas	--	40	--	173,880	--	7,080	--	--	--	
13958	2	0	0	0	Irreg	0-125	170	Prod + Quat Sd	20	20	M	1967	S Gas	11/9	37	--	121,705	867,565	11,190	166,084	6,714	20,857	
11895	2	1	0	0	Irreg	180	400	Prod	--	--	T	1964	S Gas	--	35	--	191,412	2,108,589	3,610	106,156	3,610	--	
--	1	-	0	-	Line	--	--	Prod + Miss Ch	40	35	T	1962	Grav	1/10	--	--	204,400	--	1,460	--	0	0	
7145	1	0	0	0	Irreg	0	300	Prod + Hunt	2300	15	U	1959	S Gas	--	33	--	110,000	1,530,000	4,000	--	500	--	*Was Terra Resources, Inc.
8005	0	1	0	0	Irreg	0	0	Prod + Hunt	2300	15	U	1960	S Gas	--	33	--	0	2,083,500	4,500	--	0	--	*Was Terra Resources, Inc. †Shut down for repairs
11973	2	0	0	0	Irreg	0	214	Prod + Viola + Hunt	2400	--	U	1965	S Gas	1/10.7	35	10	47,368	1,375,138	1,879	54,735	0	4,293	
13622	1	0	0	0	Irreg	150	150	Prod + Fr	20	5	M	1967	S Gas	--	33	--	55,000	440,000	2,090	--	500	--	*Was James A. Cook, 1/1/74
4575	1	0	0	0	Irreg	500	50	Prod	--	--	U	--	S Gas	--	36	--	18,250	--	721	--	721	--	
6672	0	8	0	0	5-spot	0	0	Prod	--	--	T	1958	S Gas	11/28	36	6.5	0	994,496	0	79,476	0	79,476	
7084	1	0	0	0	Irreg	200	50	Prod	--	--	T	--	S Gas	1/10	33	--	18,250	36,500	714	1,285	714	1,285	*Was Abels Oil Company
14985	1	0	0	0	Irreg	Vac	250	Prod	--	--	U	1969	Grav	1/4	37	--	75,000	517,530	4,878	36,011	--	--	

TABLE 1--ENHANCED OIL-RECOVERY PROJECTS, 1974--Continued

Kansas Geol. Survey Energy Resource Series 5, 1975

County	Is proj. uni- tized?	Field	Operator	Type and project name	Lease name	Location	Acres in project		Oil producing zone			Oil producing wells (1974)				Has inj. been con- tinuous?
						S - T - R	Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
BUTLER COUNTY (cont.)																
15390	No	El Dorado	J.A. Allison	(P) Berndsen, Hetherington, Turner	Berndsen, Hetherington, Turner	15-26S-4E	100	60	Simp	2448	28	8	0	0	0	Yes
15896	No	El Dorado	Braden Petroleum Co.*	(W) Houston	Houston	19 26S-5E	160	80	Viola + Simp	2635	50	5	0	0	3	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 Kansas City	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 Lansing-Kansas City	Abraham-Ralston, Porter, Paulson, Brack "B", Brack "C", Hamilton, Enyart "A"	1-26S-4E 2-26S-4E 11-26S-4E 12-26S-4E	568	268	L-KC to	1600 2000	22	38	2	0	7	Yes
10002																
9803	--	El Dorado	Cities Service Oil Co.	(W) Stokes Kansas City	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	Yes
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	2	Yes
16163	--	El Dorado	Cities Service Oil Co.	(W) Empire Lansing	Empire Fee	17-26S-5E	103	0	Lans	1700	20	8	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	No	El Dorado	Gulf Oil Corporation	(W) A.J. Shumway	A.J. Shumway	11-26S-4E	160	0	KC	1975	--	16	8	0	0	Yes
7402	--	El Dorado	W.E. Stone Opr. by* Saco Oil Company	(P) W.E. Stone	W.E. Stone	2-25S-5E	60	--	Peru	2130	14	0	3	0	-	†
7484	--	El Dorado	Saco Oil Company	(P) Belton	Belton	3-25S-5E	40	--	Peru	2130	14	2	-	-	2	Yes
12221	--	El Dorado	Anna Seeber*	(W) Ramsey, et al	Ramsey	6-26S-5E	50	0	White Cld	760	10	5	0	0	0	Yes
6333	--	El Dorado	Southern States Oil Co.*	(P) Mills	Mills	27-25S-5E	160	--	El Dor KC Doug	700 2000 2500	--	13	23	0	13	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	2	0	0	0	Yes
3454	--	El Dorado	Stelbar Oil Corporation	(W) Stone	Stone	2-25S-5E	80	--	Peru	2150	20	2	2	0	0	Yes
4099	No	El Dorado	White & Ellis Drlg., Inc.*	(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	4	0	0	0	Yes
5287	--	Ferrell	Midwest Supply Company*	(P) Ferrell	Ferrell	21-28S-8E	480	--	Miss	2750	30	9	2	0	1	Yes
16942	--	Ferrell	Petroleum Management, Inc.	(W) Mary Jane Fouts	#5	16-28S-8E	80	--	Miss	2725	--	2	0	0	0	Yes
6254	--	Fox-Bush-Couch	H.H. Blair Estate	(D) Naden	Naden	13, 14-29S-5E	200	--	Bartl	2802	12	5	-	-	-	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	Bartl	2800	5 to 55	18	0	0	0	Yes
5496	No	Fox-Bush-Couch	Tomlinson Oil Co., Inc.	(D) Speer and Bunnell	Bunnell, Speer	25-28S-5E 27-28S-5E	80	0	Bartl	2790	25	3	0	0	0	Yes
1650	--	Fox-Bush-Couch	Southern States Oil Co.*	(P) Brown (North)	Brown A	25-29S-5E	72	--	Bartl	2735	45	2	2	0	0	Yes
2903	--	Fox-Bush-Couch	James H. Webster	(P) North Fox-Bush	Bowyer, Craig, Kingsley, Mill, Speedling, Molter, Bunnell, Shawver	25-23S-5E 23-28S-5E 25-28S-5E 26-28S-5E 35-28S-5E	500	300	Bartl	2750	50	5	0	0	0	--
10457	--	Harlan	Adair Oil Company	(P) Harvey	Harvey	26, 35-23S-4E	280	40	KC	2140	7	4	0	0	0	Yes
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	25	2	0	0	Yes
16646	--	Hazlett	Range Oil Company, Inc.	(P) Sommers	Sommers	5-24S-5E	120	--	Congl Sd	2375	10	1	-	-	-	Yes
17052	No	Hazlett	Rex & Morris Drlg. Co.	(D) Fannie	Fannie	29-23S-5E	40	0	Miss Osage	2453	25	2	0	0	0	Yes

TABLE 1--ENHANCED OIL-RECOVERY PROJECTS, 1974--Continued

County	Is proj. unitized?	Field	Operator	Type and project name	Lease name	Location S - T - R	Acres in project		Oil producing zone			Oil producing wells (1974)				Has inj. been continuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
BUTLER COUNTY (concl.)																
37-05-05	--	Kramer-Stern	Dunne Equities, Inc.	(D) Blakeman	Blakeman, Clay B	4-28S-6E	240	0	Viola	3089	10	3	0	0	0	Yes
13048	--	Kramer-Stern	Hammer & Maclean	(D) Leon Unit	Tabing, Poindexter, Sontag, Holt, Woolm, Stern, Stern B	21-27S-6E	230	0	Viola	3006	12	14	1	0	1	Yes
16178	No	Kramer-Stern	Rex & Morris Drlg. Co.	(W) Lucas A & B Water-flood Unit	Lucas "A", Lucas "B"	22-27S-6E 11-28S-6E	160	0	Simp Lower	3000	6	8	0	1	0	Yes
17260	--	Kramer-Stern	Saco Oil Company	(D) Kramer	Kramer, Gilliland, Lindgren	3-28S-6E	480	--	Viola	3070	10	7	--	--	--	Yes
976	--	Kramer-Stern	Southern States Oil Co.*	(P) Shriver-Stern	Stern, Shriver, Patterson	4-28S-6E 27,28,33-27S-6E 33,34-27S-6E 34-27S-6E	680	--	Viola	3080	40	17	7	0	6	Yes
3074	--	Kramer-Stern	Texaco Inc.	(P) Tabing	Frank Tabing	28-27S-6E	--	--	Viola	3075	16	1	--	--	--	Yes
6984	No	Kramer-Stern	H.R. Woodward	(W) N & S Blakeman	North & South Blakeman	2-28S-6E	160	--	Viola	3070	21	3	1	0	--	Yes
8301	--	Leon	Hammer & Maclean	(D) Maclean	Maclean	17-27S-6E	160	0	Viola	3129-3136	17	2	0	0	0	Yes
3218	--	Kramer-Stern	Texaco Inc.	(P) Tabing	Frank Tabing	28-27S-6E	--	--	Viola	3075	16	1	--	--	--	Yes
17267	No	Kramer-Stern	H.R. Woodward	(W) N & S Blakeman	North & South Blakeman	2-28S-6E	160	--	Viola	3070	21	3	1	0	--	Yes
13911	--	Leon	Hammer & Maclean	(D) Maclean	Maclean	17-27S-6E	160	0	Viola	3129-3136	17	2	0	0	0	Yes
6426	Yes	Muddy Creek	R.R. Abderhalden	(W) South Muddy Creek W.F. Unit	---	13-29S-4E	60	20	Bartl	2800	22	2	2	0	0	Yes
6853	No	Muddy Creek	R.R. Abderhalden	(W) North Muddy Creek W.F.	E. Fresh, C. Williams	7-29S-5E	60	--	Bartl	2730	13	3	1	0	0	Yes
6099	No	Muddy Creek	Tomlinson Oil Co., Inc.	(W) Stewart "A"	Stewart "A"	6-29S-5E	20	0	Bartl	2700	9	1	1	0	0	Yes
11990	--	Paulson	American Petrofina Co. of Texas*	(P) Paulson Waterflood Station #1	Busenitz, Guinty, Webreck, Scully "A", Scully "B", Hinz	13-23S-3E 23-23S-3E 24-23S-3E	320	120	Miss	2460	28	25	0	0	0	Yes
13254	--	Paulson	American Petrofina Co. of Texas*	(P) Paulson Waterflood Station #2	Paulson "C"	25-23S-3E	160	0	Miss	2460	28	3	0	0	0	Yes
15596	--	Pierce	Baker Oil Inc.	(D) Jones	Jones	33-25S-4E	20	--	Miss Ch	2525	40	2	0	0	0	Yes
16947	--	Pierce	White & Ellis Drlg., Inc.	(D) Albers	Albers	21-25S-4E	320	0	Miss	2550	10	9	0	0	0	Yes
11095	No	Potwin	Rex & Morris Drlg. Co.*	(D) Maxwell	Maxwell "A" (Clinton), Maxwell, McGill, Penner	31-24S-4E 32-24S-4E	410	0	Miss Dol	2670	9	12	0	0	0	Yes
9368	--	Reynolds-Shaffer	American Petrofina Co. of Texas*	(D) Brewer	Brewer	33-26S-6E	80	0	Miss	2784	12	5	0	0	0	Yes
4039	--	Reynolds-Shaffer	Yuma Oil Company	(D) Palmer and Doughty	Doughty, Palmer	6-27S-6E	40	--	Bartl	2700	10	2	0	0	0	Yes
12229	--	Rosalia	Continental Oil Company*	(P) Rosalia	Friesen, Roy, Zimmerman, Merle, Bell, Gish	11-25S-7E 12-25S-7E	480	40	Squirrel	2560	30	5	1	--	--	Yes
12310	--	Salter	Kathol Petroleum, Inc.	(D) Salter	Swindell, Showalter	22-28S-3E 23-28S-3E	400	160	Simp	3001	6	4	0	0	0	Yes
1319	No	Seward	W.R. Gross	(D) Seward	Seward	12-27S-7E	50	--	Bartl	2700	30	1	0	0	0	No*
10166	--	Shinn	Petroleum Management, Inc.	(W) Shinn Waterflood	Shinn	19-29S-8E	120	0	Miss Dol	2760	16	13	0	0	0	Yes
2096	--	Smock-Sluss	Bisagno Bros., Inc. & Bisagno Six Oil Co., Inc.	(D) Bisagno	Bisagno Bros. Inc. #1214, Bisagno Six Oil Co., Inc. #2183, Bisagno Bros. & Bisagno Six #17	35-26S-5E	90	10	Bartl	2700	40	4	2	0	0	Yes
13206	No	Smock-Sluss	J.E. Morris	(D) Knutson	Knutson, Irvine	11-27S-5E	320	0	Bartl	2700	30	3	1	0	0	Yes
3430	--	Snowden-McSweeney	Earl F. Wakefield, Inc.	(D) Wakefield "Fee"	Wakefield "Fee"	9-29S-6E	200	0	Bartl	2800	20	7	8	3	0	Yes
4029	--	Towanda	Kewanee Oil Company	(W) Rice-Wait	Rice, Wait	5-26S-4E	0	0	Viola	2445	30	11	3	0	0	Yes
6580	--	Whitewater East	White & Ellis Drlg., Inc.*	(D) Edmiston	Edmiston	33-25S-4E	240	0	Miss	2460	8	5	0	0	0	Yes
16406	No	Whitewater West	Kathol Petroleum, Inc.	(D) Vachal	Vachal	33-25S-3E	80	--	Miss	2700	--	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	No	Young	Rex & Morris Drlg. Co.	(D) Guenther	Johnson, Guenther "B"	20-26S-7E 29-26S-7E	280	0	Miss Dol	2750	20	5	0	1	0	Yes
5932	No	Young	J.E. Morris	(D) Guenther	Guenther "A", Henry	29-26S-7E	320	0	Miss	2750	20	4	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 TOTALS (Reported) (Includes projects in supplemental list.)							17,173	2,766		631	123	13	83			

Oros and Saile--Enhanced Oil-Recovery Operations in Kansas, 1974

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)						Remarks	
	Active	In-active	Drilled 1974	Abd. 1974				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods			
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974	Cum. 12-31-74		
37-05-05	2	0	0	0	Irreg	--	500	Prod	--	--	U	--	Gas Exp	1/1	35	--	365,000	--	15,116	--	0	0		
13048	3	0	0	1	Irreg	0	152	Prod	--	--	U	1966	Grav	3/2	34	--	166,301	394,569	19,946	170,662	19,946	170,662		
16178	1	0	0	0	Irreg	230	365	Prod + Miss Osage	2750	50	U	1971	S Gas	7.5/12.5	34	--	131,400	499,239	17,035	384,874	2,555	4,355		
17260	7	-	-	-	Irreg	Vac	975	Prod	--	--	U	1974	Wat + Grav	5/95	--	--	355,000	--	14,747	--	14,747	--		
976 3074 6984 8301 3218	8	0	0	0	Irreg	925	720	Prod + Viola	--	--	M	1959	Grav	--	34	--	1,402,197	19,867,470	44,551	941,297	44,551	941,297	*Was Westrans Petroleum	
17267	1	-	-	-	Irreg	0	324	Prod	--	--	U	1952	Wat	5/9	--	--	118,470	713,427	3,458	103,528	--	--		
13911	1	-	-	-	Irreg	Vac	700	Prod	--	--	U	--	Grav	3/17	35	--	255,500	--	4,400	--	--	--		
6426	1	0	0	0	Line	650	160	Prod + Doug	800	70	T	1962	S Gas	3/1	38	3	58,400	1,321,511	3,071	84,278	3,071	84,278		
6853	3	0	0	0	Irreg	250	60	Prod + Doug	560	20	T	1963	S Gas	3/0	38	--	65,700	457,235	6,412	73,021	6,412	73,021		
6099	1	1	0	0	Peri	204	55	Prod + Doug	1599	30	T	1958	S Gas	--	38.4	--	20,101	468,449	2,678	113,651	2,678	53,340		
11990	4	2	0	0	Irreg	650	306	Prod	--	--	U	1965	Wat	1/5	41	--	446,056	3,662,146	25,409	891,121	25,409	289,129	*Was El Dorado Refg. Co.	
13254	1	0	0	0	5-spot	50	320	Prod	--	--	U	1967	Wat	1/20	39.9	--	117,094	3,822,890	1,696	42,416	1,696	41,344	*Was El Dorado Refg. Co.	
15596	1	0	0	0	Irreg	0	30	Prod	--	--	U	1970	Grav	--	43	--	10,950	51,000	734	35,252	0	0		
16947	1	0	0	0	Irreg	0	20	Prod	--	--	T	1973	S Gas	3/1	40	--	7,200	11,400	6,235	230,235	--	--		
11095	3	0	0	0	Irreg	180	183	Prod	--	--	U	1964	Wat	--	43	--	198,000	338,517	10,938	--	2,500	--	*Was Clinton Oil Company	
9368	1	0	0	0	Irreg	0-Vac	90	Prod	--	--	U	1962	S Gas	1/5	34	--	32,917	300,377	4,105	113,434	4,105	17,283	*Was El Dorado Refg. Co.	
4039	1	0	0	0	Irreg	Vac	50	Prod	--	--	U	--	Wat	4/96	--	--	18,250	--	4,843	--	4,843	--		
12229	1	1	-	-	Irreg	0	280	Prod	--	--	U	1965	S Gas	--	40	--	102,095	183,984	0+	--	0+	--	*Was Oasis Pet., Inc.	
12310	2	0	0	0	Irreg	Vac	569	Prod + Arb	--	20	U	1972	Wat	1/9	31	--	13,431	42,501	2,552	6,498	0	0	+Pressure Maintenance	
16653	2	0	0	0	Irreg	Vac	569	Prod + Arb	--	20	U	1972	Wat	1/9	31	--	13,431	42,501	2,552	6,498	0	0		
1319	1	0	0	0	Irreg	--	150	Prod	--	--	U	--	---	--	--	--	2,737	739,862	328	82,925	--	--	*Shut down intermittently	
10166	6	0	0	0	Irreg	875	419	Prod	--	--	T	1963	*	117/244	39	--	919,783	5,688,878	45,219	288,727	45,219	288,727	*Other, not identified	
2096	3	1	0	0	Irreg	Vac	600	Prod	--	--	T	1955	Grav	10/1	37.9	--	180,000	1,335,000 Est.	12,905	84,063 Est.	11,615	--	--	
13206	1	0	0	0	Irreg	0	258	Prod	--	--	U	1967	S Gas	3/20	39	--	92,880	663,565	6,350	122,813	1,905	3,945		
3430	2	0	0	0	5-spot	0	32	Prod	--	--	U	1960	S Gas	--	37.5	--	81,760	3,759,922*	4,782	218,112	2,391	109,056	*Since 1960	
4029	2	2	0	0	Irreg	250	1024	Prod	--	--	U	1954	Wat	--	38	--	747,400	15,349,409	32,480	4,215,141	0	0		
6580	2	2	0	0	Irreg	250	1024	Prod	--	--	U	1954	Wat	--	38	--	747,400	15,349,409	32,480	4,215,141	0	0		
16406	1	0	0	0	Irreg	0	25	Prod	--	--	T	1972	S Gas	1/2	40	--	9,000	24,875	3,441	125,796	0	0	*Was Kimray, Inc.	
15542	1	0	0	0	Irreg	Vac	13	Prod	--	--	U	1970	Wat	35/65	41	--	5,320	27,517	1,248	16,972	0	0		
15546	1	0	0	0	Irreg	Vac	17	Prod	--	--	U	1970	Wat	3/7	43	--	6,205	43,142	3,844	23,379	0	0		
1318	2	0	0	0	Irreg	0	300	Prod	--	--	U	--	Gas Exp	--	34	--	109,500	--	2,492	--	--	--		
5919	0	0	0	0	Irreg	0	0	Prod	--	--	U	1957	S Gas	18/120	33	--	0*	--	6,220	--	3,100	--	--	*No injection well on these leases
5932	0	0	0	0	Irreg	0	0	Prod	--	--	U	1957	S Gas	18/120	33	--	0*	--	6,220	--	3,100	--	--	
"	2	0	0	0	Irreg	0	390	Prod + Squirrel	2494	50	U	1957	S Gas	18/300	33	--	280,800	--	3,660	--	2,400	--	--	
12982	1	0	0	0	Peri	10	90	Prod	--	--	M	1966	S Gas	--	--	--	--	900	--	--	--	--	--	
	293	36	6	18													48,846,148		1,078,200	34,307,675	761,751	18,004,405		
																	1,162,065,134							

TABLE 1-ENHANCED OIL-RECOVERY PROJECTS, 1974-Continued

County	Is proj. uni- fied?	Field	Operator	Type and project name	Lease name	Location	Acres in project		Oil producing zone			Oil producing wells (1974)				Has inj. been con- tinuous?
						S - T - R	Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
BUTLER-COWLEY COUNTIES																
5547	--	Fox-Bush-Couch	Stelbar Oil Corporation	(W) Brown & Shawver Atlanta Ranch	Brown, Brown, Brown, Shawver Atlanta Ranch	36-29S-5E 31-29S-6E 1-30S-5E 6-30S-6E	640	320	Bartl	2800	30	3	0	0	0	Yes
16114	--	Rock Northeast	Stelbar Oil Corporation	(W) Abildgaard	Hoyt, Holt, Holt-Gimple, Gimple, Pottorff, Abildgaard	29-29S-5E 31-29S-5E 32-29S-5E 6-30S-5E	960	--	Bartl	2832	18	13	0	2	1	Yes
BUTLER-COWLEY COUNTIES TOTAL (Reported)							1,600	320				16	0	2	1	
BUTLER-MARION COUNTIES																
6185	--	Elbing	C.E. Bayes Oil Company *	(D) C.E. Bayes	Evans, Doornbos	33-22S-4E 3-23S-4E	90	0	KC	2100	40	1	2	0	0	--
CHASE COUNTY																
16856	No	Teter	Glacier Petroleum Company	(P) Hartley "A"	Hartley "A"	35-22S-9E	50	--	Bartl	2457	36	4	0	1	0	Yes
CHASE-GREENWOOD COUNTIES																
15055	Yes	Atyeo-Pixlee	Buckeye Corporation	(W) Evans Unit	Evans,	12-22S-9E 7-22S-10E	250	0	Miss 1m	2400	30	13	0	0	0	Yes
CHASE-LYON COUNTIES																
519	--	Atyeo-Pixlee	E.W. Sauder*	(P) Annie Hughes & H.W. Hughes	Annie Hughes, H.W. Hughes	24-21S-9E 19-21S-10E	80	40	Bartl	2200	25	11	1	0	0	Yes
CHAUTAQUA COUNTY																
17641	--	Cedar Vale	Mendenhall Oil Prop.	(-) Leedy	Leedy	10-34S-8E	40	0	Pawnee	2006	10	2	-	-	-	No*
14002	--	Cloverdale	Olympic Petroleum Co.	(W) Cloverdale Field Unit	F. McConaghy, J.H. Haden, Haden "G", Ruby Haden, R.O. Hawkins Newman,	12-33S-8E 13,14-33S-8E 12,13-35S-9E 18-35S-10E 7,18-35S-10E 17,18-35S-10E 18-35S-10E	243	0	Cattle	2030	15	16	0	0	0	Yes
469	--	Elgin	John M. Denman Oil Co.	(D) ---	Monroe, Harmon, Krusky, Sweeney, Alexander, Fee, Vaughn	18-32S-13E 19-32S-13E	1560	0	Peru	1540	40	13	0	0	0	Yes
10744	No	Hale-Inge	Layton Oil Company*	(W) Hale Flood	Nile McNee	14,23-32S-10E	200	0	Wiser	1130	12	9	0	0	0	Yes
9072	--	Landon-Floyd	Patteson Bros. Inc.	(D) ---	Keith, McAfee, Mattocks	20-33S-10E	220	--	Miss	1950	8	4	2	0	-	Yes
4746	--	Leniton	John M. Denman Oil Co.*	(P) Lowe Unit	Keith, McAfee, Mattocks	17-33S-10E	320	0	Peru	1440	25	13	0	0	2	Yes
5161	--	Leniton	John M. Denman Oil Co.*	(P) Leniton	Smith, J., Burden, Smith, W.W.	17,20-33S-10E 18,19-33S-10E 20-33S-10E	1040	0	Peru	1425	50	29	0	0	0	Yes
2207	--	Niotaze	Steinberger Bros.	(W) Hyder Field	Hyder, Guier, Buckles & Stough	5-35S-13E 6-35S-13E	250	0	Redd	700	15	20	2	0	0	Yes
11863	--	Oliver	Adair Oil Company	(P) McNee	Oliver, McNee	2-32S-10E	95	10	Miss	2000	6	1	0	0	0	Yes
36-01-28	No	Peru-Sedan	Roy A. Burt dba Burlington Oil Co.*	(D) Gardner	Henry Gardner	26-33S-11E	160	0	Peru	1200	23	5	1	0	0	Yes
289	No	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	No	Peru-Sedan	Walt Darnall	(D) Paullus Heirs	Paullus Heirs	6-35S-12E	102	0	Peru	1000	50	4	-	-	-	Yes
3221	--	Peru-Sedan	Deck Oil Company	(W) McMillan	McMillan	27-34S-12E	160	--	Peru	1100	15	12	-	0	-	Yes
15	--	Peru-Sedan	John M. Denman Oil Company*	(P) ---	Blundell	36-34S-11E	80	0	Peru	1000	36	4	0	0	3	Yes
139	--	Peru-Sedan	John M. Denman Oil Company*	(P) ---	D.J. Moore	3-34S-11E	150	0	Peru	1073	16	9	3	0	1	Yes
388	--	Peru-Sedan	John M. Denman Oil Company*	(P) ---	Peru Farm, H.W. Moore	31-33S-12E 16-34S-12E 3-34S-11E	490	0	Peru	980	38	27	13	4	1	Yes

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

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)						Remarks
	Active	In-active	Drilled 1974	Abd. 1974				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods		
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974	Cum. 12-31-74	
5547	1	0	0	0	Line	Vac	30	Prod	--	--	T	1957	S Gas	--	39	--	10,950	940,010	2,313	--	2,313	142,586	
16114	1	0	0	0	Line	300	40	Prod + Stal	1800	60	U	1971	S Gas	--	37	--	24,038	241,584	14,600	51,000	--	--	
	<u>2</u>	<u>0</u>	<u>0</u>	<u>0</u>													<u>34,988</u>	<u>1,181,994</u>	<u>16,913</u>	<u>51,000</u>	<u>2,313</u>	<u>142,586</u>	
6185	1	1	0	0	Irreg	0	9125	Prod + KC lm	2100	40	U	1960	Grav	1/4	31+	--	9,125	--	1,252	--	800	--	*Was Palmer & McGlaflin
16856	2	0	1	0	Irreg	250	350'	Prod	--	--	U	1973	S Gas	--	40	--	127,750	--	12,611	--	--	--	
15055	2	0	0	0	5-spot	300	400	Prod	--	--	U	1960	S Gas	1/1	38	--	146,000	--	14,517	--	4,500	--	
519	3	2	0	0	Irreg	450	80	Prod + Doug	1005	60	T	1939	Grav	1/4	39	--	85,000	1,875,000	13,600	464,000+	3,600	201,100	*Was Ohio Oil + Since 1955
17641	0	1	1	-	Irreg	--	--	Prod	--	--	-	--	Gas Exp	9/1	39	--	0	0	--	--	--	--	*Just started
14002	4	2	0	0	Line	671	165	Sh Wat Wells	20	4-6	F	1968	S Gas	78/22	38.5	*	200,436	2,136,153 thru Nov.	59,436	806,763	59,436	376,869 thru Dec.	*103° Reservoir temp. 3.50
469	3	0	0	0	Irreg	--	30	Prod	--	--	U	--	Grav	--	38	--	31,000	2,891,600	5,231	720,473	5,231	--	
10744	3	0	0	0	5-spot	350	75	Prod	--	--	T	1974	S Gas	--	33	--	34,500	34,500	496	496	496	496	*Was Frank Hall
9072	2	-	-	-	Irreg	0	700	Prod	--	--	U	1962	Grav	1/10	30	--	260,000	--	6,500	--	1,600	--	
4746	1	1	0	0	Irreg	275	60	Prod	--	--	U	--	S Gas	--	32	--	18,500	106,100+	3,082	11,052	3,082	11,052+	*Was D.J. Marshall et al +72-74
5161	3	0	0	0	Irreg	250	20	Prod	--	--	U	--	S Gas	--	31	--	38,000	1,300,228	6,326	321,883	6,326	321,883	*Was Mendenhall Drlg. Co.
2207	11	2	1	0	5-spot	350	8	Prod + Big Salt	350	50	U	1941	S Gas + Gas Exp	1/0	34.5	--	30,000	455,000	6,800	121,800	6,800	121,800	
11863	1	0	0	0	Irreg	0	25	Prod	--	--	U	1965	Wat	--	29	--	9,125	119,825	665	16,311	0	0	
36-01-28	2	0	0	0	Irreg	Grav	3	Prod	--	--	U	1933	Grav	--	34	--	1,095	--	2,510	--	850	--	*Was Sinclair Oil Co.
289	1	0	0	0	5-spot	0	10	Prod	--	--	U	--	Grav	--	33.7	--	3,650	--	400	--	0	--	*Was Little Nick Oil Co.
10903	1	1	-	-	Irreg	0	30	Prod	--	--	U	--	Grav	--	36	--	10,950	--	380	--	--	--	
3221	1	1	0	0	Irreg	150	245	Prod	--	--	U	1952	S Gas	--	34	--	89,500	--	2,566	481,008 Est.	0	--	
15	1	0	0	0	Irreg	250	35	Prod + Salt Sand	450	60	U	1955	S Gas	--	34	--	5,600	22,275+	937	3,008+	937	3,008	*Was Federal Petroleum + Since 1/1/72
139	2	2	0	0	Irreg	300	40	Prod + Salt Sd	450	60	U	1955	S Gas	--	32	--	8,700	211,068	1,455	34,389	1,455	34,389	*Was Federal Petroleum
388	5	10	0	0	Irreg	250	57	Prod + Salt Sd	450	60	U	1955	S Gas	--	33	--	84,500	973,122	14,088	176,750	14,088	176,750	*Was Federal Petroleum

TABLE 1-ENHANCED OIL-RECOVERY PROJECTS, 1974-Continued

Kansas Geol. Survey Energy Resource Series 5, 1975

County Project no.	Is proj- un- itized?	Field	Operator	Type and project name	Lease name	Location S - T - R	Acres in project		Oil producing zone		Oil producing wells (1974)				Has inj. been con- tinuous?	
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled		Abd.
CHAUTAUQUA COUNTY (concl.)																
462	--	Peru-Sedan	John M. Denman Oil Co.	(D) ---	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	7	0	0	1	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	35	0	0	1	Yes
793 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	15	30	0	8	Yes
1029	--	Peru-Sedan	John M. Denman Oil Co.*	(P) ---	A. Casement, C. Casement	33-33S-11E 5-34S-11E	350	0	Peru	1187	25	14	16	0	2	Yes
17030	--	Peru-Sedan	John M. Denman Oil Co.*	(P) C.C. Poor Farm	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	0	0	Yes
17031	--	Peru-Sedan	John M. Denman Oil Co.	(D) Bowman Unit	Dennis, Huffman*, Orton, Winans, Spire	27-34S-11E 34-34S-11E	350	0	Peru	1220	40	22	0	0	1	Yes
17032*	--	Peru-Sedan	John M. Denman Oil Co.†	(P) Mary S. Hazelton	Mary S. Hazelton	28-34S-12E	100	100	Peru	1020	19	0	0	1	4	Yes
17033	--	Peru-Sedan	John M. Denman Oil Co.*	(P) ---	Rodgers, Hartzell	18,19-34S-12E 19-34S-12E	320	0	Peru	1000	16	8	8	1	1	Yes
16970	No	Peru-Sedan	Doric Petroleum, Inc.*	(P) Stafford	Stafford	9-34S-12E	200	0	Peru	1027	35	11	14	0	0	Yes
16971	No	Peru-Sedan	Doric Petroleum, Inc.*	(P) Peru-Sedan	Bowen, Winchell	20-34S-12E 20,29-34S-12E	240	0	Peru	1055	15	18	6	9	0	Yes
16972	No	Peru-Sedan	Doric 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	No	Peru-Sedan	Doric 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	No	Peru-Sedan	Doric Petroleum, Inc.*	(P) Peru-Sedan	Neff, Ewers, Bales, R.M. Hartzell	24-34S-11E 19-34S-12E	554	0	Peru	1055	15	30	2	1	0	Yes
14682	No	Peru-Sedan	William V. Herbert	(D) Parker "B"	Parker "B"	26-34S-11E	80	0	Red Sand	978	9	6	0	0	0	Yes
905	--	Peru-Sedan	Lee R. Jones, Jr., Oil Co.	(D) Crane	Carrie H. Crane	12-35S-11E	320	80	Peru	1170	30	14	-	1	-	No*
6087	--	Peru-Sedan	Lee R. Jones, Jr., Oil Co.	(D) Austin	Clint Austin	7-34S-12E	160	--	Peru	950	15	6	-	-	-	No*
6133	--	Peru-Sedan	Lee R. Jones, Jr., Oil Co.	(D) C.W. Smith	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*
556	No	Peru-Sedan	Nunneley & Powell*	(D) Kimbrell	Kimbrell	4-34S-12E	40	20	Peru	1050	18	4	0	0	0	Yes
5477	No	Peru-Sedan	Nunneley & Powell*	(P) Violet Stafford	Violet Stafford	8-34S-12E	16	0	Peru	1050	20	12	0	2	0	Yes
6132	No	Peru-Sedan	Nunneley & Powell*	(D) Big Turner	Big Turner	3-35S-12E	80	0	Peru	1000	10	2	0	0	0	Yes
6170	No	Peru-Sedan	Nunneley & Powell*	(D) Blount	Blount	34-34S-12E	160	0	Peru	1035	20	4	0	0	0	Yes
"	No	Peru-Sedan	Nunneley & Powell*	(P) J.R. Chance	J.R. Chance	34-34S-12E	160	40	Peru	1035	20	12	0	0	0	Yes
6320	--	Peru-Sedan	Petroleum Enterprises, Inc.	(P) ---	Hills	22-34S-12E	10	--	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	No	Peru-Sedan	Shannon Bros.	(D) Turner-Johnson	Johnson, Turner	6-35S-12E 7-35S-12E	80	40	Peru	1180	40	3	0	0	0	Yes
7945	--	Peru-Sedan	Star Producers, Inc.	(D) Jobe	Jobe	8-34S-12E	330	0	Wiser	1000	12	4	1	0	-	---
10806	--	Peru-Sedan	Robert E. Warren*	(D) ---	L.D. Pitts	29-33S-12E	160	--	Peru	1050	14	4	4	0	0	Not
CHAUTAUQUA COUNTY TOTALS (Reported) (Includes project in supplemental list.)							16,979	370		679	129	20	26			

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

Project no.	Injection Wells					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)						Remarks
	Active	In-active	Drilled 1974	Abd. 1974	Injection Pattern			Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods		
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974	Cum. 12-31-74	
462	20	0	0	0	Irreg	--	30	Prod	--	--	U	--	S Gas	--	35	--	175,000	13,875,236	28,870	3,453,929	28,870	--	
463	1	0	0	0	Irreg	0	20	Prod	--	--	U	--	Grav	--	35	--	10,800	72,800	1,800	17,310†	1,800	17,310	*Was Denman Bros. †Since 10/1/68
465	5	0	0	0	Irreg	0	30	Prod	--	--	U	--	Grav	--	38	--	76,900	405,760†	12,819	95,034†	12,819	95,034†	*Was Denman Bros. †Since 10/1/68
467	1	0	0	0	Irreg	0	40	Prod	--	--	U	--	Grav	--	33.5	--	19,100	119,557†	3,187	28,296†	3,187	28,296	*Was Denman Bros. †Since 10/1/68
468	8	0	0	0	Irreg	0	20	Prod	--	--	U	--	Grav	--	34	--	100,000	537,110	16,460	125,738†	16,460	125,738†	*Was Denman Bros. †Since 10/1/68
793 1473	5	10	0	0	Irreg	300	20	Prod + Salt Sand	460	60	U	1955	S Gas	--	33.5	--	31,100	1,709,043	5,172	1,745,219	5,172	1,745,219	*Was Federal Petroleum
1029	3	13	0	0	Irreg	200	80	Prod + Salt Sand	450	60	U	1955	S Gas	--	32	--	46,000	2,649,449	7,666	321,744	7,666	321,744	*Was Federal Petroleum
17030	8	20	0	0	Irreg	275	20	Prod + Salt Sand	450	60	U	1955	S Gas	--	34	--	46,700	1,135,309	7,787	1,096,396	7,787	1,096,396	*Was Federal Petroleum
17031	4	0	0	0	Irreg	0	20	Prod	--	--	U	--	S Gas	--	35	--	35,000	177,375*	5,763	41,357*	5,763	41,357*	*Since 10/1/68
17032	0	0	0	2	Irreg	--	--	Prod + Salt Sand	450	50	U	1955	S Gas	--	34	--	500	500,907	78	211,216	78	211,216	*Lease Abd. †Was Federal Petroleum
17033	2	4	0	0	Irreg	350	20	Prod + Salt Sand	450	60	U	1955	S Gas	--	34	--	20,500	913,187	3,363	693,193	3,363	693,193	*Was Federal Petroleum
16970	3	2	0	0	Irreg	200	44	Prod + Salt Sand	450	60	U	1955	S Gas	--	34	--	48,380	1,053,187	12,697	156,956	12,697	156,956	*Was Federal Petroleum (Name change only)
16971	3	4	0	0	Irreg	185	43	Prod + Salt Sand	450	60	U	1965	S Gas	--	34	--	47,462	288,475	15,175	72,496	15,175	72,496	*Was Federal Petroleum (Name change only)
16972	3	13	0	0	Irreg	225	33	Prod + Salt Sand	450	60	U	1955	S Gas	--	34	--	35,708	2,334,629	6,385	572,587	6,385	572,587	*Was Federal Petroleum (Name change only)
16973	2	5	0	0	Irreg	200	24	Prod + Salt Sand	450	60	U	1955	S Gas	--	34	--	17,879	1,446,098	4,116	190,747	4,116	190,747	*Was Federal Petroleum (Name change only)
16974	5	5	0	0	Irreg	325	51	Prod + Salt Sand	450	60	U	1966	S Gas	--	34	--	93,212	902,019	23,400	253,604	23,400	253,604	*Was Federal Petroleum (Name change only)
14682	1	0	0	0	Irreg	120	8	Prod	--	--	U	1968	Wat	7/18	37	--	17,961	77,404	1,687	14,107	1,687	14,107	
905	1	-	-	-	Irreg	100	50	Prod	--	--	U	--	Grav	1/10	34	--	2,190	--	18,500	--	0	--	*Pump 50 bbls/day
6087	-	-	-	-	Irreg	--	--	Prod	--	--	U	--	Grav	1/10	32	--	0	--	0	--	0	--	*Not active in 1974
6133	2	-	-	-	Irreg	200	80	Prod	--	--	U	--	Grav	1/10	33	--	26,000	--	--	--	3,059	--	*Pump 80 bbls/day
10679	1	-	-	-	Irreg	100	70	Prod	--	--	U	--	Grav	1/10	33	--	25,500	--	--	--	1,861	--	*Pump 70 bbls/day
556	1	0	0	0	Irreg	0	20	Prod	--	--	U	1941	Grav	1/5	34	--	3,000	--	473	--	0	--	*Was Gene Nunneley Oil Co.
5477	1	0	0	0	Irreg	150	40	Prod	--	--	U	1957	Grav	1/4	34	--	15,000	--	9,200	--	1,000	--	*Was Gene Nunneley Oil Co.
6132	1	0	0	0	Irreg	0	10	Prod	--	--	U	--	Grav	1/3	33	--	3,000	--	2,200	--	0	--	*Was Lee R. Jones, Jr.
6170	1	0	0	0	Irreg	0	20	Prod	--	--	U	1958	Grav	1/5	34	--	10,000	--	1,316	--	--	--	*Was Lee R. Jones, Jr.
"	-	-	-	-	Irreg	2	25	Prod	--	--	U	1958	Grav	1/4	34	--	10,000	--	3,734	--	1,000	--	* " " " " "
6320	2	-	-	-	Irreg	300	50	Prod	--	--	T	--	S Gas	--	34	--	5,000	--	1,866	--	--	--	
14956	1	-	0	-	Irreg	125	75	Prod	--	--	T	1969	S Gas	--	35	--	20,000	--	3,376	--	--	--	
3556	1	0	0	0	Irreg	0	10	Prod	--	--	U	1953	Grav	1/3	35	--	3,600	38,800	1,300	10,000	500	9,700	
7945	0	-	0	-	---	--	--	Wiser	1000	9	-	--	---	--	33	--	0	--	610	--	--	--	
10806	1	2	0	0	5-spot	0	60	Prod	--	--	M	1973	Grav	1/12	32	--	--	--	--	--	--	--	*Was Bill D. Farris †Natural gravity
131	99	2	2														1,780,048	36,486,216	312,032	11,793,862	264,146	6,691,947	

TABLE 1-ENHANCED OIL-RECOVERY PROJECTS, 1974-Continued

County	Project no.	Is proj. uni- tized?	Field	Operator	Type and project name	Lease name	Location			Acres in project			Oil producing zone			Oil producing wells (1974)				Has inj. been continuous?
							S - T - R	Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.				
CHAUTAUQUA-ELK COUNTIES																				
	15710	No	Hale-Inge	Traverse Corporation*	(W) Inge Waterflood	Inge, Temple, Kimzey, Howell, Mustoe, Clymer, Vestal	26,27,34, 35-31S-12E 3-32S-12E	127	0	Stray	660	10	20	6	0	1	No†			
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	--	Morr	5450	9	3	3	0	0	Yes			
COFFEY COUNTY																				
	15677	--	Crandall	Cameron K. Reed	(D) LeRoy Field	Sutherland	31-22S-16E	5	0	Squirrel	1065	6	2	0	0	0	Yes			
	17175	--	LeRoy North	Arthur Klaus	(D) C & C Oil Company	C & C Oil Company	22-22S-16E	80	0	Squirrel	1015	12	4	0	0	0	Yes			
	11074	No	Neosho Falls-LeRoy	Bartlett & Hannen Oil Co.*	(W)+ Rue-B-Lee No. 1 (D)	---	35-22S-16E	80	0	Squirrel	962	10	16	-	24	1	Yes			
	11714	--	Neosho Falls-LeRoy	Glenn B. Boden	(P) Boden	Boden	35-22S-16E	120	0	Peru (Squirrel)	970	10	8	0	0	1	Yes			
	17568	--	Neosho Falls-LeRoy	Lancer Oil Enterprise	(-) ---	McGinnis #7	1-23S-16E	--	--	Squirrel	964	10	-	-	-	-	---			
	199	No	Virgil North	French & Winterscheid, Inc.	(P) Kelly	Kelly	14-23S-13E	90	20	Miss Lime	1800	6	9	0	0	0	Yes			
	202	No	Virgil North	French & Winterscheid, Inc.	(P) Olinger & Olinger B	Olinger	14-23S-13E	90	0	Miss Lime	1800	5	5	0	0	0	Yes			
	5835																			
	5633	--	Winterscheid	French Oil Company	(P) Pilcher	Pilcher	16-23S-14E	20	0	Miss Lime	1700	5	2	0	0	0	Yes			
	13052	--	Winterscheid	Arnold Kraft	(W) Vostrez, Shotwell, McCartney	Vostrez, Shotwell, McCartney	14-23S-14E	40	0	Miss Lime	1600	15	7	0	0	0	Yes			
	13346	--	Winterscheid	Arnold Kraft*	(W) Scott, Wiley, Cockran	Scott, Wiley, Cockran	14-23S-14E	80	0	Miss Lime	1600	15	6	0	0	0	Yes			
COFFEY COUNTY TOTALS (Reported) (Includes project in supplemental list.)								625	20				60	0	24	3				
COFFEY-WOODSON COUNTIES																				
	2863	--	Neosho Falls-LeRoy	Howard T. Newland*	(W) Unit 13,24-23S-16E	Murray, Remlinger, Wolfe, Maynard	13-23S-16E 24-23S-16E	80	0	Squirrel	940	12	18	2	3	-	Yes			
	8745	--	Virgil North	Sun Oil Company	(W) Chris A. Bahr- Joseph B. Bahr	Joseph B. Bahr, Chris A. Bahr	14-23S-13E 23-23S-13E	140	25	Miss Lime	1700	125	7	2	9	0	Yes			
COFFEY-WOODSON COUNTIES TOTALS (Reported)								220	25				25	4	12	0				
COMANCHE COUNTY																				
	17128	Yes	Collier Flats	Halliburton Oil Prod. Co.	(P) Collier Flats Unit	Thornhill, O. Baker, Norton, Schweitzer	24-33S-20W 25-33S-20W 26-33S-20W	480	0	L-KC	4777	5	2	1	0	0	Yes			
COWLEY COUNTY																				
	10481	--	Albright	Deck Oil Company	(P) Albright "A"	Albright "A"	2-34S-5E	160	0	Miss Ch	3100	12	7	0	0	0	Yes			
	11121	Yes	Bernstorf	Gralapp & Everly	(D) Sonntag Bernstorf Unit	Bernstorf (Gralapp & Everly) Sonntag (Gralapp & Everly) Bernstorf (E. Wakefield)	33-31S-4E 34-31S-4E 4-32S-4E	80	140	Bartl	3049	140	3	4	0	0	Yes			
	5563	--	Biddle	Stewart Brothers	(W) 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 36-31S-4E 6-32S-5E	80	180	Cattle	2900	18	4	1	0	-	Yes			
	7358																			
	9844	Yes	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 Company	(D) Brandenburg	Brandenburg	3-35S-3E	160	0	Miss	3355	15	3	0	0	0	Yes			
	16081	No	Branson	Gralapp & Everly	(W) Branson	Branson-Gralapp & Everly	29,32-32S-7E	140	--	Bartl	2900	20	6	-	0	-	Yes			

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

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)						Remarks	
	Active	In-active	Drilled 1974	Abd. 1974				Source	Depth, ft.	Thick., ft.						Type	Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods		
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974		Cum. 12-31-74
15710	19	1	0	0	5-spot	400	11	Prod + Salt Sand	445	20	U	1967	S Gas	1/25	32	#	75,125	2,005,512	3,954	86,001	--	--	*Was Fairway Petroleum †Mechanical malfunction #77°F.: 20
6764	2	4	0	0	Irreg	0	115	Prod	--	--	U	1959	S Gas	12/1	36	3	83,829	5,221,918	5,775	1,140,837	5,775	545,562	
15677	1	3	0	0	Irreg	0	1	Prod	--	--	U	1970	S Gas	1/0	21	--	365	2,285	168	1,725	0	0	
17175	1	0	0	0	4-spot	Grav	*	Prod	--	--	U	1973	Grav	1/1	25	25	1,616	--	600	--	100	--	*5-10 bbls.
11074	2	-	-	-	7-spot	300+	50	Prod + KC	180	180-	F+#	1964	S Gas	1/1	26	--	18,250	182,250	6,675	--	5,000	140,601	*Was Levi & Calhoun †30 Dump; 20 Pressure #Petrofas
11714	1	0	0	1	Line	50	20	Prod	--	--	T	1965	Wat	9/1	26.5	--	9,000	41,000	1,772	46,493	500	3,965	
17568	-	-	-	-	---	150	--	Prod + Squirrel	--	--	-	1974	---	--	--	--	450	450	0	0	0	0	
199	1	0	0	0	Irreg	90	350	Prod	--	--	T	1945	Wat	9/11	38	--	99,000	--	8,054	--	6,040	181,042	
202	2	0	0	0	Irreg	Vac	150	Prod	--	--	T	1960	Wat	3/2	66	--	36,500	413,500	4,276	--	2,822	54,647	
5835																							
5633	1	0	0	0	Irreg	75	90	Prod	--	--	T	1955	Wat	48/52	36	--	12,000	384,000	1,170	--	1,170	43,560	
13052	1	0	0	0	4-spot+	250	65	Prod	--	--	U	1966	Wat	3/1	38	--	23,725	47,450	1,825	--	365	--	
13346	4	0	0	0	5-spot+	350	230	Prod	--	--	F+	1966	Wat	1/3	38	--	83,950	167,900	4,380	--	1,000	--	*Was Vannocker Oil Co.
	15	3	0	1													284,856	1,238,835	28,920	48,218	16,997	423,815	
2863	7	4	0	0	---	300	30	Prod + KC	320	20	U	1952	---	--	26+	--	80,000	1,848,934	4,866	356,056	4,866	356,056	*Was Susmio Oil Co.
8745	7	3	0	0	Irreg	450	119	Prod + Arb + Bartl	2230 1660	150 40	T	1961	S Gas	--	30.9	5.4	305,230	13,015,521	90,776	310,706	90,776	310,706	
	14	7	0	0													385,230	14,864,455	95,642	666,762	95,642	666,762	
17128	2	0	0	0	Irreg	0	125	L-KC	4644	16	U	1973	S Gas	1/0	44	--	56,875	65,875	6,061	106,928*	1,200	1,200	*1973 Report was incorrect, was only 1 lse.
10481	1	0	0	0	Irreg	50	120	Prod	--	--	U	1964	S Gas	1/1	39	--	43,800	267,175	12,899	262,145	4,200	12,600	
11121	1	-	0	-	Peri	32	135	Prod + Stal	1899	--	U	1964	Wat	9/1	42	--	18,250	177,193	3,000	61,828	--	--	
5563	2	1	-	-	Line	600	830	Prod + Stal	1000	75	U	1961	Gas Exp	4/1	39	--	322,170	9,018,165	3,310	324,604	0	0	
7358																							
9844	2	0	0	0	Line	400	250	Prod + Lay	1900	80	T	1963	S Gas	5/2	37	8	182,500	3,509,964	8,553	361,407	8,553	361,407	
16770	1	0	0	0	Irreg	0	55	Prod	--	--	T	1973	S Gas	9/15	36	--	20,075	29,975	5,325	120,892	2,330	4,683	
16081	2	0	0	0	Irreg	28	70	Prod	--	--	T	1970	Wat	1/1	39	--	180,750	836,329	21,900	250,742	--	--	

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1974—Continued

Kansas Geol. Survey Energy Resource Series 5, 1975

County	Is proj. unitized?	Field	Operator	Type and project name	Lease name	Location S - T - R	Acres in project		Oil producing zone			Oil producing wells (1974)				Has inj. been continuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
COWLEY COUNTY (cont.)																
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 St. Joseph, O.P. Pierce, F. Weigle, R. Smith, B.J. Drury, Sanders, D.J. McMinn	19-31S-6E 20-31S-6E 29-31S-6E 30-31S-6E	1124	--	Bartl	2950	30	13	-	-	-	Yes
16342	--	Burden	Wilson Drilling Company	(P) Keesey-Blanchat	Blanchat, Weigel, Wakefield, Harris, Keesey	17-31S-6E 18-31S-6E 19-31S-6E 20-31S-6E	1280	--	Bartl	2820	80	9	0	0	0	Yes
11853	No	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	No	Combs	Tomlinson Oil Co., Inc.	(D) Combs	Combs	5-30S-5E	40	0	Bartl	2830	9	3	2	0	0	Yes
16269	No	Daniels	Lee Phillips Oil Company	(P) Daniels Flood Project	Fuchs, Knowles, Holt, P.E. Donley, P. Donley, Kennedy, Mahlandt, Brungardt	13-30S-4E 7-30S-5E 8-30S-5E 17-30S-5E 18-30S-5E	140	0	Bartl	2850	40	6	0	0	1	Yes
16403	--	David	American Petrofina Co. of Texas*	(P) Kurtz	Kurtz	26-30S-4E	80	0	Bartl	2945	16	1	0	0	0	Yes
8007	--	David	Gear Operating Company	(W) North David Unit	---	25, 26-30S-4E	273	--	Bartl	2975	18	6	0	0	2	Yes
10162	--	David	Merlin Hickman*	(P) Fleming	Fleming	25-30S-4E	20	60	Bartl	2920	20	2	-	-	-	No
7478	--	Deichman	H.H. Blair Estate	(D) Deichman	---	24-31S-4E	--	--	Bartl	2825	12	1	1	-	-	Yes
5535	No	Eastman	Buckeye Corporation (Aztec Oil Co., Division)	(W) Eastman	Eastman	6-31S-6E	60	0	Bartl	2816	62	1	0	0	0	No*
16839	No	Estep West	Clyde M. Becker	(P) W-Estep	Dunn, Potter	19, 20-34S-6E 20-34S-6E	240	--	Miss	3100	20	5	0	3	0	Yes
7841	--	Estes	Texaco Inc.	(P) G.O. Brooks	G.O. Brooks, M.M. Spangler, E.G. Jabara	1-32S-6E 6-32S-7E 31-31S-7E 6-32S-7E	560	--	Cott Gr	2136	12	4	-	-	-	Yes
13509	--	Estep	Texaco Inc.	(P) C.W. Estep	C.W. Estep	21-34S-6E	160	--	Stal	1802	16	1	0	0	0	Yes
5863	--	Frog Hollow	E.T. Lindsay	(D) J.W. Gardner	J.W. Gardner (Eastman)	16-32S-5E	60	--	Bartl	3040	60	2	3	-	-	Yes
7136	No	Frog Hollow	Phillips Petroleum Co.	(W) Lena	Lena	17-32S-5E	25	0	Bartl	3035	25	4	0	0	0	Yes
14230	Yes	Frog Hollow East	Merlin Hickman*	(P) East Frog Hollow Unit	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	5	-	-	1	No
3549	--	Geuda Springs	Earl F. Wakefield, Inc.	(D) Hower	Hower	32-33S-3E	40	0	Bartl	3300	34	1	0	0	0	Yes
4538	--	Gibson	McNeish Oil Operations	(W) Wilson	Wilson	29-34S-3E	40	10	Bartl	3380	18	1	0	0	0	Yes
13495	No	Graham	Crest Petroleum Inc.	(W) Bradbury-Miller-Wright "A"	Bradbury, Miller, Wright "A"	10-33S-3E 15-33S-3E	273	0	Miss Ch	3255	30	10	-	-	1	Yes
15536	Yes	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	0	Miss Ch	3233	26	16	0	0	0	Yes
16280	No	Graham	Crest Petroleum Inc.	(W) Nelson	Nelson, Winters	2-33S-3E	80	0	Miss Ch	3268	30	4	0	0	0	Yes
16692	No	Graham	Crest Petroleum Inc.	(P) Wright "B"	Wright "B", Kukuk	10-33S-3E 11-33S-3E	80	0	Miss Ch	3251	16	2	0	0	0	Yes
8938	--	Graham	Earl F. Wakefield, Inc.	(P) Boyles	Boyles	11-33S-3E	160	0	Bartl	3275	15	4	1	1	-	Yes
4843	--	Harvey	Aylward Drilling Company	(D) Harvey Unit	Harvey	23-34S-3E	10	9	Bartl	3278	20	1	0	0	0	Yes
14142	--	Harvey	Aylward Drilling Company	(P) Fussell Water Flood	Fussell, Pearson	14-34S-3E	80	0	L-KC	2839	6	3	0	0	0	Yes
4536	--	Harvey	McNeish Oil Operations	(W) Snyder	Snyder	15-34S-3E	40	--	Bartl	3270	18	3	0	0	0	Yes

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

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)				Remarks		
	Active	In-active	Drilled 1974	Abd. 1974				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.			Oil recovered by secondary methods	
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74		1974	Cum. 12-31-74
3593	8	-	-	-	5-spot	650	177	Prod	--	--	U	1963	S Gas	868/372	38	--	515,334	26,594,653	35,130	1,278,703	35,130	984,707	
16342	2	0	0	0	Irreg	750	350	Prod	--	--	T	1968	Grav	10/1	38.4	--	250,000	1,158,500	25,000	225,000	5,000	30,000	
11853	1	0	0	0	Irreg	180	200	Prod	--	--	U	1965	S Gas	3/11	40	--	72,000	--	4,875	228,899	--	--	
4028	1	2	0	0	Peri	350	208	Prod	--	--	U	1954	S Gas	--	40	--	75,850	646,129	3,021	400,710	3,021	103,659	
16269	2	0	0	1	Irreg	150	625	Prod	--	--	U	1971	S Gas	21/79	39	--	228,125	312,592	38,243	122,711	0	0	
16632																							
16403	1	0	0	0	Irreg	0-	28	Prod	--	--	U	1972	S Gas	1/4	30.9	--	10,056	29,712	670	104,646	0	0	*Was El Dorado Refg. Co.
8007	3	5	0	0	Irreg	Vac	450	Prod + Stal	1950	100	T	1960	S Gas	2/1	39	--	121,545	6,607,884	3,714	797,972	3,714	--	
10162	1	-	-	-	---	Vac	20	Prod	--	--	U	1963	Grav	--	39	--	500	--	100	--	--	--	*Was Dick Collier
7478	1	-	-	-	---	0	50	Prod	--	--	U	1961	Grav	3/7	39	--	180,000	--	1,500	--	--	--	
5535	1	0	0	0	Irreg	0	80	Prod	--	--	U	--	Grav	--	37.9	--	9,733	--	1,137	--	0	--	*Repairing SWD Well
16839	1	-	-	-	Irreg	0	50	Prod	--	--	T	1973	S Gas	17/20	41	--	12,775	18,875	9,674	--	0*	--	*Increase due to new drilling
7841	1	-	-	-	Irreg	--	--	Prod	--	--	U	1961	Wat	--	38.2	--	91,819	--	4,744	--	1,897	--	
13509	1	0	0	0	Irreg	Vac	160	Prod	--	--	U	1967	S Gas	48/9	41	--	58,400	183,960	9,469	112,335	7,425	84,102	
5863	1	-	-	-	Irreg	Grav	526	Prod + Stal	2000	45	T	1969	S Gas	--	38	--	192,221	752,731	1,041	--	1,041	3,362	
7136	1	0	0	0	5-spot	0	202	Prod	--	--	U	1959	Wat + S Gas	1/5.6	41 5 cp	--	73,566	832,786	7,588	--	7,588	110,799	
14230	1+	-	-	-	Irreg	Vac	150	Prod	--	--	U	1968	S Gas Exp	--	38	--	5,000	--	4,200	--	--	--	*Was Clinton Oil Co. †Disposal
3549	1	0	0	0	Irreg	0	400	Prod	--	--	T	1954	S Gas	--	39	--	146,000*	2,623,000	1,195	67,687	598	33,843	*Since 1954
4538	1	0	0	0	5-spot	0	1	Prod	--	--	U	1959	S Gas	--	35	--	365	1,393,548	1,278	101,762	1,278	101,762	
13495	5	-	0	0	Peri	Vac	59	Prod + Stal	2190	50	T	1967	S Gas	40/56	41	--	107,726	1,383,770	17,196	155,996	17,196	155,996	
15536	6	0	0	0	Peri	Vac	72	Stal	2180	68	T	1970	S Gas	43/50	40	--	158,287	1,039,712	20,691	89,063	9,000	66,663	
16280	1	0	0	0	3-spot	Vac	92	Prod	--	--	T	1971	S Gas	18/100	40	--	33,851	135,945	4,650	16,723	4,650	11,363	
16692	1	0	0	0	Line	Vac	42	Prod	--	--	T	1972	S Gas	1/5	41	--	15,102	35,269	2,615	10,982	2,615	10,982	
8938	1	0	0	0	Irreg	0	60	Prod	--	--	U	1961	S Gas	--	40	--	109,500	1,416,500	3,584	117,533	896	29,383	
4843	1	0	0	0	Irreg	Grav	128	Prod	--	--	T	1961	Grav	1/1	37	--	46,720	145,070	2,111	43,034	2,111	42,349	
14142	1	0	0	0	Irreg	200	80	Prod	--	--	T	1968	S Gas	--	38	--	30,500	176,050	5,320	128,708	5,320	16,811	
4536	2	0	0	0	Irreg	0	10	Prod + Arkansas River Underflow	8	20	F	1955	S Gas	--	38	--	3,650	1,117,102	2,749	146,660	2,749	146,660	

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1974—Continued

Kansas Geol. Survey Energy Resource Series 5, 1975

County	Is proj. uni- tized?	Field	Operator	Type and project name	Lease name	Location S - T - R	Acres in project		Oil producing zone			Oil producing wells (1974)				Has inj. been con- tinuous?	
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.		
COWLEY COUNTY (cont.)																	
16022	--	Higby	Landers & Musgrove Oil*	(P)	Higbee-Woods	Higbee, Woods	31-34S-6E	320	0	Miss Ch	3156	44	2	0	0	0	Yes
11742	--	Larcom	Oil Country Supply*	(P)	---	Dunbar, McFarlan	4-34S-4E	--	--	Lay	2300+	6+	3	1	0	0	Yes
5328	--	McKay	W.J. Lamberton	(W)	McKay	Bergkamp, Broce, Klink "A", Klink "B"	6-35S-4E	150	60	Bartl	3300	25	10	-	31	11	Yes
6722							7,8-35S-4E										
14558	Yes	Maddix North	Roger M. Wheeler	(W)	North Maddix Unit	Andes A, Andes B, Yadon, Maddix, Andes, Rockwell, Richardson, Groene, Jarvis	1-33S-5E	240	0	Miss	3000	15	19	2	0	0	Yes
14880							2-33S-5E										
							11-33S-5E										
							12-33S-5E										
17596	Yes	Murphy	Stelbar Oil Corp., Inc.	(W)	Jones	Jones, Collinson, McLaughlin, Weir, McMillin, Peters	14-33S-5E	880	--	Bartl	3395	20	20	1	0	0	Yes
							30-34S-3E										
							31-34S-3E										
10928	--	Posey	Moran Oil Company	(W)	Muret	Muret	21-33S-4E	160	0	Miss	3150	10	4	0	0	0	Yes
3427	--	Rahn	Rance Arnold*	(D)	---	Jesse Rahn	13-34S-5E	100	0	Bartl	2900	20	1	1	0	0	Yes
2844	Yes	Rahn	Landers & Musgrove*	(P)	Rahn Unit	M. Waldschmidt, George Rahn, Rowe, Thompson, W. Kavanaugh, D. Kavanaugh	12-34S-5E	200	0	Bartl	2900	22	6	0	0	0	Yes
							13-34S-5E										
							6-34S-6E										
							7-34S-6E										
7468	--	Rainbow Bend	McNeish Oil Operation	(W)	Rainbow Bend West Unit	Hesket, Holman, Nelson	19-33S-3E	85	--	Bartl	3180	12	4	2	0	0	Yes
3239	No	Rainbow Bend	Mead Prod. Company	(D)	Hunt Rainbow Bend Unit	Julia Hunt	16-33S-3E	50	80	Bartl	3200	20	2	0	0	0	Yes
9696																	
2918	--	Rainbow Bend	S & G Oil Company, Inc.	(D)	J.U. Hunt	J.U. Hunt, E.E. Hunt	16-33S-3E	365	0	Bartl	3200	25	1	2	0	0	No*
6330							21-33S-3E										
15895	--	Rock	Steve Cowan*	(D)	Rock Unit I	Rock Unit I	11-30S-4E	160	260	Bartl	2705	40	1	0	0	0	Not
8101	--	Rock	Kathol Petroleum, Inc.	(W)	Waite	Waite, Olson-Rule	13-31S-3E	400	240	Bartl	2915	21	4	2	0	0	Yes
3085	--	Rock	Stelbar Oil Corp., Inc.	(W)	Rock Unit	Gamble, Stelbar, Apco, Mobil, Starkey	11-30S-4E	760	600	Cattle	2750	20	4	8	0	0	Yes
							14,15-30S-4E										
12366	--	Rock	Stelbar Oil Corp., Inc.	(W)	Rock North	Shawver, Shawver, Davis, Daves, Hornaday	2-30S-4E	680	--	Cattle	280	20	13	4	0	0	Yes
							3-30S-4E										
							9-30S-4E										
							10-30S-4E										
6951	--	School Creek North	Petroleum Enterprises Inc.	(P)	---	Beamer, Davis, Miller	10-32S-7E	60	--	Layton	2230	10	12	-	0	-	Yes
6985	No	School Creek North	Petroleum Enterprises Inc.	(P)	---	Barger	11-32S-7E	--	--	Layton	2021	15-	5	-	-	-	Yes
							3-32S-7E					25					
9056	Yes	Shannon	Lewis Operating	(W)	Shannon Unit	Shannon Unit	23,27, 35-31S-5E	1000	1000	Lay "A"	2360	11	18	29	55	8	Yes
12927	--	Smith	Brunson-Spines	(W)	Smith Waterflood Project	Mowder Unit, Huggins, Hann, Hann "B" Holtje, Hann "B" A.R. Husted	10-31S-3E	120	0	Bartl	3000	16	7	2	0	0	Yes
8457	--	Stayton South	S.J. Roark*	(D)	---		15-31S-3E	80	0	Bartl	3200	--	3	0	-	0	No
10811	Yes	Trees	Braden-Deem Inc.*	(W)	Trees Field Unit	Tract 4,5 & 6, Tract 1, 2 & 3	19-30S-4E	200	100	Bartl	2860	12	4	5	0	0	Yes
17207	--	Turner North	Hammer & Maclean	(D)	Hammer	---	30-30S-4E	160	--	Bartl	2800	75	8	1*	-	-	Not
16946	No	Waldschmidt	Crest Petroleum Inc.	(P)	Waldschmidt-Rahn	Rahn, Waldschmidt	7-34S-6E	720	0	Miss	3065	20	6	0	2	0	Yes
8340	No	Werner	E.T. Lindsay	(D)	Feaster Unit	Cranston, Feaster, Kadau, Wahlenmaier-Turner	7,8-34S-6E	240	40	Layton	2240	7.2	8	2	-	-	Yes
30-32S-6E																	
15713	Yes	Wilmot-Floral	Dawson-Markwell Expl. Co.	(W)	Nora King Unit	Aubry Peters, W.J. Pendergraft, John Jarvis, Nora King	17-31S-5E	460	60	Bartl	2884	12	4	-	0	0	No
8785	--	Winfield	H.H. Blair Estate	(D)	---	Lorton	20-31S-5E	160	--	Layton	2800	20	5	0	0	0	No*
1857	No	Winfield	Gulf Oil Corp.	(D)	M. Shannon	M. Shannon	25-32S-4E	30	0	Bartl	2930	--	3	6	0	0	Yes
24-32S-4E																	

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

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)				Remarks				
	Active	In-active	Drilled 1974	Abd. 1974				Source	Depth, ft.	Thick., ft.						Type	Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods			
																	1974	Cum. 12-31-74	1974		Cum. 12-31-74	1974	Cum. 12-31-74	
16022	1	0	-	0	Irreg	180	185	Prod	--	--	T	1971	S Gas	2/5	37	--	69,350	225,000	3,250	43,300	1,625	21,650	*Was Maggard Supply Co.	
11742	1	0	0	0	Irreg	0	200	Prod	--	--	U	1964	Wat + S Gas	--	37-	--	70,000+	640,000 Est.	--	--	--	--	*Was Bob Boley	
5328 6722	10	-	-	-	Line	200	100	Prod + Arkansas River	10	26.5	F	1959	S Gas	1/0	40	--	350,000	--	5,823	--	5,823	--	--	
14558	4	0	0	0	Irreg	218	351	Prod + Stal	2062	35	T	1969	S Gas	94.4/41.8	38	20 Est.	513,054	2,148,871	43,217	909,404	35,640	132,313		
17596	2	0	0	0	4-spot	Vac	400	Prod + Stal	--	--	U	1974	S Gas	--	40	--	144,000	144,000	11,222	11,222	--	--		
10928	1	0	0	0	Irreg	160	250	Prod + Stal	2000	70	U	1964	S Gas	1/1	42	--	91,250	692,541	6,637	78,437	6,637	78,437		
3427	1	1	-	-	Irreg	20	300	Prod + Elgin	1220	25	U	1952	S Gas	--	36	--	10,800	--	2,680	--	2,680	--	*Was B.B. Blair	
2844	3	-	-	-	Line	0	425	Prod	--	--	U	1952	S Gas	1/0	37	--	14,500	2,414,000	8,100	749,100	6,075	561,825	*Jenkins-Ray	
7468	2	2	0	0	Peri	0	137	Prod + Arkansas River underflow	16	20	F	1960	S Gas	--	40	--	137,168	3,637,613	2,791	227,452	2,791	227,452		
3239	1	1	0	0	Irreg	0	130	Prod	--	--	U	1952	Wat. + Gas Exp	3/2	41	--	47,500	2,106,800	5,742	303,049	--	--		
9696	1	0	0	0	Irreg	250	900	Prod	--	--	U	1957	Wat	--	40	--	62,650	3,879,928	1,253	--	1,253	337,228	*High water & mud, impossible to get to lease.	
2919	1	0	0	0	Irreg	0	15	Prod	--	--	U	--	S Gas	--	--	40-	4,500	--	875	--	--	--	*Was CRA Inc.	
6330	1	0	0	0	Irreg	0	15	Prod	--	--	U	--	S Gas	--	--	42	4,500	--	875	--	--	--	†Disposing Prod. water	
15895	1	0	0	0	Irreg	0	15	Prod	--	--	U	--	S Gas	--	--	40-	4,500	--	875	--	--	--	*Was CRA Inc.	
8101	3	0	0	0	4-spot	575	1011	Prod + Arb	2900	17	T	1960	S Gas	--	38	--	346,822	3,966,123	12,225	316,374	6,296	13,534		
3085	3	10	0	0	Line	650	110	Prod	--	--	T	1951	S Gas	--	38	--	120,931	28,546,758	8,484	--	8,484	1,266,013		
12366	7	5	0	0	Line	760	600	Prod + Stal	180	100	T	1966	S Gas	--	39	--	1,757,518	8,408,946	145,430	1,267,303	145,430	667,305		
6951	3	-	-	-	Irreg	250	280	Prod	--	--	U	1963	S Gas	--	40	--	309,250	--	19,458	--	--	--		
6985	3	-	-	-	Line	250	150	Prod	--	--	T	--	S Gas	--	38	--	163,250	--	7,280	--	--	--		
9056	7	0	7	0	Peri	460	610	Prod + Stal	1950	30	M	1962	S Gas	5/1	42	4.3	1,473,139	21,544,505	116,783	5,616,436	116,783	--		
12927	4	0	0	0	Irreg	1350	434	Prod + Stal	2150	100	U	1966	S Gas	9/60	37	--	633,401	4,830,863	24,448	459,860	24,448	459,860		
8457	-	-	-	-	4-spot	Vac	200	---	--	--	-	--	---	--	--	--	--	--	--	--	--	--	--	*Was Laura Jane Oil Co.
10811	1	2	0	0	Irreg	765	440	Prod + Ground Water	20	40	M	1964	S Gas	10/1	40	60	145,598	1,801,786	10,209	--	10,209	--	--	†Put in return wat. only *Was Lewis Operating Co.
17207	-	-	-	-	Irreg	--	--	Prod	--	--	U	--	Grav	15/85	37	--	0	--	8,861	8,861	--	--	--	*Waiting for injection †Under construction
16946	1	-	0	-	4-spot	Vac	6	Prod	--	--	U	1973	S Gas	1/2	38	--	2,200	4,400	10,779	15,748	--	--	--	
8340	2	-	-	-	Irreg	Grav	250	Prod + KC lime	2450	6	T	1961	S Gas	--	37	--	91,250	507,430	14,715	--	3,281	10,813		
15713	3	1	-	-	Irreg	200	120	Prod + Miss Chat	3000	20	T	1970	S Gas	10/1	40.5	5	44,367	205,303	11,899	48,433	--	--	--	
8785	-	-	-	-	Irreg	0	--	Prod	--	--	U	1961	Grav	2/3	36	--	150,000	--	3,640	--	--	--	--	*Irregular
1857	1	0	0	0	Irreg	--	--	Prod	--	--	U	1948	S Gas	20/58	41	--	2,510	748,313	6,637	--	0	0		

TABLE 1-ENHANCED OIL-RECOVERY PROJECTS, 1974-Continued

County	Is proj. uni- tized?	Field	Operator	Type and project name	Lease name	Location	Acres in project		Oil producing zone			Oil producing wells (1974)				Has inj. been continuous?
						S - T - R	Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
COWLEY COUNTY (concl.)																
14697*	Yes	Winfield	V.W. McKnab	(D) Morris	Morris, Cook, Spengler, Roberts	13-32S-4E	360	--	KC	2500	12	1	1	0	-	Yes
9975	--	Winfield	Earl F. Wakefield, Inc.	(D) B.G. Thirsk	B.G. Thirsk	26-32S-4E	80	0	Bartl	2900	7	5	0	0	0	Yes
COWLEY COUNTY TOTALS (Reported) (Includes project in supplemental list.)							15,222	2,839				322	81	92	24	
CRAWFORD COUNTY																
14980	No	Farlington	G.N. Babcock	(W) ---	Granneman	3-28S-23E	30	0	Peru	180	10-36	5	1	-	-	No*
11453	--	Farlington	Walter Duncan	(W) Burge	Burge NW	2-28S-23E	85	0	Peru	175	20	30	1	0	0	Yes
11734	No	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 Company	(W) Holtman	Esther M. Holtman	2-28S-23E	60	0	Peru	160	20	25	0	0	0	Yes
7487	--	Walnut Southeast	Roy Fultz	(W) ---	Wentjen	27-28S-22E	40	0	Bartl	390	15	6	-	0	-	*
3105	No	Walnut Southeast	Morris Stephens*	(W) Walnut Water Flood	Mein, Engel	27-28S-22E 28-28S-22E	205	--	Bartl	370	12	42	2	2	-	Yes
CRAWFORD COUNTY TOTALS (Reported)							435	0				115	4	2	0	
DECATUR COUNTY																
15099	--	Adell Northwest	Continental Oil Company	(W) Adell, NW	Adell	26,27,34, 35-5S-27W	333	0	L-KC	3703	23	8	2	-	-	Yes
15829	--	Altory	Raymond Oil Company, Inc.	(W) Steffen	Steffen	34-3S-27W	60	--	L-KC	3520	32	2	-	-	-	Yes
17018	No	Blees	A.L. Abercrombie, Inc.	(D) Blees	Blees "A", Blees, Huff "B"	5-1S-26W 8-1S-26W	400	0	Lans	3250	10	3	0	0	0	Yes
10845	Yes	Decatur Center	Halliburton Oil Prod. Co.	(W) Decatur Center Unit	Witt, Harmon, Witt, Ruzicka	16-3S-28W 21-3S-28W	800	0	L-KC	3744	30	6	0	0	0	---
8190	--	Jennings	Texaco Inc.	(W) Jennings	E.B. Jennings, M. Tacha, R.L. Skubal, E.J. Keenan, Keenan Noone, M.T. Munson	25-4S-27W	614	--	Howard-Lans	3715-3500	8.7	10	-	-	-	Yes
17441	Yes	Olive	John O. Farmer, Inc.	(P) Olive Flood	Anna Miller, Reeves, Barrett	12-2S-28W 14-2S-28W	480	--	L-KC	3468	5	4	1	0	-	Yes*
16181	Yes	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	No	Pollnow	Shenandoah Oil Corp.*	(D) Amanda-Pollnow	Rogers, Amanda, Pollnow	36-2S-30W 5-3S-29W 5,6-3S-29W	200	--	KC	3750	4	5	-	-	-	Yes
7653	Yes	Pollnow	Rocket-Schusterman Oil Account*	(W) Pollnow Unit	Pollnow Unit	3,4,5,8, 9-3S-29W	740	410	Lans B	3740	4	6	1	0	0	Yes
15013	No	Jording	Halliburton Oil Prod. Co.	(P) Jording A	Jording "B", Mines	14-2S-30W 23-2S-30W	640	0	L-KC	3847	25	6	0	0	0	Yes
13755	Yes	Vavroch	Halliburton Oil Prod. Co.	(W) Vavroch Unit	Jording Vavroch	33-3S-28W 4-4S-28W	320	--	L-KC	3808	25	4	2	0	0	Yes
12401	--	Warner	Cities Service Oil Company	(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) (Includes project in supplemental list.)							5,867	410				73	8	0	1	
DICKINSON COUNTY																
15080	No	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																
12705	--	Baldwin	James E. Russell Petroleum, Inc.*	(W) Baldwin Unit	Baldwin Unit	36-14S-20E 2-15S-20E 6-15S-21E	120	0	Squirrel	800	18	15	1	2	11	Not

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

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)						Remarks
	Active	In-active	Drilled 1974	Abd. 1974				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods		
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974	Cum. 12-31-74	
14697	2	-	-	-	---	0	54.9	Prod + Hoover	1400	--	T	1972	S Gas	1/50	37	--	40,080	96,800	310	1,039	0	0	*Abd. 12/31/74
9975	1	0	0	0	Peri	20	23	Prod	--	--	T	1963	Wat	--	38	--	41,975	710,760*	2,227	64,229*	557	16,057*	*Beginning 1963
	<u>126</u>	<u>30</u>	<u>7</u>	<u>1</u>													<u>10,167,833</u>	<u>147,792,131</u>	<u>773,813</u>	<u>15,704,295</u>	<u>516,680</u>	<u>6,156,924</u>	
14980	4	3	7	-	Irreg	180	35	Miss†	628	--	-	1967	Pumping	--	31	19	19,500	95,500	680	4,380	--	--	*Occasional shut downs †Purchased water
11453	27	0	0	0	5-spot	180	22.5	Prod + Miss	628	67	F	1965	S Gas	--	31.8	18.9	118,052	1,309,860	6,176	116,268	6,176	--	
11734	4	0	0	0	5-spot	150	6	Miss	600	15	M	1965	S Gas	--	29	--	9,111	352,140	946	20,830	946	20,830	
9856	18	0	0	0	5-spot	175	15	Prod + Burgess	610	7	F	1962	*	--	31.5	18.9 CP @ 62°F.	97,000	1,168,650	5,683	132,473	--	--	*Water flood from beginning
7487	0	7	0	-	5-spot	320	3	Arb	940	125	M	1968	Grav	3/1	28	38.3	0	--	0	--	0	--	*Need to replace water line
3105	58	2	0	0	7-spot	370	7	Prod + Arb	950	--	F	1951†	Grav	--	28	--	148,190	2,831,185	7,300	210,022	7,300	210,022	*Was General American Oil †Pilot, 1951, Full, 1959
	<u>111</u>	<u>12</u>	<u>7</u>	<u>0</u>													<u>391,853</u>	<u>5,757,335</u>	<u>20,785</u>	<u>483,973</u>	<u>14,422</u>	<u>230,852</u>	
15099	3	9	-	-	Peri	445	675	Cedar Hills	1900	40	U	1970	S Gas	--	34.7	--	637,750	3,701,217	80,398	414,259	80,398	340,974	
15829	1	-	-	-	Irreg	600	203	Prod + Stray	62	--	M	1971	S Gas	1/0	34	--	92,172	252,048	5,297	33,202	5,297	33,202	
17018	3	0	0	0	Irreg	500	150	Prod + Cedar Hills	1608	100	U	1973	S Gas	--	--	--	167,208	177,798	10,828	105,527	4,828	4,828	
10845	3	0	0	0	Line	1220	311	Prod + Cedar Hills	2150	70	T&S	1964	S Gas	2/1	36	16.7 @ 40°	340,085	863,039	40,725	525,687	5,000	16,006	
8190	3	-	-	-	Irreg	800	158	Prod + Cedar Hills	1680	--	U	1961	S Gas	510/1770	37	--	172,934	6,941,401	21,744	601,757	21,744	384,110	
17441	1	-	-	-	Irreg	800	300	Prod + Cedar Hills	1420	100	U	1974	Grav	--	37	--	81,550	81,550	12,367	--	4,000	--	*Started 6/3/74
16181	4	0	0	0	Irreg	1650	123	Prod + Chey	1520	20	T	1971	S Gas	1/1	35.5	4 Est.	179,785	634,470	31,744	338,393	19,981	63,047	
14949	1	-	-	-	Irreg	Vac	50	Prod	--	--	T	1969	S Gas	5/1	35	--	18,250	31,624	7,878	118,078	--	--	*Was Solar Oil Co.
7653	2	0	0	0	Irreg	1100	1031	Prod + Dak	1425	25	M	1960	S Gas	10/1	38	--	376,640	3,726,774	14,826	803,389	14,826	373,304	*Was Union Texas
15013	1	0	0	0	Irreg	350	75	Prod	--	--	T	1970	S Gas	19/1	34	--	22,500	727,888	3,127	74,933	1,600	2,100	
13755	3	1	0	0	Line	1250	453	Prod + Cedar Hills	2120	80	T&S	1968	S Gas	4/1	36	16.7 @ 40°	495,946	2,915,628	63,719	1,226,802	60,000	131,563	
12401	7	1	0	0	Irreg	968	133	Prod + Chey	1265	--	T	1966	S Gas	97/60	34	--	365,873	3,667,659	29,416	812,045	29,416	295,485	
	<u>33</u>	<u>11</u>	<u>0</u>	<u>0</u>													<u>2,955,078</u>	<u>23,725,481</u>	<u>330,454</u>	<u>5,187,949</u>	<u>247,092</u>	<u>1,644,619</u>	
15080	1	0	0	0	Irreg	0	100	Prod	--	--	T	1969	Grav	1/9	35	--	325,000	--	7,356	--	0	--	
12705	0	5	0	5	5-spot	0	0	Rubideaux	1900	--	T&S	1966	S Gas	--	26	80+	0	80,400	1,820	41,519	0	17,649	*Was Russell-LeClair †Temp. shut down

TABLE 1-ENHANCED OIL-RECOVERY PROJECTS, 1974-Continued

Kansas Geol. Survey Energy Resource Series 5, 1975

County	Is proj. uni- tized?	Field	Operator	Type and project name	Lease name	Location S - T - R	Acres in project		Oil producing zone			Oil producing wells (1974)				Has inj. been con- tinued?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
DOUGLAS-FRANKLIN COUNTIES																
8295	--	Baldwin	Layton Oil Company	(W) Baldwin Flood	Finnerty North, Finnerty South, Bell, Broers, Higbie, Williams	14-15S-20E 23-15S-20E 24-15S-20E	157	0	Squirrel	820	24	23	0	0	0	Yes
EDWARDS COUNTY																
6178	No	Enlow	Messman-Rinehart Oil Co.*	(D) Hahn "A"	Hahn "A"	4-24S-16W	100	0	L-KC	3740	6	2	0	0	0	Yes
ELK COUNTY																
16218	No	Bush-Denton	Perkins Oil Company	(D) Clad Criger	Clad Criger	34-29S-9E	80	--	Miss 1m	2289	52	1	-	0	-	Yes
5118	No	Bush-Denton	Perkins Oil Company	(D) ---	Kyser "A", Kyser "B", Hyde	9,10-30S-9E	200	--	Miss 1m	2375	29	8	-	1	-	Yes
15543																
16219																
8063	No	Longton	Burnette Oil Company*	(D) Johnson	Johnson	35-29S-12E	360	--	Wayside	780	30	4	1	0	0	Yes
10390	--	Moline	W.R. Gross	(D) Moline	M. Eyman	9-31S-10E	160	--	Miss	2003	17	2	0	0	0	Yes
9793	No	New Albany	Burnette Oil Company*	(D) Pickell	Pickell	33,34-28S-13E 4-29S-13E	680	--	---	500	--	8	4	0	0	Yes
11214	--	Schrader	Aladdin Petroleum Corp.	(P) Shrader	Shrader	12-31S-8E	160	0	KC	1650	40	12	0	5	0	Yes
10655	No	Webb	Tomlinson Oil Co., Inc.	(D) Webb-Leffingwell Unit	Webb, Leffingwell	14-31S-10E	80	40	Miss	1950	15	13	4	0	0	Yes
17042	No	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) (Includes project in supplemental list.)							1,800	40				56	10	6	0	
ELLIS COUNTY																
10613	--	Air Base	American Petrofina Co. of Texas	(W) Pratt	Pratt Airbase	27-13S-6W	80	120	Gorham	3460	15	6	0	0	0	Yes
16340	--	Air Base East	Hinkle Oil Company	(W) Air Base East	Brungardt "A", Brungardt "B", Leiker East	25-13S-16W	200	0	L-KC	3400	15	4	0	0	0	Yes
12629	Yes	Beeching	Icer Addis	(W) Beeching Waterflood Unit	Beeching, Daisy, Gorham, Sarah	34,35-15S-16W	800	--	L-KC	3330	15	3	0	0	0	Yes
16660	--	Bemis-Shutts	Continental Oil Company	(W) Warren Mtge. Inv. Co.	Warren Mtge. Inv. Co.	3-11S-18W	20	0	L-KC	3322	131	8	0	-	-	Yes
11239	--	Bemis-Shutts	Fell & Wolfe Oil Company*	(D) Pearl Cress	Pearl Cress	13-11S-17W	80	--	L-KC	3068	12	2	0	0	0	Yes
12116	No	Bemis-Shutts	Lario Oil & Gas Company	(P) Henderson "E"	Henderson "E"	22-11S-18W	80	0	L-KC + Top	3100 3350	--	3	0	0	1	No*
12788	No	Bemis-Shutts	Lario Oil & Gas Company	(P) Henderson "E"	Lario-Henderson "E", Sohio- Henderson "A"	22-11S-18W	160	0	Arb	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
14315	Yes	Bemis-Shutts	Petroleum, Inc.	(W) Bemis Shutts L-KC Unit	Reeder #4, #5, #6, #8, Jensen "C" #1, #3, Truan "A" #1	22-12S-18W 27-12S-18W	200	0	L-KC	3404	7	5	0	0	0	Yes
12769	--	Bemis-Shutts	Shade & Berry	(D) ---	Henderson 1-E	15-11S-18W	40	--	L-KC	3132	10	3	-	-	-	Yes
11621	--	Bemis-Shutts	Sierra Petroleum Co., Inc.	(D) Schmeidler "E"	Schmeidler "E"	8-12S-17W	160	0	L-KC + Arb	3340	224	2	0	0	0	Yes
15294	--	Bemis-Shutts	Sohio Petroleum Company	(W) Bemis I	Bemis	4-12S-17W	80	0	Arb	3560	--	3	0	0	0	Yes
16345	--	Bemis-Shutts	Sun Oil Company	(W) Bemis Co-op Water- flood	Sun-Jorgensen, Sun-Hadley "A", Phillips-Sites, Sun-Hadley "BC", Peavey "A", Phillips-Hendricks & Peavey	7-11S-17W 12-11S-18W 13-11S-18W	960	0	L-KC Top	2950	20	26	0	0	0	Yes
16346																
16347																
16348																
10120	--	Bemis-Shutts	Tenneco Oil Company	(W) Frank S. Wasinger Unit	Frank S. Wasinger Unit	21-11S-18W	160	120	L-KC	3320	6	8	0	0	0	---
11933	Yes	Catherine	Kewanee Oil Company	(W) Catherine Unit	---	10,11-13S-17W	0	190	KC	3250	210	0	0	0	0	No*
7733	No	Catherine Northwest	E.T. Drube*	(D) Walter Wolfe	Wolfe	4-13S-17W	160	160	L-KC	3336	8	1	0	0	0	Yes
10619	--	Catherine Northwest	Texaco Inc.	(W) M.Wolf "A"	M. Wolf	4-13S-17W	70	--	Tor- Lans	3350	37	-	-	-	-	Yes
15300	Yes	Catherine South	Sterling Drilling Co.	(P) Catherine South Unit	---	14-13S-17W	200	--	L-KC	3276	8	4	1	0	0	Yes

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

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	Water Injection		Production and injection statistics (bbls)		Oil recovered by secondary methods		Remarks			
	Active	In-active	Drilled 1974	Abd. 1974				Depth, ft.	Thick., ft.	Type						Source	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974		Cum. 12-31-74	1974	Cum. 12-31-74
8295	20	0	0	0	Line	680	57	Sand	60	40	F	1964	S Gas	1/8	26	52.6	416,244	5,135,443	20,868	365,119	20,868	365,119			
6178	2	0	0	0	Irreg	Grav	110	Prod	--	--	U	1958	Wat	--	31	--	66,000	1,283,413	2,580	189,961	2,580	67,256	*Was Natural Gas & Oil Co.		
16218	2	-	-	-	Irreg	25	150	Prod	--	--	U	1971	Grav	5/95	36	--	54,750	58,170	1,161	--	500	--	--		
5118	6	-	-	-	Irreg	0	800	Prod	--	--	U	1955	Grav	5/95	37	--	160,000	--	16,554	--	5,000	--	--		
15543																									
16219																									
8063	1	0	0	0	Irreg	0	40	Prod	--	--	U	1974	Grav	3/10	34	--	--	--	--	--	--	--	--	--	*Was Millard L. Smith
10390	1	0	0	0	Irreg	--	250	Prod	--	--	U	--	--	--	--	--	127,750	200,750	712	1,254	--	--	--		
9793	1	1	0	0	---	100	200	Prod	--	--	U	1974	---	1/5	34	--	--	--	--	--	--	--	--	--	*Was Millard L. Smith
11214	2	1	0	0	Irreg	120	300	Prod	--	--	T	--	S Gas	--	34	--	190,131	1,200,420	22,721	453,356	20,000	--	--		
10655	2	4	0	0	Irreg	Vac	629	Prod	--	--	U	1968	S Gas	--	33	--	229,727	2,216,391	19,205	1,107,955	19,205	97,295	--		
17042	1	1	0	0	Irreg	Vac	346	Prod	--	--	U	1973	S Gas	1/2	31.5	--	126,424	166,004	18,544	192,672	1,864	1,864	--		
	16	7	0	0													1,034,782	4,072,735	87,217	1,755,237	47,819	99,159			
10613	1	0	0	0	Irreg	400	486	Prod	--	--	U	1967	Wat	1/6	33.7	--	177,276	1,473,266	5,622	233,260	5,622	54,431	--		
16340	1	-	-	-	Peri	10	150	Prod + Arb	3650	50	T	1970	S Gas	3/2	40	--	55,003	241,043	21,360	333,541	16,980	93,123	--		
12629	1	0	0	0	Irreg	0	210	Prod	--	--	U	1966	S Gas	1/8	36	--	76,000	754,200	5,451	--	2,800	18,095	--		
16660	1	0	-	-	Irreg	0	1670	Prod	--	--	U	1972	S Gas	--	30.3	--	609,728	3,653,045	24,943	361,008	--	--	--		
11239	1	0	0	0	Irreg	Vac	70	Prod + KC	--	--	U	1964	S Gas	--	32	--	--	--	3,475	--	--	--	--	--	*Was Gulf Oil Corp.
12116	0	0	0	0	Irreg	--	0	Prod	--	--	U	1965	S Gas	29/176	28	--	0	208,410	9,166	149,344	4,861	80,657	--	*Shut down to evaluate	
12788	1	0	0	0	Irreg	Grav	8086	Prod	--	--	U	1966	Wat	18/1515	28	--	2,951,389	12,053,055	7,071	85,593	0	0	--		
7923	1	-	0	0	Irreg	Vac	210	Prod	--	--	T	1960	Wat + S Gas	65/35	30.1	--	--	766,508	9,531	209,408	4,600	88,852	--	*Was George Vye	
14315	2	0	0	0	Line	233	238	Prod	--	--	T	1968	S Gas	18/8	30.5	--	173,575	715,648	20,388	65,622	20,388	65,622	--		
12769	1	0	0	0	Irreg	Vac	400	Prod	--	--	U	1966	S Gas	--	35	--	150,000	1,119,000	4,300	--	4,000	51,000	--		
11621	1	0	0	0	Irreg	Grav	120	Prod	--	--	T	1965	S Gas	--	29.9	7	43,722	699,203	3,601	--	1,800	40,384	--		
15294	2	0	0	0	Irreg	470	97	Prod	--	--	T	1969	Wat	1/1	31.3	--	70,728	368,966	12,732	67,171	6,275	17,495	--		
16345	7	0	0	0	Irreg	15	308	Prod + Arb	3300	50	T	1972	S Gas	1/3.14	--	--	787,438	2,359,089	113,913	321,814	96,800	326,181	--		
16346																									
16347																									
16348																									
10120	4	-	0	0	Irreg	297	199	Prod	--	--	U	1963	S Gas	120/644	--	--	291,613	3,563,886	34,434	1,824,015	34,434	1,824,015	--		
11933	0	3	0	0	Peri	0	0	Prod	--	--	U	1966	S Gas	77/1359	29	--	0	530,049	20,770	1,470,409	0	6,849	--	*No water injected	
7733	1	0	0	0	Irreg	0	170	Prod	--	--	U	1959	Gas Exp	--	31.6	--	62,000	--	1,670	--	1,670	--	--	--	*Was Cow Gulch Oil Co.
10619	1	-	-	-	Irreg	Vac	121	Prod	--	--	U	1964	S Gas	2061/3342	31	--	44,183	1,607,650	1,053	105,729	1,053	50,282	--		
15300	1	0	0	0	Irreg	250	150	Prod + Dak	734	10	U	1970	Grav	--	33	--	54,750	319,565	6,897	55,142	6,897	43,328	--		

TABLE 1-ENHANCED OIL-RECOVERY PROJECTS, 1974-Continued

County	Is proj. uni-sized?	Field	Operator	Type and project name	Lease name	Location			Acres in project		Oil producing zone		Oil producing wells (1974)				Has inj. been continuous?		
						S - T - R	Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.				
ELLIS COUNTY (concl.)																			
10574	--	Catherine South	Texaco Inc.	(W)	L.J. Dreiling Group	L.J. Dreiling "B", L.J. Dreiling "C", L.J. Dreiling "E"	12-13S-17W 21-13S-17W 22-13S-17W	240	--	Arb	3550	30	7	-	-	-	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	No	Dechant	Icer Addis	(W)	Dechant	Dechant	6-15S-18W	80	--	L-KC	3300	5	1	0	0	0	Yes		
16276	--	Dechant Northwest	American Petrofina Co. of Texas*	(P)	Wilson	Wilson	1-15S-19W	160	0	Arb	3646	7	4	0	0	0	Yes		
16262	No	Dechant West	Thornton E. Anderson*	(D)	Pfannenstiel SWDS	Pfannenstiel, Dechant	1-15S-19W	50	0	Arb	3700	300	4	0	0	0	Yes		
17098	No	Dinges	Palomino Petroleum*	(D)	Dinges	Dinges	10-15S-18W	160	0	L-KC	3348	46	1	0	0	0	Yes		
13073	Yes	Eagle Creek	Veeder Supply & Development Company	(W)	Eagle Creek Unit	Eagle Creek Unit	2,10, 11-11S-20W	60	150	L-KC Tor	3270	25	6	1	0	1	Yes		
7142	--	Emmeram	Hillenburg Oil Company*	(W)	Froelich	Froelich A, Froelich B, Froelich C	4-13S-16W	20	0	L-KC	3200	22	4	0	0	0	Yes		
6605	No	Emmeram Northeast	Kewanee Oil Company	(D)	Froelich E,F & Sitz	Sitz, Froelich E, Froelich F	16-12S-16W 27-12S-16W 34-12S-16W	0	160	KC	3270	4	2	1	0	0	No*		
11769																			
5267	No	Fairport	Shenandoah Oil Corp.*	(W)	Kate Austin Brungardt	Weiland C	36-12S-16W	130	--	L-KC + Dodge	3900	8	8	-	-	-	Yes		
8741	No	Fairport	Shenandoah Oil Corp.*	(W)	Schmidt "A" & "B"	Schmidt "A", Schmidt "B"	1-13S-16W 12-13S-16W	50	40	L-KC	3050	20	4	-	-	-	Yes		
14251	No	Fairport	Shenandoah Oil Corp.*	(W)	Weiland B	Weiland B	1-13S-16W	70	0	L-KC + Dodge	3050	30	7	-	-	-	Yes		
10416	No	Fairport	Shenandoah Oil Corp.*	(W)	Weiland B	Weiland B	1-13S-16W	70	0	L-KC + Dodge	3050	30	7	-	-	-	Yes		
14253	No	Gatschet	Cecil M. Keller*	(W)	Gatschet Water Flood	Gatschet, Sack	13-13S-19W	320	160	L-KC	3368	+	3	0	4	1	Yes		
6890	No	Herzog	Palomino Petroleum*	(D)	Braun-Dinkle	Braun	32-13S-16W	80	--	L-KC	3227	6	1	2	0	0	Yes		
15930	--	Irvin	Texaco Inc.	(P)	J.A. Engle	J.A. Engle	35-13S-20W	160	--	Arb	3854	30	2	-	-	-	Yes		
13599	No	Leiker East	Kewanee Oil Company	(W)	Leiker-Herl	Leiker, Herl	13-15S-18W	0	0	KC	3304	29	0	0	0	0	No*		
13651	--	Leiker Southeast	Aylward Drilling Company (Baruch-Foster Corp. part of project unreported)	(W)	Witt-Graf	Graf	14-15S-18W	40	0	Lans	3450	10	6	0	0	0	Yes		
13428	--	Lieb	Chief Drilling Co., Inc.*	(W)	Craig-Lundy Water Flood	Craig, Lundy	11-16S-11W	160	0	L-KC	3000	200	2	0	0	0	Yes		
13535	--	Lieb East	Chief Drilling Co., Inc.	(W)	Lundy	Lundy	16-11S-16W	120	0	L-KC	--	--	3	0	0	0	Yes		
14316	Yes	Meistrell	Petroleum, Inc.	(W)	Meistrell L-KC Unit	O'Brien "B", Meistrell "D"	9-11S-18W	160	0	L-KC	3262	8	3	0	0	0	Yes		
13093	No	Mixer	Murfin Drilling Company	(P)	Mixer Repressuring Project	Mixer "C"	7-11S-20W	160	100	L-KC	3372	19	2	0	0	0	Yes		
15916	--	Pleasant	Cameron K. Reed	(D)	Storm	Storm	35-13S-20W	--	0	Squirrel	3840	12	3	0	0	0	Yes		
17236	No	Pleasant	Murfin Drilling Company	(W)	Kingsley W.F.	Kingsley	34-13S-20W	160	0	L-KC	3523	35	3	0	0	0	No*		
15850	--	Rajewski	Meltzer Oil Company*	(P)	Rajewski	Rajewski	28-15S-17W	80	--	KC	3400	6	1	1	-	-	Yes		
13426	No	Ruder	Gulf Oil Corporation	(W)	J.A. Swires	J.A. Swires	8-15S-18W	80	0	L-KC	3260	--	2	2	0	0	Yes		
15955	--	Ruder	Kaiser-Francis	(D)	---	Ruder "C"	8-15S-18W	60	0	Lans	3601	180	2	0	0	0	No*		
16804	--	Schmeidler	Frontier Oil Company	(P)	Giebler	Giebler	28-12S-17W	160	0	L-KC	3400	6	3	0	0	0	Yes		
13234	--	Solburn	NCRA	(W)	Solomon-Burnett	Solomon-Burnett	28-14S-20W	70	10	Lans	3409	6	5	0	0	0	Yes		
16583	--	Sugarloaf Southeast	American Petrofina Co. of Texas*	(P)	Braun "B"	Braun "B"	26-13S-7W	80	0	Arb	3484	336	4	0	0	0	Yes		
13434	No	Toulon	Willie E. Schultz*	(W)	Braun	Braun	35-13S-17W	25	0	L-KC	3235	12	2	0	0	0	Yes		
15682																			
9229	No	Turkville	Palomino Petroleum*	(D)	McCombs	McCombs	11-11S-17W	40	0	L-KC	3175	7	1	0	0	0	Yes		
9694	--	Ubert Northwest	E.K. Edmiston	(W)	Schmidt	Schmidt	36-12S-18W	--	--	L-KC	3600	--	4	0	0	0	No *		
11815	--	Ubert Northwest	Kewanee Oil Company	(W)	Crissman A & B	Crissman A, Crissman B	1-13S-18W 2-13S-18W	0	60	Top + Tor + KC	3260	144	6	0	0	0	No*		
11068	No	Victoria North	Richard L. Mai	(P)	Schulte	Quint, Schulte	7-14S-16W 8-14S-16W	160	110	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	0	0	0	Yes		
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	13	0	0	0	Yes		
ELLIS COUNTY TOTALS (Reported)								(Includes projects in supplemental list.)				231		12		4		3	
										8,255		1,420							

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

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)						Remarks	
	Active	In-active	Drilled 1974	Abd. 1974				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods			
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974	Cum. 12-31-74		
10574	1	-	-	-	Irreg	--	51	Prod	--	--	U	1964	Wat	2661/5270	32	--	18,693	61,910	5,861	268,716	--	43,217		
5605	1	0	0	0	Irreg	27	509	Prod	--	--	T	1957	S Gas	--	28	*	183,980	1,812,067	6,828	190,838	6,828	61,824	*27.5 @ 100°	
13603	1	0	0	0	Irreg	0	5	Prod	--	--	U	--	Gas Exp	--	40	--	1,800	7,275	1,035	5,153*	--	846	*Since 1/1/71	
16276	1	0	0	0	Irreg	0-	1342	Prod	--	--	U	1971	Wat	1/50	28.7	--	489,830	1,324,831	9,469	276,006	0	0	*Was Imperial Oil Co.	
16262	1	0	0	0	Irreg	0	800	Prod	--	--	U	1971	Wat	7/93	30	--	280,000	1,012,000	19,081	233,081	500	4,000	*Was Alpine Drilling Co.	
17098	1	0	0	0	Irreg	0	12	Prod	--	--	U	1973	S Gas	3/14	30	--	4,380	6,280	1,033	166,073	0	0	*Was Colorado Oil & Gas	
13073	4	2	0	2	Peri	20	254	Prod + Dak	800	200	T	1967	Wat + S Gas	15.3/84.7	33	--	370,948	3,829,967	12,845	122,432	12,845	122,432		
7142	1	0	0	0	6-spot	15	30	Prod	--	--	T	1959	Wat	72/28	36.6	--	11,475	--	4,187	--	4,187	--	--	*Was Terra Resources
6605	0	1	0	0	Irreg	0	0	Prod	--	--	U	1961	S Gas	--	34	--	0	338,099	3,077	239,842	0	11,705	*No water injected	
11769																								
5267	1	-	-	-	Peri	0	400	Prod	--	--	U	1957	S Gas	2/3	35	--	146,000	1,646,347	23,657	1,523,657	23,657	1,218,074	*Was Solar Oil Co.	
8741	1	-	-	-	Peri	Vac	285	Prod	--	--	T	1961	S Gas	2/23	35	--	103,985	1,699,302	5,369	1,655,369	5,369	1,340,076	*Was Solar Oil Co.	
14251																								
10416	2	-	-	-	Peri	0-	453	Prod + Dak	300	30	T	1963	S Gas	3/20	32	--	165,403	2,145,216	13,691	2,148,691	13,691	190,237	*Was Solar Oil Co.	
14253	1	0	1	0	Irreg	Vac	93	Prod + Chey	740-1090	250+	U	1968	Wat + S Gas	5/1	35	--	97,630	602,241	17,791	100,801	13,343	75,601	*Was Martin & Keller +6 zones - 5' ave. thick. *Was Hinkle Oil	
6890	1	0	0	0	Irreg	0	20	Prod	--	--	U	1962	S Gas	--	38	--	7,300	80,600	2,211	198,089	0	0		
15930	1	-	-	-	Irreg	Vac	1894	Prod	--	--	U	1972	Wat	149/409	38.4	--	691,453	2,324,003	22,785	123,923	11,761	99,556		
13599	0	2	0	0	Irreg	0	0	Prod	--	--	U	1967	S Gas	100/1545	36	--	0	556,217	0	--	0	16,548	*Temp. shut down	
13651	2	0	0	0	Irreg	400	438	Prod	--	--	U	1967	S Gas	--	35	--	319,730	1,529,386	15,005	236,687	14,060	172,319		
13428	1	0	0	0	Irreg	300	450	Prod + Dak + Chey	350	100	M	--	S Gas	--	--	--	164,250	1,171,819	1,275	Craig 1,683 Lundy B	0	2,958	18,444	*Was Shields Drlg. Co.
13535	1	0	0	0	Irreg	300	350	Prod + Dak + Chey	--	--	U	1967	S Gas	1/4	35.8	--	127,750	981,526	7,832	209,867	3,900	36,475		
14316	1	0	0	0	Line	888	448	Prod + Quat	75	100	M	1968	S Gas	23/19	34.6	--	163,643	726,473	8,904	81,512	8,904	81,512		
13093	1	0	0	0	Irreg	325	185	Prod + Arb	3650	8	T	1966	S Gas + Grav	17/8	34	--	68,000	--	3,865	--	1,600	--	--	
15916	1	0	0	0	Irreg	200	400	Prod	--	--	U	1970	Wat	3/2	37	--	146,000	191,835	4,581	26,737	0	0		
17236	1	0	0	0	Irreg	Vac	500	Prod + Arb	3800	10	T	1974	S Gas + Grav	1/3	38	--	106,380	106,380	8,253	93,534	1,000	1,000	*First inj. June, 1974	
15850	1	1	-	-	Irreg	Vac	20	Prod + KC	3400	6	U	1968	Grav	1/1	36	--	7,300	--	4,745	--	--	--	--	*Was Lee Phillips
13426	2	0	0	0	Irreg	550	260	Prod	--	--	U	1967	S Gas	4/9	33.9	--	190,094	1,658,975	4,195	42,690	2,795	33,590		
15955	-	-	-	-	---	Grav	0	Prod	--	--	U	1971	Gas Exp	6/25	31	--	0	0	1,580	97,477	0	0	*Prod. wat. into another SWDS	
16804	1	0	0	0	Irreg	0	100	Prod	--	--	U	1972	S Gas	2/3	29	--	36,500	73,000	7,181	15,357	2,393	3,193		
13234	3	1	0	0	Irreg	150	200	Prod + Dak	430	60	M	1970	S Gas	1.06/1	*	--	292,102	1,277,073	23,228	228,354	11,638	111,947	*41.2 @ 60	
16583	1	0	0	0	---	0-	649	Prod	--	--	U	1972	Wat	1/2	34	--	236,888	713,362	9,849	640,480	0	0	*Was El Dorado Refg. Co.	
13434	1	0	0	0	Irreg	250	450	Prod + Fresh	220	80	M	1967	S Gas	3/5	33	--	150,550	714,858	3,650	50,603	3,650	50,603	*Was Sun Oil Company	
15682																								
9229	1	0	0	0	Irreg	0	5	Prod	--	--	U	1962	S Gas	2/3	36	--	1,825	21,825	Est. 1,080	79,489	150	150	*Was Colorado Oil & Gas	
9694	0	1	0	0	Irreg	0	--	Prod	--	--	U	1963	Pumping	--	29	--	--	--	7,802	78,066†	0	--	--	*No water inj. in 1974 +Corrected
11815	0	2	0	0	Irreg	--	0	Prod	--	--	U	1965	S Gas	49/138	29	--	0	630,186	9,688	462,831	0	0	*No water inj. in 1974	
11068	2	1	0	0	Peri	50	200	Prod	--	--	T	1964	S Gas	4/1	34	--	70,000	860,000	7,500	--	4,500	84,130		
13470	1	0	0	0	Irreg	200	189	Prod + Arb	3580	--	U	1967	S Gas	1/0	36	--	57,645	373,962	4,355	15,198	2,190	5,815		
15655	5	0	0	0	Peri	0	144	Prod	--	--	T	1970	S Gas	2/1	37	--	158,096	1,138,715	42,386	632,241	32,786	159,008		

80 14 1 2

11,046,066 72,303,956 719,613 18,334,159 423,170 6,990,206

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1974—Continued

County	Is proj. unitized?	Field	Operator	Type and project name	Lease name	Location			Acres in project			Oil producing zone			Oil producing wells (1974)				Has inj. been continuous?
						S - T - R	Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.				
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	Dodge-L-KC	3225	49	21	0	0	0	0	Yes		
ELLIS-RUSSELL COUNTIES																			
	3243 -- 5055 5094 12481 14224	Fairport	Clinton Oil Company*	(W) Kate Austin Water-flood 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	Top + Dodge + Lans	2750 3000 3050	90	13	0	0	0	0	Yes		
ELLSWORTH COUNTY																			
	16438 -- 14783* No	Geneseo-Edwards Heiken	Cities Service Oil Co. Skelly Oil Company	(D) Rathbun Arbuckle (W) John Stumps	Rathbun John Stumps	16-17S-8W 25-17S-10W	96 80	0 60	Arb Penn Congl	3206 3200	25 25	4 3	0 3	0 0	0 0	0 0	Yes Yes		
	13631 Yes	Lorraine	Petroleum, Inc.	(W) Lorraine Unit	Offner, Neinke, Janzen, Rolfs	11-17S-9W 12-17S-9W	480	0	L-KC	2870	10	5	0	0	0	0	Yes		
	14779 No	Palacky	Messman-Rinehart Oil Co.	(D) Jiricek	Jiricek	31-16S-10W	160	--	Lans	3063	11	0	1	0	0	0	No*		
	10057 No	Stoltenberg	Icer Addis	(W) Zvolanek "B"	Zvolanek "B"	33-15S-10W	30	--	Simp	3246	10	1	0	0	0	0	Yes		
	16302 No 14991 No	Wilson Creek Wilson Creek	Arthur J. Gorski L.G. Stephenson & Co.*	(P) George Vopat A (P) Wilson Creek	George Vopat A Borell C, Borell B-2, H. Kratky	21-14S-10W 19-14S-10W 20-14S-10W	160 420	0 0	L-KC Lans	2820 2820	14 20	11 21	1 0	0 0	0 0	Yes Yes			
	16265 No 16442 No 16499 No 16708 No	Wilson Creek Wilson Creek Wilson Creek Wilson Creek	L.G. Stephenson & Co.* L.G. Stephenson & Co. L.G. Stephenson & Co.* L.G. Stephenson & Co.	(P) Wilson Creek (P) Wilson Creek (P) Wilson Creek (P) Wilson Creek	Vopat D Soukup, Baker, Baker A Pekarek K. Vopat	21-14S-10W 16-14S-10W 20-14S-10W 16-14S-10W	160 80 120 80	0 0 0 0	Lans Lans Lans Lans	2820 2800 2820 2800	20 20 20 20	11 11 5 4	0 0 0 0	0 0 0 0	0 0 0 0	Yes Yes Yes No*			
ELLSWORTH COUNTY TOTALS (Reported)							1,866	60				76	5	0	0				
FINNEY COUNTY																			
	13914 -- 16552 -- 9779 --	Damme Damme Nunn	Palomino Petroleum* Texaco Inc. Maurice L. Brown Trust	(D) Clark (P) Garden City B (P) Nunn	Clark Garden City "B" McHugh, Maune, Davis, Nunn, Fly, Aelits, Gobleman	22-22S-33W 5-22S-33W 23-21S-34W 26-21S-34W 26,27-21S-34W 27-21S-34W 34-21S-34W	160 480 1440	0 -- 160	Miss Marm Marm	4693 4412 4276	10 -- 9	2 12 17	0 -- 2	0 2 --	0 -- 0	0 -- 0	Yes Yes Yes		
FINNEY COUNTY TOTALS (Reported)							2,080	160				31	2	2	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, Tract #9, Tract #11, Tract #12, Tract #5, Tract #13, Tract #14, Tract #4, Tract #15	17-26S-34W 18-26S-34W 19-26S-34W 20-26S-34W 29-26S-34W 29,30,31,32, 33-26S-34W 30-26S-34W 32-26S-34W 33-26S-34W 4-27S-34W 4,5-27S-34W 5-27S-34W 6-27S-34W 8,9,16-27S-34W	--	--	St. Louis (Miss)	5050	15	63	6	0	0	Yes			

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

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)						Remarks
	Active	In-active	Drilled 1974	Abd. 1974				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods		
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974	Cum. 12-31-74	
3145	10	1	0	0	Irreg	487	468	Prod + Dak	475	--	T	1961	S Gas	155/107	37	--	1,711,692	15,787,840	82,410	3,203,352	82,410	1,075,301	
3243 5055 5094 12481 14224	3	1	0	0	Irreg	0	629	Prod	--	--	U	1956	S Gas	1/2.6	37	--	688,608	10,041,066	34,960	2,866,537	34,960	903,408	*Was Pan American
16438 14783	1 1	0 0	0 0	0 0	Irreg Irreg	720 150	82 125	Prod Dakota	-- 250	-- --	F F	1972 1969	S Gas S Gas	25/420 20/57	37.3 45.5	-- --	31,643 45,458	71,326 1,144,609	7,109 2,237	528,180 653,415	7,109 2,237	8,841 77,376	*Project discontinued 3/4/74
13631	1	0	0	0	Line	868	909	Prod + Dak	200	50	M	1967	Wat	693/ 292	35.8	--	331,654	2,118,149	14,869	121,095	14,869	121,095	
14779	0	1	0	0	Irreg	Grav	0	Prod	--	--	U	1969	Wat	--	39.9	--	0	73,950	0	6,538	0	6,538	*Well converted to gas, Nov., 1973
10057	1	0	0	0	Irreg	0	82	Prod	--	--	U	1962	Wat	--	37	--	30,000	318,150	2,592	5,427*	1,300	25,487	*1973 and 1974
16302 14991	2 2	0 0	0 0	0 0	Peri Peri	300 400	100 277	Prod Prod + Lans	-- 2820	-- 20	U U	1971 1969	S Gas S Gas	9/1 92/8	38 38	-- --	36,500 237,885	103,000 384,089	29,000 67,754	119,000 751,964	2,900 0	6,900 0	*Was Will P. Ash
16265 16442 16499 16708	2 2 1 0	0 0 0 1	0 0 0 0	0 0 0 0	Peri Peri Peri Peri	400 300 350 --	83 135 390 --	Prod + Lans Prod + Lans Prod + Lans Prod + Lans	2820 2800 2820 2800	20 20 20 20	U U U U	1971 1971 1973 --	S Gas S Gas S Gas S Gas	92/8 92/8 92/8 3/2	38 38 38 38	-- -- -- --	61,084 99,242 142,497 0	352,047 337,538 219,051 0	87,453 85,350 42,411 40,106	518,362 414,958 253,330 83,615	0 0 0 0	0 0 0 0	*Was L.V. Bell *Was A.Gorski *Water supply not sufficient
	13	2	0	0													1,015,963	5,121,909	378,881	3,455,884	28,415	246,237	
13914 16552 9779	1 1 2	0 - 3	0 - 0	0 - 0	Irreg Irreg Line	0 240 0	46 795 132	Prod Prod Prod	-- -- --	-- -- --	U U T	1968 1972 1958	S Gas S Gas S Gas	1/1 688/57 --	30 28.4 34	-- -- *	16,800 290,175 96,541	101,505 412,172 2,865,975	9,532 300,938 36,410	281,802 723,146 3,340,644	4,500 0 18,205	41,300 0 199,292	*Was Rocket Drilling Co. *11.6 @ 100°
	4	3	0	0													403,516	3,379,652	346,880	4,345,592	22,705	240,592	
13423	7	0	0	0	Irreg	570	327	Prod	--	--	T	1966	Wat + S Gas	2573/ 3278	33.5	--	619,548	17,437,234	836,436	6,414,083	0	0	

TABLE 1-ENHANCED OIL-RECOVERY PROJECTS, 1974-Continued

Kansas Geol. Survey Energy Resource Series 5, 1975

County	Project no.	Is proj. uni- tized?	Field	Operator	Type and project name	Lease name	Location		Acres in project		Oil producing zone		Oil producing wells (1974)				Has inj. been continuous?	
							S - T - R		Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled		Abd.
FRANKLIN COUNTY																		
	11721	--	Baldwin	Layton Oil Company	(W) Wellsville Project	Broers, Wiseman	25-15S-20E		60	0	Squirrel	750	18	10	0	0	0	Yes
	7526	Yes	Paola-Rantoul	Elton R. Greer	(W) Wellsville Flood	Ackley, Rice, Lidikay, Rhoads, Royer, Dorsey, Bell	30-15S-21E 3-16S-21E 4-16S-21E 10-16S-21E		300	0	Squirrel	700	30	34	29	0	0	Yes
	12165	--	Paola-Rantoul	Jackson Oil Company*	(W) Wellsville	Collins, Coons, Shawen, Todd, Beckmeyer	31-15S-21E 32-15S-21E		--	--	Squirrel	720	20	27	-	-	-	Yes
	17266	No	Paola-Rantoul	LL&B Oil Company*	(W) LL&B Oil Co.	Finch	29-16S-21E		190	0	Up Squir + Lo Squir	650	15	4	10	0	0	Yes
	3152	--	Paola-Rantoul	Glenn Layton	(P) H. Finch	Gingrich	33-16S-21E		40	--	Squirrel	650	20	10	-	-	-	No*
	5495	--	Paola-Rantoul	Glenn Layton	(D) Naylor	Naylor	32-16S-21E		5	0	Squirrel	630	20	2	-	-	-	Yes
	12728	--	Paola-Rantoul	Glenn Layton	(P) Hays	Hays	20-16S-21E		20	--	Squirrel	630	25	3	-	-	-	Yes
	5012	No	Paola-Rantoul	Rader Oil Company	(P) McConnell	McConnell	18-16S-21E		5	10	Squirrel	685	12	6	0	0	0	Yes
	17259	No	Paola-Rantoul	Rader Oil Company	(P) Coffman	Coffman	29-16S-21E		10	0	Squirrel	625	15	2	0	1	2	No*
	17387	No	Paola-Rantoul	Rader Oil Company	(P) Stephens	Stephens	7-16S-21E		10	0	Squirrel	710	10	2	0	0	0	Yes
	15342	--	Paola-Rantoul	Cameron K. Reed	(W) Rantoul Project	Gilliland, McCullough, Detwiler	19-17S-21E 20-17S-21E		59	0	Squirrel	610	8	16	0	0	1	Yes
	5419	No	Paola-Rantoul	L.O. Tenk*	(W) Carter-Needham Waterflood	Needham, Ritshal, Carter	17-18S-21E 17,18-18S-21E		640	0	Squirrel	550	17	16	0	1	0	No†
FRANKLIN COUNTY TOTALS (Reported)									1,339	10			132	39	2	3		
GOVE COUNTY																		
	13915	--	Albin	Chief Drilling Co., Inc.*	(P) ---	Albin	10-14S-27W		320	0	Miss	4330	16	1	0	0	0	Yes
	13217	--	Castle Rock	Chief Drilling Co., Inc.*	(P) Saver	Saver	27-14S-27W		160	160	Miss	4300	16	1	0	0	0	Yes
	16501	--	Castle Rock	Pickrell Drilling Company	(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 Company	(W) Chapman A	Oshay B, Chapman A	26-15S-26W 35-15S-26W		120	0	Marm (Ft. Scott)	4338	17	2	0	0	0	No*
	17366	No	Missouri Flats	Donald C. Slawson	(P) Beesley "C"	Beesley "C"	27-14S-28W		320	0	L-KC	3700	6	1 to 2	0	1	0	Yes
	15205	--	Rosa	Pickrell Drilling Company	(P) Rosa Becker B	Becker B	34-15S-27W		40	0	KC	4000	6	1	0	0	0	Yes
GOVE COUNTY TOTALS (Reported)									1,160	160			11	0	1	0		
GRAHAM COUNTY																		
	9707	--	Blazier	Cities Service Oil Co.	(W) Blazier Lansing-Kansas City Unit	Blazier Unit	12,27, 28-7S-25W		180	0	L-KC	3800	20	5	3	0	1	Yes
	14844	--	Bollig	Bankoff Oil Company	(W) Bollig Inj.	Bollig, Sauer, Bruhgardt (A)	28-9S-25W 35-9S-25W		120	80	Lans	3870	4	3	0	0	0	Yes
	15497	--	Brush Creek	Cities Service Oil Company	(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 Northwest	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	No	Brush Creek Northwest	Murfin Drilling Company	(P) Brush Creek Injection (Co-operative)	Wilson "K" (D.G. Hansen Tr.), McVey (D.G. Hansen), Fountain "A" (Murfin), Fountain "B" (Murfin)	32-8S-23W 5-9S-23W		480	0	L-KC	3686	40	6	0	0	0	No*
	12527	No	Cooper	Petroleum, Inc.	(W) Cooper Pilot Flood	Schmalfeldt	24-10S-21W		160	0	Arb	3740	15	6	0	0	0	Yes
	7966	--	Cooper	White Hawk Oil Company*	(P) C. Smith Unit	Denning, Rudman, Smith	32-9S-21W 5-10S-21W		160	0	L-KC	3510	6	6	0	0	0	Yes
	9110	Yes	Diebolt	Sun Oil Company	(W) Diebolt LKC	Diebolt LKC Unit	16,20,21, 28-10S-23W		1920	100	L-KC	3050	20	21	22	0	0	Yes
	14576	--	Elrick	Shenandoah Oil Corp.*	(W) Elrick Unit	Elrick Unit	3,9,10,14, 15-10S-25W		1640	0	KC	3800	150	28	12	0	0	Yes
	15410	--	Elrick East	Texaco Inc.	(W) East Elrick	J.P. Billinger, H.J. Rome "D", Frank	11-10S-25W		400	--	L-KC	3750	2.5	6	-	-	-	Yes
	16551	--	Emor	Texaco Inc.	(W) D. Spies	Spies	35-9S-25W		80	--	L-KC	3800	3*	-	-	-	-	Yes

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

Project no.	Injection Wells				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)				Remarks				
	Active	In-active	Drilled 1974	Abd. 1974			Injection Pattern	Source	Depth, ft.						Thick., ft.	Type	Water Injection			Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods	
																	1974	Cum. 12-31-74		1974	Cum. 12-31-74	1974	Cum. 12-31-74
11721	11	0	0	0	Line	680	27	Prod + Sand	60	40	F	1970	S Gas	1/5	26	--	109,500	312,691	1,296	6,677	1,296	6,677	
7526	21	61	0	0	Line	700	10	Prod + Arb	1500	300	T + P	1959	S Gas	130/58	28	40	109,500	9,589,368	11,441	836,336	--	--	
12165	9	--	--	--	Irreg	650	335	Prod + Arb	1600	10	T	1965	Grav	1/3	25	--	104,796	1,091,551	13,232	208,998	4,962	69,962	*Was Dome Petroleum
17266	1	10	0	0	5-spot	400	20	Prod	--	--	M	1974	Grav	--	27	60	--	720	--	--	--	300	*Was Layton Oil Co.
3152	--	--	--	--	---	--	--	---	--	--	--	--	---	--	--	--	--	--	--	--	--	--	Est.
5495	2	--	--	--	Irreg	300	30	Prod	--	--	U	1950	Gas Exp	6/1	28	--	20,000	--	780	--	780	--	*Temp. shut down
12728	3	--	--	--	Irreg	600	30	Prod + Fr Pond	--	--	M	1945	S Gas	6/1	30	--	28,000	--	900	--	900	--	
5012	2	0	0	0	Irreg	150	35	Prod	--	--	T	1970	S Gas	10/1	26	--	12,700	42,375	2,400	--	325	825	
17259	0	0	0	0	Irreg	--	--	Prod	--	--	T	--	S Gas	3/7	29	--	0	0	325	325	0	0	*Inj. started May, 1975
17387	3	0	1	0	Irreg	0	15	Prod	--	--	T	1974	S Gas	1/9	27	--	6,500	6,500	800	--	300	300	
15342	11	0	0	0	Irreg	500	26	Prod + Gravel	20	5	M	1970	S Gas	1/0	29	--	104,228	514,605	8,713	46,989	8,713	46,989	
5419	8	0	0	0	5-spot	270	5	Prod + Miss	945	87	T + S	1957	S Gas	1/0	27	--	3,600	478,100	554	--	400	--	*Was Sam Sayles, et al †Acquired prop. in 1975
	71	71	1	0													498,824	12,035,910	40,441	1,100,125	17,676	125,053	
13915	1	0	0	0	Irreg	0	85	Prod	--	--	T	--	S Gas	--	36	--	31,025	44,194	4,445	17,614†	1,300	4,000	*Was Tide Water Oil Co. †Since purchase
13217	1	0	0	0	Irreg	0	76	Prod	--	--	T	--	S Gas	--	36	--	27,740	33,098	1,791	7,149	300	1,400	*Was Tide Water Oil Co.
16501	1	0	0	0	Irreg	0	42	Prod	--	--	U	1972	S Gas	84/28	38	2.5	7,826	117,179	15,330	39,376	0	0	
17166	0	0	0	0	Irreg	--	0	---	--	--	--	--	S Gas	11/18	39	2.5	4,484	32,994	0	0	0	0	*Not started yet
17366	1	0	1	0	Irreg	0	22	Prod	--	--	U	1974	S Gas	5/1	38	3.5	5,947	5,947	41,153	64,342	0	0	
15205	1	0	0	0	Irreg	0	12	Prod	--	--	U	1970	S Gas	12/14	38	2.5	4,380	21,396	2,823	57,641	730	2,139	
	5	0	1	0													81,402	254,808	65,542	186,122	2,330	7,539	
9707	4	0	0	0	Peri	880	311	Prod + Dak	1500	--	T	1962	S Gas	1/1	39	--	318,862	3,289,642	20,413	937,956	20,413	424,884	
14844	1	0	0	0	Irreg	100	110	Prod	--	--	U	1969	Grav	4/1	36	--	40,150	521,440	8,972	79,827	4,000	75,827	
15497	6	0	0	0	Irreg	523	268	Prod + Cedar Hills	1480	256	T	1970	S Gas	29/175	35	--	561,906	3,055,027	27,687	1,024,894	27,687	227,252	
15929	1	0	0	0	Irreg	Vac	194	Prod	--	--	U	1971	S Gas	1/1	31	--	70,810	315,920	6,850	27,725	--	--	
16127	1	0	0	0	Irreg	0	175	Prod	--	--	T	1974	S Gas + Grav	1/5	34	--	10,500	10,500	25,530	114,387	--	--	*First inj. Oct., 1974
12527	1	0	0	0	Irreg	Vac	266	Prod	--	--	U	1966	S Gas + Edgewater	2254/2834	34.8	--	97,007	779,647	12,960	687,740	12,960	162,128	
7966	1	0	0	0	Irreg	200	565	Prod	--	--	U	1960	Wat	--	35	--	206,225	3,752,641	8,759	--	8,759	140,059	*Was Natural Gas & Oil
9110	6	14	--	13	Peri	563	292	Prod	--	--	U	1962	S Gas	1/1.9	42	--	639,051	22,486,446	78,049	1,576,401	78,049	1,576,401	
14576	9	5	0	0	Irreg	0	500	Prod	--	--	T	1969	S Gas	9/1	40	3	1,453,822	11,731,803	177,544	1,643,170	124,347	913,215	*Was Empire Drilling Co.
15410	5	--	--	--	5-spot	--	--	Prod + Cedar Hills	1690	190	U	1971	S Gas + Liq Exp	42/116	41	--	540,513	2,154,756	18,338	205,427	10,688	150,417	
16551	1	--	--	--	Irreg	Vac	147	Prod	--	--	U	1972	S Gas	45/94	41	--	53,639	111,019	16,233	54,762	--	--	*7 zones

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1974—Continued

County	Project no.	Is proj. uni-tized?	Field	Operator	Type and project name	Lease name	Location		Acres in project		Oil producing zone			Oil producing wells (1974)				Has inj. been continuous?
							S - T - R		Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
GRAHAM COUNTY																		
	10747	--	Evergreen Northwest	Sunflower Operating Co.	(W) ---	Evergreen N.W. LKC Unit	8,17-9S-23W	240	0	L-KC	3703	10	6	1	0	0	Yes	
	11076	--	Fabricius	Cities Service Oil Co.*	(W) Fabricius L-KC Unit	Fabricius Lansing-Kansas City Unit	19,23,24,25,26-7S-23W	680	80	L-KC	3636	10	5	4	0	1	Yes	
	11084																	
	16842	No	High Hill	King Oil Company	(P) High Hill	Dave Rush "B", Amanda Hobbs, Hobbs "A", D. Rush "A", G. Rush Estate "A", G. Rush Estate "B", G. Rush Estate "C"	17-10S-24W 18-10S-24W 19-10S-24W 20-10S-24W	880	0	L-KC	3725	250	9	0	0	0	Yes	
	17634																	
	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	
	6453	No	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	10-9S-24W	160	--	L-KC	3924	40	4	0	0	0	Yes	
	10363	No	Holley	Fell & Wolfe Oil Co.*	(D) Clark	Clark	10-9S-24W	160	--	KC	3960	3-6	1	0	1	0	Yes	
	11613	No	Holley	Fell & Wolfe Oil Co.*	(-) Holley Pool	G. Keith,*Keith "A",*A.E. Hildebrand†	4-9S-24W	630	--	L-KC	3775	209	9	0	0	0	Yes	
	9577	--	Holley	Petroleum Management, Inc.	(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 15-9S-24W	2800	--	Lans	3950	8	13	7	0	39	Yes	
	10367	--	Holley Southeast	Cities Service Oil Co.*	(W) Holley Southeast 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	No	Ironclad	Glenn W. Peel Oil Operator	(D) Desair	Desair	26-9S-22W	160	0	L-KC	3640	160	2	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	2	2	0	0	Yes	
	8035	No	Kobler	John O. Farmer, Inc.	(P) Kobler	Kobler	27-8S-24W	80	--	L-KC	3854	7	2	--	--	--	Yes	
	15310	--	Kohart	Petroleum Management, Inc.	(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	Morris, Hildebrand "A"	20-9S-23W 28-9S-23W	320	120	L-KC	3900	180	6	1	8	0	Yes	
	10386																	
	9536*	--	Law Southeast	B-J Oil Company	(W) Southeast Law Unit	Southeast Law Unit	12-10S-23W	--	--	---	--	--	--	--	--	--	---	
	14298	--	Morel	Maurice L. Brown Trust	(W) Lansing-KC Unit	Lansing-KC	14,23-9S-21W	400	0	L-KC	3420	30	6	1	0	0	Yes	
	14977	--	Morel	NCRA	(D) Shaw	Shaw	7-9S-21W	10	0	L-KC	3641	15	1	0	0	0	Yes	
	13357	No	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	Yes	
	6240	--	Penokee	Barnett Oil, Inc.	(W) Penokee Repressuring System	Lyon, Paxson	2-8S-24W 11-8S-24W	240	200	L-KC	3790	9	1	--	--	--	Yes	
	9836																	
	14964	Yes	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	6	3	0	0	Yes	
	8553	--	Schmied	Petroleum Management, Inc.	(W) Madden-Davis Unit	Madden-Davis B, Madden-Davis A, Madden-Davis C	17-8S-25W	400	--	Lans 1m	3650	15	1	3	0	0	Yes	
	9396	No	Schmied	Willie E. Schultz	(D) Madden-Davis "A"	Madden Davis "A"	16-8S-25W	40	280	L-KC	3800	60	3	0	0	0	Yes	
	17324	No	Schneibly	Thronton E. Anderson	(P) Jones	Jones	9-8S-22W	40	40	L-KC	3507	3	1	0	0	0	Yes	
	9397	No	Shiloh	Willie E. Schultz	(D) Minium	Minium	1,2-9S-25W	200	150	L-KC	3800	60	2	0	0	0	Yes	
	7334	No	Van	Koch Exploration Company	(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	Yes	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	12	7	0	0	Yes	
GRAHAM COUNTY TOTALS (Reported)							(Includes projects in supplemental list.)		17,457	1,415		245	74	9	44			

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

Project no.	Injection Wells					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)						Remarks	
	Active	In-active	Drilled 1974	Abd. 1974	Injection Pattern			Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods			
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974	Cum. 12-31-74		
10747	-	-	0	-	Peri	0	--	Prod	3703	10	T	1964	S Gas	--	36	--	87,600	--	7,920	--	--	--		
11076	6	4	0	0	Peri	525	229	Prod + Cedar Hills	1435	--	T	1964	S Gas	4/1	40	--	694,945	5,825,795	27,030	1,355,292	27,030	508,957	*Was Imperial Oil Co.	
11084																								
16842	2	0	0	0	Peri	0	100	Prod	--	--	U	1973	S Gas	1/2	37	--	72,074	103,924	39,224	738,791	9,000	9,000		
17634																								
9991	4	0	0	2	Irreg	1000	161	Prod + Cedar Hills	1800	--	T	1963	S Gas	1/1	37	--	227,064	2,064,266	12,593	524,576	12,593	205,791	*Was Imperial Oil Co.	
6453	1	1	0	0	Irreg	0	22	Prod	--	--	U	1958	S Gas	--	33	--	39,629	--	1,944	--	--	--	*Was Sun Oil Company	
8742	1	0	0	0	Irreg	500-600	290	Prod + Water Sand	100	--	F	1963	---	--	38.5	--	80,016	968,857	1,652	5,777	--	--	*Was NCRA	
10363	1	0	0	0	Irreg	450	325	Prod	--	--	M	1965	S Gas	--	30.7	--	--	--	907	--	--	--	*Was Sun Oil Company	
11613	4	0	0	0	Irreg	300	250	Prod + Water Sand	95	--	F	1965	---	--	36.9	--	283,861	3,087,898	9,660	--	--	--	*Was Champlin Pet. Co.	
9577	9	4	0	0	Irreg	450	143	Prod + Cedar Hills	1800	--	U	1963	S Gas	6727/8277	40	--	470,778	21,121,196	25,109	1,937,439	25,109	1,937,439	+Was NCRA	
10367	2	0	0	2	Irreg	800	151	Prod + Cedar Hills	1400	--	T	1964	S Gas	14/63	37	--	131,912	1,153,807	8,183	312,311	8,183	78,177	*Was Imperial Oil Co.	
15766	8	0	0	0	Peri	675	269	Prod + Ced H	1556	180	T	1970	S Gas	102/453	35	--	716,565	4,216,336	99,320	3,335,455	99,320	399,213		
16528	6	0	0	0	Peri	440	295	Prod + Dak	1662	78	T	1972	S Gas	26/38	38	--	594,066	1,058,291	60,044	896,963	60,044	110,009		
13102	3	0	0	0	Irreg	Vac	844+	Prod + Dak	1322	88	T	1966	S Gas	4/1	39	--	308,295	904,596	43,911	309,663	--	--		
13981	1	0	0	0	Irreg	Grav	14	Prod	--	--	U	1968	Wat	30/16	38	--	10,450	69,594	6,441	47,948	6,441	47,948		
16383	1	0	0	0	Irreg	Vac	216.4	Prod	--	--	U	1972	S Gas	1/1	38	--	78,986	215,240	41,090	155,860	--	--		
8035	1	--	--	--	Irreg	--	--	Prod	--	--	U	1966	Grav	--	31	--	--	--	1,717	--	--	--		
15310	0	1	0	0	Irreg	--	--	---	--	--	-	1970	S Gas	1/0	--	--	0	0	1,121	2,371	0	0		
9379	1	0	0	0	Irreg	850	900	Prod + Dak	1600	210	U	1962	S Gas	--	36	6	40,836	1,978,015	7,946	273,751	7,946	273,751		
10386																								
9536	--	--	--	--	---	--	--	---	--	--	--	---	---	--	--	--	--	--	--	--	--	--	--	*Temp. shut down
14298	2	0	0	0	Irreg	Vac	1320	Prod + Arb	3750	40	T	1968	S Gas	--	35	--	479,489	2,319,216	29,957	243,545	29,957	173,229		
14977	1	0	0	0	Irreg	0	60	Prod	--	--	T	1969	S Gas	1/0	32.4*	--	21,247	91,197	2,042	16,439	2,042	13,492	*@ 60	
13357	2	0	0	0	Irreg	Vac	1424	Prod	--	--	U	1966	S Gas	--	38.5	--	519,784	1,418,650	15,517	1,122,457	15,517	139,121		
11191	3	0	0	0	Peri	1100	62	Prod + Cedar Hills	1432	--	T	1966	S Gas	9.5/47.5	38	--	79,610	1,401,697	9,927	435,218	9,927	145,311		
6240	1	--	--	4	Irreg	350	50	Prod	--	--	U	1961	S Gas	4/1	37	--	12,000	1,740,000	816	47,387	200	93,500		
9836																								
14964	2	2	0	0	Line	Vac	508	Prod + Dak + Chey	1200-800	100	M	1969	S Gas	59/64	41.1	--	417,287	1,611,969	15,429	110,510	15,429	110,510		
8553	--	--	--	--	Peri	0	199	Prod + Cedar Hills	1850	--	T	1961	---	5997/8865	41	--	70,138	6,590,388	1,813	400,513	1,813	74,279		
9396	1	0	0	0	Irreg	0	370	Prod	--	--	U	1961	S Gas	1/13	40	--	135,050	1,646,995	7,665	345,426	7,665	345,426		
17324	1	0	0	0	Irreg	0	5	Prod	--	--	U	1974	S Gas	1/1	40	--	900	900	2,486	40,740	0	0		
9397	1	0	0	0	Irreg	0	750	Prod	--	--	U	1962	S Gas	3/1	38	--	273,750	1,461,274	3,650	128,876	3,650	128,876		
7334	1	0	0	0	Irreg	185	200	Prod	--	--	U	1959	Gas Exp	1/.5	35.5	--	48,600	1,188,753	8,141	539,808	8,141	89,296		
10328	2	0	0	1	Irreg	100	270	Prod	--	--	T	1963	S Gas	1/0	36.6*	--	195,706	2,336,800	7,966	197,885	7,966	103,842	*@ 60	
10172	6	4	0	0	Line	144	437	Prod + Chey + Dak	1200-800	100	M	1963	S Gas	2850/1568	41.7	--	956,358	11,080,915	41,170	569,045	41,170	569,045		
111	35	0	22														11,476,911	123,865,410	943,426	20,446,335	686,046	9,226,395		

TABLE 1-ENHANCED OIL-RECOVERY PROJECTS, 1974-Continued

County	Is proj. un- dized?	Field	Operator	Type and project name	Lease name	Location S - T - R	Acres in project		Oil producing zone			Oil producing wells (1974)				Has inj. been con- tinuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
GRAHAM-SHERIDAN COUNTIES																
15006	--	Lindenman	Okmar Oil Company	(W) Lindenman Co-op	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 5-11-23W 9-11S-23W	390	60	L-KC	3588	4	8	4	0	9	Yes
GREENWOOD COUNTY																
17019	--	Beaumont	Adair Oil Company	(P) Fowler	Fowler, Lewis	24-27S-8E	600	40	Miss	2426	16	3	0	0	2	Yes
10680	--	Beaumont	Petroleum Management, Inc. (K.T. Wiedemann Trust)	(D) Edgar	W.W. Edgar	2-28S-8E	50	0	Miss	2480	24	4	0	0	0	Yes
17590	--	Beaumont	Petroleum Management, Inc.	(W) Temple Lewis	Lewis A, Lewis C. Temple	25-27S-8E	600	--	Miss	2431	--	19	0	0	0	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
8755	--	Browning	American Petrofina Co. of Texas*	(W) Browning "A"	Browning "A"	19-22S-10E	120	0	Bartl	2550	28	6	2	0	0	Yes
14909	--	Browning	American Petrofina Co. of Texas*	(W) Browning "C"	Browning "C"	24-22S-9E	30	0	Bartl	2550	28	2	0	0	0	Yes
2072	No	DeMalorie-Souder	R.R. Abderhalden*	(W) DeMalorie-Souder Unit	Central Unit, East Unit, West Unit	1,12-22S-10E 2,12-22S-10E 11-22S-10E	660	0	Bartl	2100	55	18	0	0	0	Yes
3123																
3423																
9297	No	DeMalorie-Souder	R.R. Abderhalden*	(W) DeMalorie-Souder- Harris Unit	Warrenburg, Kipfer "A", Kipfer "B", Kipfer "C", Kipfer "D"	12-22S-10E 13-22S-10E	200	0	Bartl	2150	25	6	1	0	0	Yes
3103	No	DeMalorie-Souder	L.B. Campbell	(D) Derbyshire	---	13-22S-11E	85	20	Bartl	2100	30	5	-	-	-	Yes
2071	No	DeMalorie-Souder	Jones & Campbell, Inc.*	(D) Pix Unit	Pixlee	3-22S-10E	20	0	Bartl	2100	40	5	1	0	0	Yes
2309	--	DeMalorie-Souder	R & G Oil Company	(-) Harris	Harris	19-22S-11E	0	0	Bartl	2060	40	0	0	0	0	---
3124	--	DeMalorie-Souder	R & G Oil Company	(-) DeMalorie-Souder	DeMalorie-Souder	18-22S-11E	0	--	Bartl	2100	40	0	0	0	0	2*
5619	--	Dunaway	Ale Oil Company	(-) ---	Sauder Heirs	3-23S-13E	480	0	Miss	1850	15	12	0	1	0	---
2252	--	Dunaway	BBL Oil Producers	(W) ---	Miller, Morris	27-22S-13E	60	--	Burg	1800	10	3	-	0	-	Yes
9459	No	Dunaway	Herbert H. Hart	(D) ---	Koenig, Hessler	27-22S-13E 34-22S-13E	220	--	Miss 1m	1850	20	10	0	1	0	Yes
2492	No	Fankhauser	George A. Barnard	(P) Swanson Unit	Swanson	9,10-22S-12E	240	200	Bartl	1800	15	2	0	0	0	Yes
15037																
15638	No	Fankhauser	L.B. Campbell*	(D) Norton	---	22-22S-12E	80	60	Bartl	1850	20	1	-	-	-	Yes
883	--	Fankhauser	R & G Oil Company	(-) ---	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	No*
5079	--	Gaffney	Greenwood Petroleum & Ranch Mgmt. Inc.	(P) Kipfer	---	6-24S-11E	160	--	Up Bartl (Wiggins)	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
14986	--	Lamont	Dorman A. Ball	(W) S.E. Lamont-Wernli	Wernli	32-22S-13E	160	160	Bartl	1695	70	2	0	3	0	Yes
7362	--	Lamont	Jackman & Jackman	(-) Fankhauser	Fankhauser	23-22S-12E	160	80	Bartl	1660	20	4	1	-	-	---
16546	--	Lamont	R & G Oil Company	(-) ---	Peter Fankhauser-Lamont Unit D	23-22S-12E	0	0	Bartl	1670	50	0	0	0	0	*
3565	No	Sallyards	R.R. Abderhalden	(W) Blankenship Sallyards Unit	F.H. Hull "A & B",	35-25S-8E 2-26S-5E 2,11-26S-8E	520	--	Bartl	2425	39	20	2	0	0	Yes
3482	No	Sallyards	Beard, English & Martin*	(W) Bryden-Ladd	A.L. Stevenson Bryden Acct 1 & 2, L. Ladd, Moss, Hoffman, Bryden Acct 1 & 3	36-25S-8E 30-25S-9E 31-25S-9E	600	300	Bartl	2470	50	14	0	0	0	Yes
12717	No	Sallyards	Eureka Drilling Company	(P) Bates	Bates	30-25S-9E	64	0	Bartl	--	20	2	-	0	0	Yes
5052	No	Sallyards	Jackson Bros.	(D) Ladd "C"	Carrie Ladd	26,35-25S-8E	320	0	Bartl (Cher Sd)	2450	15	4	0	0	0	Yes
11096	No	Sallyards	Nadel and Gussman	(W) Jackson Heirs	Jackson Heirs	23,25,26-25S-8E	80	20	Bartl	2400	15	9	2	0	0	Yes
14001																

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

Project no.	Injection Wells					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)						Remarks	
	Active	In-active	Drilled 1974	Abd. 1974	Injection Pattern			Source	Depth, ft.	Thick., ft.						Type	Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods		
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974		Cum. 12-31-74
15006	1	0	0	0	Peri	Vac	500	Prod	--	--	U	1969	S Gas	120/35	36	--	182,500	1,029,618	60,913	708,139	43,400	133,175	
6808	4	2	0	3	Irreg	73	429	Prod + Cedar Hills	1500	--	T	1958	S Gas	--	40	--	543,555	7,378,109	9,502	2,070,240	9,502	733,363	*Was Imperial Oil Co.
17019	1	0	0	2	Irreg	Grav	6	Prod	--	--	U	1973	Wat	--	35	--	1,800	3,600	6,272	7,745*	0	0	*Since Proj. began
10680	1	0	0	0	---	0	20	Prod	--	--	T	1963	Grav	--	35	--	9,125	70,724	4,216	258,416	--	--	
17590	1	0	0	0	Irreg	0	160	Prod	--	--	T	1974	Wat	31/476	--	--	54,802	54,802	5,497	1,302,436	--	--	
17096	1	0	0	0	Line	0	75	Prod	--	--	U	1973	Gas Exp	27/73	36.6	--	26,645	37,361	8,603	54,863	0	0	
8755	2	0	0	0	Irreg	450	166	Prod + Doug	1421	50	U	1965	S Gas	1/5	41	--	121,165	1,782,515	8,425	567,883	8,425	95,941	*Was El Dorado Refg. Co.
14909	1	1	0	0	Peri	400	336	Prod + Doug	1421	50	U	1966	S Gas	1/1	40	--	122,790	968,442	2,551	249,541	2,551	77,193	*Was El Dorado Refg. Co.
2072	7	30	0	0	5-spot	1400	100	Prod + Arb	2730	700	T	1949	S Gas	--	40	2.8	255,500	37,458,751	4,508+	3,298,183+	4,508+	3,298,183+	*Was Richard Soule +6/1/74 to 1/1/75
3123																							
3423																							
9297	6	6	0	0	Irreg	600	200	Prod + Arb	2730	700	T	1962	S Gas	--	39	4.1	438,000	9,162,427	883+	461,587+	883+	461,587+	*Was Richard Soule +6/1/74 to 1/1/75
3103	2	-	-	-	Irreg	100	300	---	--	--	T	1952	Wat	--	41	--	109,500	1,962,250	1,751	149,951	--	--	
2071	1	0	0	0	5-spot	600	200	Prod + Doug	700	--	M	--	S Gas	--	40	--	73,000	--	3,892	--	3,892	--	
2309	0	0	0	0	Irreg	0	0	---	--	--	-	--	Grav	--	39	--	0	--	915	--	0	--	
3124	0	0	0	0	7* 5-spot	0	0	---	--	--	-	--	Grav	--	41	--	0	--	1,874	--	0	--	
5619	-	-	-	-	Irreg	300	50	Prod + Doug	--	--	T	1957	Grav + Wat	1/1	34	--	61,000	862,400	14,700	90,700	3,000	--	
2252	1	-	-	-	Irreg	200	60	Prod	--	--	T	--	Grav	--	36	--	--	--	10,500	--	--	--	
9459	4	0	0	0	Irreg	--	56	Prod	--	--	U	1962	Grav	3/2	38-	--	82,125	5,425,725	27,840	333,062	--	--	
2492	1	0	0	0	Irreg	400	200	Prod + Doug	750	20	T	1969	S Gas	--	39	--	73,000	645,312	4,031	53,564	4,031	53,564	
15037																							
15638	1	-	-	-	Irreg	125	125	Prod	--	--	T	1969	Grav	--	38	--	45,000	--	271	--	--	--	
883	1	0	0	0	5-spot	200	230	Prod	--	--	T	--	S Gas	--	40	--	85,000	--	2,748	--	2,748	--	*Was W.E. Ellis
2065																							
16051	2	0	0	0	Irreg	50	30	Prod + Doug	950	--	T + S	1971	S Gas	1/1	39	--	--	--	3,276	--	3,276	--	*Line trouble
5079	7	0	0	0	Peri	300	350	Prod + Doug	900	100	T	1957	Grav	--	40	--	180,000	3,270,000	9,400	444,833	9,400	--	
3340	-	0	0	0	Irreg	Grav	--	Prod	--	--	T	--	Grav	--	39	--	73,000	--	7,116	--	--	--	*Was Sinclair Oil Co.
14986	1	-	1	-	Line	--	--	Prod + Doug	--	50	T	1972	Grav	--	--	--	30,000	--	2,060	--	0	--	
7362	2	2	0	0	Irreg	240	220	Prod + Bartl	1600	20	T	--	Grav	--	38	--	80,300	--	1,479	--	1,479	--	
16546	0	0	0	0	Irreg	0	0	---	--	--	-	--	Grav	--	40	--	0	--	1,655	--	0	--	
3565	7	4	0	0	Irreg	650	150	Prod + Doug	1400	60	T	1953	S Gas	2/1	37	--	383,250	27,389,919	12,153	3,132,147	12,153	3,132,147	*Not started yet
3482	4	0	0	0	5-spot	800	1250	Prod + Doug	1290	--	T	1952 Est.	S Gas	--	40	--	--	--	11,034	102,959+	11,034	--	*Was Marathon Oil Co. +Beard, English & Martin prod.
12717	1	0	0	0	Irreg	700	200	Prod	--	--	U	1966	S Gas	3/1	40	--	73,000	467,200	1,983	--	--	--	
5052	1	0	0	0	4-spot	0	5	Prod	--	--	U	1958	S Gas	5/1	39-	--	1,755	30,600	1,490	75,300	1,192	25,500	
11096	3	3	0	0	Irreg	1200	189	Prod + Doug	1400	80	T	1964	S Gas	1/0	39	--	138,600	986,400	4,680	--	4,680	43,270	
14001																							

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1974—Continued

Kansas Geol. Survey Energy Resource Series 5, 1975

County	Is proj. unit- ized?	Field	Operator	Type and project name	Lease name	Location S - T - R	Acres in project		Oil producing zone			Oil producing wells (1974)				Has inj. been con- tinuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
GREENWOOD COUNTY (cont.)																
11806	--	Schindler	C.R. McClelland	(-) Schindler	Schindler	23-23S-11E	240	0	Arb	1680	20	0	0	0	0	---
										1780	10					
										2200	5					
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	---
12627	No	Seeley-Wick	George A. Barnard	(P) Shaffer Water Flood	Shaffer, Shaffer-Jones	9-23S-11E	60	20	Bartl	1900	15	3	0	0	0	Yes
17648	No	Seeley-Wick	George A. Barnard*	(D) Rickabaugh	Rickabaugh	4-23S-11E	80	40	Bartl	1940	9	2	0	0	0	Yes
2003	No	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	1000 Est.	Bartl	1850	50- 75	20	18	0	20	Yes
5095	--	Seeley-Wick	R.V. Dimick Estate	(W) BEC Unit	C.G. Beal, Carson, D.A. Edwards, Tom Edwards	28,29,32, 33-23S-11E 33-23S-11E	490	200	Bartl	1950	12	8	0	0	0	Yes
14908																
8952	No	Seeley-Wick	Eureka Drilling Company	(P) Humes	Humes	29,30-22S-11E	240	0	Bartl	2100	15	1	-	0	0	---
14151	No	Seeley-Wick	Eureka Drilling Company	(D) Greenwood	Greenwood	6-23S-11E	240	0	Bartl	2500	12	4	-	0	0	---
17131	--	Seeley-Wick	Glacier Petroleum Co.	(P) Jones	Jones	6-22S-12E	20	10	Bartl	1884	10	2	-	-	-	Yes
16739	No	Seeley-Wick	Warren G. Godfrey*	(P) Lyke	Lyke	8-24S-12E	80	0	Bartl	1797	10	4	0	0	0	---
16338	--	Seeley-Wick	W.F. Harmon*	(-) Harmon	Harmon	31-23S-12E	190	--	KC	1837	2	3	-	-	-	Yes
13360	--	Seeley-Wick	Cloide J. Hensley*	(P) Hensley	Hensley	6-22S-12E	30	--	Bartl	1775	30	3	1	0	0	Yes
734	Yes	Seeley-Wick	The J's Oil Company, Inc.*	(P) Seeley-Wick	---	5,6-23S-11E	660	--	Bartl	1925	50	3	0	0	0	Yes
2664	No	Seeley-Wick	Howard Johnson*	(W) Johnson	---	16-24S-12E	160	0	Bartl	1600	15	0	2	0	0	Not
11118	No	Seeley-Wick	Howard Johnson*	(W) Marlin	---	16-24S-12E	160	0	Bartl	1700	15	0	1	0	0	Not
11538	--	Seeley-Wick	Merle S. Mitchell*	(W) ---	Ulrich	7-24S-12E	--	--	Cattle	1600	10	3	1	-	-	---
"	--	"	George Sage	" ---	"	7-24S-12E	--	--	Cattle	1600	10	4	0	-	-	---
11539	--	Seeley-Wick	Merle S. Mitchell*	(-) ---	Fry	7-24S-12E	--	--	Cattle	1588	10	3	1	-	-	Yes
"	--	"	George Sage*	(W) ---	Fry	7-24S-12E	--	--	Cattle	1588	10	3	1	-	-	Yes
12172	--	Seeley-Wick	E.C. Murphy	(-) Gardner & Winkler	Gardner, Winkler	1-22S-11E	160	--	Bartl	1900	16	2	1	0	0	---
10954	--	Seeley-Wick	George E. Sauder	(W) Wilson-Lewis	Wilson-Lewis	8,9-24S-12E	120	20	Bartl	1700	18	8	1	0	0	Yes
11213	--	Seeley-Wick	George E. Sauder	(W) Thornton-Huber- Curtis	Thornton, Huber, Curtis	7,8-23S-12E	70	50	Bartl	1720	20	5	0	0	0	Yes
11615	--	Seeley-Wick	K.E. Snyder	(D) Shaefer Flood Project	Shaefer	27-23S-11E	40	0	Bartl	1920	22	9	0	0	0	Yes
1362	--	Seeley-Wick	Tesoro Petroleum Corp.	(W) Clopton	Clopton	8-23S-11E	320	--	Bartl	1750	15	8	0	0	0	Yes
10368	--	Seeley-Wick	White & Ellis Drilling, Inc.	(W) Kipfer	Kipfer	1,12-22S-11E	320	0	Bartl	1760	17	9	0	0	0	Yes
3293	--	Teeter-Scott	Berentz Drilling Co.*	(W) J.W. Teeter Unit	J.W. Teter Unit 22 & 21, Teter-Spencer	21-23S-9E 22-23S-9E	120	280	Bartl	2425	30- 90	4	2	-	-	Yes
3357																
10274																
2737	--	Teeter-Scott	Maurice L. Brown Trust	(W) Morris	Morris	20,21-23S-9E	320	320	Bartl	2500	40	15	1	0	0	Yes
10170	--	Teeter-Scott	Maurice L. Brown Trust	(P) Green "A" Unit	Noller, Green "A"	2-23S-9E 2,11-23S-9E	360	0	Bartl	2333	37	4	5	0	0	Yes
10430	--	Teeter-Scott	Glacier Petroleum Co.	(P) Noller "A"	Noller "A"	9,10-23S-9E	22	17	Bartl	2450	35	5	0	0	0	Yes
14306	No	Teeter-Scott	Glacier Petroleum Co.	(P) Noller	Noller	3-23S-9E	10	--	Bartl	2450	35	2	-	-	-	Yes
14901	--	Teeter-Scott	Glacier Petroleum Co.	(P) Hartley "B"	Hartley "B"	2-23S-9E	50	--	Bartl	2450	50	6	1	-	-	Yes
11169	--	Teeter-Scott	K.E. Snyder	(D) Green "B" Flood Project	Green "B"	1,2,11, 12-23S-9E	40	0	Bartl	2410	45	8	0	0	0	Yes
12236	No	Teichgraeber	King Oil Company	(P) Spencer	Spencer	18-25S-9E	80	0	Bartl	2375	23	5	0	0	0	Yes
11737	No	Teichgraeber	Nadel and Gussman	(W) Welsh-Birkett	Birkett, Welsh, Welsh	12-25S-8E 12,13-25S-8E 14,24-25S-8E	300	0	Bartl	2350	15	51	-	0	-	Yes
13198	No	Teichgraeber	Nadel and Gussman	(W) Spencer	Spencer	18-25S-9E	40	0	Bartl	2400	15	4	0	0	0	Yes
1908	--	Thrall-Aagard	Maurice L. Brown Trust	(W) J.W. Martindell	J.W. Martindell	31-23S-10E	--	--	Bartl	2300	50	1	2	0	0	No*
2226	--	Thrall-Aagard	Maurice L. Brown Trust	(W) Thrall-McKee Con- solidated	Thrall-McKee Consolidated, Louisa Thrall, Ernestine Thrall	28,29,32, 33-23S-10E 29-23S-10E	640	560	Bartl	2300	31	1	0	0	3	Yes

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

Project no.	Injection Wells					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)						Remarks	
	Active	In-active	Drilled 1974	Abd. 1974	Injection Pattern			Source	Depth, ft.	Thick., ft.						Type	Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods		
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974		Cum. 12-31-74
11806	1	0	0	0	---	190	520	Prod	--	--	T	--	Grav	15/85	36	--	189,800	--	8,859	--	0	0	
1264	0	5	0	0	5-spot	0	0	Prod	--	--	T	1945	Limited Water	--	42	4.5	0	32,820,329	17,085	1,324,830	17,085	1,324,830	
12627	1	1	0	0	Irreg	600	200	Prod + Doug	800	30	T	--	Wat	--	40	--	73,000	748,250	3,040	24,163	3,040	24,163	
17648	1	0	0	0	Irreg	0	75	Prod	--	--	T	1974	Wat	--	40	--	4,500	4,500	2,190	2,190	2,190	2,190	*Was John J. Ogilvie
2003	8	--	0	5	5-spot	670	1400	Doug	1100	--	T	--	S Gas	--	40	--	510,000	--	8,666	--	8,666	--	*Was Madison Oil Co.
5095 14908	5	0	0	0	Irreg	600	60	Doug	850	75	T+S	1959	Wat	1/1	38	--	50,000	--	3,235	--	3,235	--	
8952	--	--	--	--	Irreg	0	20	Doug	1200	100	--	1961	---	7/3	36	--	7,300	229,910	165	--	--	--	
14151	--	--	--	--	Irreg	--	50	---	--	--	--	--	---	--	39	--	18,250	73,140	2,183	--	--	--	
17131	1	--	--	--	Irreg	0	28	Prod	--	--	U	1973	Grav	--	37	--	10,074	--	229	--	--	--	
16739	2	2	0	0	5-spot	300	825	---	--	--	T	--	---	--	42+	--	--	--	4,948	--	--	--	
16338	--	--	--	--	Irreg	100	100	Prod	--	--	T	1970	---	4.5/100	39-40	--	--	--	--	--	--	--	
13360	1	--	0	0	Irreg	100	10	Prod	--	--	U	1968	Grav	10/1	40	--	3,500	--	1,255	--	--	--	*Was Glenn Supply
734	2	2	0	0	5-spot	500	750	Prod	--	--	U	--	---	--	2/98	39.4	--	--	--	--	--	--	*Was Crosshans-Peterson
2664	--	--	--	--	Irreg	--	--	Doug	640	20	T	--	Grav	--	39	--	0	--	0	--	0	--	*Was C & J Oil Co., Inc.
11118	--	--	--	--	---	--	--	Doug	640	20	T	--	Grav	--	39	--	0	--	0	--	0	--	*Was George Barnard
11538	1	--	--	--	---	65	56	Doug	650	--	U	1965	---	--	--	--	11,872+	--	493+	--	--	--	*Lack of supply water
"	1	--	--	--	---	80	75	Prod	--	--	U	1965	---	--	--	--	11,250+	--	600+	--	--	--	*Sold to George Sage
11539	1	--	--	--	5-spot	395	88	Doug	550	--	T	1964	---	--	--	--	18,656+	--	657+	--	--	--	*7 mos. production
"	1	--	--	--	5-spot	300	50	Prod	--	--	U	1964	---	--	--	--	7,500+	--	450+	--	--	--	*Was Merle S. Mitchell
12172	2	1	0	0	Irreg	Vac	250	Prod + Bartl	1900	16	T	--	Grav	--	39	--	91,250	--	2,701	--	2,701	--	*Sold to George Sage
10954	5	0	0	0	Irreg	300	600	Prod + Doug	60	100	T	1951	Grav	3/1	41	--	220,000	2,670,000	6,937	119,937	6,937	119,937	
11213	2	0	0	0	5-spot	400	220	Prod + Doug	600	100	T+S	1959	Grav	9/1	38	--	83,000	1,081,000	3,460	191,600	3,460	191,600	
11615	2	0	0	0	5-spot	800	180	Prod + Doug	1090	80	U	1972	S Gas	55/110	41	--	65,700	225,750	12,376	350,241	12,376	12,376	
1362	6	2	0	0	5-spot	--	180	Prod + Doug	650	50-	M	1946	Gas Exp	--	43	--	394,674	3,489,778	17,737	4,868,857	--	--	
10368	2	0	0	0	Irreg	150	85	Prod + Doug	700	100	T	1963	S Gas	3/1	41	--	60,000	764,200	5,973	282,973	2,000	49,421	
3293	1	2	3	0	5-spot	450	120	Prod + Doug	1400	60	T	1963	S Gas	--	42	5	42,600	117,450	2,550	13,323	2,550	--	*Was Sinclair Oil
3357																							
10274																							
2737	6	4	0	0	5-spot	162	546	Prod + Doug + L-KC	1200	75	T+P	1951	Limited Wat Drive	--	40	3.8	1,194,673	3,523,481	45,145	153,419	45,145	123,726	
10170	1	1	0	0	Irreg	415	637	Prod	--	--	T	1963	Limited Wat	--	41	3	153,725	1,962,757	4,926	391,494	4,926	124,771	
10430	1	0	0	0	Irreg	600	240	Prod	--	--	U	1969	Grav	--	39	--	87,600	428,200	3,400	--	--	--	
14306	--	--	--	--	Irreg	150	30	Prod	--	--	U	1963	Grav	--	38	--	10,950	21,170	2,438	--	--	--	
14901	1	--	--	--	Irreg	50	250	Prod	--	--	U	--	Grav	--	39	--	88,640	--	5,926	--	--	--	
11169	1	0	0	0	Irreg	0	225	Prod	--	--	U	1967	S Gas	48/130	39	--	82,125	521,050	9,275	282,190	9,275	106,959	
12236	2	1	0	0	Irreg	830	118	Prod + Doug	1290	90	U	1965	S Gas	1/1	40	--	86,069	628,000	7,640	125,268	7,000	29,845	
11737	7	0	0	0	Irreg	1500	212	Prod + Doug	1000	50	T	1967	S Gas	95/5	41	--	544,000	3,968,000	69,500	--	69,500	459,688	
13198	2	1	0	0	Irreg	700	162	Prod + Doug	1000	50	T	1967	S Gas	9/1	39	--	118,500	703,500	2,280	--	2,280	24,256	
1908	0	2	0	0	5-spot	0	0	---	--	--	--	1948	S Gas	--	40	4	0	23,032,364	1,571	2,533,772	1,571	2,533,772	*Flood depleted
2226	1	0	0	8	5-spot	301	687	Prod + Doug	1200	40	T	1949	S Gas	--	40	3.4	137,440	57,901,507	587	6,256,382	587	3,980,918	

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1974—Continued

Kansas Geol. Survey Energy Resource Series 5, 1975

County	Project no.	Is proj. uni- tized?	Field	Operator	Type and project name	Lease name	Location		Acres in project		Oil producing zone		Oil producing wells (1974)				Has inj. been con- tinuous?	
							S - T - R		Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled		Abd.
GREENWOOD COUNTY (concl.)																		
	2743	--	Thrall-Aagard	Maurice L. Brown Trust	(W) Cartwright	---	36-23-9E		325	--	Bartl	2200	35	8	6	0	0	Yes
							1-24S-9E											
							6-24S-10E											
	10734	--	Thrall-Aagard	Maurice L. Brown Trust	(W) Moore-Holverson	Aagard, Moore, Hill, Holverson	23-24S-9E		275	0	Bartl	2120	20	6	8	0	0	---
							25, 26-24S-9E											
							26-24S-9E											
	15438	--	Thrall-Aagard	Maurice L. Brown Trust	(W) George I. Miller	George I. Miller	28-23S-10E		40	0	Bartl	2385	25	2	0	0	0	Yes
	14342	--	Thrall-Aagard	J & T Cooper*	(W) Zimmerman	Zimmerman	13-24S-9E		50	0	Bartl	2300	20	3	0	0	0	Yes
	12156	No	Thrall-Aagard	Glacier Petroleum Company	(P) Osmundson	Osmundson	23-24S-9E		20	--	Bartl	--	--	2	1	--	--	No*
	16865	No	Thrall-Aagard	Glacier Petroleum Company	(P) Eide-Hill	Eide, Hill	26, 27-24S-9E		55	--	Bartl	2170	20	5	2	0	0	Yes
	17510	--	Thrall-Aagard	Glacier Petroleum Company	(P) Bratton	Bratton	14-24S-9E		10	--	Bartl	2110	91	3	--	--	--	Yes
	7563	Yes	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) Mason "B"	12-24S-9E		504	0	Bartl	2200	20	30	--	0	0	Yes
	7569						13-24S-9E											
	11893						14-24S-9E											
							6-24S-10E											
							7-24S-10E											
	13474	--	Thrall-Aagard	Kenneth C. McKee*	(D) Boone-Moore	Moore, Boone	24-24S-9E		160	--	Bartl	2160	13	3	0	0	0	Yes
							25-24S-9E											
	7558	Yes	Virgil	R.R. Abderhalden*	(W) West Virgil Unit	Geist, Sullivan, Wayham	13-24S-12E		539	0	Miss	1730	70	33	6	0	0	Yes
							14-24S-12E											
	15502	--	Virgil	Ale Oil Company	(D) ---	Gruber, Imthurn	33-22S-13E		200	0	Miss	1850	15	4	0	0	0	Yes
							4-23S-13E											
	9922	--	Virgil	Brunson-Spines	(W) Johnson	Johnson	23-24S-12E		450	0	Miss	1700	15	13	5	1	2	Yes
	192	No	Virgil	French & Winterscheid, Inc.	(P) Hout-Meyers	Meyers, Hout	10-24S-12E		50	70	Miss 1m	1700	5	3	0	0	0	Yes
							11-24S-12E											
	12482	No	Virgil	French & Winterscheid, Inc.	(P) Dame	Dame	12-24S-12E		80	40	Miss 1m	1700	6	8	0	0	0	Yes
	7811	No	Virgil	Houston-Oklahoma Oil Co.	(W) West Virgil Unit	Mennonite, Sullivan, Fleming	11-24S-12E		60	0	Miss	1745-	0	21	2	0	0	Yes
	9884						14-24S-12E					1765						
	13251						15-24S-12E											
	12408	--	Virgil	Lewis C. Long	(P) Barnes	Barnes	7-24S-13E		139	--	Miss 1m	1664	16	2	0	0	0	Yes
	221	No	Virgil North	French & Winterscheid, Inc.	(P) Shadel	Shadel	15-22S-13E		120	60	Miss 1m	1800	6	6	0	0	0	Yes
	3259	No	Virgil North	French & Winterscheid, Inc.	(P) L. Young	L. Young	10-23S-13E		40	40	Miss 1m	1800	6	4	0	0	0	Yes
	3915	No	Virgil North	French & Winterscheid, Inc.	(P) Lovett & Shambaugh	Lovett, Shambaugh	22-23S-13E		100	--	Miss 1m	1700	6	7	0	0	0	Yes
	8069	No	Virgil North	Houston-Oklahoma Oil Co.	(W) Virgil Pool	W.G. Berry	28-23S-13E		80	0	Miss	1750	10	15	0	0	0	Yes
	1057	No	Virgil North	Kewanee Oil Company*	(W) Schneider	Schneider	10-23S-13E		40	0	Miss	1770	15	9	2	1	1	Yes
	15851																	
	5838	--	Virgil North	Sun Oil Company	(D) Shadel	Shadel	15-23S-13E		160	95	Bartl	1540	50	3	1	0	0	Yes
	6126	--	Virgil North	Sun Oil Company	(D) Olinger "A"	Olinger "A"	15-23S-13E		10	1	Miss 1m	1720	30	4	0	0	0	Yes
	6135	--	Virgil North	Sun Oil Company	(W) Jones "A"	Jones "A", Dehlinger "A"	21-23S-13E		80	12	Miss 1m	1670	55	7	0	0	0	Yes
							28-23S-13E											
	8090	--	Virgil North	Sun Oil Company	(W) Griblin "B"	Griblin "B"	21-23S-13E		160	10	Miss 1m	1750	30	6	1	0	1	Yes
	16111	--	Virgil North	Sun Oil Company	(P) Dehlinger "B"	Dehlinger "B"	29-23S-13E		160	20	Miss 1m	1700	10	6	0	0	0	Yes
	16617	No	Wiggins	George A. Barnard	(P) Wiggins Water Flood	Nixon, Wiggins	25-24S-10E		400	320	Cattle	1830	15	5	0	0	0	Yes
							30-24S-11E											
	17508	No	Wiggins	George A. Barnard	(P) Lindamood Water Flood	Lindamood	19-24S-11E		80	40	Cattle	1800	25	1	0	0	0	Yes
	11036	No	Wilkerson	George E. Sauder	(D) Wilkinson-Carrington	Carrington, Wilkinson	6-25S-9E		40	20	Cattle	2100	30	4	--	--	--	Yes
							7-25S-9E											
	11069	--	Wilkerson	E.W. Sauder	(P) Olsen	Olsen	6-25S-9E		30	0	Cattle	2100	20	3	0	0	0	No
	15095	--	Willow Creek	Oscar Koepke	(-) Feltner & Feltner B	Feltner	31-22S-11E		100	0	Bartl	2000	30	1	0	0	0	---
	13840	No	Willow Creek	George E. Sauder	(D) Warren	Warren	6-23S-11E		40	0	Bartl	2050	20	10	0	0	0	---
	8109	Yes	Zimmerman	J & T Cooper*	(W) Bratton-Mansfield	Bratton Mansfield	19-23S-10E		200	200	Bartl	2300	20	12	8	0	4	Yes
GREENWOOD COUNTY TOTALS (Reported)									18,556	4,725		654	90	6	35			
HARPER COUNTY																		
	17631	--	Runnymede	Texaco Inc.	(P) Maude Wene	Springer Unit, Litsey Unit	23, 24-31S-6W		320	--	Lans	3613	--	--	--	--	--	---
							25, 26-31S-6W											
	16914	No	Spring Valley	Keener Oil Company*	(P) Schenck	Schenck	34-31S-5W		80	0	Simp	4654	8	2	0	0	0	Yes
HARPER COUNTY TOTALS (Reported)									400	0		2	0	0	0			

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

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)						Remarks
	Active	In-active	Drilled 1974	Abd. 1974				Depth, ft.	Thick., ft.	Type	Water Injection						Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods				
											1974						Cum. 12-31-74	1974	Cum. 12-31-74	1974	Cum. 12-31-74		
2743	6	19	0	1	5-spot	854	223	Prod + Doug	1200	40	T	1952	S Gas	--	40	5	729,010	27,668,934	12,015	1,264,879	12,015	1,264,879	
10734	8	13	0	0	Irreg	1122	245	Prod + Doug	1000	50	T	1963	S Gas	--	40	3.2	732,739	7,818,547	10,765	484,552	10,765	484,552	
15438	1	0	0	0	Irreg	301	388	Prod + Doug	1200	140	T	1967	S Gas	--	40	3.4	141,620	566,783	6,935	97,429	6,935	93,302	
14342	1	0	0	0	Irreg	900	150	Doug	1300	100	T	--	S Gas	98/2	40	--	45,000	90,000	4,320	--	4,320	--	*Was R. R. Riss
12156	--	1	--	--	Irreg	--	--	Prod	--	--	U	--	--	--	35	--	0	--	--	--	--	--	*Discontinued
16865	1	--	--	--	Irreg	300	200	Prod	--	--	U	1957	Grav	--	39	--	109,500	--	3,287	--	--	--	
17510	1	--	--	--	Irreg	150	75	Prod	--	--	U	--	Grav	--	39	--	64,714	--	975	--	--	--	
7563	11	18	0	0	Peri	750	100	Prod + Doug	1200	65	T	1961	S Gas	--	37-	--	401,500	--	19,101	--	19,101	--	*Was Clinton Oil Company
7569															38-								
11893															39								
13474	1	0	0	0	Irreg	0	2	Prod	--	--	M	1967	Grav	1/3	37-	--	500	4,400	2,456	19,686	245	4,630	*Was Bedell-Catt
7558	10	9	0	0	Irreg	250	125	Prod + Arb	2200	150	T	1958	S Gas	2/1	38	3.4	456,250	5,987,875	12,808	743,258	12,808	743,258	*Was Sun Oil Company
15502	1	0	0	0	Irreg	Grav	30	Prod	--	--	T	1970	---	1/4	39	--	11,000	60,000	2,014	24,480	0	--	
9922	15	3	0	3	5-spot	800	40.5	Prod + Arb	2100	--	U	1962	S Gas	38/70	38	--	221,466	15,776,571	14,134	329,201	14,134	329,201	
192	1	0	0	0	Irreg	130	125	Prod	--	--	T	1964	Wat	2/3	39	--	30,000	246,000	5,520	--	2,760	32,616	
12482	1	0	0	0	Irreg	300	300	Prod	--	--	T	1966	Wat	1/1	38	--	79,000	553,000	4,506	--	4,506	34,195	
7811	2	0	0	0	Irreg	150	120	Prod	--	--	T	1954	Grav	1/10	38.7	--	162,000	1,452,860	8,662	64,779	3,100	55,288	
9884																							
13251																							
12408	1	--	--	--	Irreg	--	50	Prod	16	--	U	1966	Grav	--	38	--	18,000	130,000	980	--	80	1,780	
221	1	0	0	0	Irreg	150	300	Prod	--	--	T	1955	---	1/1	--	--	900,000	7,212,000	1,130	--	565	41,404	
3259	1	0	0	0	Irreg	80	120	Prod	--	--	T	1955	Wat	11/9	36	--	30,000	538,000	1,900	--	950	21,911	
3915	1	0	0	0	Irreg	50	230	Prod	--	--	T	1956	Wat	11/9	36	--	900,000	7,200,000	5,148	--	2,574	45,508	
8069	1	3	0	0	Irreg	250	75	Prod	--	--	U	1959	Wat	1/3	38.2	--	54,750	1,988,906	7,700	107,483	3,800	99,000	
1057	2	0	0	0	Irreg	1200	192	Prod	--	--	U	1944	S Gas	5/47	39	--	139,837	624,863	10,334	1,239,949	8,791	40,072	*Was Barbara Oil Company
15851																							
5838	1	4	0	0	Irreg	300	398	Prod	--	--	U	1938	S Gas	--	33.8	4.5	145,382	17,490,831	5,315	180,579	5,315	180,579	
6126	1	0	0	0	Irreg	Grav	24	Prod	--	--	U	1959	S Gas	--	36.8	3.5	8,814	304,088	2,889	61,892	2,889	61,892	
6135	2	0	0	0	Irreg	650	212	Prod	--	--	U	1958	S Gas	--	39.5	3.5	154,694	2,674,407	14,464	242,483	14,464	242,483	
8090	2	4	0	2	Irreg	350	231	Prod	--	--	U	1961	S Gas	1/4	34.1	3.4	168,280	8,399,829	7,932	131,860	7,932	131,860	
16111	2	0	0	0	Irreg	300	365	Prod + Arb	2150	150	T	1971	Wat + S Gas	1/21	39.2	4	266,206	973,636	9,669	37,138	9,669	34,057	
16617	1	1	0	0	Irreg	400	300	Prod	--	--	T	1966	S Gas	--	38	--	109,500	554,215	1,716	32,308	1,716	32,308	
17508	1	0	0	0	Irreg	500	300	Prod	--	--	T	1974	S Gas	--	38	--	1,800	1,800	180	180	180	180	
11036	1	0	0	0	Irreg	450	70	Prod + Doug	1000	100	U	1964	Grav	7/3	38	--	25,000	315,000	3,940	--	2,500	19,100	
11069	1	0	0	0	Irreg	350	130	Prod	--	--	T	1964	Grav	1/4	37	--	47,500	575,500	1,790	114,780	900	27,000	
15095	--	--	--	--	Irreg	500	100	Prod + Doug	900	100	T	--	Grav	1/1	39	--	36,500	180,500	1,850	18,467	925	7,115	
13840	1	0	0	0	5-spot	200	20	Prod	--	--	T	1968	Grav	95/5	38	--	7,000	47,400	5,000	178,500	500	12,500	
8109	7	4	0	0	Irreg	1000	200	Doug	1100	100	T	--	S Gas	9/1	40	--	432,000	1,087,000	8,200	--	8,200	--	*Was R.R. Riss
	214	149	4	28													13,524,567	336,015,709	622,683	32,877,692	440,415	20,336,507	
17631	--	--	--	--	Irreg	--	--	Prod	--	--	U	1974	---	186/488	--	--	42,336	42,336	18,129	18,129	--	--	
16914	1	0	0	0	Irreg	10	95	Prod	--	--	U	1973	Wat	--	45	--	34,675	50,995	7,205	72,074	0	0	*Was Oasis Petroleum (one well)
	1	0	0	0													77,011	93,331	25,334	90,203	0	0	

TABLE 1-ENHANCED OIL-RECOVERY PROJECTS, 1974-Continued

County	Is proj. undrilled?	Field	Operator	Type and project name	Lease name	Location S - T - R	Acres in project		Oil producing zone			Oil producing wells (1974)				Has inj. been continuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
HARVEY COUNTY																
13454	Yes	Burrton	Drillers Production Co.	(W) Bott Unit	Bott Unit	6,7,8, 18-23S-3W	1580	0	Miss	3350	20	48	0	2	0	Yes
10087	No	Burrton	Home-Stake Production 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 Ch	3400	35	38	1	0	0	Yes
11005 11876	Yes	Hollow-Nikkel	Kewanee Oil Company*	(W) Hollow Nikkel W.F.	Dyck, Duerkson, Hiebert, Neufeld, Nikkel, Schroeder, Siemens	5,8-22S-3W	200	160	Miss Hunt	3200 3500	10 22	11	1	0	0	Yes
HARVEY COUNTY TOTALS (Reported)							3,232	688				97	2	2	0	
HARVEY-MCPHERSON COUNTIES																
6889	Yes	Harmac	Brunson-Spines	(P) Harmac Unit	Harmac Unit, Kaufman & Stucky Unit	35,36-21S-3W 1,2-22S-3W	590	300	Hunt	3550	8	4	0	2	0	No*
10729	--	Hollow-Nikkel	Brunson-Spines	(W) Hollow-Nikkel Water- flood Proj.	Schroeder Unit, Hollow-Nikkel Unit	32-21S-3W 33-21S-3W 4-22S-3W	960	320	Hunt	3500	20	8	4	0	3	No*
HARVEY-MCPHERSON COUNTIES TOTALS (Reported)							1,550	620				12	4	2	3	
HODGEMAN COUNTY																
14869	--	Buda Southeast	American Petrofina Co. of Texas*	(W) Cheney	Cheney	1,2-21S-26W	160	0	Miss	--	--	1	0	0	0	Yes
11855	No	Eakin Northwest	Phillips Petroleum Co.*	(P) Huling	Huling†	15-21S-21W	120	120	Miss	4325	15	2	0	0	0	Yes
16699	--*	Goebel East	Pickrell Drilling Co.	(P) Hollenbeck A	Goebel East Unit	13,24-21S-24W	560	0	Miss	4460	10	6	0	0	0	Yes
7630	Yes	Hallet	Kewanee Oil Company	(P) Hallet Waterflood	Hallet Waterflood	15,22-22S-25W	640	320	Miss	4597	64	10	1	0	0	Yes
16343	--	Hanston-Oppy	Kaiser-Francis	(D) Sipes	Sipes	22-22S-22W	160	0	Top	3572	--	2	0	0	0	Yes
13232	--	Hanston-Oppy	Sun Oil Company	(P) So. Bamberger Repressuring	S. Bamberger	20-22S-22W	640	0	Miss	4528	22	5	0	0	4	Yes
14233	No	Hanston-Oppy SE	Petroleum, Inc.	(P) Housman Pilot Flood Project	Housman	3-23S-22W	160	0	Miss	4427	--	2	0	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
17586	--	Lippoldt	Texaco Inc.	(P) E.F. Lippoldt	Lippoldt "B", Lippoldt, Lippoldt	13-23S-23W 14-23S-23W 15,24-23S-23W	--	--	Miss	4556	71	-	-	-	-	---
12365	No	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	Marm	4377	20	3	0	0	0	Yes
HODGEMAN COUNTY TOTALS (Reported)							2,960	480				33	1	0	4	
JACKSON COUNTY																
12576	--	Leach	Eureka Drilling Company	(D) Leach	Leach, Beightel, Hladky	15-7S-13E 21-7S-13E 22-7S-13E	400	600	Hunt	2700	6	4	-	0	0	Yes
JOHNSON COUNTY																
11600 11601	No	Gardner	Mo-Kan Oil Group	(P) M,K,B & G Flood	McCann & McCann-B, Bigelow, Griffin & Knabe	15-14S-22E	25	5	Bartl	825	10	6	0	1	0	Yes
11600	No	Gardner	Rader Oil Company	(P) Knabe-A & Roberts	Knabe-A, Roberts	10-14S-22E 11-14S-22E	5	0	Squir	700	10	7	0	1	0	No*
11601	No	Gardner	Rader Oil Company	(D) McCann-A	McCann-A	14-14S-22E	15	5	Bartl	825	10	3	0	0	0	Yes
JOHNSON COUNTY TOTALS (Reported)							45	10				16	0	2	0	

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

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)						Remarks
	Active	In-active	Drilled 1974	Abd. 1974				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods		
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974	Cum. 12-31-74	
13454	8	0	0	0	Irreg	20"	541	Prod	--	--	U	1967	Wat + Gas Cap	155/1200	38	--	1,420,649	6,765,300	90,676	2,546,307	10,000	64,482	
10087	19	9	0	0	5-spot	115	754	Prod + Equus Beds	75	40	M	1963	S Gas	--	36	--	5,231,477	93,784,860	83,055	1,944,289	83,055	1,944,289	
11005 11876	2	0	0	0	Irreg	450	3240	Prod + Equus Beds	35	--	F+U	1964	Wat + S Gas	1/3	42	--	2,365,659	14,707,182	50,144	1,277,308	50,144	620,254	*Was Kantor Oil Company
	29	9	0	0													9,017,785	115,257,342	223,875	5,767,904	143,199	2,629,025	
6889	0	2	0	--	Peri	0	0	Prod	--	--	U	1959	Wat + S Gas	2/5	40	--	0	6,200,639	4,541	566,168	4,541	566,168	*Temp. shut down
10729	0	2	0	0	Peri	0	0	Equus Beds	25	140	F	1963	S Gas + Grav	7/10	40	--	0	16,012,265	24,866	886,501	24,866	886,501	*Temp. shut down
	0	4	0	0													0	22,212,904	29,407	1,452,669	29,407	1,452,669	
14869	1	0	0	0	Line	0-Vac	33	Prod	--	--	U	1969	Wat	1/1	37.5	--	12,197	38,197	4,395	55,666	0	0	*Was Imperial Oil Co.
11855	1	0	0	0	Irreg	750	385	Prod + Cedar Hills	900	200	T	1965	Wat	--	35	--	140,390	1,305,128	21,951	354,179	11,630	79,440	*Was Beardmore Oil Co.
16699	1	0	0	0	Irreg	0	170	Prod	--	--	U	1972	S Gas	54/21	36	2.5 Est.	62,050	121,670	19,000	444,519	0	0	†Includes Huling prod. only *Unitized 1/1/75
7630	4	0	0	1	Peri	1500	438	Gravel	405	--	F	1960	Wat	552/180	38	--	639,673	9,257,956	42,500	1,914,878	36,053	955,426	
16343	1	0	0	0	Irreg	Grav	815	Prod	--	--	U	1972	Gas Exp	--	34	--	297,475	573,050	4,360	380,374	0	0	
13232	1	0	0	1	Irreg	400	1276	Prod	--	--	U	1966	Wat	1/10.8	36	--	465,809	3,715,414	27,165	701,788	500	8,275	
14233	1	0	0	0	Irreg	Vac	500	Prod	--	--	T	1968	Wat + S Gas	4/11	30	--	182,516	543,718	16,135	183,058	0	0	
16441	1	0	0	0	Irreg	Vac	278	Prod	--	--	T	1972	S Gas	--	--	--	101,498	182,432	0	0	0	0	
17586	--	--	--	--	---	--	--	Prod	--	--	U	1974	S Gas	--	35.8	--	70,491	70,491	7,299	7,299	--	--	
12365	1	0	0	0	Irreg	580	560	Prod + Unknown	70	15	M	1966	Wat	--	36	--	204,470	1,705,366	6,347	174,679	3,940	42,409	*Was Beardmore Oil Co.
16908	1	0	0	0	Irreg	0	63	Prod	--	--	U	1973	S Gas	23/39	24	3 Est.	22,995	47,115	10,401	183,239	0	0	
	13	0	0	2													2,199,564	17,560,538	159,553	4,399,679	52,123	1,085,550	
12576	1	--	0	--	---	0	2000	Prod	--	--	U	1966	Wat	1/1	26	--	60,000	1,020,000	2,183	--	--	--	
11600	3	0	0	0	Irreg	275	80	Prod	--	--	U	1963	Grav	9/1	22	--	29,000	360,028	4,000	--	3,200	--	
11601	1	0	0	0	Irreg	40	5	Prod	--	--	U	1973	S Gas	25/1	29	--	1,800	2,125	1,200	--	0	0	*Insufficient wat supply
11601	2	0	0	0	Irreg	0	30	Prod	--	--	U	1964	Grav	9/1	22	--	21,000	195,000	2,500	--	925	--	
	6	0	0	0													51,800	557,153	7,700	--	4,125	--	

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1974—Continued

County	Is proj. uni-tized?	Field	Operator	Type and project name	Lease name	Location	Acres in project		Oil producing zone			Oil producing wells (1974)				Has inj. been continuous?
						S - T - R	Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
KEARNY COUNTY																
16958	--	Pleasant Prairie	Helmerich & Payne, Inc.	(P) Pleasant Prairie	White "O", USA "B"	13-26S-35W 14-26S-35W	--	--	Morr-Miss	4966	24	1	0	0	0	Yes
KINGMAN COUNTY																
13079 14912	--	Alameda	Texaco Inc.	(P) Alameda	Martenev, G. Richardson, J.S. Gurtner, Nunnemaker, H. Krehbiel, G.W. Richardson, T. Lecklider, T. Lecklider "B", J. Flickner, Jr., L. Lord, T. Lecklider "C", L. Lord, 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 Simp KC	4345	10	20	-	-	-	Yes
16295	No	Broadway West	Lario Oil & Gas Company	(P) Clouse	Clouse	18-28S-5W	0	--	Miss	3850	90	0	0	0	0	Yes
5422	--	Casley	Petroleum Management, Inc.	(W) Casley	Casley	11-28S-5W	80	0	Miss	3780	9	1	0	0	-	---
7702	--	Cunningham	Skelly Oil Company	(W) Cunningham Field	Miles "B", Miles "A"	19-27S-10W 30-27S-10W	320	0	L-KC	3400	8	6	3	0	0	Yes
12870	--	Orsemus	Texaco Inc.	(P) Orsemus Unit	J. Graber, B.J. Stucky, O.W. Tanner	30-29S-5W	160	320	Simp	4472	--	1	2	-	-	Yes
16625	--	Spivey-Grabs-Basil	Picrell Drilling Company	(P) Maple G	Maple G	30-29S-6W	40	0	Miss	4116	36	1	0	0	0	Yes
5576	--	Spivey-Grabs-Basil	Sun Oil Company	(D) Higgins	Higgins	9-30S-8W	80	0	Miss Ch	4185	45	3	0	0	0	Yes
KINGMAN COUNTY TOTALS (Reported)							2,600	320				32	5	0	0	
KINGMAN-PRATT COUNTIES																
6106	Yes	Cunningham	Skelly Oil Company	(W) Cunningham "B" Unit	No. Ratcliff, J.M. Ratcliff, Interurban Realty, John Miller, Krehbiel "A", East Maxedon, So. Maxedon, West Maxedon (Wells Nos. 1 & 3), J.A. Hoagland, C.J. Moore, West Maxedon (Well No. 2), C.H. Lakin, G.D. Miller	19-27S-10W 30-27S-10W 31-27S-10W 24,25-27S-11W 25-27S-11W 36-27S-11W	800	575	L-KC	3400	16	12	1	0	0	Yes
KINGMAN-SEDGWICK																
5288	--	Bartholomew	Maurice L. Brown Trust	(W) Bartholomew Unit	Bartholomew Unit	29,30,31-27S-4W 36-27S-5W 6-28S-4W 1-28S-5W	0	0	Miss	3700	11	11	0	0	2	No*
KIOWA COUNTY																
14550	No	Fruit	J. Mark Richardson	(P) Isham Unit	White, Woodard, Fankhouser, Davis	27-27S-16W 32-27S-16W 33-27S-16W	640	0	Kind	4630	20	8	0	0	0	Yes
14366	Yes	Nichols	Misco Industries, Inc.*	(W) Nichols Unit	Beal, Pardoe, Unruh, Janson, Thorn, Yohn, Zentz, Koehn, Schmidt, Greenwood, McGary, Lewis, Brown, Willems, Dunn, Geo. Parkins, J.C. Parkins	20,21,22,27,28 29,31,32,33 34-29S-18W 5,6-30S-18W	5800	--	Miss Ch	4904	5-50	6	0	0	0	No
KIOWA COUNTY TOTALS (Reported)							6,440	0				14	0	0	0	
LABETTE COUNTY																
14677	--	Coffeyville-Cherryvale	John T. Davis	(P) Coleman	Coleman	2-33S-17E	40	0	Bartl	750	0	2	0	0	0	Yes

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

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)						Remarks		
	Active	In-active	Drilled 1974	Abd. 1974				Source	Depth, ft.	Thick., ft.						Type	Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods			
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974		Cum. 12-31-74	
16958	1	0	0	0	Irreg	Vac	23	Prod	--	--	U	1973	---	2/3	35.2	--	10,078	15,840	7,544	15,620*	0	0	*Since 1/1/73	
13079 14912	8*	-	-	-	Peri	680	353	Prod	--	--	U	1970	Wat	86550/ 29130	43	.71	1,032,081	4,748,458	264,704	5,669,104	45,213	259,195		*Injecting KC only
16295	1*	0	0	0	Irreg	Grav	3	Prod	--	--	U	1971	S Gas + Gas Exp	0/5	--	--	1,086	3,899	0	0	0	0	0	*Gas
5422	1	0	0	0	Irreg	0	63	Prod	--	--	U	1957	S Gas	2/3	35	--	23,436	610,546	3,884	24,259	3,884	27,259		
7702	4	0	0	0	Irreg	0	395	Prod + Sh Wat	80	--	M	1961	S Gas	--	34	--	577,150	5,409,838	29,689	1,805,529	29,689	493,469		
8651																								
12870	1	0	0	-	Irreg	--	--	Prod	--	--	U	1966	---	144/ 171	36.8	--	192,231	2,081,454	2,911	30,186	--	--		
16625	1	0	0	0	Irreg	0	10	Prod	--	--	U	1972	S Gas	7/13	33	2.5 Est.	3,650	8,406	2,588	30,527	0	0		
5576	1	0	0	0	Irreg	500	196	Prod	--	--	T	1957	S Gas	2.3/1	36	3.1	71,539	604,801	5,750	345,075	500	2,247		
	<u>17</u>	<u>0</u>	<u>0</u>	<u>0</u>													<u>1,901,173</u>	<u>13,467,402</u>	<u>309,526</u>	<u>7,904,680</u>	<u>79,286</u>	<u>782,170</u>		
6106	8	5	0	0	Irreg	150	332	Prod + Sh Sd	80	--	M	1958	S Gas	--	36	--	969,729	21,082,725	21,177	11,248,423	21,177	711,337		
5288	0	0	0	0	Peri	0	0	---	--	--	U	1957	Wat + S Gas	--	36	--	0	9,369,243	12,031	3,330,258	0	269,371		*Depleted
14550	1	0	0	0	Irreg	Vac	--	Prod	--	--	U	1968	Wat + S Gas	4/1	35	--	45,000	381,150	11,256	113,456	--	--		
14366	0	0	0	0	---	--	--	---	--	--	-	--	---	--	--	--	0	--	8,867	--	0	--		*Was Gulf Oil Corp, et al
	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>													<u>45,000</u>	<u>381,150</u>	<u>20,123</u>	<u>113,456</u>	<u>0</u>	<u>0</u>		
14677	2	0	0	0	Irreg	0	10	Prod	--	--	U	1960	S Gas	4/1	31	--	3,500	30,500	574	--	250	2,320		

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1974—Continued

County	Project no.	Is proj. un- dized?	Field	Operator	Type and project name	Lease name	Location		Acres in project			Oil producing zone		Oil producing wells (1974)				Has inj. been con- tinuous?
							S - T - R		Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
LABETTE COUNTY (concl.)																		
	7845	--	Coffeyville-Cherryvale	Dodson Production Company	(P) Utter	Utter	23-32S-17E		40	0	Bartl	660	15-30	1	4	0	0	No
	9483	--	Coffeyville-Cherryvale	Dodson Production Company	(W) Perry	Perry	25-32S-17E		20	--	Bartl	650	10-20	10	0	0	0	Yes
	16032	--	Coffeyville-Cherryvale	Dodson Production Company	(D) Foster	Foster	24-32S-17E		5	0	Bartl	700	15	1	0	0	0	Yes
	11991	No	Coffeyville-Cherryvale	Sekan Drilling Company	(P) Ord (Spradling)	Ord (Spradling)	26-33S-17E		--	--	Bartl	650	40	10	16	0	-	No*
	6323	No	Mound Valley	Vot Oil Company	(W) Merrick	Merrick	33-32S-18E		80	--	Bartl	579	23	12	-	15	2	Yes
LABETTE COUNTY TOTALS (Reported)									185	0				36	20	15	2	
LABETTE-MONTGOMERY COUNTIES																		
	14745	--	Coffeyville-Cherryvale	Wayne Gregory*	(D) ---	Gregory, Marchant	34,35-32S-17E 3-33S-17E		240	100	Bartl	--	--	12	9	0	10	No†
LANE COUNTY																		
	16555	--	Pendennis South	Helmerich & Payne, Inc.	(P) Leighton "A"	Anderson, Jones "D", Leighton "A"	33-16S-27W 4-17S-27W		--	--	L-KC	4120	20	5	0	0	0	Yes
LINN COUNTY																		
	9576	--	Goodrich-Parker	Kent Drilling Company*	(P) Linn Flood	Bertha Nolin	23-19S-22E		25	0	Bartl	650	15	4	0	0	3	No†
	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	Squir	600	30	99	0	0	0	Yes
	454	Yes	LaCygne-Cadmus	J & J Oil Company*	(W) Teagarden	Teagarden	2-20S-23E		160	0	Peru	160	7	2	1	1	-	Yes
	12025	Yes	LaCygne-Cadmus	J & J Oil Company*	(W) Person	Person	10-20S-23E		240	80	Peru	160	7	17	2	1	0	Yes
	15290	No	LaCygne-Cadmus	Oil Patch Pump & Supply*	(W) LaCygne Project	Edith M. Calvin	35-19S-24E		105	0	Squir	400	10	5	0	0	0	No†
	"	No	"	Lester Bailey*	(W)+ Calvin (P)	Edith Calvin	35-19S-24E		105	0	Squir	200	9	3	-	-	-	Yes
LINN COUNTY TOTALS (Reported)									2,900	80				183	214	2	3	
(Includes projects in supplemental list.)																		
LINN-MIAMI COUNTIES																		
	13055	--	Beagle	Robert A. Mason	(W) S. Beagle Field	Cook-Day	15,22-19S-22E		40	0	Squir	480	15	11	0	0	0	Yes
LYON COUNTY																		
	5671	--	Rock Creek	C.E. Murphy	(P) ---	Murphy	29,32-21S-11E		400	--	Bartl	1929	12	6	-	0	0	Yes
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	No	Georob	Colorado Oil Company	(D) Robinson	Robinson	1-18S-2W		40	0	Miss Ch	2790	7	3	0	0	0	Yes
	1911	--	Graber	George R. Hess*	(D) Graber Water Flood	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	20-21S-1W 29-21S-1W		980	640	Hunt 1m	3280	30	16	0	0	0	Yes
	2434																	
	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	Hunt 1m	3285	25	2	0	0	0	Yes

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

Project no.	Injection Wells				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)						Remarks			
	Active	In-active	Drilled 1974	Abd. 1974			Injection Pattern	Source	Depth, ft.	Thick., ft.						Type	Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods				
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974		Cum. 12-31-74		
7845	0	1	0	0	Irreg	--	--	---	--	--	-	1959	---	--	33	--	--	--	160	--	--	--			
9483	2	0	0	0	Irreg	250	35	Prod	--	--	U	1962	Gas Exp	2/3	22	--	--	--	1,000	--	--	--			
16032	1	0	0	0	Irreg	Grav	5	Prod	--	--	U	1971	Grav	2/3	22	--	--	--	320	--	--	--			
11991	-	-	-	-	---	--	--	Prod	--	--	-	--	Grav	--	34	--	--	0	--	1,800	--	0	--	*No water injected	
6323	1	-	-	-	Line	200	150	Prod + Surface	--	--	F	1958	Grav	1/5	31.7	--	10,950	--	3,072	109,884	1,976	--	--		
	<u>6</u>	<u>1</u>	<u>0</u>	<u>0</u>													<u>14,450</u>	<u>30,500</u>	<u>6,926</u>	<u>109,884</u>	<u>2,226</u>	<u>2,320</u>			
14745	8	3	0	0	5-spot	200	20	Prod	--	--	U	--	Sd frac & pump	1/9	31	--	54,750	--	894	--	89	--	--	*Was Mapco Inc. †Not able to keep wells pumping	
16555	1	0	0	0	Irreg	0	166	Prod	--	--	U	1972	---	162/120	38	--	64,109	145,730	55,922	178,609	0	0	--		
9576	4	0	0	0	Irreg	400	10	Prod + Hertha	170	6	M	1962	Grav	--	29	--	1,000	250,000	1,095	35,000	1,095	25,000	--	*Was Buddrus & Woods †Not enough water	
3165	87	0	0	0	5-spot	600	9	Prod + Arb	1400	50	M	--	Gas Exp	--	29	--	285,795	14,898,864	5,915	645,845	--	--	--		
454	2	-	0	-	5-spot	150	15	Prod + Pond	--	--	M	1955	Grav	3/1	29	28	7,950	--	731	--	--	--	--	*Was Roxbury Oil Co.	
12025	21	0	1	0	5-spot	150	15	Prod + Pond	--	--	M	1955	Grav	3/1	28	27.5	26,975	--	4,360	--	--	--	--	*Was Roxbury Oil Co.	
15290	0	0	0	0	5-spot	100	100	City wat supply	--	--	F	--	Grav	95/5	--	--	100	100	30	--	--	--	--	*Lester Bailey sold 6/74 to Hughes, Whitley and Osborn; purchased 8/15/74 by Oil Patch	
"	1	0	0	0	4-spot	200	15	Rural pipe line	--	--	F	1969	Grav	10/1	30	--	4,000	18,000	68	--	68	--	--	*Was Marvin Cramer	
	<u>169</u>	<u>212</u>	<u>1</u>	<u>0</u>													<u>680,710</u>	<u>15,435,154</u>	<u>15,972</u>	<u>968,737</u>	<u>2,524</u>	<u>45,720</u>			
13055	10	0	0	0	5-spot	473	7	Prod + Pond	--	--	F	1968	S Gas	5/1	31	20	25,103	692,795	2,906	63,740	2,906	63,740	--		
5671	2	-	0	-	Line	200	--	Prod	--	--	U	1959	S Gas	--	38	--	36,500	--	2,920	--	2,920	--	--		
5631	1	0	0	0	Irreg	0	425	Prod + Chat	3000	4	T	1957	Wat	3/7	35	--	125,000	1,177,425	900	82,000	900	2,408	--		
7365	1	0	0	0	Irreg	Vac	136	Prod	--	--	U	1959	Wat	15/121	35	--	49,739	577,668	4,863	245,726	2,910	26,499	--		
1911	6	0	0	0	Irreg	0	500	Prod	--	--	T	--	S Gas	9/1	44	--	160,000	42,255,000	33,000	15,600,600	33,000	5,081,000	--	*Was Continental Oil Co.	
2434																									
3017	2	0	0	0	Irreg	0	320	Prod	--	--	T	1952	Wat	26/0	40	--	92,000	1,494,122	2,300	1,680,000	2,300	445,697	--	*Was Cities Service Oil	

TABLE 1--ENHANCED OIL-RECOVERY PROJECTS, 1974--Continued

County	Project no.	Is proj. unitized?	Field	Operator	Type and project name	Lease name	Location	Acres in project		Oil producing zone		Oil producing wells (1974)				Has inj. been continuous?	
							S - T - R	Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled		Abd.
MCPHERSON COUNTY (concl.)																	
	17397	--	Graber	George R. Hess	(P) Boesker	Chavez & Boesker	8-21S-1W	560	0	Hunt	3364	4	5	0	0	0	Yes
	4038	--	Gypsum Creek	George R. Hess	(P) Buckeye "C" SWD	Arnold, B Lagree & Goering	16-21S-1W										
						Van Meter A, Van Meter B, Bukey D	17-21S-1W	240	0	Miss	2622	20	4	0	0	0	Yes
	13798	--	Hollow-Nikkel	George R. Hess	(P) Schroeder	Schroeder	32-16S-1W	80	0	Hunt 1m	3418	20	0	0	0	0	Yes
	1295	No	Jenday	Alfred D. Koehn*	(D) Wedel B S.W.D.	Wedel B	5-17S-1W	--	--	Miss Ch	2940	30	6	0	0	0	Yes
	5715	--	Jenday	Alfred D. Koehn*	(D) Ryno S.W.D.	Ryno	28-21S-3W	--	--	Miss Ch	2938	30	2	0	0	0	Yes
	15232	Yes	Johnson	David Litan*	(P) Kasey-Colburn	Kasey A, Kasey B, Colburn	6-19S-1W	320	--	Miss	2990	110	3	1	0	0	Yes
	11527	No	Lindsborg	Leonard L. Bruce	(W) R.A. Johnson	R.A. Johnson	35-19S-3W	160	--	Maq	3370	10	1	0	0	1	No*
	15946	--	Lindsborg	Tenneco Oil Company	(W) Community B	Community B	19-17S-3W	--	--	Viola	3300	--	1	1	0	0	---
	7085	No	McPherson	Lawrence & Bush	(W) Anderson B & Johnson	Johnson, Anderson A, Anderson B, Chindberg	8-17S-3W	400	0	Maq KC 1m	2300	10	13	1	1	0	Yes
	10429						30-13S-2W										
							31-18S-2W										
	7951	No	McPherson	Mead Production Company	(W) O.T. Bentson	O.T. Bentson	32-18S-2W	60	20	KC 1m	2350	12	3	0	0	0	Yes
	6179	--	McPherson	Jo Rierson*	(W) ---	Rolander	32-18S-2W	160	--	KC 1m	2340	10	3	-	-	-	Yes
	2158	--	Ritz-Canton	An-Son Corporation*	(D) Hull	Hull, Decker, Fleming	30-18S-2W	500	240	Miss	2889	40	3	3	0	0	Yes
	3034	--	Ritz-Canton	An-Son Corporation*	(D) Giffin "A"	Meyers	11-19S-2W	160	300	Miss	2889	--	3	0	0	0	Yes
	5630	--	Ritz-Canton	George R. Hess	(P) H.P. Unruh	H.P. Unruh, Maude Smith	14-19S-2W	160	0	Miss	2976	25	4	0	0	0	Yes
	5682	--	Ritz-Canton	George R. Hess	(P) Flook S.W.D.	Flook, Johnson	16-19S-2W	320	0	Miss	2945	8	2	0	0	0	Yes
	8148	--	Ritz-Canton	George R. Hess	(P) Thompson B	Thompson B, Thompson A	1-20S-2W	240	0	Miss	2943	25	4	0	0	0	Yes
	17373	--	Ritz-Canton	George R. Hess	(P) G.A. & Della Nelson	G.A. Nelson, Frank Hill, W.W. Johnson	22-19S-2W	400	0	Miss	2953	9	14	0	0	0	Yes
							4-19S-2W										
	17403	--	Ritz-Canton	George R. Hess	(P) Marvin Hill	Marvin Hill, Peterson, Edna Hill, Pitts, Sadey	3-19S-2W	640	0	Miss	2955	8	8	0	0	0	Yes
	2039	No	Ritz-Canton	Hillenburg Oil Company*	(D) F.A. Lovett	F.A. Lovett	2-19S-2W	160	0	Miss	2916	59	3	0	0	0	Yes
	9787						13-19S-2W										
	6975	No	Ritz-Canton	Hillenburg Oil Company*	(D) Unruh	Unruh	26-19S-2W	160	0	Miss	2945	11	4	0	0	0	Yes
	7969	No	Ritz-Canton	Hillenburg Oil Company*	(D) Eaton-Kundson	Kundson, Eaton	23-19S-2W	240	0	Miss	2930	30	7	1	0	0	Yes
	7971	No	Ritz-Canton	Frank Jones Oil Operations	(P) McPherson	Finkle	26-19S-2W	160	0	Miss	2900	8	5	0	0	0	Yes
	14280	No	Ritz-Canton	Frank Jones Oil Operations	(P) Ritz-Canton	Opal Russell	23-19S-2W	160	75	Viola 1m	3362	8	1	0	0	0	Yes
	3476	No	Ritz-Canton	Alfred D. Koehn*	(D) Unruh S.W.D.	Unruh	26-19S-2W	--	--	Miss Ch	2915	50	2	0	0	0	Yes
	5844	--	Ritz-Canton	Alfred D. Koehn*	(D) Miller S.W.D.	Miller	36-19S-2W	--	--	Miss Ch	2932	40	2	0	0	0	Yes
	4067	--	Ritz-Canton	Homer G. Krehbiel, Sr.	(D) Koehn B	Koehn B	34-19S-2W	80	--	Miss	2963	5	2	-	2	-	Yes
	8813	--	Ritz-Canton	Homer G. Krehbiel, Sr.	(D) Lacquement	Lacquement	20-19S-1W	80	--	Miss	2980	5	3	-	4	-	Yes
	6760	No	Ritz-Canton	Ray Perera*	(D) Drum-Somers	Drum (Somers)	35-19S-2W	160	0	Viola	3480	15	1	-	0	-	Not
	7076																
	3387	--	Ritz-Canton	Elmer Unruh	(D) Wiles	Wiles	25-19S-2W	140	0	Miss Ch	2930	25	4	0	0	0	Yes
	14770	--	Round Hill	Leonard L. Bruce	(D) ---	Krehbiel A	33-18S-1W	20	0	Miss	2940	10	1	-	0	0	Yes
	3219	--	Roxbury South	Elmer Unruh*	(D) ---	Boyd #2, Boyd SWD, Tinkler #1, Tinkler #2	20-17S-1W	240	0	Miss Ch	2650	80	3	0	0	0	Yes
							29-17S-1W										
	6463	--	Roxbury South	White Hawk Oil Company*	(D) Bishop-Lilly Unit	Bishop, Lilly	30-17S-1W	60	0	Miss	2685	5	1	0	0	0	Yes
	17536																
	14203	--	Voshell	Herman J. Schrag	(W) Schrag Flood Project	Schrag, Goering	26-20S-3W	80	60	Miss	3090	3	3	0	0	0	Yes
	17665	No	Welch-Bornholdt	Dick Hess	(D) Knackstedt	Knackstedt	30-20S-5W	80	0	Miss	3300	40	1	-	-	-	No*
MCPHERSON COUNTY TOTALS (Reported)								7,600	1,375				148	7	7	1	
MCPHERSON-MARION COUNTIES																	
	13747	Yes	Goessel	Donald C. Slawson	(W) Goessel Hunton Waterflood	Goessel Hunton Waterflood Unit	1,12-21S-1W	800	0	Hunt	3400	10	8	3	0	0	Yes
							6-21S-1E										
MARION COUNTY																	
	8353	--	Covert-Sellers	Berry Petroleum Company, Inc.	(-) ---	Stovall #1	28-21S-4E	--	--	Hunt	--	--	-	-	-	-	---
	8119*	No	Covert-Sellers	Hillenburg Oil Company†	(-) D.K. Reamey	D.K. Reamey	17-21-4E	--	--	L-KC	1750	4	-	-	-	-	---

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

Project no.	Injection Wells				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)						Remarks	
	Active	In-active	Drilled 1974	Abd. 1974			Injection Pattern	Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods			
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974	Cum. 12-31-74		
17397	1	0	0	0	Irreg	0	35	Prod	--	--	T	1974	S Gas	9/1	40	--	7,000	7,000	3,541	67,000	2,200	2,200		
4038	1	0	0	0	Irreg	0	400	Prod	--	--	T	1954	Wat	1/1	35	--	145,000	1,755,160	6,500	270,000	6,500	19,500		
13798	1	0	0	0	Irreg	0	200	Prod	--	--	T	1967	Wat	9/1	40	--	40,000	387,570	3,500	110,000	3,500	69,120		
1295	1	0	0	0	Irreg	Vac	600	Prod	--	--	T	--	---	--	36	--	216,000	--	--	--	6,480	--	*Was Barbara Oil Co.	
5715	1	0	0	0	Irreg	Vac	600	Prod	--	--	T	--	---	--	37	--	216,000	--	3,240	--	--	--	*Was Tenneco Oil Co.	
15232	1	1	--	--	Irreg	0	600	Prod	--	--	U	1969	Wat	1/13	38	--	219,000	1,378,000	5,090	--	0	0	*Was Clarence Warner	
11527	0	--	0	1	Line	Vac	50	Surface	40	10	F	1965	Wat	5/99	35	--	18,250	476,950	1,069	--	100	10,275	*Too much water produced	
15946	1	0	0	0	Irreg	--	200	Prod	--	--	T	1971	S Gas	--	--	--	73,000	292,000	406	364,692	0	0		
7085 10429	3	0	0	0	Irreg	350	250	Prod + Miss	1m	3000	--	U	1959	S Gas	4/1	--	--	247,793	2,356,027	22,411	762,980	19,838	235,596	
7951	1	0	0	0	Irreg	25	100	Prod + Miss	Ch	3000	--	U	1960	S Gas	1/9	36	--	32,850	873,569	1,880	80,012	--	--	
6179	1	--	--	--	Irreg	315	300	Prod + Miss	Ch	--	--	T	1972	Grav	1/3	34	--	110,000	220,000	912	--	--	--	*Was Leonard Bruce
2158	1	0	0	0	Irreg	Grav	6000	Prod	--	--	U	1949	S Gas	--	35	--	2,190,000	79,099,014	27,260	--	27,260	--	*Was Kathol Petroleum	
3034	1	0	0	0	Irreg	Grav	6040	Prod	--	--	U	1952	S Gas	--	36	--	2,204,600	61,689,196	13,797	--	13,797	--	*Was Kathol Petroleum	
5630	1	0	0	0	Irreg	0	200	Prod	--	--	T	1957	Wat	1/1	35	--	75,000	1,094,650	7,081	150,000	6,000	7,000		
5682	1	0	0	0	Irreg	0	240	Prod	--	--	T	1958	Wat	7/3	35	--	80,000	510,250	2,000	160,000	1,100	1,200		
8148	4	0	0	0	Irreg	0	70	Prod + Chat	2950	--	T	1960	Wat	2/3	35	--	30,000	382,900	1,500	190,000	1,500	1,800		
17373	1	0	0	0	Irreg	0	700	Prod	--	--	T	1974	S Gas	1/9	37	--	15,700	15,700	17,808	560,000	9,250	9,250		
17403	1	0	0	0	Irreg	0	260	Prod	--	--	T	1974	S Gas	1/1	36	--	1,560	1,560	8,402	198,000	4,000	4,000		
2039	1	0	0	0	Irreg	Vac	1500	Prod	--	--	U	1948	S Gas	--	34	--	548,000	--	6,694	--	0	--	*Was Schusterman Oil Co.	
9787																								
6975	1	0	0	0	Irreg	Vac	500	Prod	--	--	U	1959	S Gas	--	35	--	182,500	1,047,500	4,775	--	0	--	*Was CRA	
7969	2	0	0	0	Irreg	Vac	1000	Prod	--	--	U	1960	S Gas	--	34	--	710,000	--	10,376	--	0	--	*Was CRA	
7971																								
7617	1	0	0	0	Irreg	0	200	Prod	--	--	U	1952	Grav	8/92	35	--	365,000	--	7,000	--	1,200	--		
14280	1	0	0	0	Irreg	0	150	Prod	--	--	U	1968	Wat	4/96	36	--	52,000	--	2,300	--	0	--		
3476	1	0	0	0	Irreg	Vac	600	Prod	--	--	T	--	---	--	34	--	216,000	--	1,800	--	--	--	*Was Colorado Oil & Gas	
5844	1	0	0	0	Irreg	Vac	--	Prod	--	--	T	1956	---	--	34	--	144,000	--	3,240	--	--	--	*Was C.J. Snedeger	
4067	1	--	--	--	Irreg	--	50	Prod	--	--	T	1965	Grav	--	36	--	1,650	164,250	--	--	--	--		
8813	1	--	--	--	Irreg	--	140	Prod	--	--	T	1961	Grav	2/3	37	--	140	453,600	--	--	--	--		
6760	1	1	--	--	Irreg	0	400	Prod	--	--	T+	1957	Wat	--	34	--	100,000	6,555,000	2,490	--	0	--	*Was Nadel & Gussman †Re-cycled brine	
7076																								
3387	1	0	0	0	Irreg	Vac	275	Prod	--	--	U	--	Grav	3/97	35.7	--	100,550	--	4,070	--	407	--		
14770	1	0	0	0	Line	5	20	Prod	--	--	U	--	Wat	3/7	36	--	7,300	21,900	1,679	--	500	1,000		
3219	1	0	0	0	Irreg	Vac	500	Prod	--	--	-	1952	Grav	--	35	--	162,000	--	2,900	--	--	--	*Was Guy Schulz	
6463	1	1	0	0	Irreg	0	355	Prod	--	--	U	1958	Wat	--	32	--	129,575	3,286,065	1,667	--	1,667	44,587	*Was Natural Gas & Oil	
17536																								
14203	1	0	0	0	4-spot	100	50	Prod + Shallow Sand	80	12	M	1968	S Gas	2.5/22	36	--	18,250	112,825	1,278	41,913	1,278	8,006		
17665	1	1	--	1	Irreg	0	1000	Prod	--	--	T	1974	S Gas	1.5/200	34	--	1,000	--	10	--	0	--	*Just started Dec., 1974	
49	4	0	2														9,086,457	207,684,901	217,739	20,562,923	145,687	5,969,138		
13747	7	1	0	0	Peri	565	255	Prod + Miss	3050	100	T	1968	S Gas	1/1	40	3 Est.	650,900	3,245,060	22,488	647,194	20,983	136,878		
8353	--	--	--	--	---	--	--	---	--	--	-	--	---	--	--	--	--	--	--	--	--	--	--	
8119	--	--	--	--	---	--	--	---	--	--	-	--	---	--	--	--	--	--	--	--	--	--	--	*Not started yet †Was Terra Resources, Inc.

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1974—Continued

Kansas Geol. Survey Energy Resource Series 5, 1975

County	Is proj. unit- ized?	Field	Operator	Type and project name	Lease name	Location S - T - R	Acres in project		Oil producing zone		Oil producing wells (1974)				Has inj. been con- tinuous?		
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled		Abd.	
MARION COUNTY (concl.)																	
17154	--	Elbing North	American Petrofina Co. of Texas*	(P) DeForrest "E"	J. DeForrest, J.J. Ryan	27-22S-4E	320	0	Miss	2447	1	7	1	0	0	Yes	
17659	No	Fanska	Dick Hess	(D) Law	Law	6-17S-1E	40	0	Miss	2691	20	1	1	9	7	No*	
13045	--	Lost Springs	Roland Jones	(D) Huna Project	A. Melcher	20-18S-4E	320	320	Miss	2403	40	2	-	0	1	Yes	
6630	--	Lost Springs	K.O.T., Inc.*	(D) ---	Martin	2-17S-4E	--	--	Miss	2310	50	3	1	-	-	Yes	
MARION COUNTY TOTALS (Reported)							680	320					13	3	9	8	
MEADE COUNTY																	
6354	--	Adams Ranch	Cotton Petroleum Corp.*	(D) Adams Ranch Field	Adams "D" (Formerly Adams J)	25-34S-30W	240	80	Marm	4368	4	1	0	0	1	Yes	
16693	No	McKinney	Skelly Oil Company	(W) I.B. Regier	I.B. Regier	17-33S-27W	640	640	Morr	5710	6	0	0	0	0	---	
4924	Yes	Novinger	Cities Service Oil Co.	(W) Novinger Field Unit	Novinger Field Unit	22,23,26,27, 34,35-33S-30W	3240	0	Marm	5297	15	10	0	0	0	Yes	
16489	No	Singley	Diamond Shamrock Corp.	(P) Ida K. Heinson	Ida K. Heinson	2,3-34S-30W 29-33S-29W	320	80	Morr	5800	12	4	0	0	0	Yes	
MEADE COUNTY TOTALS (Reported)							4,440	800					15	0	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	--	Louisburg	Reese Enterprises, Inc.*	(W) Louisburg	Richmond, Briggs, Miller	28-16S-25E 34-16S-25E	75	9	Peru	330	14	22	-	-	-	---	
11056	--	Louisburg	Reese Enterprises, Inc.*	(W) Louisburg	McHale, Roger	9-17S-25E	105	--	Peru	400	11	30	2	0	-	Yes	
6816	--	Paola-Rantoul	Harold T. Beck	(W) Rantoul Pool	Caylor	36-17S-21E	90	60	Squir	510	20	10	0	0	0	Yes	
4829	No	Paola-Rantoul	Leo Tucker Blackstone*	(W) Schmitt	Schmitt	1-18S-21E 11-17S-22E	160	0	Squir	600	10	4	3	0	-	Not	
4864	--	Paola-Rantoul	Reese Enterprises, Inc.*	(W) KCS	Black, Travis	10-17S-22E	480	--	Squir	700	30	42	-	-	-	Yes	
471	--	Paola-Rantoul	Reese Enterprises, Inc.*	(W) Miami Flood	Murphy, Schendel, Phillips, Cayot	24-16S-21E	--	--	Squir	670	12	25	2	6	-	Yes	
5273																	
MIAMI COUNTY TOTALS (Reported)							990	69					168	9	7	0	
MONTGOMERY COUNTY																	
5236	--	Coffeyville- Cherryvale	Alexanders-Seaton	(W) Clark Hudson	Clark Hudson	17-34S-17E	50	0	Bartl	605	20	9	0	0	0	Yes	
4034	--	Coffeyville- Cherryvale	John T. Davis	(W) Coffeyville Pilot, Davis, King Day	Coffeyville Pilot, Davis, King Day	19-34S-17E 20-34S-17E 30-34S-17E	140	0	Bartl	600	20	15	0	0	0	Yes	
9081																	
13445	No	Jefferson- Sycamore	F.E. Guyot	(D) ---	Harvey	13-34S-15E	160	--	Lay	400	--	3	7	12	-	No	
12123	No	Jefferson- Sycamore	George Kerasotes, et al	(W) Carpenter	Carpenter (Cities Service Gas Co.)	1-34S-15E	20	10	Squir	815	12	-	-	-	-	No*	
10093	--	Jefferson- Sycamore	Layton Oil Company	(W) Bolton Extension	Stocker, Blosser, Hadley, Vineyard, McVey, Patterson	13-33S-14E 24-33S-14E 25-33S-14E 18,19-33S-15E	40	0	Bartl	1170	16	10	0	0	0	Yes	
13620																	
14651	--	Jefferson- Sycamore	Layton Oil Company	(W) Bolton	Sewell, Browning	18-33S-15E	25	0	Bartl	1186	15	7	2	1	0	Yes	
2045	--	Jefferson- Sycamore	Stekoll Petroleum Co.	(P) Fld #3	H.O. Smith, S.R. Springer, L.C. Demott	6-33S-15E	400	--	Bartl	1160	13	11	-	-	1	Yes	
2079																	
2094																	
7871	--	Jefferson- Sycamore	Stekoll Petroleum Co.	(P) Fld #2	Hester, Banks, H.F. Adams, H.F. Adams, Fitzgerald, Weiner	15-34S-15E 16-34S-15E 21-34S-15E	--	--	Way	450	13	48	-	2	-	Yes	
7077	No	Jefferson- Sycamore	Carl D. Wyckoff*	(D) Zinser	Zinser	8-33S-14E	180	--	Bartl	1190	10	3	2	0	2	Yes	
17353	No	Tyro	Collins Oil Company	(W) East Tyro	Collins (Old Harding)	4,5-35S-15E	100	--	Bartl	1220	28	3	0	0	0	Yes	

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

Project no.	Injection Wells				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 (bbl)						Remarks			
	Active	In-active	Drilled 1974	Abd. 1974			Injection Pattern	Source	Depth, ft.	Thick., ft.						Type	Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods				
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974		Cum. 12-31-74		
17154	1	0	0	0	Irreg	50	562	Prod	--	--	U	1973	Wat	1/7	36.9	--	205,195	342,984	3,843	133,240	0	0	*Was El Dorado Refg. Co.		
17659	-	-	-	-	Irreg	--	--	Prod	--	--	T	--	Wat	4/200	35	--	0	--	--	--	--	--	--	*Not started yet	
13045	1	-	0	-	Irreg	--	--	---	--	--	U	1966	Wat	1/9	34	--	50	--	1,978	--	--	--	--		
6630	3	-	-	-	Irreg	0	--	Prod	--	--	U	--	---	--	--	--	--	--	--	--	--	--	--	*Was Burnette-Thompson	
	<u>5</u>	<u>0</u>	<u>0</u>	<u>0</u>													<u>205,245</u>	<u>342,984</u>	<u>5,821</u>	<u>133,240</u>	<u>0</u>	<u>0</u>			
6354	1	0	0	0	Irreg	0	10	Prod	--	--	T	1958	S Gas	--	40	--	3,650	882,107	1,625	109,136	1,625	109,136		*Was Cities Service Oil	
16693	1	0	0	0	Irreg	0	12	Prod + Morr + Ches	5700	--	U	--	Gas Well	*	--	--	4,320	9,865	0	0	0	0		*Gas Trace/24BPD	
4924	11	0	0	0	Line	1188	246	Prod + Perm	400	--	M	1956	S Gas	100/14	45	3.4	986,345	20,084,417	97,569	6,030,002	97,569	2,333,170			
16489	1	0	0	0	Irreg	0	200	Prod	--	--	T	1959	S Gas	--	29.6-	--	2,360	162,000	6,630	365,121	0	0			
	<u>14</u>	<u>0</u>	<u>0</u>	<u>0</u>													<u>996,675</u>	<u>21,138,389</u>	<u>105,824</u>	<u>6,504,259</u>	<u>99,194</u>	<u>2,442,306</u>			
590	15	-	-	-	5-spot	200	10	Prod + Pond	--	--	F	1967	S Gas	3/1	27	20	145,600	538,698	9,409	59,638	9,409	59,638			
13497	31	-	-	-	Line	350	40	Prod	--	--	M	1958	S Gas	95/5	32-	1005	160,375	4,651,983	3,833	368,450	--	--		*Was E.S. & J.M. Cook	
11056	25	-	-	-	Line	295	35	Prod + Hertha	260	5	M	1964	S Gas	95/5	32-34	--	270,000	2,540,000	6,223	111,769	--	--		*Was E. Buddrus, et al	
6816	11	0	0	0	5-spot	500	20	River Gravel	--	--	M	--	Grav	1/4	28-	--	--	--	360	--	360	--	--		
4829	3	0	0	0	4-spot	600	20	Prod + Hertha	270	20	M	--	Grav	--	29	20.9	0	--	370	--	--	--	--		*Was A.B.C. Oil Company †Starting in 1975
4864	24	-	-	-	5-spot	650	18	Prod + Hertha	240	5	-	--	S Gas	95/5	28-29	--	154,300	--	3,650	--	--	--	--	*Was Southern Enterprises	
471	17	-	4	-	5-spot	680	97	Prod + Miss	1240	5	M	--	S Gas	95/5	31	--	280,350	2,257,995	8,873	107,731	--	--		*Was Richard Moherman	
5273																									
	<u>126</u>	<u>0</u>	<u>4</u>	<u>0</u>													<u>1,010,625</u>	<u>9,988,676</u>	<u>32,718</u>	<u>647,588</u>	<u>9,769</u>	<u>59,638</u>			
5236	2	0	0	0	Irreg	275	200	Prod	--	--	U	1968	Gas Exp	--	31	--	2,400	--	2,800	--	1,200	--	--		
4034	14	0	0	0	5-spot	200	5	Prod	--	--	U	1954	S Gas	9/1	32	--	24,500	2,420,561	2,727	--	2,727	110,832			
9081																									
9082																									
13445	0	-	2	-	Irreg	--	--	Prod	--	--	M	--	Grav	9/1	31	--	0	--	100	--	0	--	--		
12123	-	-	-	-	5-spot	500	5	Prod	--	--	T	1965	S Gas	5/10	34	--	--	--	--	--	--	--	--		*Sold to Elton R. Greer Inactive during 1974
10093	17	2	0	0	5-spot	480	35	Prod + Miss 1m	1322	30	U	1967	S Gas	1/8	35	4	217,947	864,032	11,188	49,177	11,188	49,177			
13620																									
14651	5	0	0	0	Irreg	550	27	Prod + Arb	1370	--	U	1968	S Gas	6/1	33	--	49,388	227,275	3,902	15,664	3,902	15,664			
2045	7	0	-	0	5-spot	354	14	Prod + Fresh	--	--	T+	1959	Grav	9/1	36	--	28,770	--	6,038	--	1,509	--	--		
2079																									
2094																									
7871	40	-	-	2	5-spot	275	18	Prod + Sheet water	135	35	T+	1957	Grav	7/3	32	--	262,800	--	15,078	--	8,760	--	--		
7077	1	0	0	0	Irreg	150	15	Prod	--	--	U	1960	Gas Exp	10/1	34	--	5,400	--	562	--	250	--	--		*Was Hester and Wright
17353	1	0	0	0	5-spot	350	100	Prod	--	--	U	1974	Grav	1/9	33	--	21,000	21,000	200	200	0	0			

TABLE 1-ENHANCED OIL-RECOVERY PROJECTS, 1974-Continued

Kansas Geol. Survey Energy Resource Series 5, 1975

County	Project no.	Is proj. uni-tized?	Field	Operator	Type and project name	Lease name	Location		Acres in project		Oil producing zone		Oil producing wells (1974)				Has inj. been continuous?
							S - T - R		Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	
MONTGOMERY COUNTY (concl.)																	
	14036	No	Tyro	Layton Oil Company	(W) Tyro Unit-Friedline & Dunbar Leases	Dunbar, Freidline, Grother, Wilson, Krebs,	33-34S-15E	80	0	Bartl	1162	17	14	0	0	0	Yes
	326	--	Wayside-Havana	Dodson Production Co.	(W) Bragg-Riggle	Krebs Riggle, McKemey,	4-35S-15E 4-34S-14E	--	--	Way	660	30	1	0	0	0	Yes
	3222	--	Wayside-Havana	Hawkins Production Co. H.J. Horton*	(P) Havener	Bragg, Bragg Havener	5-34S-14E 33-33S-14E	--	--	Way	700	30	7	0	0	0	Not
	11712	--	Wayside-Havana	H.J. Horton	(P) Mantooth-Dunham	Mantooth, Dunham	28-33S-14E	240	0	Way	700	30	14	0	1	0	Yes
	15264	--	Wayside-Havana	H.J. Horton*	(P) A.D. Berry	A.D. Berry	33-33S-14E	80	0	Way	735	30	13	0	0	0	Yes
	1439	--	Wayside-Havana	Layton Oil Company*	(W) Wayside	Mitchell, Shearhart, Allen, Dyer Brewer, Garrett Dyer,	32-33S-14E 5-34S-14E	310	0	Way	700	18	29	0	19	0	Yes
	9034					Dalby	7-34S-14E										
	10447					Schneider (Hecht)	16-34S-14E	160	0	Wiser	720	30	4	0	0	0	Not
	10442	--	Wayside-Havana	Layton Oil Company*	(W) Schneider	Schneider (Hecht)	16-34S-14E	160	0	Wiser	720	30	4	0	0	0	Not
	13823	--	Wayside-Havana	Layton Oil Company*	(W) ---	Boan	35-33S-14E	6	0	Way	650	30	2	0	0	0	Not
	10949	No	Wayside-Havana	Nunneley Powell*	(P) Neiswanger	Neiswanger	17-34S-14E	80	0	Bartl	1270	15	7	0	1	0	Yes
	16035	No	Wayside-Havana	Wheeler & Haddan	(D) Snell Unit	Snell, Blex, Brown, Anderson	18-34S-15E	560	80	Way	550	30	33	7	0	-	Yes
MONTGOMERY COUNTY TOTALS (Reported)							(Includes projects in supplemental list.)				2,961	90		253	18	36	3
MORRIS COUNTY																	
	15416	--	Comisky	Maurice L. Brown Trust	(D) Porter "A"	Porter "A"	13-16S-9E	40	0	Viola	2930	18	1	0	0	0	---
MORTON COUNTY																	
	15918	--	Elkhart	Texaco Inc.	(W) Carthage N.E. Morrow A	W. Pritchett "A", W. Pritchett "B"	23-35S-43W	100	--	Morr A	4300	15	2	-	-	-	Yes
	11602	--	Interstate	Anadarko Production 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	35	28	0	1	Yes
	15849	--	Taloga	Anadarko Production 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
	13899	Yes	Taloga	Cities Service Oil Co.	(W) Taloga So. Morrow "G" Sd Unit	Taloga So. Morrow "G" Sd Unit	1,10,11,12,13, 14-35S-42W	3760	0	Morrow "G"	4553	14	13	0	0	0	Yes
	12571	Yes	Wilburton	Cities Service Oil Co.	(P) Wilburton Morr "C" Sd Unit	Wilburton Morrow "C" Sd Unit	28,29,32, 33-34S-41W 4,5-35S-41W	3840	0	Morrow "C"	4900	20	12	0	0	1	Yes
	13848	Yes	Wilburton	Cities Service Oil Co.	(W) Wilburton S-3 Lo Mor Sd Unit	Wilburton S-3 Lower Mor Sd Unit	5-35S-41W	640	0	S-3 Lo Morrow	5050	10	3	1	0	0	Yes
MORTON COUNTY TOTALS (Reported)											13,420	0		72	32	0	2
NEOSHO COUNTY																	
	11382	No	Erie	Graybol Oil Corp.*	(W) Shaw Unit	Luther, Waggoner, McCan	13-28S-19E	40	80	Bartl	600	10- 20	5	9	0	3	Yes
	15249	--	Erie	Graybol Oil Corp.*	(W) Kinne Unit	O.A. Kinne B & M Kinne	13-28S-19E 18-28S-20E	80	0	Bartl	600	10- 20	-	-	1	0	Yes
	15761	No	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	Bartl	600	10- 20	26	4	10	-	Yes
	15675	No	Erie	Oil Patch Supply* (Alfred E. Allison)	(W) Wason Oil	Sam Maphies	27-28S-20E	140	10	Bartl	474	10	6	0	0	0	Yes
	4121	--	Humboldt-Chanute	Walter Lacey	(P) ---	Raymond Fickel	20-28S-18E	20	0	Bartl	795	20	4	0	0	0	No*
	14681	No	Humboldt-Chanute	Layton Oil Company	(W) Earlton	Kepley	18-28S-18E	30	0	Bartl	800	16	3	2	0	0	No

Oros and Saile--Enhanced Oil-Recovery Operations in Kansas, 1974

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)						Remarks	
	Active	In-active	Drilled 1974	Abd. 1974				Depth, ft.	Thick., ft.	Type	Water Injection						Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods					
											1974						Cum. 12-31-74	1974	Cum. 12-31-74	1974	Cum. 12-31-74			
14036	13	0	0	0	5-spot	380	51	Prod + Tuck	1243	23	T	--	S Gas	--	32	--	242,200	427,935	5,013	9,876	5,013	9,876		
326	3	0	0	0	5-spot	150	6	Prod	--	--	T	1970	Gas Exp	33/67	30	--	--	--	5,371	--	--	--	--	
3222	1	0	0	0	Peri	--	--	Prod	--	--	U	1953	Grav	1/2	30	--	4,300	2,017,200	1,216	10,285	0	--	--	*Was Cons. Gas, Oil Mfg. †Injected when available
11712	4	0	0	0	5-spot	440	11.18	Prod	--	--	U	1965	Grav	1/2	29	--	16,327	61,527	4,527	4,973	1,000	19,100		
15264	1	0	0	0	5-spot	Grav	17	Prod	--	--	U	1969	Grav	1/2	29	--	6,205	15,014	1,893	10,702	300	1,820	*Was Horton Oil Company	
1439	23	0	15	0	5-spot	250	9	Prod + Salt Sand	430	30	U	1974	S Gas	1/5	32	--	65,269	136,569	12,806	40,405	8,226	10,226	*Was Horton Oil Company	
9034																								
10447																								
10442	1	0	0	0	4-spot	200	2	Prod	--	--	U	1964	S Gas	1/3	31	--	700	26,000	85	4,785	0	0	0	*Was Bert L. Horton †Mechanical problems
13823	1	0	0	0	Peri	150	11	Prod	--	--	U	1967	S Gas	1/2	30	--	4,015	51,515	314	2,325	314	2,325	*Was Horton Oil Company †Mechanical problems	
10949	-	-	-	-	Irreg	150	20	Prod	--	--	U	1964	Grav	1/3	31	--	7,000	--	3,088	--	0	--	--	*Was Gene Nunneley
16035	1	-	0	-	5-spot	0	10	Prod	--	--	U	1971	Grav	7/3	31	--	3,600	10,900	9,500	--	1,200	--	--	
	145	2	17	2													1,162,071	6,279,528	99,986	148,392	48,839	219,020		
15416	1	0	0	0	Irreg	0	350	Prod	--	--	T	1970	Wat	--	23	--	255,500	1,476,067	319	96,946	0	0	0	
15918	1	-	-	-	Peri	1000	399	Prod + Ogal	225	400	F	1971	S Gas	--	40.4	2	145,635	444,979	36,156	43,658	33,827	41,329		
11602	10	3	0	1	Peri	500	1890	Prod + Ogal	200	100	M	1965	S Gas	1600/1245	39	2.49	5,891,014	63,482,699	1,137,114	11,261,250	1,137,114	9,127,368		
15849	2	0	0	1	Peri	250	1350	Ogal	140	80	F	1971	S Gas	30/5	43.5	2	888,415	2,609,266	7,335	35,309	7,335	35,309		
13899	7	0	0	0	Peri	600	300	Prod + Ogal	200	45	M	1969	S Gas	4.2/1	39	3.15	805,776	4,456,833	79,956	1,538,489	79,956	256,870		
12571	7	1	0	1	Peri	191	982	Prod + Ogal	200	45	M	1966	S Gas + Gas Cap	11.7/1	42	4.51	1,793,504*	11,995,795*	431,102	6,323,439	377,582	2,509,666	*Gas inj. yr. 690,855MCF Gas inj. cum. 4,888,961MCF	
13848	2	0	0	0	Irreg	540	550	Ogallala	200	45	F	1968	S Gas	3499/0	42	4.51	201,984	1,056,551	16,230	507,160	16,230	102,582		
	29	4	0	3													9,726,328	84,046,123	1,707,893	19,709,305	1,652,044	12,073,124		
11382	2	11	0	7	Irreg	400	55	Prod + Surface	--	--	M	1963	S Gas	1/0	32	--	69,066	--	2,904	52,763	2,904	52,763	*Was Gordon Willis	
15249	15	0	0	0	Irreg	650	42	Prod + Surface	--	--	M	1969	S Gas	1/0	32	--	237,825	901,726	24,521	145,621	24,521	145,621	*Was Gordon Willis	
15761	17	-	4	3	Line + Irreg	650	60	Prod + Surface	--	--	M	1970	S Gas	1/0	32	0	269,863	--	23,686	73,545	23,686	73,545	*Was Gordon Willis	
15675	4	0	0	0	5-spot	475	5	Prod	60	10	F	1970	Grav	9/1	32	--	5,475	26,375	2,180	5,753	0	0	*Was Wason Oil Company	
4121	1	0	0	0	Irreg	550	45	Prod	--	--	U	1963	---	1/19	33.6	--	2,000	--	760	--	--	--	*Disposal well	
14681	9	2	0	0	5-spot	630	59	Prod + Sand	400	60	U	1968	S Gas	1/8	33	--	1,766	291,328	282	16,006	282	16,006		

TABLE 1--ENHANCED OIL-RECOVERY PROJECTS, 1974--Continued

County	Project no.	Is proj. uni- tized?	Field	Operator	Type and project name	Lease name	Location		Acres in project		Oil producing zone			Oil producing wells (1974)			Has inj. been con- tinuous?	
							S - T - R		Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled		Abd.
NEOSHO COUNTY (concl.)																		
	11	--	Humboldt-Chanute	Texaco Inc.*	(W)	Russell Block	Russell Block	1,2,10,11,12, 14,15,21,22, 26,27-27S-18E 6,7-27S-19E	3336	--	Bartl	700	0- 40	408	-	-	-	Yes
	264																	
	290																	
	514																	
	741																	
	13477	--	Humboldt-Chanute	Roy Willis*	(D)	Cooper-Pierpont	Cooper-Pierpont	23-27S-11E	--	--	Bartl	775	8	1	0	0	0	Not
	13447?																	
	9986	--	St. Paul-Walnut	Jackson Oil Company	(W)	Casady	Madl, Mitchell, Morgan, Dowling	29-28S-21E	120	--	Bartl	380	20	41	-	0	0	Yes
	6713	--	St. Paul-Walnut	Trico Oil Company*	(W)	Butler	Butler	30-28S-21E	100	--	Bartl	450	16	9	10	-	-	Yes
	16629	Yes	Thayer South	Wright-Erbe-Ross	(P)	Thayer So. Field	Mrs. C.F. Gildart, Ralph Gildart	11-30S-17E	30	0	Bartl	940	3-	4	0	0	0	No*
											Lower	11						
	8145	--	Trent	Erie Oil Company	(W)	---	Edward-Stanley	22-28S-20E	60	--	Bartl	475	16	10	-	0	-	Yes
	8378	--	Trent	Jackson Oil Company*	(W)	McDermed	McDermed, Metzger	22-28S-20E	10	0	Bartl	480	20	26	0	0	0	Yes
	7073	--	Trent	Trico Oil Company*	(W)	Dagget-Hazen	Roy L. Dagget	23-28S-20E	160	--	Bartl	450	16	14	9	-	-	Yes
NEOSHO COUNTY TOTALS (Reported)									4,201		110			557	34	11	3	
NESS COUNTY																		
	9920	No	Aldrich	Thornton E. Anderson*	(D)	Edwards	Edwards	22-18S-26W	40	0	Miss	4500	10	1	0	0	0	Yes
	14618	--	Aldrich	Continental Oil Company	(P)	Aldrich	C.R. Aldrich	7,8-18S-25W	320	0	Miss	4350	12	3	0	-	-	Yes
	2952	--	Aldrich	Hillenburg Oil Company*	(W)	Aldridge	Everett A, Lythe, Harkness C, Thompson, Daisy, Bateman A, Sutton A	22-18S-26W 23-18S-26W 24-18S-26W	100	60	Miss	4430	8	3	0	0	0	Yes
	3740	--	Aldrich	Tenneco Oil Company	(D)	Louise Everett	Louise Everett	8-18S-25W	40	20	Miss	4390	37	1	1	0	0	Yes
	13484	No	Aldrich Northeast	Barnett Oil, Inc.	(P)	Shearer "B"	Shearer "B"	26-17S-25W	80	--	Miss	4300	30	2	0	0	0	Yes
	16010	--	Dumler	Pickrell Drilling Co.	(W)	Dumler Unit	Dumler Unit	2,11-17S-26W	120	80	Miss	4500	15	3	2	0	0	Yes
	16851	No	McDonald Northeast	Palomino Petroleum*	(D)	Crowell	Crowell	34-18S-24W	0	0	L-KC	3735	4	1	0	0	0	Not
	10676	--	Petersilie	Kewanee Oil Company	(W)	Petersilie	Petersilie	14-20S-24W	80	0	Miss	4388	22	2	1	0	0	Yes
	17321	--	Petersilie	Meltzer Oil Company*	(D)	---	Petersilie "A", Petersilie "B"	14-20S-24W	320	--	Miss	4406	4	3	-	-	-	Yes
	17417	No	Prairie Ridge	Empire Drilling Company	(P)	Armstrong	Armstrong	7-16S-26W	120	0	Miss	4520	--	2	-	-	-	Yes
	17407	No	Stutz East	Oil Property Management, Inc.(P)	(P)	Rupp "F"	Stutz "H", Stutz, Rupp "B", Rupp "D", Rupp "E", Rupp "A", Ryan "C"	8-17S-25W 8,17-17S-25W 9-17S-25W 10-17S-25W 16-17S-25W	--	--	Miss	4431	20	8	0	-	0	Yes
NESS COUNTY TOTALS (Reported)									1,780		200			38	5	14	4	
(Includes projects in supplemental list.)																		
NORTON COUNTY																		
	11002	--	Norton	Theodore Gore	(P)	Lawson	Charles Lawson, Scott	36-3S-24W 1-4S-24W	--	--	---	--	--	-	-	-	-	No*
PAWNEE COUNTY																		
	6115	--	Benson	Cities Service Oil Co.	(W)	Benson Unit S.E.	Benson S.E. Unit	31,32-23S-15W	77	35	L-KC	3700	35	4	1	0	3	Yes
	8878	No	Garfield	A.L. Abercrombie, Inc.*	(D)	Hutchinson "D"	Hutchinson "D"	9-23S-17W	30	270	Miss	4228	26	2	0	0	0	Yes
	13723	No	Garfield	A.L. Abercrombie, Inc.*	(D)	Fertig	Fertig	15-23S-17W	20	140	Miss	4220	30	2	0	0	0	Yes
	10116	--	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
	12708																	
	4616	No	Lovett	C.H. Todd, Inc.*	(D)	Lovett	Lovett	35-22S-15W	40	--	L-KC	3685	8	2	0	0	0	Yes
	13114	--	Oro	NCRA	(W)	Hagerman-Matoush	Matoush, Hagerman	9-20S-19W 10-20S-19W	60	10	Cher	4184	22	4	0	0	1	Yes
	14134																	
	14971	--	Oro Northwest	NCRA	(W)	Van Rensselaer	Van Rensselaer	5-20S-19W	160	0	Pawnee	4194	7	2	1	0	0	Yes
	14328	No	Rutherford	Murfin Drilling Company*	(W)	Almquist W.F.	Almquist	5-20S-16W	160	120	Arb	3795	5	2	0	0	0	Yes

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

Project no.	Injection Wells				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)						Remarks		
	Active	In-active	Drilled 1974	Abd. 1974			Injection Pattern	Source	Depth, ft.	Thick., ft.						Type	Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods			
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974		Cum. 12-31-74	
11 264 290 514 741	331	-	-	-	5-spot	700	--	Prod + Arb	1500	--	M	1974	S Gas	--	32	--	--	--	--	--	--	--	*Was Ross Keas Oil, Inc.	
13477 13447?	3	-	0	-	Irreg	100	1	Prod + Oswego lm	450	40	U	1968	Grav	1/0	31	--	0	--	80	1,000	--	--	*Was C.A. Willis †Shut down part of year	
9986 6713	24 13	2 -	- -	- -	Line 5-spot	500 500	401 17	Prod + Arb Prod + Miss	1280 848	20 20	T T	1963 1958	Grav Grav	10/1 2/1	31 29	-- --	183,017 --	1,364,033 --	21,759 1,108	267,246 9,669	8,159 1,108	91,624 9,669	*Was Crystal Oil Company	
16629	1	0	0	0	5-spot	300	10	Prod + Oswego	620	20	U	1972	Grav	1/0	27	--	3,000	4,000	700	--	--	400	*Shut down for work over	
8145 8378	9 3	- 1	0 0	- 0	5-spot 5-spot	-- 550	-- 44	Prod + Other Prod + Arb	-- 1200	-- 10	M T	-- 1968	S Gas Grav	9/1 1/1	29 30	-- --	1,700 13,340	182,100 163,045	1,700 1,872	49,925 22,120	1,700 702	-- 7,182	*Was Dome Petroleum	
7073	8	-	-	-	5-spot	350	17	Prod	--	--	M	--	---	--	29	--	--	--	1,331	6,109	1,331	6,109	*Was Crystal Oil Co.	
	440	16	4	10													787,052	2,932,607	82,883	649,757	64,793	402,519		
9920	1	0	0	0	Irreg	0	50	Prod	--	--	U	1963	†	1/4	37	--	17,000	192,000	1,632	63,632	0	0	*Was High Plains Prod. Co. †Partial water drive	
14618 2952 4276 7632	1 1	0 2	- 0	- 0	Line Irreg	550 50	177 1196	Prod Prod	-- --	-- --	U T	1968 1956	Wat Wat	-- 44/56	36.1 36	-- --	122,483 439,210	1,129,333 --	10,210 15,737	61,985 --	4,612 15,737	20,395 --	--	*Was Terra Resources, Inc.
3740 13484	1 1	0 -	0 -	0 -	Irreg Irreg	150 380	200 650	Prod Prod	-- --	-- --	T U	1955 1967	S Gas S Gas	-- 1/4	-- 37	-- --	73,000 105,000	320,657 1,058,600	1,614 23,992	295,041 429,749	0 4,000	0 30,400		
16010 16851	2 0	0 0	0 0	0 1	Line Irreg	270 --	757 --	Chey Prod	1075	20	U	1971 1973	S Gas S Gas	68/73 --	36 --	2.5 --	276,382 6,000	842,045 23,600	15,430 --	277,650 --	260 --	2,237 --	--	*Was Mull Drilling Co. †Discontinued Aug., 1974
10676 17321 17417 17407	1 - 1 8	0 - - 0	0 - - 0	0 - - 0	Irreg Irreg Peri Peri	150 0 175 0	280 200 50 45	Prod Prod Prod + Ced H Prod	-- -- 1600 --	-- -- 200 --	U U T T	1964 1974 1974 1974	Wat --- S Gas Wat	80/81 1/9 78/22 1/1	38 36 37.8 37	-- -- -- --	102,344 200 7,625 38,800	1,058,374 -- 7,625 38,800	8,201 3,419 -- 86,419	380,763 -- -- --	0 0 0 --	0 -- -- --	--	*Was Artnell Company
	19	2	0	1													1,791,007	4,671,034	234,509	2,386,364	58,536	103,032		
11002	-	-	-	-	Irreg	--	--	---	--	--	-	--	---	--	--	--	--	--	--	--	--	--	*Injection well plugged	
6115 8878	3 1	1 0	0 0	1 0	Peri Irreg	436 Vac	447 4	Prod + Wat Sd Prod	67 --	-- --	M U	1958 1965	S Gas S Gas	68/160 1/1	41 35	-- --	450,002 1,825	6,670,304 1,399,725	21,850 2,611	849,343 599,631	21,850 0	334,211 0	--	*Was Colorado Oil Co.
13723	1	0	0	0	Irreg	Vac	52	Prod	--	--	U	1967	S Gas	1/3	35	--	18,818	338,403	3,647	322,748	1,000	2,182	*Was Colorado Oil Co.	
10116 12708	1	1	0	0	Irreg	0	112	Prod	--	--	T	1963	Limited Water	--	37	5.61 @ 100°	37,620	1,283,954	6,979	1,358,352	2,275	38,048		
4616 13114 14134	1 3	0 0	0 0	0 0	Irreg Irreg	Vac 900	16 285	Prod Prod + Dak	-- 374	-- 47	T M	1964 1966	Wat + S G S Gas	5/4 1395/0	23 39	-- --	5,840 312,695	41,482 1,615,458	4,810 9,340	123,441 110,663	403 9,340	403 78,744	--	*Was R.W. Rine Drlg. Co.
14971 14328	1 1	0 0	0 0	0 0	Irreg Irreg	850 1200	250 180	Prod Prod	-- --	-- --	U T	1969 1968	S Gas S Gas	1/0 --	45.4 42	-- --	90,219 66,000	305,525 500,191	41,183 2,456	298,810 340,563	0 2,456	0 46,687	--	*Was Sun Oil Company

TABLE 1--ENHANCED OIL-RECOVERY PROJECTS, 1974--Continued

Kansas Geol. Survey Energy Resource Series 5, 1975

County	Project no.	Is proj. uni- tized?	Field	Operator	Type and project name	Lease name	Location		Acres in project		Oil producing zone		Oil producing wells (1974)				Has inj. been con- tinuous?	
							S - T - R		Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled		Abd.
PAWNEE COUNTY (concl.)																		
	8460	--	Shiley	Cities Service Oil Co.	(W) Shiley Waterflood	Jennings "C", Jennings "D", Risse "A"	13-20S-20W		70	130	Basal Penn	4170	7	2	0	0	4	Yes
	12417						14-20S-20W											
	9236	--	Shiley East	NCRA	(W) Eckert	Eckert	18-20S-19W		20	20	Cher	4224	35	0	0	0	1	*
PAWNEE COUNTY TOTALS (Reported) (Includes project in supplemental list.)									1,237	1,685				27	3	3	9	
PHILLIPS COUNTY																		
	16225	--	Beckman	Petroleum Management, Inc.	(W) Beckman South Project	Roeder, Beckman, Flanigan, Roeder, Clark	9-4S-19W		680	0	L-KC	3248	116	10	1	0	0	Yes
	8011	--	Dayton	Sierra Petroleum Co., Inc.	(W) Dayton Unit	Schultz, Kaiser, R.L. Dusin, C.G. Eltiste, E.C. Garber	10-4S-19W 25-2S-19W 26-2S-19W 35-2S-19W 36-2S-19W		640	0	KC	3200	23	7	0	0	0	Yes
	15214	Yes	Fredericksburg	Ladd Petroleum Corp.*	(W) Seyler-Lansing-Kansas City	Imm, Seyler "C", Seyler "A", Seyler "B"	9-1S-18W		320	--	Lans	3050	450	3	1	0	0	Yes
	15283	--	Huffstutter	Good & Phillips Oil Co.	(P) O'Neill	O'Neill	22-1S-18W		80	20	L-KC	3327	20	1	0	0	0	Yes
	17599	No	Huffstutter	Leland R. Baird	(W) Wolf	Wolf	15-1S-18W		160	0	KC lm	3286	43	4	--	1	--	Yes
	6746	Yes	Huffstutter	Ladd Petroleum Corp.*	(W) North Huffstutter Unit	---	16,17,20,21, 22,28-1S-18W		2200	--	L-KC	3400	254	29	1	0	0	Yes
	8461	Yes	Huffstutter	Petroleum Management, Inc.	(W) Center Huffstutter Unit	Center Huffstutter Unit	31,32-1S-18W 5,6,7-2S-18W		1220	280	L-KC	3365	235	37	9	--	--	Yes
	13834	--	Huffstutter	Petroleum Management, Inc.	(W) Huffstutter NW	W.A. Jackson, Rakestraw, Huffstutter "C"	31-1S-18W		130	0	L-KC	3350	235	5	0	0	0	Yes
	8141	Yes	Huffstutter	Phillips Petroleum Co.	(W) Huffstutter Coop Unit	Huffstutter Coop Unit	13-2S-19W		345	0	L-KC	3400	50	5	0	0	0	Yes
	9984	Yes	Huffstutter	Phillips Petroleum Co.	(W) Huffstutter	Huffstutter Unit	7-2S-18W 12-2S-19W		520	0	L-KC	3400	50	13	0	0	0	Yes
	8195	--	Huffstutter	Sierra Petroleum Co., Inc.	(W) Kelly Unit	Hopper, Kelly	23-2S-19W		80	160	L-KC	3280	176	2	1	0	0	Yes
	13887	--	Logan	Dane G. Hansen Trust	(D) Stephens-Ross	Stephens, Ross	35-4S-20W		200	0	L-KC	3200	220	2	--	0	0	No*
	15291	--	Logan	Palomino Petroleum*	(D) Shaw-Wallgren	Shaw-Wallgren	34-4S-20W		20	0	L-KC	3223	5	1	0	0	0	Yes
	6898	--	Mont Sol	Petroleum Management, Inc.	(W) Mont Sol LKC Unit	Krause "A",	7-4S-18W		100	--	L-KC	3200	28	2	0	0	0	Yes
	15215					Krause "B", Sophia Meyers	1-4S-19W 6-4S-18W 12-4S-19W											
	15704	--	Mont Sol	Phillips Oil Operating Co.	(P) Meyer	Meyer	7-4S-18W		160	160	L-KC	3150	20	0	0	0	1	*
	15367	--	Slinker	Petroleum Management, Inc.	(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	1	0	0	1	Yes
	16645	--	Slinker	Petroleum Management, Inc.	(W) Adee Unit (PMI Project)	Schneider B, Schneider A, Adee, Schneider A	19,29,30-4S-19W 29-4S-19W 30-4S-19W		--	0	Lans	3162	150	5	0	0	0	Yes
	13967	Yes	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	--	Tor L-KC	3098 3118	20	7	3	0	0	Yes
	14227	--	Stoneman	T.W. Jackson	(W) T.W. Jackson	Elsie #5, Jackson #3	20-4S-18W		400	--	Lans	--	--	--	--	--	--	Yes
	14228																	
	12729	--	Stoneman	Petroleum Management, Inc.	(W) Stoneman Field Waterflood	Stoneman, Morgan, Sutley, Quanz, Van Der Wege	20-4S-18W 21-4S-18W 29-4S-18W		1140	0	L-KC	3105	235	12	4	0	0	Yes
	12730																	
	12731	--	Stoneman	Santa-Fe Pipe & Supply, Inc.*	(W) Bredemeier	Bredemeier	28-4S-18W		80	40	KC	3050	18	2	0	0	0	Yes
	6112	--	Stuttgart	Petroleum Management, Inc.	(W) Stuttgart	---	13,14, 23-3S-19W		165	--	L-KC	3200	35	2	2	0	0	Yes
	6131																	
	16728	--	Veeh	Petroleum Management, Inc.	(W) Grau	Grau, Emma	35-3S-19W		160	--	Lans	3208	223	3	--	--	--	Yes
PHILLIPS COUNTY TOTALS (Reported)									9,265	680				153	22	1	2	

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

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)				Remarks		
	Active	In-active	Drilled 1974	Abd. 1974				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.			Oil recovered by secondary methods	
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74		1974	Cum. 12-31-74
8460	1	0	0	2	Line	775	280	Prod + Dak	362	--	M	1961	S Gas	1/1	36	5	98,723	1,875,868	8,585	515,267	8,585	292,887	
12417	0	0	0	1	Irreg	--	--	Prod	--	--	T	1962	S Gas	1/.7	35.8	--	13,804	740,245	212	72,078	212	60,052	*Terminated 5/74
9236	14	2	1	4													1,197,793	14,771,155	139,343	4,905,475	56,121	953,214	
16225	5	0	0	0	Irreg	600	128	Prod + Dak	--	--	T	1971	Wat	2.2/1	36	--	232,944	568,165	41,915	247,721	10,800	70,969	
8011	6	0	0	0	Line	810	105	Prod + Chey	1060	--	T	1960	S Gas	--	36	6	229,724	3,449,756	26,116	519,810	26,116	519,810	
15214	1	0	0	0	Irreg	725	133	Dakota	1055	75	T	1969	Grav	3.5/1	35	--	48,520	232,531	8,624	152,391	8,624	61,822	*Was LVO Corporation
15283	1	0	0	0	Irreg	350	85	Prod	--	--	T	1969	S Gas	--	34	--	31,025	138,675	2,255	15,555	1,700	6,590	
17599	1	--	0	--	Irreg	360	50	Prod	--	--	T	1974	Grav	5/3	36	--	3,093	3,093	1,332	81,328	--	--	
6746	21	3	0	0	Irreg	475	85	Prod + Dak	1055	75	T	1956	S Gas	--	36	--	649,905	10,181,377	72,144	2,404,781	72,144	2,404,781	*Was LVO Corporation
8461	13	--	--	--	Irreg	450	125	Dakota	1050	--	T	1961	S Gas	1/0	37.3	--	598,873	7,037,402	108,977	1,993,165	108,977	1,993,165	
13834	3	0	0	0	Irreg	350	145	Dakota	--	--	T	1967	S Gas	1/0	37	--	152,281	1,012,648	13,813	216,526	13,813	216,526	
8141	2	1	0	0	Irreg	35	263	Prod + Dak	871	30	U	1972	S Gas	3/2	35	--	191,668	1,899,257	30,368	812,079	30,368	237,449	
9984	6	0	0	0	Irreg	275	193	Prod + Dak	1000	--	U	1963	S Gas	1/1.7	36	9	422,949	3,203,064	39,224	839,305	39,224	416,262	
8195	1	0	0	0	Irreg	--	112	Prod	--	--	T	1961	S Gas	--	32	--	40,959	1,150,728	2,273	108,978	2,273	108,978	*Shut down part of year
13887	1	0	0	0	Irreg	Vac	60	Prod	--	--	T	1967	S Gas	1/1	28-31†	--	9,255	138,275	2,016	32,860	--	--	†33-36
15291	1	0	0	0	Irreg	0	20	Prod	--	--	U	1969	S Gas	3/17	29	--	7,300	65,615	530	19,107	0	0	*Was Burch Drilling Co.
6898	1	--	--	--	Line	300	112	Prod + Dak	1130	50	T	1960	S Gas	10/3	36	--	41,006	1,314,232	4,696	319,036	4,696	319,036	
15215																							
15704	0	1	0	0	Irreg	0	0	Prod	--	--	T	1970	S Gas	--	--	--	0	41,610	0	922	--	--	*Project Abd. Jan., 1974
15367	1	0	0	0	Irreg	400	267	Prod	--	--	U	1970	S Gas	99/1	35	--	2,232	168,270	2,912	10,684	2,012	4,900	
16645	1	0	0	0	Irreg	200	173	Prod	--	--	U	1972	Wat	2/1	36	--	65,273	129,481	15,565	75,777	7,165	15,463	
13967	5	0	0	0	Peri	820	2034	Prod + Dak	740	220	M	1967	Other†	1/1.09	37	3.6	742,652	4,152,181	42,444	1,193,664	42,444	346,009	*Was R.W. Rine Drlg. Co. †Other not indicated
14227	2	0	0	0	Irreg	500	250	---	--	--	-	--	---	--	--	--	79,980	803,733	--	--	--	--	
12228																							
12729	7	1	--	--	Irreg	450	125	Prod + Dak	960	100	T	1966	S Gas	1/1	38	--	342,598	2,637,240	60,748	841,013	60,748	256,323	
12730																							
12731	1	0	0	0	Peri	550	20	Prod + Ced H	950	150	U	--	S Gas	3/2	39.3	--	7,300	225,798	2,562	29,183	2,562	--	*Was Hershberger Expl.
6112	1	6	0	0	Irreg	500	363	Prod	--	--	U	1952	S Gas	2/1	35.3	--	132,294	6,088,519	2,311	55,318	2,311	55,318	
6131																							
16728	1	--	--	--	Irreg	323	161	Prod	--	--	U	1973	S Gas	--	--	--	57,788	96,857	13,816	57,303	8,760	26,760	
82	6	0	0														4,089,619	44,738,507	494,641	10,026,506	444,737	7,060,161	

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1974—Continued

Kansas Geol. Survey Energy Resource Series 5, 1975

County	Is proj. unitized?	Field	Operator	Type and project name	Lease name	Location S - T - R	Acres in project		Oil producing zone			Oil producing wells (1974)				Has inj. been continuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
PRATT COUNTY																
14279	--	Barnes Southwest	Bowers Drilling Co., Inc.	(P) Barker B#2	Barker	35-27S-12W	100	60	L-KC	3798	6	4	0	0	0	Yes
4080	--	Chitwood	Raymond Oil Co., Inc.*	(W) Chitwood	---	14, 22, 23, 26, 27-28S-12W	1200	--	Simp	4390	23	4	--	--	1	Yes
16091	Yes	Cunningham	Braden-Deem, Inc.	(W) Cunningham Water-flood	Bowers, Royse, Sellon	3-28S-11W	400	0	L-KC	3430	15	6	0	0	0	Yes
16624	--	Frisbie	Clinton Oil Company	(W) A.E. Frisbie	A.E. Frisbie	5-26S-13W	80	0	L-KC	3948	0	2	0	0	0	Yes
5215	--	Frisbie	Range Oil Company, Inc.	(P) F. Smith	F. Smith	6-26S-13W	160	--	Lans	--	15	4	--	--	--	Yes
7970	--	Iuka-Carmi	BM&N Oil Co., Inc.	(-) ---	Honeman	31-26S-12W	160	--	Simp	4210	48	3	--	--	--	No*
13600	--	Iuka-Carmi	Getty Oil Company	(W) Miskimen-Simpson	V.E. Miskimen,	32-26S-12W	160	0	Simp	4214	30	5	0	0	0	---
11392	--	Iuka-Carmi	Raymond Oil Company, Inc.*	(P) Iuka Carmi North	Beck "A" and "B"	5-27S-12W 6-27S-12W	0	290	Simp	4236	33	1	--	--	2	No†
"	No	Iuka-Carmi	Terra Resources, Inc.	(P) Iuka-Carmi North Sector	McFadden "C", Calbeck "A"	6-27S-12W 1-27S-13W	--	--	Simp	4236	33	4	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	No*
6895	--	Iuka-Carmi	Skelly Oil Company	(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	7	10	0	0	Yes
8202	Yes	Iuka-Carmi	Skelly Oil Company	(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	No	Iuka-Carmi	Skelly Oil Company	(W) V.E. Miskimen Water-flood	V.E. Miskimen	32-26S-12W	100	50	Simp	4200	25	4	0	0	0	Yes
4827	No	Iuka-Carmi	C.H. Todd, Inc.*	(P) ---	Briggeman A #1, Briggeman B, Hoener B	34-26S-13W 35-26S-13W	30	--	L-KC	3992	7	3	0	0	0	Yes
16490	No	Moore West	Thornton E. Anderson*	(P) Henderson	Collins, Henderson	3-26S-14W 4-26S-14W	80	--	L-KC	3804	8	2	1	0	0	Yes
13954	Yes	Rolingson	Beren Corporation*	(W) North Rolingson Simpson Unit	Helmke, Josserand, Rolingson, Humphrey, Grier, Bergher, Humphrey	19-27S-12W 30-27S-12W 31-27S-12W 25-27S-13W 36-27S-13W	560	160	Simp	4310	7	6	4	0	0	Yes
4170	No	Shriver	Skelly Oil Company	(P) F.H. Kerr	F.H. Kerr	27-29S-14W	80	0	Simp	4550	5	1	0	0	0	Yes
PRATT COUNTY TOTALS (Reported) (Includes project in supplemental list.)							4,774	660				69	21	0	5	
RAWLINS COUNTY																
17253	No	Cahoj	Anderson Oil & Gas Co., Inc.	(W) A. Sramek	A.Sramek	18-1S-34W	40	--	L-KC	4045	10	2	--	--	--	No*
15518	Yes	Cahoj	Halliburton Oil Producing	(W) S.E. Cahoj Unit	Thieler, Fikan, Rosa Dozbaba, Cahoj "H", Micek, Richard Dozbaba	15-1S-34W 16-1S-34W 21, 22-1S-34W	1120	0	L-KC	4047	20	9	0	0	0	Yes
16643	Yes	Cahoj	Skelly Oil Company	(W) Cahoj LKC Waterflood	Cahoj (LKC) Unit	3, 4, 8, 9, 10, 16, 17, 18-1S-34W	2880	0	L-KC	4062	156	35	3	0	0	Yes
11929	--	Cahoj West	Burch Exploration, Inc.	(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 Company	(P) R.H. Palmer Water-flood	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, Inc.	(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 Company, Inc.	(P) Ruda-Waterman	Waterman, Ruda	15-4S-33W 23-4S-33W	200	--	KC	3976	5	1	0	0	0	Yes
17213	Yes	Wilhelm	Skelly Oil Company	(W) Wilhelm Unit	Wicke "C", W.J. Wicke, E.W. Wicke, Meyer "B", Wilhelm Meyer, E.H. Wicke, Meyer "A", Meyer "C", Wick "A", "B", Harrison Wicke "B", Harrison E. H. Wicke,	16-1S-32W 17-1S-32W 20-1S-32W 21-1S-32W	1440	0	L-KC	3900	13	8	1	0	0	Yes

(continued next page)

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

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	Water Injection		Production and injection statistics (bbls)		Oil recovered by secondary methods		Remarks		
	Active	In-active	Drilled 1974	Abd. 1974				Source	Depth, ft.	Thick., ft.	Type						1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974	Cum. 12-31-74		1974	Cum. 12-31-74
14279	4	0	0	0	Irreg	Grav	100	Prod	--	--	U	1968	Wat	4/1	36	--	20,800	279,800	11,180	270,180	2,236	54,036			
4080	4	-	-	-	Irreg	Vac	448	Prod	--	--	U	1955	S Gas	--	38	--	1,150,000	37,921,156	12,645	3,794,875	12,645	3,794,875	*Was Lion Oil Company		
16091	3	0	0	0	Irreg	800	492	Prod + Ground	50	50	M	1971	S Gas	1/1	36	--	538,695	2,257,742	8,384	--	2,000	--			
16624	1	0	0	0	Irreg	700	65	Prod	--	--	U	1972	S Gas	8/9	32.5	--	23,690	54,145	4,838	12,724	4,838	10,611			
5215	2	-	-	-	Peri	0	300	Prod	--	--	U	--	S Gas	1/4	36	--	1,095,000	--	4,787	20,435	1,197	5,109			
7970	-	5	-	-	Irreg	0	0	---	--	--	F+M	--	Wat	--	--	--	--	--	--	--	--	--	*Not used since attainment in 1973		
13600	1	0	0	0	Irreg	17	79	Prod	--	--	U	1967	S Gas	1.71/1	39	--	28,670	370,213	29,580	376,210	29,580	376,210			
11392	-	-	-	-	---	--	--	Prod + Sh Sd	117	--	M	1959	S Gas	1/0	38	--	0	--#	--	--#	--	--#	--#	*Was Terra Resources, Inc. †Inj. discontinued, 1973 #Figures included with Terra Resources, Inc.	
"	1	0	0	0	Line	26" Vac	1213	Prod + Pleistocene Gr	117	55	M+T	1959	S Gas	34/66	39.5	--	434,531	9,468,668	17,384	2,001,568	17,384	1,029,373			
11041	1	3	0	0	Peri	0	90	Sand	150	--	U	1964	S Gas	--	38	--	32,800	2,911,850	7,117	100,093	7,117	100,093	*Mechanical problems		
6895	6	3	0	0	Irreg	220	623	Prod + Shallow Sands	90	--	M	1961	S Gas	3314/347	38	--	1,364,706	15,878,890	25,549	3,771,364	25,549	1,634,564			
8202	5	3	0	0	Irreg	85	443	Prod + Shallow Sands	90	--	M	1961	S Gas	3929/2792	38	--	809,277	9,114,080	28,260	2,416,619	28,260	1,036,407			
11297	3	0	0	0	Irreg	0	321	Shallow Sands	90	--	F	1964	S Gas	236/334	40	--	351,350	3,386,229	19,650	815,779	19,650	222,610			
4827	1	0	0	0	Peri	465	339	Prod	--	--	T	1965	S Gas	4/7	36	--	123,700	991,050	2,244	39,138	2,244	25,156	*Was R.W. Rine Drlg. Co.		
16490	1	0	0	0	Irreg	0	70	Prod	--	--	U	1972	S Gas	1/4	36	--	24,000	65,000	4,400	171,700	0	0	*Was Dunne-Gardner		
13954	1	2	0	0	Peri	150	115	Prod	--	--	U	1968	S Gas	40/33	38	--	41,975	†	17,674	756,466	8,647	†	*Was Amerada-Hess †No records		
4170	1	0	0	0	Irreg	0	636	Prod	--	--	U	1954	S Gas	--	39	--	232,114	2,355,060	6,272	559,265	6,272	79,707			
	35	17	0	0													6,271,308	85,053,883	201,877	15,119,390	167,619	8,368,751			
17253	0	0	0	0	Line	--	--	Prod	--	--	U	--	S Gas	16.5/8.5	35.4	14	0	0	6,460	42,900	0	0	*Not started yet		
15518	7	1	0	0	Peri	800	170	Prod + Dak	2215	335	T+S	1970	S Gas	35/1	36	--	143,230	385,705	25,716	690,822	2,000	6,000			
16643	18	0	0	0	5-spot	0	289	Prod + Dak	2312	78	U	1973	S Gas	7104/8664	34.2	--	1,897,206	3,018,274	132,441	4,095,836	30,000	30,000			
11929	1	0	0	0	Irreg	0	103	Cedar Hills	2500	70	T	1964	S Gas	1/1	36	6	37,630	672,181	13,296	63,676	13,296	63,676			
14615	2	0	0	0	Irreg	500	220	Prod + L-KC	--	--	T	1968	Grav	67/33	38	--	99,580	544,717	29,224	369,642	20,000	119,000			
15426	2	0	0	0	Irreg	200	135	Prod	--	--	T	1970	S Gas	8/24	25	--	95,728	261,260	23,303	174,840	15,822	51,169			
16115	1	-	-	-	Irreg	0	15	Prod	--	--	U	1971	Wat	1/2	35	--	4,050	12,365	1,251	5,363	0	0			
17213	3	0	0	0	Irreg	0	424	Prod + Dak	1660	50	T	1974	S Gas	1/1	34	--	16,677	16,677	21,336	879,321	0	0			

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1974—Continued

Kansas Geol. Survey Energy Resource Series 5, 1975

County	Is proj. uni- tized?	Field	Operator	Type and project name	Lease name	Location		Acres in project		Oil producing zone			Oil producing wells (1974)			Has inj. been con- tinuous?
						S - T - R		Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	
RAWLINS COUNTY (concl.)																
17213		Wilhelm				Harrison R.A. Rueber, D. Leseberg, Harrison Rueber	28-1S-32W 29-1S-32W									
17400	Yes	Wilhelm	Skelly Oil Company	(W)	Wilhelm Unit	---	16,17,20,21, 28,29-1S-32W	1440	--	L-KC	3900	225	8	1	-	No*
16985	No	Wilhelm	Donald C. Slawson	(P)	Wicke "C"	Wicke "C"	17,18-1S-32W	240	0	L-KC	3900	6	2	0	0	0 Yes
RAWLINS COUNTY TOTALS (Reported)								8,020	50				78	5	0	0
RENO COUNTY																
10925	No	Albion North	Harry A. Sprague	(D)	Graber Pressure Maintenance Project	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	Basil Penn	3720	7	1	1	0	0 Yes
4385	--	Buhler	Schneider Oil Company	(D)	Dodge	Mary Dodge	25-22S-5W	160	100	Simp	3862	5	3	0	0	0 No*
15881	No	Burrton	J.A. Allison	(P)	Seedle "A"	Collins "A", Seedle "A"	16-24S-4W	--	--	Hunt	3318	--	3	0	0	0 Yes
13167	No	Burrton	R.L. Evans Trust	(D)	Evans "B"	Evans "B"	23-23S-4W	160	120	Miss	3285	10	4	0	0	0 Yes
10414	No	Burrton	Harold J. Milburn*	(D)	Haury	Haury, White	1-23S-4W 2-23S-4W	100	60	Miss	3243	40	2	0	0	0 Yes
11618	--	Burrton	Okmar Oil Company*	(P)	Evans & Base W.F.	Evans, Base	36-23S-4W	80	0	Miss	3258	40	8	0	0	0 Yes
12044	--	Burrton	S & K Oil Company*	(D)	Fast-Smith	Fast, Roberts	25-23S-4W	640	0	Miss	3308	52	6	0	0	0 Yes
15373	No	Hilger Southwest	Woodman-Iannitti Oil Co.	(P)	C.J. Genbelle	C.J. Genbelle, A.J. Genbelle	20-26S-4W 29-26S-4W	320	0	Mise	3970	5	4	0	0	0 Yes
5139	No	Nicklaus	Phillips Petroleum Co.	(P)	Prough	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
4456																
RENO COUNTY TOTALS (Reported) (Includes projects in supplemental list.)								2,820	2,200				68	5	1	28
RENO-RICE COUNTIES																
6188	--	Sterling	Phillips Petroleum Co.*	(P)	---	Mayer, Sylvia Mayer UA, Stubbs	4-22S-8W 9-22S-8W	400	--	Miss	3420	10	8	0	0	0 Yes
RENO-STAFFORD COUNTIES																
12893	Yes	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	Mise + Viola	3760 3780	20 40	4	2	0	0 Yes
13339	--	Zenith-Peace Creek	Stelbar Oil Corporation	(W)	Zenith Waterflood	---	21,29,30, 32-23S-10W 25,36-23S-11W 5,6-24S-10W	--	--	Viola	3700	10	3	3	1	0 No*
RENO-STAFFORD COUNTIES TOTALS (Reported)								1,000	5,235				7	5	1	0
RICE COUNTY																
16326	--	Calf Creek	Range Oil Company, Inc.	(P)	Buehler "B"	Buehler "B"	33-18S-10W	90	--	Lans	2850	7	5	-	-	- Yes
13524	No	Chase-Silica	Icer Addis	(W)	Schubert	Schubert	9-20S-10W	160	--	Simp	3400	5	1	1	0	0 Yes
15792	No	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	--	Doug	2842	7	9	1	0	0 Yes

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

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)						Remarks	
	Active	In-active	Drilled 1974	Abd. 1974				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods			
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974	Cum. 12-31-74		
17400	3	-	-	-	Irreg	0	325	Prod + Lo Morr + Perm	2265	235	U	1974	S Gas	1/.55	34	--	61,232	61,232	33,352	884,056	6,513	6,513	*Started inj. 9/18/74	
16985	1	0	0	0	Irreg	0	14	Prod	--	--	U	1973	S Gas	1.5/1	32	6	5,086	6,886	3,293	37,534	1,000	1,000		
	<u>38</u>	<u>1</u>	<u>0</u>	<u>0</u>													<u>2,360,419</u>	<u>4,979,297</u>	<u>289,672</u>	<u>7,243,990</u>	<u>88,631</u>	<u>277,358</u>		
10925	1	0	0	0	Peri	0	800	Prod	--	--	U	1964	Wat	--	42	--	292,000	2,951,500	9,052	264,345	300	77,000	*Temp. shut down	
13754	1	1	0	0	Peri	Vac	50	Prod	--	--	U	1967	Wat	19/31	34	--	18,250	223,211	2,472	48,855	2,472	--	--	*Was Shenandoah Oil Corp.
4385	0	0	0	1	Irreg	0	0	Prod	--	--	U	1954	Wat	1/4	36	--	0	--	6,400	--	0	0	0	*Inj. well plugged
15881	1	-	-	-	Peri	Vac	600	Prod + Simp	--	--	T	1970	Wat	3/2	40	--	210,000	645,000	--	--	--	--	--	
13167	1	0	0	0	Irreg	0	1200	Prod	--	--	U	1967	S Gas	1/9	36	--	438,000	2,769,000	3,000	--	0	0	0	
10414	1	0	0	0	Irreg	0	140	Prod	--	--	U	1963	S Gas	--	37	--	51,000	--	1,820	--	0	0	0	*Was Tomlinson Oil Co.
11618	1	0	0	0	Peri	Vac	820	Prod	--	--	U	1965	S Gas	--	34	--	324,000	1,188,335	54,042	449,277	50,980	181,109	181,109	*Was SoRoBee
12044	1	0	0	0	Irreg	Vac	780	Prod	--	--	U	1966	Wat	1/13	38	--	249,488	3,350,244	24,449	50,884	767	1,597	1,597	*Was General American
15373	1	0	0	0	7-spot	0-30	30	Prod	--	--	T	1969	S Gas	98/2	36	--	9,000	34,390	7,200	25,000	3,000	7,300	7,300	
5139	1	0	0	0	Irreg	15	57	Prod	--	--	U	1956	S Gas	1/.8	35	10	20,889	806,468	2,113	301,512	0	0	0	
2754	8	0	0	1	Line	4	609	Prod + Wat Sd	185	--	F+	1951	S Gas	175/950	39	--	2,073,979	41,112,349	45,540	8,014,730	45,540	1,621,507	1,621,507	
4456																								
	<u>19</u>	<u>1</u>	<u>0</u>	<u>2</u>													<u>5,681,446</u>	<u>57,145,174</u>	<u>251,166</u>	<u>9,494,520</u>	<u>118,059</u>	<u>1,993,513</u>		
6188	1	0	0	0	Peri	0	4	Surface Sd	50	20	M	1958	S Gas	9/1	35	--	10,295	1,002,382	6,375	455,027	3,188	78,557	78,557	*Was Thomas H. Allan
12893	7	4	0	0	Line	50	1152	Prod + Meade	40	60	M	1966	S Gas + Grav	7/93	41	5	3,154,937	46,763,601	31,940	313,116	31,940	287,145	287,145	
13339	1	3	0	0	Peri	Grav	330	Prod	--	--	F	1967	S Gas	--	37	--	110,700	12,701,300	2,826	--	2,826	37,157	37,157	*Shut down for repairs
	<u>8</u>	<u>7</u>	<u>0</u>	<u>0</u>													<u>3,265,637</u>	<u>59,464,901</u>	<u>34,766</u>	<u>313,116</u>	<u>34,766</u>	<u>324,302</u>		
16326	1	-	-	-	Irreg	--	200	Prod	--	--	U	1971	S Gas	2/3	34	--	73,000	231,000	2,335	10,187	584	2,547	2,547	
13524	1	0	0	0	Irreg	0	100	Prod	--	--	U	1967	Gas Exp	1/9	52	--	37,595	557,977	3,300	6,438*	1,800	18,260	18,260	*1973 & 1974
15792	2	0	0	0	Irreg	300	460	Prod	--	--	U	1970	Gas Exp	7/3	28	--	168,253	628,462	15,353	196,841*	6,100	27,685	27,685	*1967-1974, prior prod. records not available

TABLE 1-ENHANCED OIL-RECOVERY PROJECTS, 1974-Continued

County	Project no.	Is proj. unitized?	Field	Operator	Type and project name	Lease name	Location	Acres in project		Oil producing zone		Oil producing wells (1974)				Has inj. been continuous?	
							S - T - R	Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled		Abd.
RICE COUNTY (cont.)																	
	7885	--	Chase-Silica	Bergman Oil Company	(W) Eatinger	Eatinger	20-19S-10W	80	20	L-KC	2975	50	2	0	0	0	Yes
	9634	--	Chase-Silica	Bergman Oil Company	(W) Soeken	---	11-19S-9W	40	--	Simp	3305	12	1	0	0	0	Yes
	11507	--	Chase-Silica	Ralph G. Bowen	(D) Specht "A" & "B"	Specht A & B	16-20S-10W	120	0	L-KC + Arb	3300	20	2	0	0	0	Yes
	16251	--	Chase-Silica	Cities Service Oil Company	(W) Dewitt	DeWitt	33-19S-9W	125	20	Arb	3195	31	3	1	0	0	Yes
	7692	--	Chase-Silica	Clinton Oil Company*	(W) Heinrich Roth	Heinrich Roth	29-19S-10W	160	0	L-KC	2957	107	2	0	0	0	Yes
	10470	No	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	No	Chase-Silica	Fell & Wolfe Oil Co.*	(D) Tatlock Unit	H. Drews, Steuder, A.J. Bayer	5-20S-10W	490	--	Arb	3264	8	3	0	0	0	Yes
	7836	No	Chase-Silica	Don Fox*	(D) John Wolf	John Wolf	20-19S-10W	160	--	KC	2950	30	2	1	--	--	Yes
	12543	--	Chase-Silica	F.G. Holl	(W) Wenke	Wenke, Hirsch	18-20S-10W	60	0	L-KC	3106	8	1	--	--	--	Yes
	15838	--	Chase-Silica	Isern Petroleum Company	(W) Flora	Flora	12-19S-10W	320	0	L-KC	2989	20	4	0	0	0	Yes
	15526	No	Chase-Silica	Meltzer Oil Company*	(P) Layton-Project	Layton	29-19S-9W	80	--	KC	2937	4	1	0	0	1	Yes
	15609	No	Chase-Silica	Phillips Petroleum Co.	(P) Kate	Kate	18-19S-8W	40	0	Arb	3270	10	2	0	0	0	Yes
	6043	--	Chase-Silica	Range Oil Company, Inc.*	(W) Bernstorf "D"	Bernstorf "D"	23-19S-10W	80	--	L-KC	3140	12	3	--	--	--	Yes
	16354	No	Chase-Silica	Rocket-Schusterman Oil Account*	(D) Houston Community	Houston Community	19-20S-10W	0	--	Lans	3020	6	0	0	0	0	Yes
	7360	No	Chase-Silica	Skelly Oil Company	(W) Knop "A"	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	160	--	L-KC	2956	50	10	8	0	0	Yes
	14299	--	Chase-Silica	Southern States Oil Co.*	(P) Feldman	Feldman	12-19S-10W	160	--	L-KC + Doug	2870	18	6	0	0	0	Yes
	9916	--	Chase-Silica	Ira Stephens, Jr.	(D) ---	Keller	5-19S-9W	80	80	Arb	3235	--	2	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, Staatz "A"	10-18S-9W	320	0	Simp	3252	12	6	0	0	0	Yes
	17026	--	Geneseo-Edwards	Clinton Oil Company	(W) Geneseo Field WFS (Congl.)	A.H. Johnson, R. Michells, C. Wood, J.A. Williams, J.A. Lewis	11-18S-9W	480	0	Penn-Congl	3150	10	4	5	0	1	Yes
	7243	--	Geneseo-Edwards	Continental Oil Company	(W) Geneseo Simp. Sn. Un.	Geneseo Simp. Sn. Un.	13-18S-8W	290	0	Simp	3170	16	11	7	--	--	Yes
	12620	--	Geneseo-Edwards	Continental Oil Company	(P) Geneseo Jt. LKC Repr.	S. Ainsworth, J.R. Lansing, J.R. Lansing "A"	14-18S-8W	260	0	L-KC	2875	50	22	4	--	--	Yes
	15998	--	Geneseo-Edwards	Continental Oil Company	(P) Gray-Hamilton "A"	B.C. Gray, Wm. Hamilton "A"	25, 30, 36-18S-8W	320	0	L-KC	2850	8	6	2	--	--	Yes
	9585	No	Geneseo-Edwards	Fell & Wolfe Oil Co.*	(D) Bolton	Ira O. Bolton	19-18S-7W	80	40	Simp	3216	8	2	0	0	0	Yes
	11875	--	Geneseo-Edwards	Kaiser-Francis*	(P) Zajic	Zajic	31-18S-7W	--	--	Lans	2789	250	5	0	0	0	Yes
	12712	Yes	Geneseo-Edwards	Murfin Drilling Company	(W) Geneseo Unit W.F.	Geneseo Unit	13-18S-8W	720	510	B Penn Congl	3200	9	6	3	0	2	Yes
	13839	Yes	Lyons West	Kewanee Oil Company	(W) West Lyons Unit	West Lyons Unit	3, 4, 9, 10-18S-8W	1980	1540	Kind	3320	15	12	37	0	0	Yes
	12960	Yes	Mary Ida South	Pioneer Operations Co., Inc.	(W) Mooney-Manke Unit	Mooney-Manke Unit	16, 17, 20, 21, 28, 29, 30, 31, 32, 33-19S-8W	640	0	L-KC	2950	150	17	0	0	0	Yes
	4823	--	Odessa	Atlantic Richfield Co.	(W) Odessa Unit	Odessa Field Unit	5-20S-8W	800	220	Marm	3090	8	9	0	0	1	Yes
	8206	--	Orth	Meltzer Oil Co.*	(D) Habiger	Habiger	32, 33-19S-6W	80	--	Top	2434	250	3	--	--	--	Yes
	3875	--	Orth	Skelly Oil Company	(W) Volkland "A"	Volkland "A"	27-18S-10W	60	0	Top 1m	2670	16	3	0	0	0	Yes
	3953	No	Orth West	J.A. Allison	(P) Feist	Feist, Manke	20-18S-10W	110	30	Lans	3218	10	6	1	0	0	Yes
	14317	No	Orth West	R.M. Edwards	(P) Conservation #C-14786	Reichuber, Heinz, Poppelreiter, Oberle	16, 17-18S-10W	880	0	Lans	3200	20	15	1	1	1	Yes
	14786	--	Orth West	R.M. Edwards	(P) Conservation #C-14786	Reichuber, Heinz, Poppelreiter, Oberle	17-18S-10W	880	0	Lans	3200	20	15	1	1	1	Yes
	14265	No	Ponce	Clamur Drilling Company	(P) Ponce	---	28-21S-7W	160	--	Miss	3388	40	2	--	0	--	No*
	7522	No	Ringwald	Rocket-Schusterman Oil Account*	(W) Ringwald WF	Gemeinhardt, Ringwald	29-18S-10W	140	40	Lans G	2930	30	3	1	0	0	Yes
	14300	No	Ringwald	Skelly Oil Company	(W) Buehler "A" Water-flood	Buehler "A"	32-18S-10W	80	70	L-KC	2280	15	1	0	0	0	Yes
	3502	No	Ringwald	Skelly Oil Company	(W) Buehler "A" Water-flood	Buehler "A"	33-18S-10W	80	70	L-KC	2280	15	1	0	0	0	Yes
	10813	--	Rino	NCRA*	(W) Rino Pressure Maintenance	Wellman "G", Wellman "I"	33-21S-9W	40	0	Simp	3499	10	4	0	0	1	Yes
	15207	--	Shumway	Catherine S. McGrew*	(W) Potwin	Potwin, Shumway	9-20S-8W	320	--	Kind	3459	10	3	--	--	--	Not

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

Project no.	Injection Wells					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 (bbl)				Remarks			
	Active	In-active	Drilled 1974	Abd. 1974	Injection Pattern			Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.			Oil recovered by secondary methods		
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74		1974	Cum. 12-31-74	
7885	-	-	-	-	Irreg	0	50	Prod	--	--	T	1960	S Gas	1/0	38	--	18,000	213,000	7,700	286,850	3,850	31,025		
9634	1	-	-	-	Irreg	500	50	Prod	--	--	T	1962	S Gas	1/0	38	--	18,000	346,650	325	123,727	150	49,510		
11507	1	0	0	0	Irreg	Vac	365	Prod	--	--	U	1965	S Gas	--	40	--	136,130	1,361,238	4,234	21,901	3,018	19,393		
16251	2	0	0	1	Irreg	197	178	Prod	--	--	U	1971	S Gas	46/279	47.7	--	113,331	297,321	18,054	2,418,945	4,671	16,664		
7692	1	1	0	0	Irreg	0	194	Prod	--	--	U	1960	S Gas	1/1	44.6	--	70,853	663,614	7,427	659,443	7,427	85,481	*Was Pan American	
10470	1	0	0	1	---	200	160	Prod	--	--	U	1963	S Gas	--	33.2	--	--	--	385	--	--	--	*Was NCRA	
13843	1	0	0	0	Irreg	Vac	30	Prod	--	--	U	1967	---	--	38.8	--	--	--	311	--	--	--	*Was Texaco, Inc.	
16477	1	0	0	0	Irreg	Vac	600	Prod + Arb	3325	--	U	--	Wat	--	40.6	--	--	--	2,639	--	--	--	*Was Herman Geo. Kaiser	
7836	1	-	-	-	Irreg	0	100	Prod	--	--	T	1966	S Gas	9/1	40	--	36,000	--	1,400	--	0	--	*Was Clinton Oil Co.	
12543	1	-	-	-	Peri	0	250	Prod	--	--	T	1966	S Gas	6/30	38.6	--	91,250	882,000	2,809	192,224	1,800	--		
15838	1	-	-	-	Irreg	0	239	Prod	--	--	T	1970	S Gas	1/1	40	--	79,068	390,850	5,120	381,566	0	20,236		
15526	0	0	0	0	Irreg	550	200	Prod + Arb	3300	--	U	1969	---	7/3	46	--	36,500	--	3,600	--	0	--	*Was Siegrist Oil Company	
15609	1	0	0	0	Irreg	0	387	Prod	--	--	U	1970	Wat	1/34	47	--	141,079	544,916	2,570	219,266	0	0		
6043	-	-	-	-	Irreg	0	253	Prod	--	--	U	1958	S Gas	--	37	--	92,345	--	1,543	33,929	386	8,482	*Was Skelly Oil Co.	
16354	1	0	0	0	Irreg	0	105	Prod	--	--	U	1972	Wat	1/50	39	--	38,325	111,000	8,347	413,753	0	0	*Was Union Texas	
7360	0	1	0	0	---	0	0	Prod	--	--	U	1960	S Gas	--	37	--	0	212,916	6,000	488,706	0	324,367	*Lse. watered out	
11993	1	0	0	0	Irreg	1250	409	Prod	--	--	T	1965	Grav	--	36	--	149,530	760,123	9,726	70,772	9,726	70,772	*Was Westrans Petroleum	
14299	2	1	0	0	Irreg	1100	294	Prod	--	--	F	1967	Grav	--	27	--	215,193	989,105	14,686	100,653	14,686	100,653	*Was Westrans Petroleum	
9916	1	0	0	0	Irreg	0	120	Prod	--	--	T	1963	Wat	--	44.6	--	0	--	2,806	224,646	--	--		
10600	1	0	0	0	Irreg	180	250	Prod	--	--	U	1963	S Gas	5/95	45	--	82,500	--	1,242	--	0	--	*Random	
11795	3	1	0	0	Irreg	500	175	Prod	--	--	T	1963	Limited Water	--	46	2.4	96,184	437,162	19,082	842,373	2,739	2,739	*Was Maurice L. Brown Tr.	
17026	2	0	0	0	Irreg	1484	203	Prod	--	--	U	1973	S Gas	1/2.5	36	--	148,482	184,463	24,385	5,906,595	0	0		
7243	5	8	-	-	Line	2100	270	Prod + Arb + Lans	3200	50	T	1960	S Gas	--	36.2	--	539,144	9,167,136	18,535	1,275,079	18,535	1,091,295		
12620	3	0	-	-	Irreg	1250	635	Prod	--	--	U	1966	Wat	--	36.2	--	695,856	4,915,547	0	--	0	--		
15998	2	0	-	-	Irreg	0	390	Prod	--	--	U	1971	S Gas	--	32.9	--	283,275	743,696	0	--	0	--		
9585	2	0	0	0	---	400	300	Prod + Simp	3230	12	U	--	S Gas	--	33.1	--	--	--	2,147	--	--	--	*Was Sinclair Oil & Gas	
11875	1	0	0	0	Irreg	380	1000	Prod	--	--	T+S	1965	Gas Exp	--	32	--	365,000	2,868,615	8,700	3,466,149	2,000	16,800	*Was Shell Oil Company	
12712	5	3	0	5	Peri	1250	230	Prod + Arb	3400	15	T	1967	S Gas + Grav	25/5	40	10	431,081	3,126,610	8,863	--	8,863	145,145		
13839	10	5	0	0	9-spot	1050	485	*	--	--	F	1968	S Gas	1363/475	40	--	1,769,850	13,557,404	104,089	4,766,764	27,328	613,368	*Purchased City of Lyons (wells)	
12960	5	0	0	0	Irreg	820	225	Prod + Arb	3200	30	T	1966	S Gas	2/3	38	--	410,625	3,772,476	21,043	--	20,000	--		
4823	7	0	0	0	Irreg	240	150	Prod + L-KC	2900	90	U	1959	S Gas	70/36	28	--	395,212	7,501,540	24,371	1,297,386	24,371	952,301		
8206	0	0	0	0	Peri	Vac	330	Prod + Top	24	250	U	1954	Wat	--	29	--	6,015	--	--	--	--	--	--	*Was Artnell
3875	1	0	0	0	Irreg	400	614	Prod	--	--	U	1954	S Gas	442/882	30	--	223,987	2,824,096	6,335	288,107	6,335	204,141		
3953	1	0	0	-	Peri	950	54	Prod + Arb	3266	20	T	1968	Gas Exp	99/1	39	--	18,250	302,400	16,587	295,206	16,587	136,264		
14317	1	-	0	-	Peri	950	54	Prod + Arb	3266	20	T	1968	Gas Exp	99/1	39	--	18,250	302,400	16,587	295,206	16,587	136,264		
14786	4	0	0	0	Irreg	1875	368	Prod	--	--	T	1969	S Gas	*	41	--	498,955	1,384,701	48,424	481,611	36,318	--	*Trace of water	
14265	0	1	0	0	Irreg	0	0	Prod	--	--	U	--	S Gas	--	34	--	0	0	4,015	193,957	0	0	*Abd. project	
7522	2	0	0	0	Irreg	1000	400	Prod	--	--	U	1961	S Gas	1/4	40	--	146,200	2,378,087	18,946	926,072	18,670	202,873	*Was Union Texas	
14300	3502	1	0	0	Irreg	200	116	Prod	--	--	U	1953	S Gas	--	40	--	42,370	2,258,421	2,167	406,650	2,167	73,995		
10813	1	0	0	0	Irreg	700	160	Prod	--	--	T	1973	S Gas	19/463	39	--	58,114	95,747	6,687	13,437	292	2,103	*Was Thunderbird Drlg.	
15207	0	-	-	1	Irreg	70	20	Shallow Sd	60	10	F	1969	S Gas	20/2	39	--	3,003	295,894	2,585	276,918	0	5,865	*Was Ben C.W. Hyde, Jr. †Stopped proj. May, 1974	

TABLE 1-ENHANCED OIL-RECOVERY PROJECTS, 1974-Continued

County	Is proj. uni- tized?	Field	Operator	Type and project name	Lease name	Location	Acres in project		Oil producing zone			Oil producing wells (1974)				Has inj. been con- tinuous?
						S - T - R	Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
RICE COUNTY (concl.)																
16771	Yes	Tobias	Aspen Drilling Company	(W) Southwest Tobias Lansing Unit	Shuyler, Altman, Mosher, Lipp, Werner	3-21S-9W 3,4-21S-9W	476	0	L-KC	2958	4	4	0	0	0	Yes
10096	Yes	Tobias	Thunderbird Drilling, Inc.	(W) Tobias Simpson Unit	Tobias, Fair "B", Schafer, Fair "C", Pulliam, Koons, Caskey, Fair "A", Faler, Gillen, Harrison	25-20S-9W 26-20S-9W 35-20S-9W 36-20S-9W 2-21S-9W	830	415	Simp	3300	16	18	16	38	4	Yes
13199	No	Welch-Bornholdt	J.W. Braden	(D) J.W. Braden	J.W. Braden	1-20S-6W	170	150	Miss Chat	3340	40	2	0	0	0	Yes
13203																
17667	No	Welch-Bornholdt	Dick Hess	(D) G.W. Carlson	G.W. Carlson	36-20S-6W	160	0	Miss	3286	60	2	1	5	2	No*
9071	No	Welch-Bornholdt	Phillips Petroleum Co.*	(P) Welch-Bornholdt	Unit A, Unit B, Bengston, Fry "G", Fry "C", Fry "E", Fry "J", Hubenett, Ekholm, Hokr, Malm Unit, 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 13-20S-6W 15-20S-6W 22-20S-6W 23-20S-6W 24-20S-6W 25-20S-6W 26-20S-6W 27-20S-6W 28-20S-6W 33-20S-6W 34-20S-6W 4-21S-6W	1400	840	Miss	3300	--	33	4	0	0	Yes
6848	--	Welch-Bornholdt	Shade & Berry	(D) ---	Mattson, Anderson, Mattson	25-19S-6W	--	--	Miss Ch	3435	14	11	0	0	0	Yes
13204	--	Welch-Bornholdt	Shade & Berry*	(D) Braden	---	1-20S-6W	--	--	Miss Ch	3250	50	1	0	0	-	Yes
16994	--	Wherry	Kaiser-Francis*	(D) Gossman	Gossman	8-21S-7W	80	50	Miss	3352	18	2	0	0	3	Yes
RICE COUNTY TOTALS (Reported) (Includes project in supplemental list.)							14,161	3,945			281	94	45	16		
ROOKS COUNTY																
14067	Yes	Andreson	Davis Bros.	(W) Andreson Waterflood	Andreson C, Gasaway D, Gasaway E, Gasaway F	31-10S-18W	110	70	L-KC	3500	75	2	0	0	0	Yes
13518	Yes	Barry	Continental Oil Company	(W) Barry L-KC	Barry Lans.-KC	35-8S-19W 1,2,3,10,11, 12-9S-19W	1540	0	L-KC	3200	12	18	4	-	-	Yes
16334	No	Barry Southeast	Rocket-Schusterman Oil Account*	(D) Bedard WI	Cabbage	7-9S-18W	0	0	Arb	3495	--	0	0	0	0	Yes
6815	No	Barry Southeast	Skelly Oil Company	(W) Cora A. Hilgers Waterflood	C.A. Hilgers	12-9S-19W	--	--	L-KC	3200	--	-	-	-	-	No*
16521	No	Baumgarten	Myrlin Monroe	(W) Sollenberger	Sollenberger, Hilgers Unit	30-9S-18W	240	0	L-KC	3280	3	4	0	0	0	Yes
9767	No	Carmichael	Petroleum, Inc.	(W) Carmichael Unit	Carmichael-Mosher "A", Welch "A-C"	33-8S-18W	480	480	L-KC	3175	10	0	0	0	0	No*
9977	--	Chesney	Kaiser-Francis*	(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	Reeder, McMillen "B"	19-8S-17W 25-8S-18W	40	0	Tor + L-KC	3090	20	4	0	0	0	Yes
16960																
4089	--	Dopita	Clinton Oil Company*	(W) Pearl McMillen	Pearl McMillen	24-8S-18W	80	0	Tor + Lans	3136	197	3	0	0	0	Yes
8544																
1665	No	Dopita	K-G Oil Company	(P) ---	Russ	31-8S-17W	240	0	Arb + KC Neva + Top	3459 2322	1137	5	0	0	0	Yes
16100	No	Dopita	Murfin Drilling Co.*	(W) Thompson W.F.	Thompson	5-9S-17W	160	0	Tor + L-KC	3150	60	3	0	0	0	Yes
15831	--	Dopita	Okmar	(W) Moos	Moos	6-9S-17W	40	--	Arb	3370	3	2	0	0	0	Yes
11324	No	Dopita	Samson Resources Co.*	(W) Krug WF	Krug	19-8S-17W	150	0	Tor + Lans	3100	6	5	0	0	0	Yes
2957	--	Dorr	Cities Service Oil Co.	(W) Dorr Unit	Dorr Unit	16,17,20, 21-9S-16W	601	19	Dodge + L-KC	3141	45	20	2	0	2	Yes
9161																
9185	--	Dorr	Theodore Gore	(P) Casey	Meyers, Casey	16-9S-16W 21-9S-16W	320	0	L-KC	3445	251	2	-	-	2	Yes
13728																
15586	--	Dorr	Harold Krueger	(P) Overholser	Overholser, Andreson	20-9S-16W 21-9S-16W	20	0	KC 1m	3350	4	1	1	0	0	Yes

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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)				Remarks		
	Active	In-active	Drilled 1974	Abd. 1974				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.			Oil recovered by secondary methods	
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74		1974	Cum. 12-31-74
16771	1	0	0	0	Irreg	250	100	Prod + Fresh Wat Sd	46	--	M	1972	S Gas	1/0	38.7	3.6	101,863	162,311	4,548	142,774	0	0	
10096 10559 14464	6	0	6	0	Peri	200	500	Prod + Arb	3350	200	T	1968	S Gas	698/11	45	1.88	1,188,900	7,351,175	312,133	4,364,573	312,133	2,645,383	
13199 13203	1	0	0	0	Irreg	0	100	Prod	--	--	U	1967	S Gas	1/4	33	--	66,000	450,000	2,764	502,764	1,832	7,098	
17667 9071 10733 10740 12187 12367	9	5	0	0	Irreg	500	120	Prod	--	--	T	--	S Gas	5/30	34	--	0	--	--	--	0	--	*Proj. approved 12/19/74
					Irreg			Prod	--	--	U	1958	S Gas + Grav	--	36	--	395,462	11,762,574	41,141	1,551,984	13,165	239,578	*Was Cardinal Pet. Co.
6848 13204	1	0	0	0	Irreg	Vac	180	Prod	--	--	U	1959	Wat	--	33.6	--	60,000	918,000	--	--	--	--	
	--	--	--	--	Irreg	Vac	200	Prod	--	--	U	1967	S Gas + Wat	--	33.6	--	73,000	--	--	--	--	--	*Was J.W. Braden Trust
16994	1	0	0	0	Irreg	0	6	Prod	--	--	T + S	1973	Gas Exp	3/6	35	--	4,000	5,095	4,300	659,381	0	0	*Was Grace Oil Company
	97	27	7	9													9,617,780	84,653,316	825,872	33,507,627	565,533	7,114,023	
14067	2	0	0	0	Peri	600	106	Prod	--	--	T	1968	Grav	3/2	34	5	116,310	825,751	6,830	191,939	6,830	89,958	
13518	8	18	--	--	Peri	500	490	Prod	--	--	U	1968	S Gas	--	35.3	--	1,383,580	11,505,368	55,059	584,132	55,059	409,132	
16334	1	0	0	0	Irreg	0	1700	Prod	--	--	U	1972	Wat	1/50	28	--	621,000	1,706,000	9,125	1,142,315	0	0	*Was Union Texas
6815	--	--	--	--	---	--	--	---	--	--	--	--	---	--	--	--	--	--	--	--	--	--	*Not started yet
16521 9767	1	0	0	0	Irreg	0	76	Prod	--	--	T	1972	Wat	13/220	30	45	27,740	75,238	4,553	14,428	315	680	
	0	0	0	0	Line	--	--	---	--	--	--	1963	S Gas	279/3373	--	--	0	772,323	0	50,297	0	50,297	*Discontinued and plugged 5/74
9977 12545 16960	--	--	--	--	Irreg	210	750	Prod + Dak	512	--	T	1963	S Gas	1/1	36	--	273,750	2,511,993	7,119	133,841	7,119	--	*Was Cities Service Oil
4089 8544 1665	2	0	0	0	Irreg	40	32	Prod	--	--	T	1966	S Gas	21/23	27	--	22,302	133,564	8,988	177,848	8,988	46,017	
	1	0	0	0	Irreg	0	207	Prod	--	--	U	1965	S Gas	1/8.6	29.5	--	75,657	948,781	7,296	301,871	7,296	93,589	*Was Pan American
	1	0	0	0	Irreg	250	275	Prod	--	--	T	1947	---	--	--	--	100,375	--	1,492	--	0	--	
16100	1	0	0	0	Irreg	Grav	400	Prod	--	--	T	1971	S Gas + Grav	1/4	36	--	146,000	330,000	7,139	--	3,100	13,000	*Was Sun Oil Co.
15831 11324	1	0	0	0	Line	--	152	Prod	--	--	U	1974	S Gas	--	30	--	55,480	55,480	2,412	118,653	502	502	
	3	1	0	0	Irreg	30	350	Prod	--	--	T	1965	S Gas	1/3	29	--	127,000	2,200,589	9,926	726,867	9,926	161,774	*Was Shell Oil Company
2957 9161 9185 13728 15586	15	0	0	0	5-spot	87	289	Prod + Dak	800	--	T	1962	S Gas	148/209	38	--	1,735,366	16,924,950	67,804	2,882,883	67,804	1,091,975	
	1	--	--	1	Irreg	200	395	Prod	--	--	T	1962	Wat	--	39	--	144,175	2,179,101	4,622	--	1,016	61,413	
	1	0	0	0	Line	Vac	50	Prod	--	--	T	1970	S Gas	1/2	37	--	18,250	85,000	1,889	61,092	0	0	

TABLE 1-ENHANCED OIL-RECOVERY PROJECTS, 1974-Continued

County	Is proj. uni-tized?	Field	Operator	Type and project name	Lease name	Location	Acres in project		Oil producing zone			Oil producing wells (1974)				Has inj. been continuous?
						S - T - R	Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
ROOKS COUNTY (cont.)																
15048	No	Eilers	Davis Bros.	(P) Eilers	Eilers B, Eilers C, Shepard I, Eilers A	22-10S-18W	90	50	L-KC	3500	75	3	0	0	0	Yes
7789	Yes	Finnesy South	Davis Bros.	(W) South Finnesy Water-flood	Shepard A, Shepard C	27-10S-18W 23,24-10S-18W 24-10S-18W	190	380	L-KC	3500	75	4	0	0	0	Yes
14007	No	Finnesy South	Davis Bros.	(P) Shepard B	---	23-10S-18W	80	55	L-KC	3376	22	1	0	0	0	Yes
12595	No	Grover	A.L. Abercrombie, Inc.	(D) Roy "B"	Roy "B", Roy, Grover	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 + L-KC	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 + L-KC	3070	53	16	1	0	2	Yes
6619	No	Laton	Co-Co, Inc.*	(W) Doane-Swisher Cooperative W.F.	Doane, Swisher	34-8S-16W	320	180	Tor + L-KC	3020	52	6	0	0	0	Yes
7166	No	Laton	Co-Co, Inc.*	(W) Gamble-McFadden "E" Cooperative W.F.	Gamble, McFadden "E"	3-9S-16W	320	240	Tor + L-KC	3070	52+	6	1	0	0	Yes
12140																
7831	No	Laton	Co-Co, Inc.*	(W) Luhman Cooperative W.F.	Co-Co-Luhman, Jones-Campbell, Sarver	11-9S-16W 12-9S-16W	160	40	Tor + L-KC	3180	34	2	0	0	1+	Yes
12702	No	Laton	Co-Co, Inc.*	(W) Blank Cooperative W.F.	Blank	14-9S-16W	100	80	Tor + L-KC	3190	45	2	0	0	0	Yes
10499	--	Laton	Harold Krueger	(W) Laton Flood Project	Buell, Beardmore, Luhman-Johnson, Tatkenhorst B, Tatkenhorst E, Tatkenhorst C, Home	10-9S-16W 11-9S-16W	420	0	KC 1m	3240	3-	16	0	0	0	Yes
6050	No	Laton	Murfin Drilling Co.*	(W) Li-Be-Bax W.F.	Baxter "A", "B", Beardmore, Baxter "D", "E", Livingood	2-9S-16W 3-9S-16W 11-9S-16W	800	300	L-KC	3100	30	14	0	0	0	Yes
11184																
11185																
11333																
13043	Yes	Laton	Murfin Drilling Co.*	(W) North Laton Unit	North Laton Unit	27,28-8S-16W	400	200	L-KC	3060	50+	6	0	0	0	Yes
" was (8118)	No	Laton	Graves Drilling Co.* (Murfin Drilling Co.)	(W) Bergier	Bergier	33-8S-16W	80	60	L-KC	3060	200	1-	0	0	2	Yes
14469	No	Lone Star	Okmar Oil Co.	(W) Luther-Arndts Coop	Luther, Arndts	8-8S-17W 9-8S-17W	40	0	L-KC	3037	5	2	0	0	0	Yes
15302	--	McClellan	Clinton Oil Company*	(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	Bayard, McClellan, Stull, Whisman	8-9S-19W	320	0	L-KC	3500	5	13	0	0	0	Yes
9412*	--	Marcotte	B-J Oil Company	(W) Tribble	Tribble	28-10S-20W	--	--	---	--	--	--	--	--	--	---
16628	--	Marcotte	Francis Oil & Gas, Inc.	(D) Gish	Gish "C"	36-9S-20W	80	65	Arb	3825	4	1	0	0	2	No*
12517	No	Marcotte	Nadel and Gussman	(W) Stithem-Eliza	Stithem & Eliza	14-10S-20W	60	30	L-KC	3693	17	20	13	0	-	No
15992	No	Marcotte	Nadel and Gussman	(W) Gish	Gish	6-10S-19W	0	0	L-KC	3480	10	2	4	0	2	No*
9848	--	Marcotte	Okmar Oil Co.	(P) Rode	Rode, Veatch	9-10S-20W	0	--	L-KC + Arb	3440 3740	12- 5	1	0	0	0	No*
10570	--	Marcotte	Okmar Oil Co.	(W) ---	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	Nettie Unit	33,34-9S-17W 3,4-10S-17W	560	0	Top L-KC	3225- 3525	60- 5	29	1	0	0	Yes
15389	No	Nettie Northwest	Davis Bros.	(D) Rempe A & B	---	28,29-9S-17W	75	45	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	10	4	0	0	1	Yes
15129																
15855	Yes	Paradise Creek	Paul H. Williams*	(P) S. Paradise Creek	South Paradise Creek	27,28-9S-18W	100	--	L-KC	3324	5	1	-	-	-	Yes
12384	Yes	Plainville	Davis Bros.	(W) Plainville Water-flood Unit	Bice Unit, Collins E, Kleinschmidt B, Ross C, Ross D	6-10S-17W 7-10S-17W	790	400	L-KC	3500	75	17	0	0	0	Yes
13187	Yes	Plainville	Davis Bros.	(W) Winters-Plante Unit No. 2 (Plainville Waterflood No. 2)	Plante B, Winters C, White A, White B	8-10S-17W	550	235	L-KC	3500	75	8	0	0	0	Yes
14009	Yes	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	380	580	L-KC	3500	75	9	0	0	0	Yes
16341	--	Riffe	Sierra Petroleum Co., Inc.	(W) Riffe Unit	Riffe, Dryden, Dryden, Desmarteau	4-7S-19W 5-7S-19W 8-7S-19W 9-7S-19W	460	0	L-KC + Tor	3180	7	9	0	0	0	Yes

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

Project no.	Injection Wells					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)						Remarks	
	Active	In-active	Drilled 1974	Abd. 1974	Injection Pattern			Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods			
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974	Cum. 12-31-74		
15048	1	0	0	0	Irreg	70	198	Prod	--	--	T	1969	Grav	3/7	32	15	72,196	383,027	10,494	552,410	2,624	21,658		
7789	2	0	0	0	Peri	550	584	Prod + Dak	450	300	T	1960	Grav	9/1	34	6	393,075	6,068,568	12,727	368,539	12,727	316,698		
14007	1	0	0	0	Peri	475	286	Prod	--	--	T	1967	Grav	1/2	34.5	--	104,682	1,660,094	2,819	80,958	2,819	80,958		
12595	1	0	0	0	Irreg	200	170	Prod	--	--	U	1966	S Gas	--	33	--	59,175	571,231	10,454	238,822	5,500	82,912		
10258	3	1	0	1	Peri	433	234	Prod + Dak	730	--	T	1963	S Gas	50/75	37	--	306,976	1,955,218	11,645	544,715	11,645	181,340		
3504	7	0	0	1	Irreg	218	293	Prod + Dak	850	--	T	1953	S Gas	124/55	33	--	760,618	8,503,672	51,821	2,039,728	51,821	1,133,443		
6619	3	0	0	0	Irreg	600	283	Prod + Dak	800	50	M	1962	S Gas + Grav	3/7	39-40	--	310,030	3,037,782	18,053	569,768	18,053	569,768	*Was Max Cohen	
7166	4	1	0	0	Irreg	225	232	Prod + Dak	870	50	M	1963	S Gas + Grav	3/7	39-40	--	339,060	4,094,174	21,707	343,917	21,707	343,917	*Was Max Cohen	
12140	2	0	0	0	Irreg	165	311	Prod + Dak	950	50	M	1965	S Gas + Grav	3/7	39-40	--	227,139	930,415	4,019	47,393	4,019	47,393	+Cumulative porosity	
7831	2	0	0	0	Irreg	165	311	Prod + Dak	950	50	M	1965	S Gas + Grav	3/7	39-40	--	227,139	930,415	4,019	47,393	4,019	47,393	*Was Max Cohen	
12702	2	0	0	0	Irreg	200	272	Prod + Dak	950	50	M	1966	S Gas + Grav	35/65	39	--	198,592	761,746	5,740	69,501	5,740	69,501	+Converted to wat supply	
10499	3	1	0	0	Irreg	Vac	110	Prod	--	--	T	1965	S Gas	1/1	38	--	115,120	1,697,130	35,932	1,212,863	23,954	398,559	*Was Max Cohen	
6050	12	4	0	0	Irreg	300	275	Prod + Dak	600	200	M	1966	S Gas + Grav	6/94	38	--	704,500	3,027,100	37,727	--	37,727	1,261,412	*Was Clinton Oil Company	
11184																								
11185																								
11333																								
13043	4	0	0	1	Peri	281	280	Prod + Dak	600	200	M	1966	S Gas + Grav	6/94	38	--	409,522	2,732,122	20,558	--	20,558	182,339	*Was D & D Drilling Co.	
"	+	0	0	1	Peri	281	280	Prod + Dak	600	200	M	1966	S Gas + Grav	6/94	38	--	+	+	4,078	--	4,078	--	--	+Aggregate porosity
(8118)																								+See No. Laton Unit above #
14469	1	0	0	0	Irreg	0	240	Prod + Arb	3300	5	U	1969	S Gas	3/60	33	--	87,300	334,545	4,115	204,845	1,060	3,791		
15302	1	0	0	0	Irreg	0	92	Prod	--	--	T	1970	S Gas	1/6.9	33	--	33,519	254,035	3,952	38,511	3,952	17,182	*Was O.A. Sutton	
15529	3	0	0	0	Peri	50	486	Prod	--	--	U	1969	Wat	2/3	35	--	422,891	1,802,583	30,843	352,134	18,843	47,088	*Was Kathol Petroleum	
9412*	-	-	-	-	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	*Not active during 1974
16628	-	-	-	-	Irreg	0	0	Prod	--	--	U	1972	Gas Exp	9/226	27	--	0	0	3,424	239,312	0	0	0	*Prod. wat. goes into another SWDS
12517	0	2	0	0	Peri	0	0	Prod + Dak	700	100	T	1966	S Gas	4/1	29	--	0	296,750	52,800	--	0	7,400		
15992	0	0	0	0	Irreg	0	0	Prod + L-KC	3480	10	T	--	Other†	1/3	29	--	0	0	4,300	--	0	0	0	*Not started †not specified
9848	0	0	-	1	---	--	--	Prod + L-KC	3440	12	-	1968	S Gas	2/20	29	--	0	407,710	4,810	292,892	0	1,835	0	*Cancelled 4/4/74
10570	1	0	-	0	Peri	Vac	340	Prod + Arb	3770	10	U	1969	S Gas	--	33	--	124,100	1,199,175	2,354	501,786	1,460	33,017		
16483	4	0	0	0	Peri	57	288	Prod + Chey	690	62	T	1972	S Gas	27/167	35	--	401,188	892,825	20,661	384,683	20,661	67,669		
11849	7	0	0	0	Irreg	105	767	Prod	--	--	U	1965	Wat + S Gas	1/4.3	35	10	1,191,934	9,598,809	916,516	2,555,058	82,517	840,857		
15389	1	0	0	0	Peri	0	135	Prod	--	--	T	1969	Grav	3/2	30.4	--	49,503	293,157	3,013	83,398	1,507	14,642		
11302	1	0	0	0	Irreg	--	369	Prod	--	--	T	1965	Grav	--	29	--	134,791	645,411	7,203	262,678	7,203	262,678	*Was Westrans Petroleum	
15129																								
15855	3	-	-	-	4-spot	100	250	Prod + Fresh	65	--	M	1971	Gas Exp	3/20	36	--	230,765	--	2,555	--	--	--	--	*Was Cities Service Oil
12384	-	-	-	-	5-spot	1015	386	Prod + Dak	700	300	T	1965	Grav	3/1	34	5	704,837	6,432,887	39,748	671,277	39,748	39,748		
13187	3	0	0	0	5-spot	680	360	Prod + Dak	700	300	T	1967	Grav	3/1	34	6	393,873	2,112,437	25,134	306,655	25,134	306,655		
14009	2	0	0	0	5-spot	700	40	Prod	--	--	T	1968	Grav	3/1	34	5	28,651	1,487,033	7,772	120,186	7,772	120,186		
16341	2	0	0	0	Line	600	695	Prod + Chey	945	50	T	1972	Grav	17/83	34.5	--	276,571	626,857	12,063	54,634	0	0		

TABLE 1-ENHANCED OIL-RECOVERY PROJECTS, 1974-Continued

County	Is proj. unitized?	Field	Operator	Type and project name	Lease name	Location S - T - R	Acres in project		Oil producing zone			Oil producing wells (1974)				Has inj. been continuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
ROOKS COUNTY (concl.)																
16831	No	Simons	Thornton E. Anderson	(P) Simons	Simons	11-7S-17W	60	0	L-KC +	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 +	3580	24	8	0	0	5	Yes
7906*	No	Trico	Colorado Oil Company	(P) Williams	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	No*
10794	No	Trico	Murfin Drilling Company	(P) Briggs/Harlan W.F.	Briggs	34-10S-20W	40	20	L-KC	3500	37	1	0	0	0	Yes
17404	--	Twin Mounds	Pickrell Drilling Co.	(W) Twin Mounds Unit	Twin Mounds Unit	3,4,9S-17W	640	0	Pleas Up Penn	3426	7	7	0	0	0	Yes
12298	No	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 Company*	(W) Felix Senecal	Felix Senecal	12-10S-19W	40	0	Lans	3303	105	1	0	0	0	Yes
12309	No	Vohs	Kewanee Oil Company	(-) Vohs Waterflood	Vohs	14-10S-19W	--	--	KC	--	--	3	0	0	0	No*
14335	No	Webster	Phillips Petroleum Co.	(W) Fidelis	Fidelis	33-8S-19W	100	0	L-KC	3180	20	3	1	0	0	Yes
10080	No	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 1m	3150	3-5	3	1	0	0	Yes
13647	--	Westhusin	Harold Krueger	(P) Mary Dougherty	Mary Dougherty	13-9S-17W	120	0	KC 1m	3150	3-6	8	0	0	0	Yes
17200	No	Westhusin	Murfin Drilling Co.	(P) Hrabe W.F.	Hrabe "A", "B", "C"	1-9S-17W	160	0	L-KC	3150	15	7	0	0	0	No*
10108	--	Westhusin	Terra Resources	(D) Westhusin	Westhusin Unit, J. Westhusin, Baxa, Dora Smith, McClay	11-9S-17W 12-9S-17W	80	70	L-KC	3130	20	9	1	0	0	Yes
6557	No	Zurich	Veeder Supply & Development	(W) Casey	Casey	35-10S-19W	160	--	L-KC	3300	*	1	0	2	1	Yes
6581	No	Zurich	Veeder Supply & Development	(W) McCullough	McCullough, Johnson "A", McCullough, Johnson "B"	26-10S-19W 35-10S-19W	380	--	L-KC	3300	*	3	0	1	1	Yes
17039	--	Zurich Townsite	Cities Service Oil Co.	(W) Zurich Townsite Unit	Zurich Townsite Unit	27-9S-19W	560	0	Tor + L-KC	3360	1	5	1	0	0	Yes
ROOKS COUNTY TOTALS (Reported)							14,425	3,991				356	36	3	21	
RUSH COUNTY																
16776	--	Basgall West	Clinton Oil Company	(W) D.R. Roth	D.R. Roth	4-16S-17W	70	0	L-KC	3200	13	3	0	0	0	Yes
16358	--	Pleasant View	Frontier Oil Company	(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
17214	--	Boxberger West	Helmerich & Payne, Inc.	(P) Morgenstern	Morgenstern	34-15S-15W	160	--	Lans	3200	26	3	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	No	Eulert West	Shields Oil Producers, Inc.	(D) Eulert	Eulert	34-11S-15W	80	0	Arb	3260	10	1	0	0	0	Yes
11553	--	Fairport	Aylward Drilling Company	(P) Booth	Booth	32-11S-15W	80	0	L-KC	2850	22	6	0	0	0	Yes
4976	--	Fairport	Clinton Oil Company*	(W) Frank H. Booth "A"	Frank H. Booth "A"	32-11S-15W	80	0	Dodge + Lans	2875	10	3	0	0	0	Yes
15009	--	Fairport	Clinton Oil Company*	(W) Ed Oswald Unit	Ed Oswald	8-12S-15W	130	30	Lans	2911	31	13	0	0	0	Yes
11344	--	Fairport	John O. Farmer, Inc.	(P) Fairport Waterflood	Cleve Miller, Driscoll	20-12S-15W	160	--	L-KC	3000	5	4	-	-	1	No*
14502	--	Fairport	Harold Krueger	(P) Reich, Keeney & Meckel Unit	Reich, Keeney, Meckel A, Meckel B	28-12S-15W 29-12S-15W	85	0	KC 1m	2975	3-6	15	0	0	0	Yes
11438	--	Fairport	Louis M. Mai Operations	(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

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

Project no.	Injection Wells				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	Water Injection		Production and injection statistics (bbls)		Oil recovered by secondary methods		Remarks	
	Active	In-active	Drilled 1974	Abd. 1974			Injection Pattern	Source	Depth, ft.	Thick., ft.						Type	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974		Cum. 12-31-74
16831	1	0	0	0	Irreg	150	70	Prod	--	--	U	1973	S Gas	3/7	38	--	25,000	50,000	8,977	86,977	1,000	1,000	
16056	5	0	0	0	Peri	500	342	Prod + Dak	650	40	T	1972	S Gas	34/94	31	--	594,601	1,570,942	31,102	1,125,326	31,102	100,192	
7906	1	0	0	0	Irreg	100	116	Prod	--	--	U	1960	Wat	--	30	--	42,299	1,035,666	5,737	--	0	0	*Primarily SWD
13998	2	0	0	0	---	Grav	0	Prod	--	--	U	1968	Gas Exp	--	29.5	--	0	0	6,269	291,273	0	0	*Produced water goes into another SWDS
10794	1	0	0	0	Irreg	Grav	90	Prod	--	--	T	1964	S Gas + Grav	3/2	28	--	32,100	202,065	3,256	67,985	2,000	--	
17404	1	0	0	0	Irreg	306	141	Lo Dak	509	135	U	1974	S Gas	35/13	34	2.5	32,984	32,984	21,018	249,146	9,270	9,270	
12298	2	0	0	0	Irreg	200	600	Prod + Arb	3596	6	U	1966	Gas Exp + Grav + Wat	32/68	34	--	383,601	3,256,801	19,226	220,005	19,226	208,181	
13602	1	0	0	0	Irreg	0	114	Prod	--	--	T	1967	S Gas	1/5.8	35.5	--	41,763	306,950	6,823	359,943	6,823	69,974	*Was Pan American
12309	0	0	0	0	Irreg	0	0	---	--	--	U	1966	S Gas	36/697	34	--	0	500,676	9,887	679,888	0	18,675	*Flood inactive, observing production
14335	2	0	0	0	5-spot	0	108	Prod + Cedar Hills	830	--	U	1968	S Gas	1/6.3	36	9	78,653	866,185	2,591	304,556	0	2,003	
10080	4	0	0	0	Irreg	Vac	425	Prod	--	--	U	1963	S Gas	4/10	35	--	742,815	9,177,559	10,971	1,031,968	10,971	283,742	
13645	1	0	0	0	Line	Vac	100	Prod	--	--	T	1967	S Gas	4/1	37	--	35,050	414,025	7,963	189,281	2,654	21,470	
13647	1	0	0	0	Irreg	Vac	290	Prod	--	--	T	1967	S Gas	7/3	37	--	107,619	699,750	10,476	242,689	3,492	46,248	
17200	1	0	0	0	Irreg	Grav	120	Prod	--	--	T	1974	S Gas + Grav	1/4	36	--	21,900	21,900	10,708	209,960	--	--	*New project
10108	3	0	0	0	Irreg	29" Vac + 206	439	Prod	--	--	T	1963	S Gas	34/66	35.1	--	472,668	6,886,264	25,795	1,319,765	25,795	448,738	
6557	1	0	1	1	Irreg	400	250	Prod + Dak	600	150	T	1958	S Gas	1/10	31	--	19,200	490,236	634	15,103	--	10,000	*4 zones 25 ft.
6581	1	0	1	1	4-spot	400	100	Prod + Dak	600	150	T	1958	S Gas	2/5	32	--	15,660	704,825	5,993	83,207	5,993	83,207	*4 zones 25 ft. +conv. to wat supply well
17039	3	0	0	0	Peri	0	131	Prod + Wat	48	30	M	1974	S Gas	1/7	--	--	115,662	115,662	14,611	433,626	0	0	
143	28	2	8														15,689,168	128,393,121	1,785,358	25,433,527	719,110	9,773,683	
16776	1	0	0	0	Line	1412	214	Prod + Dak	268	75	M	1973	S Gas	9/1	35.3	--	78,240	107,884	23,336	143,227	23,336	23,336	
16358	1	0	0	0	Irreg	0	100	Prod	--	--	U	1972	S Gas	9/1	36	--	36,500	109,500	4,129	18,183	1,378	6,061	
2	0	0	0														114,740	217,384	27,465	161,410	24,714	29,397	
14534	1	0	0	0	Irreg	0	0	Prod	--	--	-	1968	S Gas	8/6	32.2	--	12	21,216	2,862	66,204	0	2,555	
17214	1	0	0	0	Irreg	0	83	Prod + Dak	345	70	U	1974	S Gas	--	32	--	26,207	26,207	7,374	258,445	0	0	
12723	1	--	0	--	Irreg	0	230	Prod	--	--	U	1966	S Gas	--	37	--	83,950	612,250	1,204	49,164	0	--	
14451	7	0	0	0	Peri	Vac	650	Prod + Arb + B L-KC	3290	14-400	U	1968	S Gas	104/771	38.8	--	1,576,322	8,595,543	44,378	371,602	44,378	295,636	
16754	1	0	0	0	Irreg	0	350	Prod	--	--	U	1972	Wat	--	33	--	127,750	262,750	4,138	10,574	500	500	
11553	1	0	0	0	Irreg	Vac	450	Prod	--	--	T	1965	S Gas	--	32	--	164,250	1,668,900	10,522	307,865	10,522	106,561	
4976	1	1	0	0	Irreg	0	232	Prod	--	--	U	1956	S Gas	1/4.1	33.4	--	84,787	2,937,106	7,695	1,032,538	7,695	271,571	*Was Pan American
15009	4	0	0	0	Irreg	0	430	Prod + Dak	325	233	U	1964	S Gas	2.6/1	35.7	--	627,336	5,895,969	40,627	3,131,714	40,627	366,619	*Was Pan American
11344	--	--	--	--	---	0	70	Prod	--	--	U	1968	Grav	--	39	--	--	--	1,300	--	--	--	*Inj. field water only
14502	--	--	--	--	---	0	165	Prod	--	--	T	1962	S Gas	4/1	35-39	--	177,366	1,962,520	21,392	620,833	10,696	240,353	
11438	3	0	0	0	Line	0	165	Prod	--	--	T	1962	S Gas	4/1	35-39	--	177,366	1,962,520	21,392	620,833	10,696	240,353	
12911	4	0	0	0	Irreg	400	172	Prod	--	--	T	1966	S Gas	1/2	36	--	250,096	2,309,113	26,531	1,146,696	23,878	250,915	

TABLE 1--ENHANCED OIL-RECOVERY PROJECTS, 1974--Continued

County	Project no.	Is proj. unitized?	Field	Operator	Type and project name	Lease name	Location	Acres in project		Oil producing zone			Oil producing wells (1974)				Has inj. been continuous?
							S - T - R	Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
RUSSELL COUNTY (cont.)																	
	13149	--	Fairport	Louis M. Mai Operations	(W) Sutton B	Sutton "B"	9-12S-15W	80	0	L-KC	2961-1963-2986-2988	6	6	0	0	0	Yes
	16012	--	Fairport	Louis M. Mai Operations	(W) Milke-Krug	Milke, Krug	20-12S-15W	120	0	L-KC	3000	6	10	0	0	0	Yes
	15693	--	Fairport	R.P. Nixon Operations	(D) Gibbs	Gibbs	20-12S-15W	160	0	L-KC	3001	30	3	4	0	0	Yes
	17122	No	Fairport	Shields Oil Producers, Inc.	(W) Holland Waterflood	Holland	17-12S-15W	80	--	L-KC	3000	20	3	0	0	0	*
	13056	No	Fairport	Sohio Petroleum Co.	(W) Deckert	Deckert	30-12S-15W	46	--	L-KC	3020	36	3	1	0	0	Yes
	13057	No	Fairport	Sohio Petroleum Co.	(W) Rusch "A"	Rusch "A"	19-12S-15W	50	--	L-KC	3020	36	2	2	0	0	Yes
	13058	No	Fairport	Sohio Petroleum Co.	(W) Rusch "B"	Rusch "B"	19-12S-15W	29	--	L-KC	3020	36	3	0	0	0	Yes
	16180	No	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	--	27	0	0	0	Yes
	6472	--	Fairport	Texaco Inc.	(W) P. Jacobs	P. Jacobs	31-12S-15W	155	--	Lans L.S.	3000	34	6	-	-	-	Yes
	13077	No	Gorham	C.L. Hanes	(P) VonFeldt	VonFeldt	6-15S-14W	70	0	KC	2964	5	3	0	0	0	Yes
	9137	No	Gorham	Home-Stake Production Co.	(W) Gorham Waterflood	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	29	2	0	0	Yes
	11631	No	Gorham	Okmar Oil Co.	(W) Rexroat Coop	Rusch Seeley, Hummel, Rexroat B, Rusch, Rexroat C, Solbach S, Solbach N, Solbach E	30-14S-14W 31-14S-14W 32-14S-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	4	2	0	0	Yes
	1354	No	Gorham	Phillips Petroleum Co.	(W) Carroll	Carroll	18-14S-14W	70	0	L-KC	3100	50	4	1	0	0	Yes
	17573	No	Gorham	R.P. Nixon Operations	(P) Atherton	---	30-13S-14W	160	0	L-KC	3073	220	5	-	0	-	Yes
	15950	No	Gorham	Terra Resources, Inc.	(P) Reinhardt	Reinhardt "D"	19-14S-14W	50	80	L-KC	3055	18	2	0	0	0	Yes
	4105	--	Gorham	Texaco Inc.	(W) D. Brandenburg	D. Brandenburg	20-14S-14W	160	--	Lans	3100	--	1	-	-	-	Yes
	10618	--	Gorham	Roy Vonfeldt*	(W) Dumler Unit	Dumler Unit	11-14S-15W	160	0	KC	3033	6	4	4	0	-	Yes
	7370	--	Gorham	A B Oil Company, Inc.*	(P) Dumler S.W.S	Paul E. Dumler	16-14S-13W	160	--	Tark	2370	10	1	-	-	-	Not
	9974	--	Hall-Gurney	Earl Allen	(D) Kaufman	Kaufman	33-15S-12W	40	0	KC	3028	48	1	0	0	0	Yes
	14595	Yes	Hall-Gurney	American Petrofina Co. of Texas*	(W) Tarkio Unit	Ehrlich "B", Rein "C", Rein "F"	17-14S-13W 20-14S-13W	210	0	Tark	2315	10	5	5	0	0	Yes
	6968	--	Hall-Gurney	American Petrofina Co. of Texas*	(W) J. Blehm	J. Blehm	11-14S-14W	160	0	Tark	2380	10	3	0	0	0	Yes
	9395	--	Hall-Gurney	American Petrofina Co. of Texas*	(W) Rein	G. Rein, H. Rein, G. Rein	17-14S-13W 19-14S-13W 20-14S-13W	320	120	Tark	2410	10	3	6	0	0	Yes
	9516	--	Hall-Gurney	American Petrofina Co. of Texas*	(D) Kuhnle	Kuhnle	4-15S-12W	80	0	L-KC	2953	28	2	0	0	0	Yes
	14923	--	Hall-Gurney	Aylward Drilling Company	(P) Holl "A"	Holl "A"	22-14S-14W	60	40	L-KC	3000	22	7	0	0	0	Yes
	4543	--	Hall-Gurney	Aylward Drilling Company	(P) Herbel "B"	Herbel "B"	26-14S-14W	80	0	L-KC	2924	20	3	0	0	0	Yes
	7165	--	Hall-Gurney	Aylward Drilling Company	(P) J. Boxberger	J. Boxberger	26-14S-14W	80	0	L-KC	2292	18	4	0	0	0	Yes
	7167	--	Hall-Gurney	Aylward Drilling Company	(P) Holl "A"	Holl "A"	22-14S-14W	10	50	Tark	2425	22	1	0	0	0	Yes
	7946	--	Hall-Gurney	Aylward Drilling Company	(P) Holl "B"	Holl "B"	22-14S-14W	80	10	Tark	2425	22	1	0	0	0	Yes
	7947	--	Hall-Gurney	Aylward Drilling Company	(P) Holl "B"	Holl "B"	22-14S-14W	140	20	L-KC	2950	22	9	0	0	1	Yes
	7950	--	Hall-Gurney	Aylward Drilling Company	(P) H.A. Fink	---	15-14S-14W	10	--	Lans	3000	3200	1	0	0	0	Yes
	8293	No	Hall-Gurney	Aylward Drilling Company*	(D) Anschutz	Anschutz	21-14S-14W	150	10	L-KC	3127	20	7	0	0	1	Yes
	8293	No	Hall-Gurney	Aylward Drilling Company	(P) Holl "C"	Holl "C"	21-14S-14W	80	0	L-KC	3027	60	4	0	0	0	Yes
	9425	--	Hall-Gurney	Carl W. Boxberger	(P) Boxberger B	Boxberger B	14-14S-14W	160	0	L-KC	3000	200	2	2	0	0	Yes
	13157	--	Hall-Gurney	Cities Service Oil Co.	(W) Hall-Gurney LKC Coop. W.F.	Ebel "A", Ebel "B", Strecker "B"	24-14S-14W 36-14S-14W	259	191	L-KC	2880	66	10	2	0	7	Yes
	15814	--	Hall-Gurney														
	2030	--	Hall-Gurney														
	4724																
	4738																
	7524																

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

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)						Remarks	
	Active	In-active	Drilled 1974	Abd. 1974				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods			
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974	Cum. 12-31-74		
13149	3	0	0	0	Irreg	350	239	Prod	--	--	T	1970	S Gas	2/1	37.6	--	262,013	647,626	18,901	177,557	9,450	47,517		
16012	2	0	0	0	Irreg	50	440	Prod	--	--	T	1971	S Gas	1/4	36	--	322,456	836,438	14,356	378,808	8,614	25,407		
15693	2	0	0	0	Irreg	0	480	Prod	--	--	T	1970	S Gas	3/2	38	--	172,800	504,165	17,184	--	8,592	43,793		
17122	2	0	0	0	Irreg	0	--	Dak Chey	400	100	T	1974	S Gas	--	34	--	4,083	10,714	0	--	0	--	*Proj. started 2/14/74	
13056	1	0	0	0	Irreg	0	91	Prod + Fresh	409	24	M	1967	S Gas	1/15	34.9	--	33,465	766,114	14,793	178,670	14,793	79,907		
13057	1	0	0	0	Irreg	0	432	Prod + Fresh	409	24	M	1967	S Gas	1/14	37.8	--	157,823	801,433	10,389	151,697	10,389	100,625		
13058	2	0	0	0	Irreg	0	356	Prod + Fresh	409	24	M	1967	S Gas	1/11	38.6	--	260,291	1,619,236	8,446	69,383	8,446	44,437		
16180	1	0	0	0	Irreg	220	218	Prod	--	--	T	1972	S Gas	1/11	37	--	79,740	218,654	147,545	359,238	52,929	115,772		
6472	2	-	-	-	Irreg	0	313	Prod	--	--	U	1958	S Gas	3000/223	33	--	228,179	5,797,946	19,544	474,217	19,544	301,488		
13077	1	0	0	0	Peri	650	400	Prod	--	--	U	1966	Grav	2/3	34	--	146,000	806,800	9,829	98,609	6,741	51,331		
9137	12	0	0	0	5-spot	370	661	Prod	--	--	T	1962	S Gas	--	36	--	2,896,531	46,823,029	66,223	2,033,560	66,223	2,033,560		
9846																								
11631	1	0	0	0	Irreg	375	165	Prod + Arb	3160	5	U	1965	S Gas	--	34	--	60,225	2,302,433	20,915	1,520,018	4,017	48,266		
12345	1	0	0	0	Peri	500	1407	Prod	--	--	U	1966	S Gas	--	40	--	512,000	5,894,071	9,094	666,618	9,094	165,223		
1354	3	0	0	0	Irreg	0	705	Prod	--	--	U	1957	S Gas	1/11.5	41	5	771,561	10,576,100	12,850	1,234,140	12,850	363,716		
17573	3	-	-	-	Irreg	0	175	Prod	--	--	T	1974	S Gas	3/1	38	--	31,500	31,500	6,369	6,369	2,610	2,610		
15950	1	0	0	0	Irreg	22"	Vac	1670	Prod	--	--	T	1954	S Gas	42/58	38.7	--	606,282	8,671,861	8,115	1,100,570	8,115	302,136	
4105																								
4098	2	-	-	-	Peri	--	--	Prod	--	--	U	1975	S Gas	759/426	34	--	214,662	7,133,789	5,182	263,348	5,182	235,305		
10618																								
7370	2	-	-	0	Line	Vac	135	Prod + Gorham	3300	--	T	1969	Grav	1/6	38	--	118,800	--	4,957	--	--	--	*Was Sun Oil Co.	
9974	1	0	-	-	Irreg	400	350	Prod	--	--	T	--	Wat	--	36	--	36,400	--	250	--	45	--	*Was Carl Dumler +Started Sept., 1974	
14595	1	0	0	0	Line	0	50	Prod	--	--	U	1968	Wat + S Gas	1/9	39	--	18,000	108,000	1,510	9,060	0	0		
6968	1	2	0	0	Irreg	800	34	Prod + Dak	356	30	U	1967	S Gas	1/3	41	--	12,248	4,492,384	4,625	68,828	4,625	68,828	*Was El Dorado Refg. Co.	
9395	1	0	0	0	5-spot	1000	200	Prod + Dak	336	25	U	1962	S Gas	1/9	36	--	72,980	1,061,961	1,314	81,299	1,314	24,263	*Was El Dorado Refg. Co.	
9516	2	3	0	0	5-spot	500	37	Prod + Dak	232	50	U	1962	S Gas	1/5	38	--	27,360	3,495,809	1,998	569,040	1,998	184,533	*Was El Dorado Refg. Co.	
14923	1	0	0	0	Irreg	920	119	Prod + Gorham	3204	4	U	1969	S Gas	1/6	38.3	--	43,765	243,241	6,068	362,823	6,068	24,040	*Was El Dorado Refg. Co.	
4543	3	0	0	0	Irreg	400	540	Prod	--	--	T	1954	S Gas	--	37	--	591,325	1,573,210	14,697	1,005,658	14,697	845,550		
7165	1	0	0	0	Irreg	490	32	Prod	--	--	T	1959	S Gas	--	38	--	11,556	420,007	3,446	102,814	3,446	88,482		
7167	1	0	0	0	Irreg	480	920	Prod	--	--	T	1959	S Gas	--	39	--	335,888	2,562,546	17,038	237,314	17,038	225,125		
7946	1	0	0	0	Irreg	100	726	Prod	--	--	T	1957	S Gas	--	37	--	265,000	637,901	1,000	49,846	1,000	49,846		
7947	1	0	0	0	Irreg	550	347	Prod + Dak	275	65	T	1960	S Gas	1/1	37	--	126,535	1,152,985	858	70,058	858	37,068		
7950	2	0	0	0	Irreg	500	532	Prod + Dak	275	65	T	1970	S Gas	--	37	--	388,710	1,764,172	15,013	586,073	15,013	497,229		
8293	1	0	0	0	Line	1900	143	Prod	--	--	T	1974	S Gas	--	37	--	22,375	22,375	812	812	812	812	*Was Gulf Oil Corp.	
9425	1	0	0	0	Irreg	800	480	Prod	--	--	T	1962	S Gas	--	38	--	175,761	2,030,315	6,742	79,282	6,742	57,768		
13157	2	0	0	0	Irreg	1000	336	Prod + Chey	175	90	M	1966	S Gas	1/1	37	--	244,932	1,293,624	17,120	543,753	17,120	333,423		
15814	1	1	0	0	Irreg	1000	300	Prod	--	--	U	1970	S Gas	1/5	38	--	109,500	292,450	2,776	382,690	1,676	7,237		
2030	6	0	0	2	Peri	613	656	Prod	--	--	T	1948	S Gas	18/10	39	--	1,404,077	20,710,819	37,755	3,208,411	37,755	1,454,546		
4724																								
4738																								
7524																								

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

Project no.	Injection Wells					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)						Remarks
	Active	In-active	Drilled 1974	Abd. 1974	Injection Pattern			Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods		
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974	Cum. 12-31-74	
2328	2	1	0	3	Irreg	800	206	Prod + Dak	300	--	M	1950	S Gas	1/1	37	--	136,668	3,100,227	5,075	1,200,712	5,075	494,874	
6101	1	0	0	0	Irreg	0	354	Prod	--	--	T	1958	S Gas	--	--	--	129,000	129,000	4,217	122,558	0	0	*Was Theodore Gore
16582	1	0	0	0	Irreg	0	33	Prod	--	--	F	1972	S Gas	25/15	39.1	--	12,000	30,000	8,292	228,392	0	0	
4587	10	2	0	2	Irreg	568	531	Prod	--	--	U	1953	S Gas	1/.25	37.4	--	1,938,242	15,322,241	170,793	5,975,076	135,542	3,807,941	
4595																							
14620																							
5437	2	0	0	0	Irreg	525	299	Prod	--	--	U	1957	S Gas	1/6.1	37.7	--	218,725	3,430,709	6,152	1,050,060	6,152	347,926	*Was Pan American
8926																							
12387	1	1	0	0	Irreg	1000	415	Prod	--	--	U	1966	S Gas	1/1.5	37.6	--	151,445	1,920,029	10,733	700,877	10,733	114,321	*Was Pan American
9985	1	0	0	0	Irreg	350	513	Prod	--	--	U	1963	Wat	20/66	37	--	187,204	2,371,726	2,120	--	998	40,180	
4592	7	3	--	--	Irreg	1300	219	Water Sd + Granite	40-	25-	F	1956	S Gas	--	39.2	--	547,340	8,133,675	22,119	891,307	22,119	822,048	
9407	4	0	--	--	Irreg	610	360	Chey	88	242	U	1972	S Gas	--	38.9	--	538,267	5,044,348	39,167	505,590	31,223	350,832	
14758	2	0	--	--	Irreg	975	140	Water Sd	40	26	F	1969	S Gas	--	37	--	107,483	632,930	8,152	54,247	8,152	36,459	
9415	--	--	--	--	Irreg	600	350	Prod	--	--	U	1962	Grav	--	--	--	106,256	2,047,037	6,320	--	3,000	--	
10485	0	2	--	--	Irreg	--	--	Prod	--	--	U	1964	Grav	--	38	--	257,974	3,966,229	3,910	--	0	--	*Stopped inj. wat. 9/74
16068	6	--	--	--	Irreg	700	3350	Prod + Dak	488	90	U	1971	Grav	--	38	--	1,172,445	4,356,774	28,909	203,720	5,000	--	
4032	4	0	--	--	Irreg	850	356	Prod	--	--	T	1955	Wat	--	37	--	520,490	2,823,020	21,448	--	10,724	455,060	
4499																							
13980																							
17491																							
12581	1	--	--	--	Irreg	750	300	Prod	--	--	T	1967	Wat	--	40	--	109,500	822,471	14,531	--	0	0	
13036	1	0	--	0	Irreg	1025	289	Prod	--	--	T	1966	Wat	--	37	--	105,485	1,545,176	13,379	159,879	8,562	96,460	
16088	1	0	--	0	Irreg	0	110	Prod	--	--	T	1971	Wat	--	38	--	40,150	123,485	1,474	--	560	2,157	
16112	1	0	--	0	Irreg	0	215	Prod	--	--	T	1971	Wat	--	40	--	78,475	285,909	2,985	--	0	0	
8293	1	0	0	1*	5-spot	1300	473	Prod	--	--	U	1960	S Gas	19/185	38.2	--	172,816	3,302,297	5,029	132,046	5,029	132,046	*1 well sold to Aylward
12992	0	0	0	0	---	--	--	---	--	--	--	--	---	--	--	--	--	--	3,600	--	0	--	*Inj. not started yet
15078	2	0	0	0	Irreg	1000	330	Prod	--	--	T	1967	Grav	3/8	38	--	240,850	1,452,216	43,564	2,850,123*	32,412	211,345	*Total prod. from project since 1931
7566	1	0	0	0	Irreg	31"Vac	700	Prod	--	--	T	1960	Wat	2/98	36	--	84,480+	--	1,469+	--	1,469+	--	*Was Terra Resources, Inc. +4 months production
"	1	0	0	0	Irreg	27"Vac	679	Prod	--	--	T	1960	Wat + S Gas	11/89	36.2	--	163,604+	2,682,927	2,929+	275,524	2,929+	141,587	*Sold to Hillenburg Oil Co. +to 9/1/74
17046	1	0	0	0	Irreg	0	140	Prod	--	--	U	1973	Wat	1/8	36	--	25,906	47,506	4,082	60,464	3,367	6,956	
4691	3	5	0	0	Irreg	820	288	Prod	--	--	T+	1959	S Gas	1/	38	--	105,000	3,935,392	6,170	259,030	6,170	43,870	*Was Sunray
6727																							
15052	2	1	0	0	Irreg	--	401	Cedar Hills	446	60	F	1969	Gas Exp	1/1	39.3	--	292,914	1,236,499	28,907	797,407	23,627	216,308	
8345	1	0	0	0	Irreg	Vac	25	Prod	--	--	T	1960	S Gas	1/4	39	--	9,125	87,835	4,046	--	2,240	27,559	
9091	5	0	0	0	Irreg	1100	145	Prod + Up Dak	294	35	T	1964	S Gas	1/4	39	--	264,405	2,365,522	9,973	391,927	9,973	148,185	
11296																							
11301																							
9417	3	0	0	0	Irreg	700	233	Prod	--	--	T	1962	S Gas	5/24	38	--	255,154	2,724,314	8,679	--	3,472	102,359	*Was Sun Ray DX
13594																							
11509	1	0	0	3	Irreg	0	79	Prod	--	--	T	1965	S Gas	--	38	--	28,856	1,444,914	3,185	--	3,185	102,474	*Was CRA
11111																							
11620	2	0	0	0	Line	700	134	Prod	--	--	T	1967	S Gas	1/4	36	--	95,570	2,667,065	6,344	--	1,803	35,635	*Was Continental Oil Co.
15796	1	0	0	0	Line	1200	132	Prod	--	--	T	1970	S Gas	1/4	36	--	48,044	252,474	13,859	--	5,544	17,004	*Was Magnolia Petroleum
13313	8	0	0	0	Peri	1550	750	Alluvial Plains	80	20	M	1967	S Gas	--	36.4	9	1,513,562	10,276,940	60,930	978,614	60,930	978,614	

TABLE 1-ENHANCED OIL-RECOVERY PROJECTS, 1974-Continued

County	Is proj. uni- sized?	Field	Operator	Type and project name	Lease name	Location	Acres in project		Oil producing zone			Oil producing wells (1974)				Has inj. been continuous?
						S - T - R	Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
RUSSELL COUNTY (cont.)																
8566	--	Hall-Gurney	Carl Motzkus*	(D) ---	Major	4-15S-12W	--	--	Lans	--	--	2	-	0	-	Yes
13536	No	Hall-Gurney	Murfin Drilling Company	(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	Tark	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	Tark	2275	10	4	1	0	0	Yes
15415	No	Hall-Gurney	Okmar Oil Company	(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	2	-	-	-	No*
13201																
8420	No	Hall-Gurney	Lee Phillips Oil Co.	(W) Letsch	Letsch	34-14S-13W	160	0	L-KC + Tark	2810 2240	20 10	10	0	0	0	Yes
8615																
9511																
13121																
8065	--	Hall-Gurney	Ruthven, Inc.	(P) Flegler	Flegler	28-14S-14W	160	80	L-KC	2950	150	1	0	0	0	Yes
1552	No	Hall-Gurney	Shields Oil Producers, Inc.*	(W) G.C. Ehrlich	Ehrlich	32-14S-13W	--	--	KC	2800	30	4	0	1	0	Yes
6847	No	Hall-Gurney	Shields Oil Producers, Inc.	(D) Gustason Estate	Gustason Estate, Kastrup	14-15S-12W	160	80	Tor lm	2840	15	2	0	0	0	Yes
7750	No	Hall-Gurney	Shields Oil Producers, Inc.	(W) Miller Waterflood	Miller "A"	31-14S-13W	160	0	KC	2800	30	6	0	2	0	Yes
9408	No	Hall-Gurney	Shields Oil Producers, Inc.	(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
1088	No	Hall-Gurney	Skelly Oil Company	(P) T.B. Carter	T.B. Carter	33-14S-13W	160	0	L-KC	2885	10	6	0	0	0	Yes
2439	No	Hall-Gurney	Skelly Oil Company	(W) Hall-Gurney	C. Colliver, W. Opdycke, Ben Rein	28-14S-13W 29,32-14S-13W 25-14S-14W	890	0	L-KC	2890	18	23	3	0	0	Yes
5195																
5781																
16911	No	Hall-Gurney	Skelly Oil Company	(W) A. Ehrlich L-KC	A. Ehrlich	25-14S-15W	160	0	L-KC	2944	84	3	0	0	0	Yes
7619	--	Hall-Gurney	Southern States Oil Co.	(P) Boxberger	Boxberger	26-14S-14W	160	--	L-KC	2928	79	4	1	0	1	Yes
3059	No	Hall-Gurney	Terra Resources, Inc.	(P) C.E.P.-L-KC	Clyde, Ehrlich, Phinney, Phinney "S"	19-14S-13W 30-14S-13W	300	0	L-KC	2950	8	15	0	0	0	Yes
6527																
7567																
14872																
5396	No	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
10571	No	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	--	--	Tark	--	--	1	-	-	-	No*
4517	--	Hall-Gurney	Texaco, Inc.	(W) G. Boxberger A & B	G. Boxberger "A", G. Boxberger "B"	22-14S-14W	240	--	Lans	3100	--	4	-	-	-	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	2	-	-	-	Yes
4219	--	Hall-Gurney	Texaco, Inc.	(W) H.L. & S. Boxberger	S. Boxberger, L. Boxberger, H. Boxberger	10-14S-14W	480	--	Reag ss + Lans ls	3050	--	13	-	-	-	Yes
4220																
4504																
5445																
10948																
10284	--	Hall-Gurney	Texaco, Inc.	(W) Goodheart-Ruby	W.W. Goodheart, E.Z. Ruby	25-14S-13W 36-14S-13W	240	--	Lans	2900	23	10	-	-	-	Yes
10725																
10433	--	Hall-Gurney	Texaco, Inc.	(W) Borell Vejl	E.A. Borell, F. Vejl	32-14S-12W 5-15S-12W	480	--	Lans ls	2900	10	5	-	-	-	No*
10434																
11915																
17442	--	Hall-Gurney	Texaco, Inc.	(P) E.P. Gurney	E.P. Gurney	23-14S-14W	160	--	Tark	2340	--	5	-	-	-	Yes
5955	No	Hall-Gurney	Clarence H. Wilhelm*	(D) Shaffer	Ray Shaffer	26-14S-13W	80	--	Tark	2222	12	2	2+	4	0	Yes
14969	--	Kraft-Prusa	Isern Petroleum Company	(P) Durr	Durr AB	31-15S-12W	160	0	Quartzite Sand	3374	20	5	0	0	0	Yes
8871	--	Nuss	Duke Drilling Company	(D) Nuss	Nuss	32-15S-14W	0	--	Lans	3120	25	2	0	0	0	Yes

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Project no.	Injection Wells					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)						Remarks
	Active	In-active	Drilled 1974	Abd. 1974	Injection Pattern			Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods		
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974	Cum. 12-31-74	
8566	1	-	0	-	Irreg	50	250	Prod	--	--	U	1959	Wat	12/88	--	--	90,250	90,250	3,102	3,102	--	--	*Was Amoco Prod. Co.
13536	1	0	0	0	Irreg	Grav	50	Prod + Tark	2250	8	T	1967	S Gas + Grav	73/27	37	--	18,250	106,414	2,818	--	2,818	16,695	
11738	1	0	0	0	Irreg	900	45	Prod + Dak	420	--	U	1965	S Gas	1/1	37.6	--	15,871	500,271	8,697	58,164	5,909	17,591	
10610	3	0	0	0	Irreg	650	110	Prod	--	--	U	1963	S Gas	3/7	38	--	115,550	778,925	13,080	157,005	9,430	153,355	
11459	1	0	0	0	Irreg	625	150	Prod	--	--	T	1964	S Gas	3/1	34	--	52,500	487,675	2,177	4,594	2,177	4,594	
8022	2	1	0	0	Irreg	800	125	Prod + Alluvium	80	--	M	1960	S Gas	--	36	--	100,000	1,931,856	3,641	275,616	3,641	78,851	*Was R.P. Nixon
15415	2	0	0	0	Peri	400	423	Prod	--	--	U	1970	S Gas	73/870	34	--	308,776	1,270,142	15,924	599,602	7,800	16,480	
5033	1	-	-	-	Irreg	--	--	Prod	--	--	-	1966	---	--	37	--	27,078	2,551,198	1,719	286,475	0	284,756	*Shut down part of year
13201	2	0	0	0	Irreg	550	325	Prod + River Sand	70	10	M	1961	S Gas	93/7	38	--	118,625	2,928,050	60,749	2,870,174	--	--	
8420	2	0	0	0	Irreg	550	325	Prod + River Sand	70	10	M	1961	S Gas	93/7	38	--	118,625	2,928,050	60,749	2,870,174	--	--	
8615	2	0	0	0	Irreg	550	325	Prod + River Sand	70	10	M	1961	S Gas	93/7	38	--	118,625	2,928,050	60,749	2,870,174	--	--	
9511	2	0	0	0	Irreg	550	325	Prod + River Sand	70	10	M	1961	S Gas	93/7	38	--	118,625	2,928,050	60,749	2,870,174	--	--	
13121	2	0	0	0	Irreg	550	325	Prod + River Sand	70	10	M	1961	S Gas	93/7	38	--	118,625	2,928,050	60,749	2,870,174	--	--	
8065	1	0	0	0	Irreg	575	385	Prod	--	--	T	--	S Gas	2/3	39	--	140,525	--	4,398	--	3,550	--	
1552	1	0	0	0	Irreg	800	415	Prod + Dak	220	20	M	1971	S Gas	--	37	--	151,013	446,388	30,382	45,866	27,750	42,500	*Was Skelly Oil Co.
6847	1	0	0	0	Irreg	0	300	Prod + Arb	3300	100	U	1957	S Gas	--	37	--	109,500	734,500	6,100	46,100	3,000	40,000	
7750	3	0	0	0	Irreg	800	325	Prod + Dak	220	20	M	1964	S Gas	--	37	--	371,567	1,855,467	52,920	132,020	46,000	108,500	
9408	9	0	0	0	Irreg	800	155	Prod + Dak	2800	25	T	1963	S Gas	--	39.3	--	505,282	12,359,982	58,616	1,507,616	53,000	1,391,000	
1088	2	0	0	0	Irreg	1350	395	Prod + Dak	200	--	T	1944	S Gas	--	34	--	288,421	1,978,975	25,785	456,461	25,785	220,543	
2439	15	2	0	0	Irreg	1100	274	Prod + Dak	200	--	T	1950	S Gas	2421/3670	39	--	1,499,280	20,058,746	60,994	3,561,340	60,994	2,501,906	
5195	15	2	0	0	Irreg	1100	274	Prod + Dak	200	--	T	1950	S Gas	2421/3670	39	--	1,499,280	20,058,746	60,994	3,561,340	60,994	2,501,906	
5781	15	2	0	0	Irreg	1100	274	Prod + Dak	200	--	T	1950	S Gas	2421/3670	39	--	1,499,280	20,058,746	60,994	3,561,340	60,994	2,501,906	
16911	1	0	0	0	Irreg	0	435	Prod	--	--	T	1973	S Gas	358/669	32	--	158,847	245,402	14,016	439,658	7,280	7,280	
7619	2	0	0	0	Irreg	325	241	Prod + Dak	1520	30	M	1960	Grav	--	36	--	176,437	3,290,743	3,169	158,715	3,169	158,715	
3059	5	0	0	0	Irreg	1256	250	Prod + Dak	134	30	T	1959	S Gas	39/61	37.2	--	457,014	4,106,985	49,379	1,374,335	49,379	795,797	
6527	5	0	0	0	Irreg	1256	250	Prod + Dak	134	30	T	1959	S Gas	39/61	37.2	--	457,014	4,106,985	49,379	1,374,335	49,379	795,797	
7567	5	0	0	0	Irreg	1256	250	Prod + Dak	134	30	T	1959	S Gas	39/61	37.2	--	457,014	4,106,985	49,379	1,374,335	49,379	795,797	
14872	3	0	0	0	Irreg	1359	206	Prod + Chey	480	18	F + T+M	1957	S Gas	53/47	36.8	--	222,059	5,051,430	24,208	720,380	21,949	427,862	
5396	3	0	0	0	Irreg	1359	206	Prod + Chey	480	18	F + T+M	1957	S Gas	53/47	36.8	--	222,059	5,051,430	24,208	720,380	21,949	427,862	
10571	2	0	0	0	Irreg	1097	790	Prod	--	--	T	1963	S Gas	15/85	35.7	--	576,376	5,573,927	7,424	181,375	4,519	106,156	
10671	2	0	0	0	Irreg	1097	790	Prod	--	--	T	1963	S Gas	15/85	35.7	--	576,376	5,573,927	7,424	181,375	4,519	106,156	
12707	2	0	0	0	Irreg	1097	790	Prod	--	--	T	1963	S Gas	15/85	35.7	--	576,376	5,573,927	7,424	181,375	4,519	106,156	
3771	-	-	-	-	---	--	--	---	--	--	U	1959	Wat	--	--	--	--	--	2,421	--	--	--	*No inj. since 1/69
4517	1	-	-	-	Irreg	0	482	Prod	--	--	U	1953	S Gas	2418/8804	37	--	175,771	5,026,410	8,130	512,155	8,130	512,155	
5073	1	-	-	-	Irreg	0	482	Prod	--	--	U	1953	S Gas	2418/8804	37	--	175,771	5,026,410	8,130	512,155	8,130	512,155	
5858	2	-	0	-	Irreg	--	--	Chey	280	100	F	1958	Wat	--	--	--	--	--	3,638	--	--	--	
4219	2	-	-	-	Peri	--	--	Prod	--	--	U	1954	S Gas	73/118	36	--	125,062	8,774,781	23,289	1,911,933	23,289	658,964	
4220	2	-	-	-	Peri	--	--	Prod	--	--	U	1954	S Gas	73/118	36	--	125,062	8,774,781	23,289	1,911,933	23,289	658,964	
4504	2	-	-	-	Peri	--	--	Prod	--	--	U	1954	S Gas	73/118	36	--	125,062	8,774,781	23,289	1,911,933	23,289	658,964	
5445	2	-	-	-	Peri	--	--	Prod	--	--	U	1954	S Gas	73/118	36	--	125,062	8,774,781	23,289	1,911,933	23,289	658,964	
10948	6	-	-	-	Irreg	500	160	Prod + Arb	--	--	U	1963	S Gas	1944/3621	36	--	350,751	--	17,945	521,752	17,945	395,382	
10284	6	-	-	-	Irreg	500	160	Prod + Arb	--	--	U	1963	S Gas	1944/3621	36	--	350,751	--	17,945	521,752	17,945	395,382	
10725	6	-	-	-	Irreg	500	160	Prod + Arb	--	--	U	1963	S Gas	1944/3621	36	--	350,751	--	17,945	521,752	17,945	395,382	
10433	0	-	-	-	Irreg	--	--	Prod	--	--	U	1963	S Gas	1261/2640	36.5	--	0	4,059,827	11,000	375,467	11,000	285,700	*No inj. since 8/1/71
10434	0	-	-	-	Irreg	--	--	Prod	--	--	U	1963	S Gas	1261/2640	36.5	--	0	4,059,827	11,000	375,467	11,000	285,700	*No inj. since 8/1/71
11915	0	-	-	-	Irreg	--	--	Prod	--	--	U	1963	S Gas	1261/2640	36.5	--	0	4,059,827	11,000	375,467	11,000	285,700	*No inj. since 8/1/71
17442	1	-	-	-	Irreg	650	296	Prod	--	--	U	1974	---	44/200	--	--	36,448	36,448	5,178	5,178	--	--	
5955	1	-	-	-	Irreg	Grav	130	Prod	--	--	U	--	Gas Exp	--	35	--	45,854	--	4,850	--	900	--	*Was Louis M. Mai +1 SWD, 1 SWI
14969	1	-	-	-	Irreg	0	750	Prod	--	--	T	1969	S Gas	10/1	35	--	273,000	2,082,012	5,198	145,293	0	--	
8871	1	0	0	0	Irreg	200	350	Prod + Dak	305	--	U	1961	S Gas	--	35	--	127,750	1,717,600	2,342	118,613	--	--	

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

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)						Remarks			
	Active	Inactive	Drilled 1974	Abd. 1974				Source	Depth, ft.	Thick., ft.						Type	Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods				
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974		Cum. 12-31-74		
16313	-	-	-	-	----	--	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	*Not pressured	
16992	1	0	0	0	Irreg	0	100	Prod	---	---	T	1973	S Gas	---	38	---	21,000	42,000	1,839	5,304	0	---	---	---	---
15953	1	0	0	0	Irreg	Vac	168	Prod + Arb	3600	5	U	1971	S Gas	36/154	35	---	61,151	517,899	6,386	879,064	2,860	17,390	---	---	---
15949	1	0	0	0	Irreg	Grav	15	Prod	---	---	U	1971	Wat	14/65	37.5	---	28,150	100,987	3,449	15,994	3,449	15,994	---	---	---
11977	1	0	0	0	Irreg	0-Vac	287	Prod	---	---	U	1965	S Gas	1/1	40	---	104,580	686,173	9,062	55,839	9,062	55,839	---	---	*Was El Dorado Refg. Co.
16047	4	0	0	0	Irreg	750	1150	Prod	---	---	U	1971	S Gas	---	37	---	270,686	270,686	15,557	15,557	4,667	4,667	---	---	*Was Willie E. Schultz
5472	2	0	0	4	Irreg	610	384	Prod	---	---	T	1957	S Gas	60/85	38	---	189,705	6,341,736	10,791	1,573,972	10,791	548,052	---	---	---
13257	4	0	0	1	Irreg	615	447	Prod + Dak	400	---	U	1960	S Gas	22/10	37	---	622,399	5,479,169	36,838	1,369,137	36,838	367,873	---	---	---
7631	4	0	0	0	Irreg	0	0	Prod + Dak	490	---	T	1961	S Gas	10/8	37	---	8,942	293,496	1,663	142,416	1,663	62,083	---	---	---
8707	1	0	0	0	Irreg	0	0	Prod + Dak	490	---	T	1961	S Gas	10/8	37	---	8,942	293,496	1,663	142,416	1,663	62,083	---	---	---
7589	10	2	0	1	Irreg	810	167	Prod + Dak	600	180	U	1960	S Gas	1/1.5	40.5	---	609,981	8,749,118	70,483	3,418,201	70,483	3,418,201	---	---	*Was Pan American
7590	10	2	0	1	Irreg	810	167	Prod + Dak	600	180	U	1960	S Gas	1/1.5	40.5	---	609,981	8,749,118	70,483	3,418,201	70,483	3,418,201	---	---	*Was Pan American
7604	10	2	0	1	Irreg	810	167	Prod + Dak	600	180	U	1960	S Gas	1/1.5	40.5	---	609,981	8,749,118	70,483	3,418,201	70,483	3,418,201	---	---	*Was Pan American
13776	1	0	0	0	Irreg	1200	155	Prod + Arb	3316	8	U	1967	Wat	12/53	37	---	56,564	370,453	1,008	---	0	6,853	---	---	---
13777	2	0	0	0	Irreg	775	212	Prod + Arb	3306	4	U	1967	Wat	21/37	37	---	154,622	856,829	10,722	---	8,106	89,980	---	---	---
7606	8	12	-	-	Irreg	950	240	Chey + Dak	550	72	U	1961	S Gas	---	38.5	---	583,033	6,464,145	37,292	828,727	37,292	756,516	---	---	---
7553	11	0	0	4	5-spot	725	285	Dakota	240	87	T	1961	S Gas	1/1.43	39	6	1,146,465	12,989,973	87,168	2,072,124	87,168	1,898,996	---	---	---
14141	2	0	0	0	Irreg	550	158	Prod	---	---	U	1968	S Gas	27/32	38	---	115,144	1,115,085	4,782	499,819	2,761	32,120	---	---	---
15070	1	0	0	0	Irreg	550	207	Prod	---	---	U	1969	S Gas	5/23	38	---	76,173	403,723	0	36,084	0	0	---	---	---
14364	3	0	0	0	Peri	533	152	Prod + Dak	250	154	M	1969	S Gas	44.22/55.78	38-39	---	166,084	1,395,806	25,858	---	25,858	115,858	---	---	---
5183	1	0	0	0	Irreg	800	200	Prod	---	---	U	1956	S Gas	1/.29	38.3	---	78,819	2,544,308	3,061	345,340	3,061	181,367	---	---	---
6038	2	0	0	0	Irreg	650	360	Prod + Arb	3322	4	T	1958	S Gas	1/3.7	27.7	---	262,874	4,545,431	13,797	289,092	13,797	210,497	---	---	---
9131	1	0	0	1	Irreg	400	650	Prod + Arb	3177	3	U	1962	S Gas	1/2.5	38.3	---	237,324	3,841,083	4,994	223,215	4,994	137,864	---	---	---
10484	1	0	0	0	Irreg	115	425	Prod	---	---	U	1963	S Gas	1/.25	36.3	---	155,438	2,184,398	5,746	131,554	5,746	81,994	---	---	---
7568	1	0	0	0	Irreg	52	573	Prod*	---	---	U	1960	S Gas	1/0.5	39	6	209,265	3,018,738	4,726	304,439	4,726	124,263	---	---	*Produced water from other leases
10920	1	0	0	0	Irreg	0	75	Prod	---	---	T	---	S Gas	1/1	38	---	27,375	---	7,603	---	5,500	---	---	*Sold to Ruthven, Inc. 2/75	
11410	1	4	0	1	----	---	---	Prod	---	---	U	---	S Gas	---	37	---	3,800	648,000	48,000	16,300,000	---	---	---	---	*4 wells temp. Abd.
3537	1	0	0	0	----	---	---	Prod	---	---	U	---	S Gas	---	33	---	8,775	309,000	22,000	135,000	0	0	---	---	---
11871	1	0	0	0	----	---	---	Prod	---	---	U	---	S Gas	---	33	---	8,775	309,000	22,000	135,000	0	0	---	---	---
13496	1	0	0	0	----	---	---	Prod	---	---	U	---	S Gas	---	33	---	8,775	309,000	22,000	135,000	0	0	---	---	---
7570	4	0	0	0	Irreg	800	255	Prod	---	---	T	1960	S Gas	---	37.2	---	312,347	3,806,075	31,269	330,540	28,000	300,600	---	---	---
5952	2	0	0	-	Irreg	0-Vac	375	Prod + Arb	3286	8	T	1958	S Gas	4/1	41.3	---	131,400	2,201,139	10,876	258,376	10,876	258,376	---	---	---
7765	9	2	0	0	Irreg	1400	256	Prod + Dak	337	32	T	1961	S Gas	1896/1026	37	---	840,106	9,146,612	53,809	2,475,239	53,809	1,091,890	---	---	---
7565	3	1	0	0	Irreg	940	256	Prod + Dak	450	55	T	1960	S Gas	1/1.5	40.7	---	280,927	2,755,276	22,392	306,653	22,392	228,397	---	---	---
7607	12	1	0	0	5-spot	684	249	Prod + Dak	240	50	T	1961	S Gas	56/44	37.6	---	1,089,395	12,539,020	91,573	6,839,216	91,573	2,304,872	---	---	---
15539	1	0	0	0	Peri	500	105	Prod + Lans	2820	20	U	1969	S Gas	92/8	38	---	33,642	405,773	37,212	426,394	0	0	---	---	*Was Will P. Ash
16282	1	0	0	0	Peri	400	129	Prod + Lans	2800	20	U	1970	S Gas	92/8	38	---	46,949	207,770	9,135	91,755	0	0	---	---	---
16710	1	0	0	0	Peri	300	71	Prod + Tark	2100	12	U	1973	S Gas	92/8	38	---	26,212	34,828	1,048	8,941	0	0	---	---	---
17466	1	0	0	0	Peri	0	567	Prod + Lans	2821	7	U	1974	S Gas	92/8	38	---	207,062	207,062	69,060	307,764	0	0	---	---	---
17428	1	0	0	0	Peri	0	567	Prod + Lans	2821	7	U	1974	S Gas	92/8	38	---	207,062	207,062	69,060	307,764	0	0	---	---	---
341	47	0	23														38,393,125	431,184,909	2,563,428	96,058,496	1,870,968	38,662,077			

TABLE 1--ENHANCED OIL-RECOVERY PROJECTS, 1974--Continued

Kansas Geol. Survey Energy Resource Series 5, 1975

County	Is proj. un- itized?	Field	Operator	Type and project name	Lease name	Location S - T - R	Acres in project		Oil producing zone			Oil producing wells (1974)				Has inj. been con- tinuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
SALINE COUNTY																
10664	No	Lindsborg	Ray Perera*	(D) Robinson-Martinson-Johnson	Robinson, Martinson, Johnson	32-15S-3W	160	80	Maq	3400	5	3	3	6	2	Not
11513	No	Pihl	Tomlinson Oil Co., Inc.	(D) Pihl	Krauss "A"	24-15S-2W	400	240	Miss	2750	10	3	1	0	0	Yes
13808	--	Salina	Art Small & Co.*	(D) Airport-City of Salina	Airport-City of Salina	20-14S-2W	160	0	Maq	3224	20	1	0	0	-	Yes
9817	No	Salina South	Shenandoah Oil Corp.*	(W) Swigart	Wauhob, Swigart, Riddle	5-15S-2W 5,6-15S-2W 7-15S-2W	90	20	Maq	3225	15	3	-	-	-	Yes
14385	--	Smolan	Gear Operating Co.*	(W) Smolan Field Water-flood Project	Larson B, Frost, Gustafson, Bengtson, Lofgren	30-15S-3W 25-15S-4W 36-15S-4W	800	--	Maq	3400	6	14	2	0	0	Yes
6631	No	Smolan	Ray Perera*	(D) Ostenberg	Ostenberg	30-15S-3W	120	0	Maq	3413	5	3	-	5	1	Not
SALINE COUNTY TOTALS (Reported)							1,730	340					27	6	11	3
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	American Petrofina Co. of Texas*	(P) Hemme	Hemme	31-25S-1E	100	0	Hunt	3445	5	3	1	0	0	Yes
15022	No	Clearwater	King Oil Company	(P) Senter	Senter	23-29S-2W	20	20	L-KC	2940	10	1	0	0	0	Yes
8324	Yes	Gladys	Kewanee Oil Company	(W) Gladys Unit	Tracts 1-61	25,29,30,31, 32,36-28S-1E	1060	551	Miss	3200	10- 78	56	10	0	0	Yes
8325	Yes	Gladys	Kewanee Oil Company	(W) East Gladys Unit	Blood, Parton, Tucker	29-28S-1E	160	70	Miss	3200	10- 40	7	0	0	0	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 1m	2730	11	9	0	0	0	Yes
16157	No	Kuske West	TGT Petroleum Corp.	(P) Korber Input System	Korber A, Lewis	14-25S-1E	320	38	Burg	3014	38	4	0	0	1	Yes
15105	--	O.S.A.	Continental Oil Company	(W) O.S.A.	O.S.A.	10,11,14,15, 22-29S-1W	1520	0	Simp	2884	8	20	7	-	-	Yes
2055	--	Robbins	Stelbar Oil Corp., Inc.	(-) 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., Inc.	(D) Greenup	Greenup, Miller	33-25S-2E	160	0	Burg	2902	--	3	0	0	0	Yes
12272	--	Valley Center	Bankoff Oil Company	(W) Bright Inj.	Sam Bright	1-26S-1W	40	120	Lans	2555	--	2	0	0	0	Yes
11419	No	Valley Center	Samson Resources 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)							4,087	999					114	18	0	1
SEWARD COUNTY																
16786	--	Evalyn-Condit	Anadarko Production 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 + Ches	6236	13	3	3	0	0	Yes
SEWARD-STEVENS COUNTIES																
13902	Yes	Cutter	Mobil Oil Corporation	(W) Cutter Unit Area (Morrow) (Coop 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	--	Up Morr	5200	15	6	0	0	1	Yes

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

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)						Remarks
	Active	In-active	Drilled 1974	Abd. 1974				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods		
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974	Cum. 12-31-74	
10664	1	1	-	-	Irreg	0	120	Prod	--	--	T+	1964	S Gas	--	35	--	100,000	1,900,000	3,700	21,000	1,700	14,000	*Was Sierra †As continuous as re-cycling permits
11513	1	0	0	0	Peri	Vac	199	Prod	--	--	U	1965	Wat + S Gas + Gas	--	35.5	--	72,779	2,134,482	1,523	166,527	1,523	93,490	
13808	-	-	-	-	Irreg	Vac	100	Prod	--	--	U	1967	Grav	1/4	--	--	3,480	--	2,500	--	--	--	*Was Don McKellar
9817	1	-	-	-	Irreg	375	800	Prod	--	--	U	1962	Wat	3/7	35	--	292,000	3,084,394	8,706†	2,508,706	8,706	1,984,889	*Was Solar Oil †Wauhob 1&2 5,766 Swigart 2,940
14385	5	2	0	0	Irreg	Vac	588	Prod + McPher	250	--	U	1962	---	--	--	35	1,073,100	--	13,781	--	13,781	--	*Was Arvel C. Smith
6631	1	-	-	-	Irreg	0	50	Prod	--	--	T+	--	S Gas	--	35	--	60,000	--	5,805	--	2,900	8,500	*Was Amos Ostenberg †Water re-cycled as prod.
	<u>9</u>	<u>3</u>	<u>0</u>	<u>0</u>													<u>1,601,359</u>	<u>7,118,876</u>	<u>36,015</u>	<u>2,696,233</u>	<u>28,610</u>	<u>2,100,879</u>	
4333	1	-	0	0	Irreg	0	206	Prod	--	--	T	1968	Wat	--	26	--	75,018	692,652	5,327	2,056,208	2,663	15,161	
16044	1	0	0	0	Irreg	450	720	Prod	--	--	U	1971	Wat	1/40	41	--	262,892	1,232,703	2,495	245,066	0	0	*Was El Dorado Refg. Co.
15022	1	0	0	0	Irreg	0	4	Prod	--	--	U	1969	S Gas	11/100	36	--	1,100	5,500	2,952	62,688	1,300	3,519	
8324	31	12	0	0	Peri	1600	311	Gravel	20	50	F	1961	S Gas	1658/1687	42	--	3,518,638	97,415,167	121,121	7,982,474*	121,121	6,455,535	*Corrected
8325	6	0	0	1	Peri	1600	354	Gravel	20	50	F	1961	S Gas	153/24	42	--	775,047	14,371,241	21,400	1,086,431*	21,400	962,720*	*Corrected
15691	1	0	0	0	Line	350	35	Prod	--	--	U	1970	Wat	1/8	35	--	12,700	49,000	1,375	7,000	0	0	*Was Isern Wells Oil †Broken
13037	5	0	0	0	Peri	1048	214	Prod + Miss	3000	5	U	1966	S Gas	18/9	33	--	343,132	2,311,084	18,820	676,142	18,820	244,988	
16157	1	0	0	0	Irreg	175	669	Prod	--	--	U	1971	Wat*	1/50	39	--	255,157	707,377	5,696	49,528	--	17,316	*+S Gas
15105	7	1	-	-	Irreg	1000	380	Stal	2450	100	U	1970	Wat	--	45.5	--	853,413	3,158,841	152,735	767,403	152,735	709,865	
2055 4182 4626	2	0	0	0	Irreg	600	200	Prod + Sh	--	--	F + T	1954	S Gas	--	42	--	148,000	5,087,000	11,928	--	11,928	1,196,648	
16303	3	0	0	0	Peri	Vac	40	Prod	--	--	U	1971	S Gas	--	--	--	--	--	--	--	--	--	
12272	2	0	0	0	Irreg	170	180	Prod	--	--	U	1965	Grav	1/15	35.6	--	65,700	822,633	3,940	46,217	2,900	43,317	
11419	2	0	0	0	Irreg	0	300	Prod	--	--	U	1966	S Gas	--	33	--	109,500	2,441,313	6,650	3,856,416	6,650	47,291	*Was Kathol Petroleum
	<u>62</u>	<u>13</u>	<u>0</u>	<u>1</u>													<u>6,345,279</u>	<u>127,601,859</u>	<u>349,112</u>	<u>14,779,365</u>	<u>336,854</u>	<u>9,681,199</u>	
16786	2	0	0	0	Irreg	300	1452	Prod + Sh Fr	202	138	M	1973	S Gas	86/50	41.9	2.2	1,297,667	2,142,265	45,054	74,666	0	0	
13902	4	0	0	0	Irreg	200	1234	Prod + Ogal	250	250	M	1968	S Gas	417/50	40	.066	1,801,949	12,927,121	163,266	3,856,953	163,266	2,052,953	

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1974—Continued

Kansas Geol. Survey Energy Resource Series 5, 1975

County	Project no.	Is proj. un- itized?	Field	Operator	Type and project name	Lease name	Location		Acres in project		Oil producing zone			Oil producing wells (1974)				Has inj- been con- tinuous?
							S - T - R		Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
SHERIDAN COUNTY																		
	8906	--	Adell	Continental Oil Company	(W) Adell Lans-KC	Adell Lans KC Un.	1,2,3,11, 12-6S-27W		584	0	L-KC	3500	23	17	18	-	-	Yes
	9881	--	Adell	Petroleum Management, Inc.	(W) Adell Lansing-Kansas City	Adell	7,18-6S-26W 12,13-6S-27W		190	0	L-KC	3530	12	4	1	0	0	Yes
	10188	--	Hortonville	Kaiser-Francis*	(D) Hardesty	Hardesty	20-6S-26W		80	40	Lans	3744	94	1	0	0	0	Yes
	16389*	No	Hortinville East	A.L. Abercrombie, Inc.	(D) Glasgow	Glasgow, Glasgow "B"	21-6S-26W		0	320	Lans	3775	5	2	0	0	0	Yes
	16164	Yes	Hoxie	John O. Farmer, Inc.	(P) Hoxie Unit	Mosier, Mosier B, Decker, Pratt B	36-8S-29W 6-9S-28W 1-9S-29W		400	--	Tor	3856	5	3	0	0	0	Yes
	15224	--	Hoxie West	Koch Exploration Company	(W) Pratt	Pratt	35-8S-29W		40	0	Shaw	3816	14	1	0	0	0	Yes
	15349	No	Jerome	Okmar Oil Co.	(W) Jerome WF	Jerome	35-8S-27W		100	0	L-KC	3930	5	4	0	0	0	Yes
	6322	No	Studley	KRM Petroleum Corp.*	(D) Pratt	Pratt	22,23-8S-26W		640	0	L-KC	3740	20	3	0	0	0	Yes
SHERIDAN COUNTY TOTALS (Reported)									2,034	360				35	19	0	0	
STAFFORD COUNTY																		
	15826	No	Bayer	Phillips Petroleum Co.	(P) Lincoln "A"	Lincoln "A"	29-21S-14W		10	0	Simp	3750	14	1	0	0	0	Yes
	15211	Yes	Brenn	Sterling Drilling Co.	(P) Brenn Unit	---	19-23S-13W		320	--	L-KC	3654	8	2	0	0	0	Yes
	12237	No	Centerview	Ladd Petroleum Corp.	(P) E. Toland & O. Toland Repressuring Project	E. Toland, O. Toland	28-24S-13W		120	0	L-KC	3590	20	3	0	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 Company	(D) Spacil	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 Company*	(P) Reed Unit	White Hawk, Reed, Cities Service, Reed	8-21S-13W		160	0	L-KC	3450	10	5	0	0	0	Yes
	16314	No	Fanshier	Icer Addis	(W) Fanshier	Fanshier	9-21S-13W		160	0	L-KC	3318	5	3	0	1*	1	Yes
	16704	No	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	No	Gates	Atlantic Richfield Co.	(W) Gates Unit	Gates	27-21S-13W		80	--	L-KC	3550	130	5	0	0	4	Yes
	16179	--	Gates	Clinton Oil Company	(W) Chapman	Chapman	32-21S-13W		160	0	L-KC	3500	20	3	0	0	0	Yes
	15785	Yes	Gates	Nadel and Gussman	(W) Fischer Unit	Fischer	25,36-21S-13W		420	0	L-KC	3300	20	27	4	0	0	Yes
	13744	No	Gates	Okmar Oil Co.	(W) Fischer-Weiszbrod	Fisher Est. Weiszbrod	36-21S-13W 1-22S-13W		50	0	L-KC	3300	5	3	0	0	0	Yes
	16109	No	Gates	Phillips Petroleum Co.	(W) Stafford	Stafford	33-21S-13W		25	0	L-KC	3371	24	5	0	0	0	Yes
	14491	Yes	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	Yes	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	1	1	Yes
	10320	--	Hickman	Kaiser-Francis	(D) Gates "B", Pile	Gates "B", Pile	27-21S-14W		240	40	Lans	3412	200	8	0	0	0	Yes
	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
	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
	14623	No	Knoche South	Palomino Petroleum*	(D) Jordan "B"	Jordan "B"	8-24S-12W		80	0	Viola + L-KC	3871	--	1	0	0	0	Yes
	16107	No	Knoche South	Ervin Schneider*	(D) Teichman	Teichman	17-24S-12W		160	0	Viola	3870	5	2	0	0	0	Yes
	15408	No	Koelsch West	Nadel and Gussman	(W) Koelsch	Koelsch	23-24S-14W		50	0	L-KC	3700	8	2	0	0	0	Yes
	17285	--	Kowalsky Southwest	Okmar Oil Company	(W) ---	Schlochtermeyer, Kasselman A	7-21S-11W 8-21S-11W		160	0	Simp + Arb	3418	29	5	0	0	0	Yes
	11122	Yes	Leesburg	Continental Oil Co.	(W) Leesburg, No.	Leesburg, No.	12-25S-13W		386	0	Lans + Simp	3710- 4070	83- 13	6	1	-	-	Yes
	11123	Yes	Leesburg	Continental Oil Co.	(W) Leesburg, So.	Leesburg, So.	13-25S-13W		246	0	Lans + Simp	3708- 4064	84- 12	3	3	-	-	Yes
	14032*	No	McCandless	Atlantic Richfield Co.	(W) McCandless	McCandless	30-25S-13W		--	--	L-KC	3701	280	5	0	0	0	---

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

Project no.	Injection Wells				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)						Remarks		
	Active	In-active	Drilled 1974	Abd. 1974			Injection Pattern	Source	Depth, ft.	Thick., ft.						Type	Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods			
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974		Cum. 12-31-74	
8906	9	30	-	-	Peri	400	420	Cedar Hills	1875	50	U	1972	S Gas	--	39	--	1,246,640	22,476,033	79,421	1,854,263	79,421	1,627,522		
9881	1	4	0	0	Irreg	0	157	Prod + Cedar Hills	1900	--	T	1963	S Gas	1/1	38	--	57,322	4,853,270	5,593	309,013	5,593	270,491		
10188	-	-	-	-	Irreg	Grav	20	Prod	--	--	U	1963	S Gas	1/26	34.5	--	7,300	97,267	953	112,777	0	0	*Was NCRA	
16389	0	0	0	0	Irreg	--	--	Prod	--	--	T	1972	S Gas	3/7	38	--	79,512	158,723	5,399	110,271	3,000	10,900	*Cancelled 1/2/75	
16164	3	0	0	0	Irreg	0-175	600	Prod + Water Sd	155	20	M	1971	Grav	1/4	39	--	238,174	840,316	16,470	88,861	12,050	--		
15224	1	0	0	0	Irreg	500	360	Prod	--	--	U	--	Gas Exp	2/1	38.8	--	96,571	429,532	12,419	61,591	0	0		
15349	1	0	0	0	Peri	650	108	Prod + Alluvium	50	--	U	1970	S Gas	30/142	39	--	39,400	182,926	11,890	122,304	6,910	18,886		
6322	1	0	0	0	Irreg	Vac	110	Prod	--	--	U	1958	S Gas	1/9	39	--	34,000	1,964,000	2,436	--	2,436	51,600	*Was Crown Oil Company	
	16	34	0	0													1,798,919	31,002,067	134,581	2,659,080	109,410	1,979,399		
15826	1	0	0	0	Irreg	0	3	Prod	--	--	U	1970	Wat*	1/.2	32	--	1,070	6,943	7,506	266,183	0	0	*Plus S Gas	
15211	1	0	0	0	Irreg	1200	250	Prod + Sh gravel	50	--	M	1969	S Gas	--	31	--	91,250	461,750	7,126	57,412	7,126	57,412		
12237	3	0	0	1	Irreg	Vac	122	Prod + Gr water	30	--	M	1966	S Gas	17/20	26	25	133,640	826,641	5,740	282,794	5,740	73,982		
11941	1	0	0	0	Irreg	0	34	Prod + L-KC	3692	24	U	1965	Wat	--	25	--	12,410	135,005	2,600	--	2,600	19,576	*Was Natural Gas & Oil	
9481	1	0	0	0	Irreg	0	230	Prod	--	--	U	1962	Wat	1/9	37	--	83,950	930,884	5,590	365,083	2,160	31,560		
13792	2	0	0	0	Irreg	2500	200	Prod + Ter Sd	60	25	M	1966	S Gas	16/0	33	18	200,521	1,974,894	12,435	190,345	12,435	185,568		
15378	1	0	0	0	Irreg	650	620	Prod	--	--	U	1970	Wat	--	38	--	226,300	866,551	17,006	94,604	12,074	48,250	*Was Natural Gas & Oil	
16314	1	0	0	0	Irreg	50	175	Prod + Fr wat	--	--	M	1972	Gas Exp	2/3	32	--	64,051	200,198	9,137	161,704	3,650	31,081	*Dry hole	
16704	1	0	0	0	Irreg	50	115	Prod + Fr Wat	--	--	M	1972	Gas Exp	35/65	33	--	41,867	111,242	7,118	141,805	1,500	4,960		
16034	1	-	0	-	3-spot	0	450	Prod	--	--	T	1971	Wat	8/30	28	--	164,250	610,250	9,937	--	9,937	--		
12284	1	0	0	0	Irreg	Vac	643	Prod + Arb	3660	--	U	1966	S Gas	38/916	38	--	264,748	1,981,188	5,390	70,140	5,390	70,140		
16179	1	0	0	0	Irreg	0	496	Prod	--	--	U	1971	S Gas	1/11.9	28	--	180,958	446,235	10,910	586,316	10,910	34,481		
15785	3	0	0	0	Peri	0	414	Prod + Sh Fr Wat	60	20	F + T	1970	S Gas	1/1	34.5	--	456,000	1,141,700	32,085	--	0	0		
13744	1	0	0	0	Peri	Vac	115	Prod + Arb	3670	5	U	1967	S Gas	28/58	34	--	41,600	337,365	8,361	475,228	3,988	11,168		
16109	1	0	0	0	Irreg	0	234	Prod	--	--	U	1971	S Gas	1/4.4	30	--	85,475	278,368	18,702	322,408	18,125	37,012		
14491	2	0	0	0	Line	646	670	Quat	100	50	F	1968	S Gas	52/35	30.1	--	489,135	2,335,889	31,982	214,704	31,982	214,704		
15604	3	1	0	0	Peri	200	110	Alluvium	90	20	F	1970	S Gas	7/3	32	--	121,303	830,770	8,352	--	8,352	63,922		
10320	1	0	0	0	Irreg	Vac	348	Prod	--	--	T*	1963	Gas Exp	43/57	29	--	127,000	623,710	50,000	1,108,824	8,000	16,300	*Plus S	
16263	5	1	0	0	Peri	165	255	Prod + Water Sd	80	--	M	1956	S Gas	15/21	33	--	565,461	5,627,179	22,348	1,525,052	22,348	448,371		
14970	2	0	0	0	Irreg	625	332	Prod + Water Sd	80	--	M	1969	S Gas	16/25	32	--	230,720	1,361,930	9,282	408,955	8,043	57,381		
14623	1	0	0	0	Irreg	0	30	Prod	--	--	U	1968	S Gas	6/70	34	--	10,950	34,675+	2,685	93,438	0	0	*Was Terra Resources (CRA)	
16107	1	0	0	0	Irreg	0	350	Prod	--	--	U	1971	S Gas	15/85	35	--	31,500+	--	--	--	--	--	--	*Was Willie Schultz †Sold lse. 4/1/74
15408	1	0	0	0	Irreg	300	90	Prod + Sh Fr	75	35	M	1970	S Gas	1/1	31	--	32,850	119,340	4,000	--	4,000	11,630		
17285	1	-	-	-	Peri	0	100	Prod	--	--	U	1974	S Gas	1/7	33	--	18,250	18,250	5,370	260,792	166	166		
11122	6	2	-	-	Peri	1850	420	Water Sand	91	23	F	1964	S Gas	--	33.5	--	765,420	6,101,275	43,400	802,519	43,400	681,089		
11123	5	5	-	-	Peri	1500	235	Water Sand	99	23	F	1964	S Gas	--	33.5	--	387,600	4,612,572	8,559	228,757	8,559	187,270		
14032	0	0	0	0	Irreg	--	--	---	--	--	-	--	---	--	--	--	0	0	10,199	563,030	0	0	*Proj. not started	

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1974—Continued

Kansas Geol. Survey Energy Resource Series 5, 1975

County	Is proj. uni- tized?	Field	Operator	Type and project name	Lease name	Location S - T - R	Acres in project		Oil producing zone			Oil producing wells (1974)				Has inj. been con- tinuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
STAFFORD COUNTY (concl.)																
17223	No	McKittrick	Aspen Drilling Company	(D) Wolf "A"	Wolf "A"	28-21S-11W	320	0	Simp	3350	18	4	0	0	0	Yes
15562	No	Max	Phillips Petroleum Co.*	(D) Siefkes "A"	Siefkes "A"	34-21S-12W	40	0	Arb	3615	20	2	0	0	0	Yes
8062	--	Merle	Southern States Oil Co.*	(P) Williams	Kuske, Williams	31-23S-13W 32-23S-13W	320	--	KC	3699	10	3	1	0	2	Yes
15347	Yes	Moody	Nadel and Gussman	(W) Moody	---	7,8-25S-14W	150	160	Miss Ch	4200	20	5	--	--	--	Yes
13909	No	Mt. View	Petroleum, Inc.	(W) Walls "A" Water- flood Project	Walls "A"	29-22S-13W	160	0	L-KC	3450	7	2	0	0	0	Yes
6117	--	Mueller	Joe Holman	(W) ---	Welch "A"	18-21S-12W	50	10	Arb	3570	14	2	1	0	0	Yes
6062	--	Mueller	Kaiser-Francis	(D) Batman B	Batman B	12-21S-13W	80	40	Arb	3570	--	3	0	0	0	Yes
13180	--	Omlor	Bill Witcraft*	(W) Omlor-Bushnell	Omlor	10-24S-12W	160	--	KC	--	6	2	--	--	--	Yes
15248	No	Oscar North	Palomino Petroleum*	(W) Williams	Williams	12-22S-14W	80	0	L-KC	3553	5	3	0	0	0	Yes
5948	No	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	334	112	L-KC	3600	7	9	6	0	1	Yes
6910	No	Pleasant Grove	John S. Martin*	(D) ---	---	26-22S-12W	40	10	KC	3550	10	3	0	5	1	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	6	6	0	1	Yes
16232	No	Radium Townsite	H.A. Chapman	(W) Bauer-Strobel WF	Bauer, Strobel	32-21S-14W 33-21S-14W	320	--	L-KC	3569	7	3	--	--	--	Yes
8232	--	Rattlesnake SE	White Hawk Oil Co.*	(D) McConnaughay Unit	Harrison	13-24S-24W	60	0	L-KC	3700	10	1	0	0	0	Yes
13751	No	Richardson	C & S Well Service Co.	(W) ---	C. Aiken	20-22S-11W	40	10	KC	3500	200	1	--	1	--	Yes
16654	--	Richardson	Clinton Oil Company	(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
12920	--	Sand Hills	Bergman Oil Company	(W) Mellies	Mellies	31-21S-11W 36-21S-12W	40	--	Simp	3540	4	1	0	0	0	Yes
17119	No	Sand Hills	H.A. Chapman	(W) Duggan	Duggan	30-21S-11W	160	--	L-KC	3236 3329	3 3	1	--	--	--	Yes
15780	--	Saundra	Southern States Oil Co.*	(P) Christiansen	Christiansen	15-21S-12W	160	--	KC	3361	25	4	1	0	0	Yes
13406	No	Seevers Northwest	Thornton E. Anderson*	(D) Bowker	Bowker	36-24S-14W	60	0	Miss	4030	20	2	0	0	0	Yes
13617	No	Seevers Northwest	Ladd Petroleum Corp.	(P) Sanders	Sanders	1-25S-14W	160	0	L-KC	3664	21	3	0	0	0	Yes
14994	Yes	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	Kaiser-Francis	(P) Wilcutt B	Willcutt A & B	4-21S-13W	160	0	Lans	3270	200	1	0	0	0	Yes
11894	Yes	Shaeffer-Rothgarn	Petroleum, Inc.	(W) Shaeffer Unit	Tucker, Fanshier "A", Sharp	4-21S-13W	120	0	Congl	3500	7	3	3	0	0	Yes
14211	--	Shaeffer-Rothgarn	Texaco Inc.	(W) C.D. Koopman	C.D. Koopman	4-21S-13W	160	--	Congl	3540	11	2	--	--	--	Yes
15937	No	Silver Bell	Woodman-Iannitti Oil Co.*	(W) Silver Bell Pilot Flood	Soeken-Besthorn	9-22S-13W	160	--	L-KC	3530	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	3	0	1	0	Yes
11857	Yes	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	--	Congl Cht	3350	25	2	1	--	1	Yes
12286	No	St. John	Atlantic Richfield Co.	(W) McNaughten "B"	McNaughten "B"	27-24S-13W	160	--	Lans	160	300	2	0	0	0	Yes
12323	No	Strobel	Thornton E. Anderson	(P) Strobel	Strobel	8-22S-14W	160	160	KC	3658	6	1	0	0	0	Yes
15587	No	Zenith-Peace Creek	Fell & Wolfe Oil Co.*	(D) Volker	Volker	36-23S-11W	80	--	Viola	3744	6	1	0	0	0	Yes
4338	--	Zenith-Peace Creek	Santa-Fe Pipe & Supply*	(D) McComb SWD	McComb, McComb, Richardson	21-24S-11W 22-24S-11W	--	--	Viola	3800	--	--	--	--	--	Yes
STAFFORD COUNTY TOTALS (Reported) (Includes project in supplemental list.)							9,986	890					222	33	9	15

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

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)				Remarks		
	Active	In-active	Drilled 1974	Abd. 1974				Source	Depth, ft.	Thick., ft.	Type	Water Injection						Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods				
												1974						Cum. 12-31-74	1974	Cum. 12-31-74	1974		Cum. 12-31-74	
17223	1	0	0	0	Irreg	0	18	Prod	--	--	U	1973	S Gas	1/1.5	40	3.5	20,470	21,424	12,874	307,741	0	0		
15562	1	0	0	0	Peri	0	3	Prod	--	--	U	1970	S Gas	1/1	38	--	2,460	34,750	4,304	151,816	0	0	*Was Thomas H. Allan	
8062	1	0	0	0	Irreg	--	225	Prod	--	--	T	1965	Grav	--	33	--	82,125	977,168	1,546	--	1,546	--	*Was Westrans Petroleum	
8551																								
15347	1	3	0	0	Peri	0	1065	Prod	--	--	T	1970	Wat + S Gas	1/12	35	--	388,000	1,389,400	9,400	--	4,700	11,400		
13909	1	0	0	0	Line	817	233	Prod + Quat	100	50	M	1967	S Gas	63/19	30.6	--	85,000	279,830	13,188	116,150	13,188	116,150		
6117	2	1	0	0	Irreg	300	106	Prod	3570	14	T	1958	S Gas	1/10	36.3	--	38,550	1,033,050	3,855	89,237	3,855	89,237		
6062	1	0	0	0	Irreg	Vac	70	Prod	--	--	T*	1958	Gas Exp	1/3	37	--	25,550	259,070	5,400	--	500	12,800	*Plus S	
13180	1	--	--	--	Irreg	200	165	Prod	--	--	U	--	Wat	--	34	--	61,000	322,800	4,000	--	--	--	*Was Sun Oil Company	
15248	1	0	0	0	Irreg	0	335	Shallow	80	--	F	1969	S Gas	4/1	30	--	122,350	533,750	6,262	477,568	2,500	15,600	*Was Shell Oil Company	
5948	1	0	0	0	Irreg	Vac	1/3	Prod	--	--	T	1957	S Gas	881/536	32.4	--	110	40,823	1,822	126,014	0	48,753	*Disposal	
6336	9	0	0	0	Peri	700	312	Prod + Fr Wat	60	--	M	1958	S Gas	45/11	33	--	962,786	11,930,521	41,410	2,440,525	41,410	1,622,014		
6910	1	0	5	1	Irreg	Vac	300	Prod	--	--	U	--	S Gas	9/1	35.1	--	109,500	--	3,600	275,000	9,000	90,000	*Was Shelly-Miller Drlg.	
13372	7	0	0	0	Peri	535	164	Prod + Sh Sd	35	53	M	1967	S Gas	44/67	30	--	433,848	4,370,625	18,699	1,068,482	18,699	191,088		
16232	3	--	--	--	Peri	Vac	105	Prod + Arb	--	--	T	1973	S Gas	3/1	36	--	114,849	202,641	12,997*	976,567+	3,836	3,836	*L-KC (Sec. & Pri. only) †Most prod. from Arb.	
8232	1	0	0	0	Irreg	0	10	Prod	--	--	U	1961	Wat	--	28	--	3,650	32,350	1,482	--	1,482	30,182	*Was Natural Gas & Oil	
13751	1	--	1	--	Line	200	300	Prod	--	--	U	--	Gas Exp	5/1	38	--	105,000	1,750,000	2,880	43,200	1,440	26,600		
16654	1	0	0	0	Irreg	770	85	Prod	--	--	U	1973	S Gas	1/3	35	--	30,879	92,762	45,268	--	6,500	19,840		
12920	1	--	--	--	Irreg	0	10	Prod	--	--	T	1966	S Gas	1/0	42	--	360	33,715	140	33,495	0	13,342		
17119	1	--	--	--	Irreg	Vac	81	Prod + Arb	--	--	T	1973	S Gas	1/3	36	--	29,463	38,922	7,994	193,261	0	0		
15780	1	0	0	0	Irreg	--	155	Prod	--	--	T	1971	Grav	--	33	--	56,575	171,954	5,761	22,324	5,761	22,324	*Was Westrans Petroleum	
13406	1	0	0	0	Irreg	0	60	Prod	--	--	U	1967	S Gas	16/2	34	--	21,000	243,000	3,121	136,771	400	2,300	*Was Dunne-Gardner	
13617	2	1	0	0	Irreg	Vac	231	Prod	--	--	U	1967	S Gas	50/79	29	25	168,510	852,452	6,865	346,481	6,865	39,768		
14994	6	1	0	0	Peri	902	351	Quat	100	50	F	1969	S Gas	139/136	32	--	810,906	2,647,335	41,574	273,738	41,574	273,738		
8784	1	0	0	0	Irreg	485	250	Prod	--	--	T + S	1961	Gas Exp	3/2	38	--	91,250	798,415	3,500	213,411	0	0		
11894	2	0	0	0	Line	502	171	Prod + Quat	73	50	M	1965	S Gas	258/2	43.8	--	104,083	140,393	13,563	127,335	13,563	127,335		
14211	2	--	--	--	Irreg	100	330	Prod + Arkansas River Gravel	100	--	M	1969	S Gas + Liquid Exp.5	680-	44.5	--	241,006	1,334,942	11,513	92,183	11,513	65,992		
15937	1	0	0	0	4-spot	500	450	Prod	--	--	T	1967	S Gas	3/2	31	--	164,000	994,450	4,300	--	2,000	17,400	*Was Petroleum Inc.	
11775	1	0	0	0	Irreg	0	90	Prod + Top	3140	65	U	1965	Wat	--	32	--	32,850	268,315	16,055	--	9,600	57,750	*Was Natural Gas & Oil	
11857	3	1	0	0	Peri	850	346	Prod + Fr Wat	70	--	M	1957	S Gas	47/1	36	--	379,051	3,329,074	10,091	168,260	10,091	168,260	*Was Sun Oil Co.	
13889	1	--	--	--	Peri	--	25	Prod	--	--	U	1967	S Gas	1/1	45	--	9,125	84,000	4,537	79,412	--	--		
12286	2	0	0	0	Irreg	400	325	Prod + Ter	63	23	M	1968	S Gas	30/58	32.2	--	286,622	1,374,158	21,238	72,866	21,238	72,866		
12323	1	0	0	0	Irreg	0	150	Prod	--	--	U	1965	S Gas	1/1	35	--	48,000	260,000	1,326	69,300	0	0		
15587	1	0	0	0	---	150	60	Prod	--	--	U	--	S Gas	--	39.3	--	--	--	0	--	--	--	*Was Republic Natural Gas	
4338	1	0	0	0	Irreg	--	1200	Prod	--	--	T	--	Wat	--	38	--	438,000	--	1,088	--	--	--	†Proj. being plugged 1/75 *Was Hershberger Expl.	

III 16 6 2

10,327,987 68,941,138 704,032 16,270,668 461,746 5,424,618

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1974—Continued

Kansas Geol. Survey Energy Resource Series 5, 1975

County	Is proj. unitized?	Field	Operator	Type and project name	Lease name	Location S - T - R	Acres in project		Oil producing zone			Oil producing wells (1974)				Has inj. been continuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
SUMNER COUNTY																
11093	Yes	Anson Southeast	Phillips Petroleum Co.*	(P) Anson East Unit	Anson East Unit	6,7,18-31S-1W	220	60	Miss	3750	10	8	0	0	0	Yes
13989	Yes	Anson Southeast	Phillips Petroleum Co.*	(P) Anson West Unit	Anson West Unit	6,7-31S-1W	340	560	Miss	3750	10	7	1	0	0	Yes
12774	No	Ashton Northwest	Lario Oil & Gas Co.	(P) Williamson	Lario-Williamson	1,12-31S-2W 13,14-34S-1E	320	0	Miss Ch	3484	--	2	0	0	0	Yes
13900	Yes	Bates	Phillips Petroleum Co.*	(P) Bates Unit	Bates Unit	31-30S-1W	520	120	Miss	3750	10	11	0	0	0	Yes
15716	No	Caster	Basin Petroleum Corp.	(P) Caster Unit	Melick, Caster,	33-33S-2E 35-33S-2E 2-34S-2E	160	15	Lay "A"	2680	10	15	0	0	0	Yes
12381	--	Conway Springs	Texaco Inc.	(P) Conway Springs Unit	Long, Caster "A", Dunbar	35-33S-2E 2-34S-2E 3-34S-2E	880	--	Simp	4352	15	3	-	-	-	Yes
14630	--	Fall Creek	Texaco Inc.	(W) Fall Creek K.C. Unit	M. Lies, E.H. Zerner, R. Stoehr, M. Games, J. Orr, R.C. Frantz	5-31S-3W 8-31S-3W	380	--	KC	3700	6.5	5	-	-	-	Yes
17006	--	Guelph	Herndon Drilling Co.	(P) ---	S. Hibbisiefken, I.E. Showalter, N.J. Peters, F.A. Hudson	3-35S-3W 4-35S-3W 4,9-35S-3W 10-35S-3W	140	--	Simp	3908	19	5	-	-	-	Yes
10738	No	Interchange	Lario Oil & Gas Co.	(P) Ashton-Lynch Unit	Gurley	6-35S-1E	480	0	Simp	4050	--	3	0	0	0	Yes
15035	No	Latta	Okmar Oil	(W) Latta Coop	Lario-Lynch, Lario-Ashton	18-32S-1E 19-32S-1E	60	0	L-KC	3045	5	4	0	0	0	Yes
15195	--	Love-Three	Continental Oil Co.*	(P) ---	Latta A, Latta B	8-30S-2W 9-30S-2W	--	--	Simp	4378	12	-	-	-	-	†
14498	Yes	Murphy	Terra Resources, Inc.	(W) Vernon North Unit	Love, Orie, Ruth	13-32S-4W	288	0	Miss Dol	3392	11	6	0	0	0	Yes
9106	--	O'Hara	Stelbar Oil Corp., Inc.	(W) O'Hara	Kemp, Callender, Callender "B", Waggoner, McClasky	8-35S-2E 9-35S-2E 16-35S-2E 17-35S-2E	160	--	KC	3250	10	4	2	0	0	Yes
9209	--	Padgett	Stelbar Oil Corp., Inc.	(W) Norrish-Shawver	O'Hara	18-32S-1W	320	--	Miss Ch	3450	30	5	0	0	0	Yes
14030					Shawver Fee, Spence, Norrish, Shawver Fee B, Shawver Fee A	26-34S-2E 27-34S-2E 34-34S-2E										
10688	--	Padgett	Stelbar Oil Corp., Inc.	(W) Post	Post	34-34S-2E	80	--	Miss Ch	3450	30	3	0	0	0	Yes
12773	No	Rutter Southwest	Lario Oil & Gas Co.	(P)+ King	Lario-King	29-33S-2E	160	0	Simp	3525	15	1	0	0	0	Yes
11612	No	Seydell	E. Morris Seydell*	(W) Seydell	(D) Seydell	17-30S-1E	80	80	Simp	3800	13	2	0	0	1	Yes
14742	No	Seydell	Shenandoah Oil Corp.*	(W) Stunkel	Stunkel	9-30S-1E	20	0	Simp	3766	7	1	-	-	-	---
16485	No	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	40	2	0	0	0	Yes
15952	No	Voils	Donald C. Slawson	(D) Bell "B" & Kraft "B"	Bell "B",	16-30S-1W 17-30S-1W	320	0	Miss	3500	20	2	0	0	0	Yes
3396	Yes	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 Dol	3650	20	64	0	0	0	Yes
5718	--	Wellington Northeast	Aladdin Petroleum Corp.	(P) Miller	Miller	23-31S-1W	40	40	Miss	3640	18	2	0	0	0	Yes
SUMNER COUNTY TOTALS (Reported)							7,328	955			156	3	0	1		

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

Project no.	Injection Wells					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)						Remarks	
	Active	In-active	Drilled 1974	Abd. 1974	Injection Pattern			Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods			
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974	Cum. 12-31-74		
11093	2	0	0	0	Peri	250	480	Wellington	50	20	F	1964	S Gas	--	41	--	350,538	3,021,014	106,400	1,538,160	94,212	677,039	*Was Beardmore Oil Inc.	
13989	3	0	0	0	Peri	180	369	Prod + Wellington	50	20	M	1968	S Gas	--	41	--	403,978	2,823,596	50,176	1,063,892	27,720	195,129	*Was Beardmore Oil Inc.	
12774	1	0	0	0	Irreg	Grav	--	Prod + Lay + Arb	2863	--	U	1966	S Gas	37/149	40	--	--	--	7,010	79,996	0	0		
13900	2	0	0	0	Peri	260	1087	Prod + Stal	2700	60	U	1967	Gas Exp	--	41	--	793,642	4,162,215	98,950	779,989	62,949	124,921	*Was Beardmore Oil Inc.	
15716	3	0	0	0	Irreg	0-100	128	Prod	--	--	U	1970	Gas Exp +7/3 Limited water influx	41	1.5	140,000	458,000	50,000	350,000	20,000	30,000			
12381	2	-	-	-	Peri	0	411	Prod	--	--	U	1967	Wat	29572/16450	44	1.13	299,592	4,030,360	9,004	116,223	--	--		
14630	6	-	-	-	Peri	--	--	Prod + Stal	3225	90	M	1969	S Gas	559/2572	36	3.6	254,335	1,976,193	9,559	132,696	9,559	106,260		
17006	-	-	-	-	Irreg	0	--	Prod	--	--	U	1973	Wat	1/12	45	--	600,000	891,950	30,055	2,486,943	8,145	10,155		
10738	1	0	0	0	Irreg	Grav	277	Prod	--	--	U	1964	Wat	3524/630	43	--	101,070	320,433	62,267	705,983	0	0		
15035	2	0	0	0	---	150	303	Prod	--	--	U	1969	S Gas	3/32	37	--	110,439	686,069	9,244	525,603	3,140	4,720*	*Corrected figure	
15195	-	-	-	-	---	--	--	---	--	--	-	--	---	--	--	--	--	--	--	--	--	--	*Was Oasis Pet., Inc.	
14498	5	0	0	0	Peri	Vac	264	Prod + Stal	2293	138	T	1961	S Gas	0.26/1.0	41.5	--	552,785	5,800,716	20,715	630,472	20,715	259,923	+Not in operation	
9106	2	1	0	0	Peri	150	60	Prod + Stal	2750	100	T	1961	S Gas	--	35	--	44,150	1,449,804	9,263	--	9,263	240,633		
9209	1	1	0	0	Line	Vac	340	Prod	--	--	U	1960	Wat + S Gas	--	39	--	124,100	684,500	18,487	--	18,487	111,660		
14030																								
10688	1	0	0	0	Irreg	500	200	Prod + Stal	2350	150	U	1965	Wat	--	40	--	73,000	578,486	6,789	--	5,090	40,937		
12773	2	0	0	0	Peri	Grav	--	Arb	3544	--	U	1964	S Gas	31/0	38	--	--	--	11,160	120,252	0	15,292		
11612	2	1	0	1	Irreg	400	380	Prod + Fr Wat Sd	26	--	M	1963	S Gas + Wat	1/0	40	--	279,103	1,603,223	3,670	513,344	3,670	123,369	*Was Sam P. Wallingford	
14742	-	-	-	-	---	--	--	---	--	--	-	--	---	--	--	--	--	--	--	--	--	--	--	*Was Solar Oil
16485	1	0	0	0	Irreg	Vac	98	Prod + Surface	10	100	F	1972	S Gas	1/0	42	--	24,000	96,000	2,916	93,031	2,916	14,353	*Inject periodically	
11012	1	1	0	0	Peri	400	405	Prod	--	--	U	1964	S Gas	--	41	--	147,859	2,987,740	6,762	327,474	2,896	88,467	*Was Beardmore Oil Inc.	
15952	1	0	0	0	Irreg	150	55	Prod + Stal	2600	90	U	1971	S Gas	2/1	46	1.5	19,938	164,638	12,065	166,683	7,025	30,959		
3396	30	11	0	0	Irreg	293	419	Prod + Stal	2650	100	U	1953	S Gas	98/1	43	--	5,496,155	107,714,396	195,799	9,078,043	195,799	8,463,303		
5718	2	-	0	0	Irreg	150	--	Prod	--	--	T	1957	S Gas	--	38	--	70,862	2,192,918	7,280	362,186	--	--		
70	15	0	1														9,885,546	141,642,296	727,571	19,070,970	498,145	10,537,120		

TABLE 1-ENHANCED OIL-RECOVERY PROJECTS, 1974-Continued

County	Project no.	Is proj. un- tized?	Field	Operator	Type and project name	Lease name	Location	Acres in project		Oil producing zone			Oil producing wells (1974)				Has inj. been continuous?
							S - T - R	Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
TREGO COUNTY																	
	16437	--	Garner West	B. Tepper	(P) Brown	Shearer, Connor, Brown	13-11S-25W 23-11S-25W 24-11S-25W	120+	--	L-KC	371	22	2	0	0	0	Yes
	10154*	--	Groff	John O. Farmer, Inc.	(P) Holtsinger	Holtsinger	25-14S-21W	80	--	Penn	3830	6	8	-	-	-	No
	17618	No	Groff	John O. Farmer, Inc.	(P) Wannamaker	Holtsinger Wannamaker "A", Wannamaker "B", Holtsinger "B"	34-14S-21W 35-14S-21W	200	--	Penn	3830	6	8	-	-	-	Yes
	17377	No	Holland	Donald C. Slawson	(P) Holland "B"	Holland "B"	23-13S-22W	320	0	L-KC	3600	10	2	0	1	0	Yes
	13976	No	Kutina West	Shields Oil Producers, Inc.	(W) Dickman-Philip Waterflood	Dickman	24-15S-22W	80	0	Cher	4200	20	1	0	0	0	Yes
	15870	--	Madden	Raymond Oil Co., Inc.	(W) Madden	Madden	17-14S-21W	40	0	Cher	3971	11	1	-	-	-	Yes
	11229	No	Mong	W.E. Wickizer	(D) Mong	Mong	24,25-11S-23W	320	40	KC 1m	3616	*	1	0	0	0	Yes
	8278	No	Newcomer	A.L. Abercrombie*	(D) Rasek "A"	Rasek "A"	12-12S-23W	60	--	L-KC	3700	35	1	2	0	0	Yes
	10092	--	Newcomer	Petroleum Management, Inc.	(W) Newcomer Coop-Hixson, LKC	Hixson LKC Unit, Newcomer A, Newcomer B, Morgan C	2,11-12S-23W 12-12S-23W	1280	0	L-KC	3660	12	5	5	0	0	Yes
	16356	--	Newcomer	Texaco Inc.	(W) Newcomer Unit	Sarah Losee, F. Rinker	1-12S-23W	480	--	L-KC	3650	3.3	4	-	-	-	Yes
	17636	--	Nicholson	Cities Service Oil Co.	(W) Nicholson Field LKC W.F.	Huck "A"	25-11S-21W	80	0	L-KC	3580	12	2	0	0	0	Yes
	14633	No	Ogallah	Colorado Oil Company	(W) Schoenthaler	Schoenthaler	26-12S-22W	30	10	L-KC	3580	82	3	0	0	0	Yes
	14666	--	Ogallah	Texaco Inc.	(P) Ogallah Unit	Christian Church, Powers, Kellogg-Wynn, J.F. Stickline, E.A. Scott, A. Schoenthaler, V.G. Powers, C. Scott, G. Bittel, Monroe, Anderson "C", P. Hendrickson, U.S. Government, Kellogg-Wynn, C. Scott, E.M. Monroe, Benson	25-12S-22W 26-12S-22W 27-12S-22W 31-12S-22W 34-12S-22W 35-12S-22W 36-12S-22W	1690	--	Arb	3950	24	31	-	-	-	*
	17401	--	Rideway	Texaco Inc.	(P) Edith King	Schoenthaler, E. King	26-12S-21W 27-12S-21W	320	--	Lans + Arb	3712 3893	--	4	-	-	-	Yes
	17094	--	Trico	Cities Service Oil Co.	(W) Spaulding "B" W.F.	Spaulding "B"	1-11S-21W	160	0	L-KC	3366	8	3	1	0	0	Yes
	6045	--	Wakeeney	Okmar Oil*	(W) Kraus-Lemke	Kraus, Lemke	15-11S-23W	120	0	L-KC	3500	5	2	0	0	0	Yes
	14181	--	Wakeeney East	Okmar Oil	(W) Mong	Mong	24-11S-24W	50	0	L-KC	3539	5	2	0	0	0	Yes
	14887	--	Walz	Continental Oil Co.	(W) Walz Lans. KC	J.J. O'Connor, J.J. O'Connor "A"	13-11S-21W	100	0	L-KC	3400	17	5	0	-	-	Yes
TREGO COUNTY TOTALS (Reported)								(Includes project in supplemental list.)									
								5,610	50				87	9	1	0	
WABAUNSEE COUNTY																	
	13504	Yes	Ashburn	Mack Oil Company*	(P) Ashburn Droll Unit	Ashburn, Droll	29-14S-10E	40	--	Viola	3250	15	2	2	0	0	Yes
	14051	No	Davis Ranch	Exxon Corporation	(W) Davis Ranch Water-flood	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	0	0	1	No*
	13124	No	Mill Creek	Frank Small Oil Co.*	(P) Thowe	Carl Thowe	2,3-13S-10E	150	--	Viola 1m	2930	3-4	2	0	0	0	Yes
WABAUNSEE COUNTY TOTALS (Reported)																	
								334	0				6	2	0	1	
WILSON COUNTY																	
	12711	No	Altoona	John T. Davis	(W) Umbarger	Umbarger	36-28S-16E	40	0	Squir	660	16	7	0	1	0	Yes
	12954	--	Altoona	Davis & Bel Const.	(P) Folger	Folger	36-28S-16E	40	0	Squir	690	10	3	0	0	0	Yes
	8983	No	Altoona	Jones & Campbell, Inc.*	(P) Short	Short	31-28S-17E	320	0	Squir	790	20	5	3	2	0	Yes
	9576																
	7516	No	Altoona	Nicholas Sage*	(W) Arthur Mullen	Arthur Mullen	21-29S-16E	40	0	Bart1	780	12	4	3	0	2	Yes
	10348	Yes	Benedict	C.F. Jones	(D)+ Roberts A	Roberts A	11-28S-15E	120	0	Squir	940	15	7	5	0	0	No*
					(S)												

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

Project no.	Injection Wells					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)						Remarks	
	Active	In-active	Drilled 1974	Abd. 1974	Injection Pattern			Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods			
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974	Cum. 12-31-74		
16437	1	0	0	0	Irreg	Vac	450	Prod	--	--	U	1972	S Gas	3/1	24	--	164,000	295,000	15,609	68,857	--	--		
10154	1	-	-	-	Irreg	--	--	Prod + Dak	--	100	U	1963	Grav	--	40	--	--	--	--	--	--	--	--	*No longer inj. well
17618	-	-	-	-	Irreg	400	300	Prod + Cedar Hills	1200	100	U	1974	Grav	--	40	--	52,083	52,083	24,000	24,000	15,000	15,000		
17377	1	0	1	0	Irreg	0	73	Prod + Cedar Hills	--	--	U	1974	S Gas	3/1	31	6.5	17,829	17,829	32,454	53,419	0	0		
13976	1	0	0	0	Irreg	1800	190	Prod + Cedar Hills	1100	250	T	1968	Grav	--	38	--	69,155	445,005	7,509	121,409	6,000	91,500		
15870	1	-	-	-	Irreg	400	330	Prod + Arb	4000	--	T	1970	S Gas	1/0	37	--	14,078	171,385	1,990	26,915	1,990	26,915		
11229	-	-	-	-	Irreg	0	60	Prod	--	--	U	1964	Wat + App. Grav	1/3	36	--	24,000	--	--	--	--	--	*5 zones	
8278	1	3	0	0	Irreg	0	25	Prod	--	--	U	1960	S Gas	5/2	39	6	9,125	812,115	1,613	196,578	1,613	96,045	*Was Phillips Petroleum	
10092	3	2	0	0	Irreg	150	154	Prod	--	--	U	1960	---	--	36	--	168,026	3,748,277	8,240	556,870	8,240	411,378		
16356	3	-	-	-	Irreg	500	342	Prod + Cedar Hills	1380	220	M	1972	S Gas	58/12512	38.4	3.2	375,026	1,142,427	18,288	51,609	8,881	20,729		
17636	1	0	0	0	Irreg	0	72	Prod + Dak	815	43	M	1974	S Gas	1/3	--	--	3,503	3,503	401	156,315	401	401		
14633	1	0	0	0	Irreg	Vac	143	Prod + Arb	3972	24	U	1969	Wat	52/17	39	--	52,066	407,329	13,265	--	13,265	55,271		
14666	0	-	0	-	---	--	--	---	--	--	-	--	Wat	2860/880	37	2.6	--	--	143,170	2,534,644	--	--	*No injection, active water drive	
14667																								
14948																								
17401	1	-	-	-	Irreg	--	--	Prod	--	--	U	1974	Wat + S Gas	22/750	--	--	32,728*	32,728	1,282*	1,282	--	--	*Since 11/1/74	
17094	1	0	0	0	Irreg	0	274	Prod	--	--	U	1974	S Gas	16/21	--	--	58,789	58,789	2,344	536,816	7,313	7,313		
6045	1	0	-	0	Irreg	150	300	Prod	--	--	U	1958	S Gas	--	40	--	109,500	+	2,065	619,132	2,065	+	*Was S & G Oil †No records on this data	
14181	1	0	0	0	Irreg	330	637	Prod	--	--	U	1968	S Gas	15/5	36	--	232,000	1,375,938	873	56,931*	873	2,903	*Corrected figure	
14887	2	0	-	-	Line	280	460	Prod	--	--	U	1969	S Gas	--	33.6	--	357,015	1,673,561	15,965	105,606	7,433	34,184		
	22	3	1	0													1,811,683	10,235,969	291,931	5,110,383	75,937	761,639		
13504	1	-	-	-	Peri	0	930	Prod	--	--	U	1967	Wat	2/98	21	--	339,450	1,396,700+	4,277	231,164	4,277	13,553+	*Was Wm. Gruenerwald †Mack Oil Cum. figures	
14051	0	0	0	0	Irreg	--	--	Prod	--	--	U	1968	S Gas	50/1	29	--	0	416,725	3,053	62,158	3,053	62,158	*Injection terminated	
13124	1	0	0	0	Irreg	175	1000	Prod	--	--	U	1966	Wat	--	23.5	--	365,000	--	4,691	--	0	--	*Was Skelly Oil Co.	
	2	0	0	0													704,450	1,813,425	12,021	293,322	7,330	75,711		
12711	4	0	0	0	5-spot	600	20	Prod + Bartl	800	20	T	1972	S Gas	9/1	29	--	28,000	78,000	2,160	5,330	1,110	2,315		
12954	1	0	0	0	Irreg	500	10	Prod + Bartl	800	20	T	1966	S Gas	9/1	26	--	3,500	99,000	650	--	150	3,750		
8983	3	1	2	0	Irreg	600	300	Prod + Oswego	353	75	M	--	S Gas	--	28	--	35,000	--	1,056	--	1,056	--	*Was Wimsett & Thompson	
9576																								
7516	2	-	0	-	Irreg	400	30	Prod + Oswego	640	8	U	1964	S Gas	95/5	36	--	18,000	198,000	875	22,994	875	12,994	*Was Crest Oil Co.	
10348	0	6	0	0	5-spot+ Line	300	40	Prod + Miss	1160	41	M	1963	Gas Exp	1/9	32	--	1,500	--	480	--	0	--	*No water in 1974	

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1974—Continued

County	Project no.	Is proj. uni-tized?	Field	Operator	Type and project name	Lease name	Location		Acres in project		Oil producing zone		Oil producing wells (1974)				Has inj. been continuous?
							S - T - R		Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	
WILSON COUNTY (concl.)																	
	10473	--	Benedict	Layton Oil Co.	(-)* Employers Reinsurance	Employers Reinsurance	9-28S-15E		--	--	Bart1	980	6	-	-	-	---
	11290	--	Benedict	Layton Oil Co.	(-)* Manderscheid & Pierpoint	Manderscheid, Pierpoint	4-28S-15E		--	--	---	--	--	-	-	-	---
	11377	No	Buffalo-Vilas	Marland No. 1*	(W) Uhren Flood	---	16-28S-17E		320	0	Bart1	960	20	9	-	10	- Yes
	9674	No	Buffalo-Vilas	Wimsett & Thompson	(W) Carlson	Carlson	11,12-27S-16E		160	30	Bart1	990	15	6	1	-	- Yes
	8283	No	Fredonia	R.R. Abderhalden*	(W) Van Camp	Hamilton, Mikesell, Van Camp	27,28,34,35-29S-15E		150	0	Bart1	1160	40	24	1	0	0 Yes
	7521	No	Neodesha	Nicholas Sage	(W) Susie Phillips	Susie Phillips	26-30S-16E		60	30	Bart1	780	20	8	4	-	- Yes
WILSON COUNTY TOTALS (Reported)									1,250	60				73	17	13	2
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		30	0	Bart1	1200-	20-	39	0	0	0 Yes
	14889	--	Durand	Dunigan Operating Co.	(W) Earl Davidson	Earl Davidson	6-25S-16E		18	0	Squir	965	10	4	0	0	0 Yes
	13220	--	Neosho Falls-LeRoy	Leedy-Beaman	(P) Leedy-Beaman	Leedy, Entz	25-23S-16E		20	8	Squir	924	12	11	3	2	1 Yes
	15417	No	Owl Creek	Tec Drilling Co., Inc.	(W) ---	Fred Coffield, Kenneth Stockebrand, Tom Smith, Marie Yohon	16-25S-16E		190	0	Squir	911	12	20	0	1	0 No*
	8990	No	Perry-Halligan	Layton Oil Co.	(-)* Rose Flood	---	16,17,18,19,20,21,29,31-26S-17E		--	--	Squir	--	--	-	-	-	-
	10770	--	Quincy	Marion Myers*	(W) Batesville	Corkery	29-25S-14E		160	0	Bart1	1400	20	5	0	0	0 Yes
	11604	Yes	Silver City	Steinforth Well Service*	(W) Silver City Water Flood Unit B	Adams, Hill "A", Hill "C"	20-26S-15E		55	0	Bart1	1400	20	4	0	0	0 Yes
	12198	Yes	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	No	Tichenor	Tec Drilling Co. Inc.	(W) Dearinger B	R. E. Dearinger "B"	19-23S-16E		160	0	Squir	1037	9	6	0	0	0 Yes
	17126	No	Vernon	L. C. Bodemann, Jr.*	(W) John F. Wingrave Lse.	John F. Wingrave	16,17-24S-16E		480	0	Squir	1015	20	9	2	0	0 Yes
	12385	--	Vernon	Long-Tye Oil Co.	(W) Glades-Fuller	Robison	29-23S-16E		540	--	Squir	1039	15	23	1	2	2 Yes
	6887	--	Vernon	James E. Russell Petroleum, Inc.	(W) Aljo Flood	Butler	33-23S-16E		116	0	Squir	1000	21	37	10	0	0 Yes
	12706	--	Vernon	James E. Russell Petroleum, Inc.	(W) South Vernon	Wilson-Dunne	35-23S-16E		15	0	Squir	1000	20	22	0	2	0 Yes
	14285	No	Vernon	Tap Oil Company	(W) Vernon	Mathias Strahm	1-24S-16E		40	0	Squir	1180	35	4	0	0	0 Yes
	10663	--	Vernon	Trico Oil Co.*	(W) Sturlong	Sturlong	11-24S-16E		320	20	Squir	1020	14	10	6	-	- Yes
	10670	No	Winterscheid	Atlantic Richfield Co.	(W) Winterscheid Water-flood	Carl Keske	11-24S-16E		320	20	Squir	1020	14	10	6	-	- Yes
	7103	No	Winterscheid	Atlantic Richfield Co.	(W) Winterscheid Water-flood	A. A. Newby	12-24S-16E		320	20	Squir	1020	14	10	6	-	- Yes
	7949	No	Winterscheid	Barnett Oil, Inc.	(D) Bahr	W. P. Headley "A", "B", "C"	29,30-23S-14E		560	--	Miss Ch	1700	20	25	13	0	0 Yes
	416	--	Winterscheid	French Oil Company	(P) Dewey	J. W. Maclaskey "A"	29,30-23S-14E		160	-	Arb	2200	5	3	-	-	- Yes
	1056	--	Winterscheid	French Oil Company	(P) Maclaskey	Henry G. Collins	30-23S-14E		100	0	Miss 1m	1600	6	7	0	0	0 Yes
	3902	No	Winterscheid	French Oil Company	(P) W. P. Headley	Bahr	23-23S-13E		40	0	Miss 1m	1700	4	4	0	0	0 Yes
	5646	No	Winterscheid	French Oil Company	(P) South Peek	Headley	29-23S-14E		90	0	Miss 1m	1700	6	11	0	0	0 Yes
	5662	No	Winterscheid	French Oil Company	(P) Headley 541	Headley	29-23S-14E		70	0	Miss 1m	1700	6	6	0	0	0 Yes

Oros and Saile--Enhanced Oil-Recovery Operations in Kansas, 1974

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)						Remarks
	Active	In-active	Drilled 1974	Abd. 1974				Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods		
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974	Cum. 12-31-74	
10473	-	-	-	-	---	--	---	--	--	-	--	---	--	--	--	--	--	--	--	--	--	*Primary production only, at present	
11290	-	-	-	-	---	--	---	--	--	-	--	---	--	--	--	--	--	--	--	--	--	*Primary production only, at present	
11377	8	0	-	-	Irreg	280	30	Prod + Creek	--	--	F+T	1964	Gas Exp	3/1	28	--	91,250	161,750	27,732	140,767	27,732	140,767	*Was Charley Murphy
9674	2	-	0	-	5-Spot	600	75	Prod	--	--	M	--	Grav	9/1	30	--	28,000	--	1,500	--	1,500	--	
8283	11	4	0	0	Irreg	500	160	Prod + Oswego	350	50	T	1961	S Gas	--	25	--	642,400	6,857,755	16,960	247,323	16,960	247,323	*Was Sun Oil Co.
7521	5	1	0	0	5-Spot	400	20	Prod + Salt Sand	900	50	U	1962	S Gas	99/1	38	--	35,525	755,525	525	90,767	525	40,767	
	36	12	2	0													883,175	8,150,030	51,938	507,181	49,908	447,916	
6103	5	0	0	0	5-Spot	0	57	Prod + Cher	1100	30-50	T	1957	Grav	3/1	21	--	104,012	1,558,703	19,094	--	19,094	506,159	
14889	1	0	0	0	5-Spot	500	32	Prod	500	--	T	1969	S Gas	5/95	22	243	11,803	81,969	1,559	14,366	1,559	14,366	
13220	11	3	2	1	Irreg	30	--	Prod	105	20	U	1967	Grav	95/5	26	--	1,200	23,400	5,015	15,635	3,600	11,750	
15417	0	0	0	0	Irreg	300	32	Prod + KC	420	46	T+	1970	S Gas	99/1	24	80	#--	--	7,738	156,018	--	16,908	*Converting + Plus P #42,800 MCF
8990	-	-	-	-	---	--	---	--	--	-	--	---	--	--	--	--	--	--	--	--	--	--	*Primary production only, at present
10770	2	0	0	0	Line	300	300	Prod	--	--	U	1972	Wat	7/200	40	--	88,000	--	4,224	--	1,408	--	*Was H. J. Uhl
11604	5	3	0	0	Line	190	25	Prod	--	--	U	1967	Wat	1/2	28	21	12,000	1,774,450	1,760	21,952	1,760	21,952	*Was Pauley Petroleum
12198	4	7	0	0	Line	200	15	Prod	--	--	U	1965	Wat	2/1	29	21	8,000	661,069	1,350	24,303	1,350	24,303	*Was Pauley Petroleum
13137	1	0	0	0	Irreg	300	32	Prod + KC	350	--	U	1969	Wat+S G	1/3	24	--	11,680	92,087	1,860	39,861	400	--	
17126	3	0	0	0	Irreg	291	49	Prod + KC	360	60	U	1973	S Gas	2/1	25	--	37,783	39,084	3,953	61,811	3,953	3,953	*Was J.F.Williams & Gibbs
12385	6	-	0	-	Irreg	--	45	Prod + KC	565	35	U	1966	Grav	9/1	24	--	16,500	--	6,834	--	200	--	
6887	35	16	0	0	5-Spot	593	22	KC Lime	550	40	T	1963	S Gas	--	26	70	287,292	3,601,059	30,834	676,929	30,834	535,294	
12706	4	2	1	0	Irreg	307	36	KC Lime	500	40	T+S	1966	S Gas	--	26	70	51,839	376,150	9,981	101,696	9,981	55,939	
14285	4	0	0	0	5-Spot	300	50	Prod + KC	420	20	T	1969	Grav	9/1	22	--	7,300	78,368	4,821	--	--	--	
10663	6	1	-	-	Irreg	300	15	Prod + KC	420	--	T	1965	S Gas	1/1	24	--	--	--	5,297	113,607	5,297	113,607	*Was Crystal Oil Co.
10670	14	4	0	0	5-Spot	450	225	Prod + Dougl	700	30	U	1960	S Gas + Wat	82/380	39	--	1,088,123	15,615,833	33,519	800,815	33,519	716,826	
7949	1	-	1	-	Irreg	Vac	400	Prod	--	--	U	1960	S Gas	2/8	34	--	105,000	1,542,260	15,593	313,846	2,000	75,150	
416	1	0	0	0	Irreg	75	100	Prod	--	--	T	1956	Wat	55/45	37	--	24,000	268,000	15,388	--	3,847	73,696	
1056	1	0	0	0	Irreg	Vac	100	---	--	--	T	1960	Wat	45/55	36	--	10,000	130,000	2,492	--	623	16,806	
3902	-	-	-	-	Irreg	75	200	Prod	--	--	T	1955	Wat	5/5	37	--	35,000	1,045,000	13,759	--	4,815	62,530	
5646	1	0	0	0	Irreg	75	125	Prod	--	--	T	1956	Wat	51/49	37	--	30,000	930,000	12,527	--	3,758	95,608	
5662	1	0	0	0	---	80	200	Prod	--	--	T	1955	Wat	5/5	37	--	12,000	344,000	6,381	--	2,552	41,643	

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

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)				Remarks				
	Active	In-active	Drilled 1974	Abd. 1974				Source	Depth, ft.	Thick., ft.						Type	Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods			
																	1974	Cum. 12-31-74	1974		Cum. 12-31-74	1974	Cum. 12-31-74	
6222	1	0	0	0	Irreg	75	50	Prod	--	--	T	1955	Wat	6/4	36	--	4,000	28,000	3,087	--	1,234	27,048		
7898	1	0	0	0	Irreg	60	50	Prod	--	--	T	1960	Wat	45/55	36	--	15,000	355,000	1,710	--	513	16,519		
8459	1	0	0	0	Irreg	100	180	Prod	--	--	T	--	Wat	5/5	36	--	38,000	1,066,000	3,732	--	746	17,235		
12149	1	0	0	0	Irreg	100	125	Prod	--	--	T	1963	Wat	55/45	33	--	18,000	206,000	2,817	--	422	24,498		
12189	1	0	0	0	---	70	75	Prod	--	--	T	1965	Wat	48/52	33	--	8,000	66,000	2,958	--	739	20,600		
1055	1	0	0	0	Irreg	125	150	Prod	--	--	T	1950	Wat	45/55	36	--	58,000	508,000	3,494	--	1,747	68,619		
3892	1	0	0	0	Irreg	50	100	Prod	--	--	T	1950	Wat	52/48	36	--	25,000	775,000	2,284	--	1,142	56,752		
3893	1	0	0	0	Irreg	90	110	Prod	--	--	T	--	Wat	49/51	36	--	28,500	849,500	1,683	--	1,262	65,328		
5645	1	0	0	0	Irreg	25	50	Prod	--	--	T	1956	Wat	5/5	35	--	14,000	333,000	463	--	463	18,406		
6021	1	0	0	0	---	150	200	Prod	--	--	T	1955	Wat	45/55	35	--	20,000	100,000	1,747	--	874	5,299		
6088	1	0	0	0	Irreg	80	100	Prod	--	--	T	--	Wat	4/6	37	--	32,500	957,500	2,329	--	1,164	46,859		
16395	1	0	0	0	Irreg	0	20	Prod	--	--	T	1960	Wat	6/4	36	--	2,000	6,000	5,925	--	2,370	7,283		
16396	-	-	-	-	Irreg	50	15	Prod	--	--	T	--	Wat	6/4	36	--	5,000	15,000	16,006	46,452	6,402	18,580		
13109	2	0	0	0	Irreg	100	100	Prod	--	--	U	1966	Wat	1/3	35	--	73,000	608,000	6,181	32,521	3,600	80,600		
13162																								
12212	2	0	0	0	Irreg	500	296	Prod	--	--	U	1944	S Gas	8/5	39	--	216,015	2,572,098	16,736	892,743	15,438	196,739	*Was Barbara Oil Co.	
1054																								
11700	1	0	0	0	4-Spot*	150	65	Prod	--	--	U	1965	Wat	15/85	38	--	12,775	25,550	1,095	--	400	--	*Peri	
13047	1	1	0	0	Peri*	250	300	Prod	--	--	T	1965	Wat	2/8	39	--	109,500	219,000	3,650	--	1,460	--	*5-Spot +Plus Surfactant	
13070	1	0	0	0	Peri*	100	50	Prod	--	--	U	1967	Wat	2/8	36	--	18,250	36,500	1,825	--	730	--	*4-Spot	
14365	1	1	0	0	Peri*	250	1200	Prod	--	--	T	1968	Wat	1/3	38	--	438,000	876,000	4,380	--	1,095	--	*5-Spot	
6143	10	3	0	0	Peri	900	452	Prod + Arb	2030	500	T	1968	S Gas	1/4	38	--	1,648,913	10,693,961	22,589	731,882	--	--		
10251	8	2	0	0	5-Spot	950	225	Prod + Arb	2011	439	T	1963	Grav	17/63	38.5	--	656,818	9,029,641	23,258	317,814	23,258	317,814		
4218	1	0	0	0	Irreg	0	--	Prod	--	--	U	1954	Grav*	8/60	35	35	22,000	--	1,825	--	300	--	*Comb. with Gas Exp	
11592	7	3	0	0	Irreg	--	373	Prod + Arb	1850	311	U	1961	S Gas	1/1	35	--	952,964	13,701,292	12,911	363,247	--	--		
186	46	4	1														6,357,767	78,833,974	346,664	4,725,498	195,909	3,374,669		
6421	11	0	1*	0	Irreg	650	15	Prod+400Ft sh†	400	4	M+S	1958	S Gas	49/1	35	--	38,500	570,000	7,163	--	5,000	--	*Converted †+Surface	
6436	2	2	0	0	Irreg	700	20	Prod+400Ft sh	400	4	M+S	1958	S Gas	98/2	34	--	14,500	210,000	604	--	400	--		
6699	3	3	0	0	Irreg	600	20	Prod + Oswego	400	5	T	1959	S Gas	9/1	34	--	30,000	355,000	5,925	--	--	--	*Was J. W. Perry	
9179	5	1	0	-	Irreg	550	20	Prod+400 Ft. sh	400	4	M	1962	S Gas	49/1	35	--	36,000	352,170	1,201	--	1,201	--	*Converted to input	
11406	6	-	1	-	Irreg + 5-Spot	600	20	Prod+Oswego + surface	400	4	T#	1965	S Gas	9/1	35	--	43,200	106,420	7,845	--	7,845	--	*Was J. W. Perry +2 converted to input #Surfactant	
14488	1	-	-	-	Irreg	Vac	158	Prod	--	--	U	1972	S Gas	16/46	36	--	57,600	79,862	3,314	372,475	985	3,395*	*Includes 2410bbl in 1973	
11715	1	0	0	0	Peri	350	205	Prod + Arb	3300	5	T	1966	S Gas	--	34	34	74,800	737,577	1,352	230,237	1,352	4,046		
11293	2	0	2	0	Irreg	500	590	Prod	--	--	U	1972	Grav	1/16	38	--	15,000	--	1,900	--	760	--	*Was NCRA	
2551	2	0	0	0	Irreg	200	100	Prod	--	--	U	--	S Gas	--	36	--	35,600	184,170	3,054	--	3,054	--		
7763	1	0	0	0	Irreg	50	299	Prod	--	--	U	1960	S Gas	--	43	--	109,135	--	5,711	--	5,711	--		
13161	1	0	0	0	Peri	350	905	Prod + Arb	2440	5	U	1966	S Gas	--	33	--	329,000	2,636,950	2,634	50,786	1,458	16,029	*Was L. Lamb	
15109	1	0	0	0	Peri	275	305	Prod + KC	1750	10	U	1969	S Gas	18/158	34	--	115,000	849,525	2,492	34,495	2,492	9,588		
17323	1	-	-	-	5-Spot	--	--	Prod	--	--	-	1974	---	--	--	--	--	--	--	--	--	--	--	*Was Goering-Hedrick

TABLE 1—ENHANCED OIL-RECOVERY PROJECTS, 1974—Continued

County	Project no.	Is proj. unitized?	Field	Operator	Type and project name	Lease name	Location	Acres in project		Oil producing zone			Oil producing wells (1974)				Has inj. been continuous?
							S - T - R	Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In-active	Drilled	Abd.	
SUPPLEMENTAL LIST (Concl.)																	
BUTLER COUNTY (Concl.)																	
	4169	--	Blankenship (Sallyards)	Okmar Oil Company	(W) Drumm-Bitler	Drumm-Bitler	20-26S-8E	80	0	Bartl	2660	25	2	2	0	0	Yes
	3258	No	Young	Okmar Oil Company	(W) Young Coop	Young A Young B, Young-Inger, A. R. Willhite, Willhite A & B	27-26S-7E 27-26S-7E 27-26S-7E 27-26S-7E	110	0	KC	2140	37	8	0	0	0	Yes
CHAUTAUQUA COUNTY																	
	---	No	Leniton(N. Lowe)	Two J. Drilling Co.* John S. Carter	(D) ---	McCall	16-33S-10E	160	0	Way	1450	20	9	0	1	1	Yes
COFFEY COUNTY																	
	17368	No	Virgil North	French & Winterscheid, Inc.	(-) Bahr	Henry Bahr	14-23S-13E	20	0	Viola	2100	--	1	0	0	0	No*
COWLEY COUNTY																	
	15017	No	Graham	Berger Oil Co.*	(W) ---	Nixon	10-33S-3E	100	--	Miss Ch	3241	10	3	0	0	0	Yes
DECATUR COUNTY																	
	17588	No	Petracek	Okmar Oil Co.	(W) Petracek	Petracek	9-4S-27W	320	0	LKC	3559	15	2	0	0	0	Yes
ELK COUNTY																	
	16500	--	Webb Field	BMG, Inc.	(D) Durbin	Durbin	23-31S-10E	10	--	KC	1356	10	3	-	0	-	Yes
ELLIS COUNTY																	
	12976	--	Bemis-Shutts	Okmar Oil	(-) Lynn-Henderson	Henderson, Lynn A, B, C, D, & E	22-11S-18W 23-11S-18W	400	0	L-KC	3350	5	3	0	0	0	Yes
	17121	--	Chrisler South	Okmar Oil*	(W) Madsen Unit	Madsen, Snapp, McGuire	27-11S-16W 28-11S-16W	100	0	L-KC	3017	148	3	1	0	0	Yes
	14553	--	Schoenchen	Okmar Oil	(W) Wolf	Wolf	16-15S-18W	--	--	L-KC	3300	4	-	-	-	-	*
	10846	No	Solomon	Okmar	(W) Albert	Albert, Wickham, Fred	10-11S-19W 10-11S-19W 15-11S-19W	160	--	L-KC	3244	5	4	0	0	0	Yes
	14016	No	Solomon	Okmar Oil Co.	(W) Albert-Fred	Albert, Fred	10-11S-19W 15-11S-19W	120	0	Arb	3600	5	-	-	-	-	---
	13553	--	Sugarloaf SE	Okmar	(W) Dreiling	Dreiling A & C	28-13S-17W	60	0	L-KC	3280	5	2	1	0	0	Yes
	9849	No	Toulon South	Okmar Oil	(W) Brungardt WF	Goetz D, Brungardt, Christina, 15-14S-17W	10-14S-17W 14-14S-17W 15-14S-17W	100	--	L-KC	3430	7	3	1	0	0	Yes
	13544	--	Toulon Southwest	Okmar	(W) Dinkel A	Dinkel & Dinkel A	16-14S-17W	50	0	Arb+ L-KC	3500*	5	3	0	0	0	Yes
	15425	No	Younger	Okmar	(W) Hoffman	Hoffman	32-13S-17W	40	0	L-KC	3318	5	3	0	0	0	Yes
GRAHAM COUNTY																	
	12174	--	Holley	Herndon Drilling Co.	(W) Keith Waterflood	Keith	9-9S-24W	90	0	KC	3882	4	3	1	-	-	Yes
	13960	--	Jackson Branch	Beren Corp.	(P) H. H. Stewart	H. H. Stewart	8-9S-23W	120	35	L-KC	3625	30	1	0	0	0	Yes
LINN COUNTY																	
	3150	--	LaCygne-Cadmus	Moray Oil Co., Inc.	(W) Scott	Wilbur Scott	34,35-19S-23W 2,3-20S-23W	80	0	Peru	250	--	20	24	-	-	Yes
	15486	--	LaCygne-Cadmus	Moray Oil Co.	(W) Baker	Baker, Light, Harvey, Croxton, Crisler, Synder, Burnett Burnett, Stroup, Baldwin	4,5,8,9-20S-23W 21,31,33-19S-23W	1885	0	Peru	260	18	33	187	-	-	No*

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

Project no.	Injection Wells					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)						Remarks
	Active	In-active	Drilled 1974	Abd. 1974	Injection Pattern			Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods		
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974	Cum. 12-31-74	
4169	1	0	0	0	---	50	80	Prod	--	--	U	1954	S Gas	--	36	--	29,200	693,420	555	116,308	555	11,139	
3258	4	0	0	0	Peri	300	487	Prod + Miss	2700	10	U	1952	S Gas	--	34	--	177,609	3,275,308	21,009	1,033,406	18,150	146,910	
---	3	1	0	0	Irreg	0	30	Prod	--	--	U	1967	S Gas + Wat	1/20	32	--	9,000	--	2,160	--	0	--	*Was Cache Invest. Co.
17368	1	0	0	0	Irreg	Grav	10	Prod	--	--	T	1974	Wat	9/1	--	--	0	0	0	0	0	0	*Inj. began Dec., 1974
15017	1	0	0	0	Line	0	40	Prod + Lay	2550	75	U	1969	Gas Exp	1/2	41	--	14,600	88,802	12,356	53,306	12,356	53,306	*Was Maggard Oil, Jenkins Ray
17588	1	0	0	0	Peri	0	105	Prod + Tor	3500	5	U	1974	S Gas	21/65	34	--	4,385	4,385	8,385	133,877	0	0	
16500	1	-	-	-	5-Spot	300	400	Prod + KC + Miss	1975	6	U	1972	S Gas	1/20	30	--	146,000	231,000	8,320	--	1,250	--	
12976	1	0	0	0	Peri	Vac	244	Prod + Arb	3600	5	U	1966	S Gas	--	33	--	89,200	1,419,198	6,872	925,117	2,694	27,643	
17121	2	0	0	0	Irreg	425	247	Prod	--	--	U	1969	S Gas	1/1	35	--	180,346	1,078,820	4,076	177,058	1,876	11,107	*Was Ferguson Oil Co.
14553	-	-	-	-	---	--	--	---	--	--	-	--	---	--	--	--	--	--	2,699	151,896	0	0	*Project Not Started
10846	1	0	0	0	Peri	Vac	200	Prod + Arb	3500	5	U	1964	S Gas	--	34	--	72,800	694,855	19,908	---	8,511	58,856	*No records on individual zones prior to flood
14016	-	-	-	-	Irreg	Vac	2500	Prod + L-KC	3200	5	U	1968	---	48/4500	26	--	912,000	5,782,000	17,263	---	0	0	*No records on individual zones prior to flood
13553	1	0	0	0	Peri	0	109	Arb	3530	5	U	1967	S Gas	34/20	30	--	39,600	216,498	4,793	349,751	540	2,008	
9849	2	0	0	0	Peri	1000	300	Prod + Arb	3500	3	U	1963	---	--	35	--	240,000	1,899,125	11,045	505,600	6,354	86,728	
13544	1	0	0	0	Irreg	450	149	Prod	--	--	U	1960	S Gas	--	33	--	54,385	1,012,529	10,218	404,150	8,600	93,110	*+3,250
15425	1	0	0	0	Peri	Vac	119	Prod	--	--	U	1970	S Gas	30/67	34	--	43,400	152,618	8,805	293,827	1,710	8,138	
12174	-	-	-	-	5-Spot	0	161	Shallow Sand	40	--	F	1966	---	68/56	40	--	58,656	490,756	3,898	--	3,698	57,588	
13960	1	0	0	0	Peri	Vac	268	Prod	--	--	U	1968	S Gas	8.5/91.5	33	--	97,400	475,811	4,777	56,442	4,777	16,864	
3150	20	26	-	-	5-Spot	260	24	Prod + Miss	1068	--	T	1940	S Gas	3/1	29	53	86,700	--	2,412	267,172	--	--	
15486	34	186	-	-	5-Spot	220	45	Lake	--	--	F	1974	S Gas	3/1	29	53	268,190	268,190	1,361	20,720	1,361	20,720	*Inert gas stopped & Wat started +108,035 MCF

TABLE 1-ENHANCED OIL-RECOVERY PROJECTS, 1974-Continued

County	Is proj. uni- tized?	Field	Operator	Type and project name	Lease name	Location S - T - R	Acres in project		Oil producing zone			Oil producing wells (1974)				Has inj. been con- tinuous?
							Prod.	Abd.	Name	Depth, ft.	Thick., ft.	Active	In- active	Drilled	Abd.	
SUPPLEMENTAL LIST (Concl.)																
MONTGOMERY COUNTY																
15114	--	Coffeyville- Cherryvale	BMG, Inc.	(D) Nancy Benson	Nancy Benson	25,36-34S-15E 36-32S-13E	20	--	Arb	1200	5	2	-	-	-	Yes
4666	--	Sorgum Hollow	BMG, Inc.	(P) Linn-(Circle Basin)	Linn (Circle Basin)	30,31-32S-14E	160	--	Weiser	850	50	6	0	0	0	Yes
4990	--	Sorgum Hollow	BMG, Inc.	(-) Fowler	Fowler	17,19,20-32S-14E	150	0	Weiser	850	25	12	0	0	0	Yes
NESS COUNTY																
14896	No	Bellesprit (Cherokee)	Walters Drilling Co.	(P) Ryan	Ryan	22-16S-21W	160	40	Cher	4260	15	3	0	4	1	Yes
10347	No	Dickman	Walters Drilling Co.	(P) Dickman	Irvin Tilley Dickman & Elmore Humphrey	22-16S-21W 8-17S-24W 17-17S-24W 18-17S-24W	400	0	Miss	4500	40	6	1	10	3	Yes
PAWNEE COUNTY																
16981	No	Badger Hill	Walters Drilling Co.	(P) Zugg	Zugg	7-23S-18W	120	0	L-KC	4200	10	3	0	3	0	Yes
PRATT COUNTY																
15384	No	Iuka-Carmi	TGT Petroleum Corp.	(D) Knop (Hoeme)	Knop	25-26S-13W	160	0	Viola	4120	25	2	0	0	2	No*
RENO COUNTY																
14675	No	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	20	0	1	0	Yes
15569	No	Burrton	TGT Petroleum Corp.	(-) Van Buren Input System	Harper & Hill Van Buren	27-23S-4W 28-23S-4W	160	--	Miss	3330	12	7	0	0	0	No*
RICE COUNTY																
3500	--	Chase-Silica	Marvin E. Lebow	(P) Roelfs	Roelfs	29-19S-10W	80	0	Arb	3280- 3286	6	1	0	0	0	Yes
RUSSELL COUNTY																
11475	--	Davidson	Marvin E. Lebow	(P) Chegwidden	Chegwidden	29-15S-11W	160	0	L-KC	3020-24 3163-74	15	2	0	0	0	Yes
STAFFORD COUNTY																
1419	--	Kipp	Earl M. Knighton*	(P) Kipp Re-Pressure System	Kipp "F" Kipp "C"	22-25S-14W 26-25S-14W	160	40	L-KC	3836	73	4	0	0	0	Yes
TREGO COUNTY																
13935	--	Groff	Earl M. Knighton	(W) Holtzinger	Holtzinger	35-14S-21W	80	0	Cher	3795	16	2	1	0	0	Yes

Oros and Saile—Enhanced Oil-Recovery Operations in Kansas, 1974

Project no.	Injection Wells					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 (bbl)						Remarks
	Active	In-active	Drilled 1974	Abd. 1974	Injection Pattern			Source	Depth, ft.	Thick., ft.	Type						Water Injection		Total Oil recovered from project Pri. & sec.		Oil recovered by secondary methods		
																	1974	Cum. 12-31-74	1974	Cum. 12-31-74	1974	Cum. 12-31-74	
15114	1	-	-	-	Irreg	200	100	Prod	--	--	U	1970	Wat	--	25	--	36,000	--	2,100	--	0	--	
4666	3	5	-	-	Irreg	300	50	Prod	--	--	U	--	Grav*	--	30	--	54,750	--	8,919	--	1,250	--	* + S Gas
4990	6	0	0	0	5-Spot	300	50	Prod	--	--	U	--	S Gas	--	30	14.6	109,500	--	2,559	--	2,000	--	
14896	1	0	1	0	Irreg	200	130	Prod	--	--	U	--	Wat*	95/5	34	--	142,963	--	27,361	252,305	13,680	50,000+	*Partial
10347	1	0	1	0	Irreg	250	209	Prod	--	--	U	1963	Wat*	95/5	35	--	460,000	--	40,494	625,239	20,247	--	*Partial
16981	1	0	1	0	Peri	Vac	93	Prod	--	--	U	--	S Gas	95/5	42	--	102,247	--	37,670	314,579	10,000	100,000	
15384	0	1	0	0	Irreg	0	0	Shallow Sand	35	10	F	--	---	1/10	36	--	0	0	1,913	12,974	0	0	*Well is sanded up
14675	2	0	0	0	Irreg	0	--	Prod	--	--	U	1970	S Gas + Wat	1/30	38	--	1,830,840	3,937,779	95,078	339,917	15,000	65,000	
15569	0	0	0	0	Irreg	0	0	Prod	--	--	U	1970	Wat + S Gas	1/30	38	--	0	126,898	0	0	0	40,000	*Inj. well plugged & abandoned Aug. 1974
3500	1	1	1	1	Irreg	--	--	Prod	--	--	U	1969	*	--	45	--	--	--	2,113	--	--	--	*Combination, unspecified
11475	1	0	0	0	Irreg	--	--	Prod	--	--	U	1965	*	--	35	--	48,545	512,545	2,661	--	--	--	*Combination, unspecified
1419	1	0	0	0	Irreg	Vac	86	Prod	--	--	U	1946	S Gas	--	35	--	32,780	1,124,245	6,559	133,238	6,559	--	*Was Skelly Oil Co.
13935	1	0	0	0	---	900	200	Prod +Shal Wat	18	--	F*	1967	Wat	1/9	39	--	72,760	--	2,863	--	2,863	--	* + U

TABLE 2.--COUNTY SUMMARY OF ENHANCED RECOVERY PROJECTS IN KANSAS--1974.

COUNTY	TOTAL OIL FROM PROJECT AREA bbl.	OIL RE- COVERED BY SECONDARY METHODS bbl.	WATER INJECTED bbl.	CURRENT PRODUCING ACRES	ACTIVE PRODUCING WELLS	ACTIVE INJEC- TION WELLS	WELLS DRILLED OIL INJ.	NUMBER OF PROJECTS
ALLEN	242,648	204,250	3,018,106	6,481	731	557	45 13	35
ALLEN-ANDERSON	7,011	7,011	86,553	150	30	12	0 0	1
ALLEN-NEOSHO	0	0	0	765	124	61	0 0	2
ANDERSON	138,440	119,273	2,776,984	2,117	694	567	24 1	19
BARBER	240,563	169,338	3,672,743	3,614	71	36	0 0	14
BARTON	656,036	457,563	7,942,516	9,927	286	106	10 4	80
BARTON-RICE	40,308	40,308	688,027	370	8	8	0 0	1
BARTON-RUSSELL	54,898	27,487	844,334	400	16	8	0 0	1
BARTON-STAFFORD	17,462	12,561	215,904	170	8	3	0 1	2
BOURBON	42,196	36,196	821,425	1,340	86	78	0 0	6
BUTLER	1,078,200	761,751	48,846,148	17,173	631	293	13 6	94
BUTLER-COWLEY	16,913	2,313	34,988	1,600	16	2	2 0	2
BUTLER-MARION	1,252	800	9,125	90	1	1	0 0	1
CHASE	12,611	--	127,750	50	4	2	1 1	1
CHASE-GREENWOOD	14,517	4,500	146,000	250	13	2	0 0	1
CHASE-LYON	13,600	3,600	85,000	80	11	3	0 0	1
CHAUTAUQUA	312,032	264,146	1,780,048	16,979	679	131	20 2	48
CHAUTAUQUA-ELK	3,954	--	75,125	127	20	19	0 0	1
CLARK	5,775	5,775	83,829	1,280	3	2	0 0	1
COFFEY	28,920	16,997	284,856	625	60	15	24 0	11
COFFEY-WOODSON	95,642	95,642	385,230	220	25	14	12 0	2
COMANCHE	6,061	1,200	56,875	480	2	2	0 0	1
COWLEY	773,813	516,680	10,167,833	15,222	322	126	92 7	62
CRAWFORD	20,785	14,422	391,853	435	115	111	2 7	6
DECATUR	330,454	247,092	2,955,078	5,867	73	33	0 0	13
DICKINSON	7,356	0	325,000	320	9	1	0 0	1
DOUGLAS	1,820	0	0	120	15	0	2 0	1
DOUGLAS-FRANKLIN	20,868	20,868	416,244	157	23	20	0 0	1
EDWARDS	2,580	2,580	66,000	100	2	2	0 0	1
ELK	87,217	47,819	1,034,782	1,800	56	16	6 0	9
ELLIS	719,613	423,170	11,046,066	8,255	231	80	4 1	63
ELLIS-ROOKS	82,410	82,410	1,711,692	352	21	10	0 0	1
ELLIS-RUSSELL	34,960	34,960	688,608	450	13	3	0 0	1
ELLSWORTH	378,881	28,415	1,015,963	1,866	76	13	0 0	11
FINNEY	346,880	22,705	403,516	2,080	31	4	2 0	3
FINNEY-HASKELL	836,436	0	619,548	0	63	7	0 0	1
FRANKLIN	40,441	17,676	498,824	1,339	132	71	2 1	12
GOVE	65,542	2,330	81,402	1,160	11	5	1 1	6
GRAHAM	943,426	686,046	11,476,911	17,457	245	111	9 0	45
GRAHAM-SHERIDAN	60,913	43,400	182,500	130	4	1	0 0	1
GRAHAM-TREGO	9,502	9,502	543,555	390	8	4	0 0	1
GREENWOOD	622,683	440,415	13,524,567	18,556	654	214	6 4	97
HARPER	25,334	0	77,011	400	2	1	0 0	2
HARVEY	223,875	143,199	9,017,785	3,232	97	29	2 0	3
HARVEY-MCPHERSON	29,407	0	0	1,550	12	0	2 0	2
HODGEMAN	159,553	52,123	2,199,564	2,960	33	13	0 0	11
JACKSON	2,183	--	60,000	400	4	1	0 0	1
JOHNSON	7,700	4,125	51,800	45	16	6	2 0	3
KEARNY	7,544	0	10,078	0	1	1	0 0	1
KINGMAN	309,526	79,286	1,901,173	2,600	32	17	0 0	7
KINGMAN-PRATT	21,177	21,177	969,729	800	12	8	0 0	1
KINGMAN-SEDGWICK	12,031	0	0	0	11	0	0 0	1
KIOWA	20,123	0	45,000	6,440	14	1	0 0	2
LABETTE	6,926	2,226	14,450	185	36	6	15 0	6
LABETTE-MONTGOMERY	894	89	54,750	240	12	8	0 0	1
LANE	55,922	0	64,109	0	5	1	0 0	1
LINN	15,972	2,524	680,710	2,900	183	169	2 1	7
LINN-MIAMI	2,906	2,906	25,103	40	11	10	0 0	1
LYON	2,920	2,920	36,500	400	6	2	0 0	1
MCPHERSON	217,739	145,687	9,086,457	7,600	148	49	7 0	38
MCPHERSON-MARION	22,488	20,983	650,900	800	8	7	0 0	1
MARION	5,821	0	205,245	680	13	5	9 0	6
MEADE	105,824	99,194	996,675	4,440	15	14	0 0	4
MIAMI	32,718	9,769	1,010,625	990	168	126	7 4	7
MONTGOMERY	99,986	48,839	1,162,071	2,961	253	145	36 17	23
MORRIS	319	0	255,500	40	1	1	0 0	1
MORTON	1,707,893	1,652,044	9,726,328	13,420	72	29	0 0	6
NEOSHO	82,883	64,793	787,052	4,201	557	440	11 4	14
NESS	234,509	58,536	1,791,007	1,780	38	19	14 0	13
NORTON	--	--	--	--	--	--	-- --	1
PAWNEE	139,343	56,121	1,197,793	1,237	27	14	3 1	11
PHILLIPS	494,641	444,737	4,089,619	9,265	153	82	1 0	23
PRATT	201,877	167,619	6,271,308	4,774	69	35	0 0	17
RAWLINS	289,672	88,631	2,360,419	8,020	78	38	0 0	10
RENO	251,166	118,059	5,681,446	2,820	68	19	1 0	13
RENO-RICE	6,375	3,188	10,295	400	8	1	0 0	1
RENO-STAFFORD	34,766	34,766	3,265,637	1,000	7	8	1 0	2
RICE	825,872	565,533	9,617,780	14,161	281	97	45 7	52
ROOKS	1,785,358	719,110	15,689,168	14,425	356	143	3 2	65
RUSH	27,465	24,714	114,740	550	8	2	0 0	2
RUSSELL	2,563,428	1,870,968	38,393,125	23,531	791	341	14 0	144
SALINE	36,015	28,610	1,601,359	1,730	27	9	11 0	6
SCOTT	5,327	2,663	75,018	120	2	1	0 0	1
SEDGWICK	349,112	336,854	6,345,279	4,087	114	62	0 0	12
SEWARD	45,054	0	1,297,667	1,031	3	2	0 0	1
SEWARD-STEVENS	163,266	163,266	1,801,949	880	6	4	0 0	1
SHERIDAN	134,581	109,410	1,798,919	2,034	35	16	0 0	8
STAFFORD	704,032	461,746	10,327,987	9,986	222	111	9 6	62
SUMNER	727,571	498,145	9,885,546	7,328	156	70	0 0	23
TREGO	291,931	75,937	1,811,683	5,610	87	22	1 1	19
WABAUNSEE	12,021	7,330	704,450	334	6	2	0 0	3
WILSON	51,938	49,908	883,175	1,250	73	36	13 2	11
WOODSON	346,664	195,909	6,357,767	6,417	408	186	7 4	45
TOTALS	21,317,267	13,334,252	299,593,259	320,438	10,368	5,163	493 102	1,358

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