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Field Laboratory in the Osage Reservation – Determination of the Status of Oil and Gas
Operations: Task 1. Development of Survey Procedures and Protocols

By
William I. Johnson
Herbert B. Carroll

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U.S. Department of Energy
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National Petroleum Technology Office
P.O. Box 3628
Tulsa, OK 74101

Prepared by:
BDM-Oklahoma, Inc.
P.O. Box 2565
Bartlesville, OK 73005

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ABSTRACT

Procedures and protocols were developed for the determination of the status of oil, gas, and other mineral operations on the Osage Mineral Reservation Estate. The strategy for surveying Osage County, Oklahoma, was developed and then tested in the field. Two Osage Tribal Council members and two Native American college students (who are members of the Osage Tribe) were trained in the field as a test of the procedures and protocols developed in Task 1. Active and inactive surface mining operations, industrial sites, and hydrocarbon-producing fields were located on maps of the county, which was divided into four more or less equal areas for future investigation. Field testing of the procedures, protocols, and training was successful. No significant damage was found at petroleum production operations in a relatively new production operation and in a mature waterflood operation.

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Field Laboratory in the Osage Reservation—Determination of the Status of Oil and Gas Operations: Task 1. Development of Survey Procedures and Protocols

1.0 OBJECTIVE

The objective of Task 1 is the development of survey procedures and protocols for determination of the status of oil, gas, and other mineral operations on the Osage Mineral Reservation Estate. The survey strategy divides Osage County, Oklahoma, into units containing relatively equal densities of mineral resource exploration and exploitation activities. Information collection procedures and checklists have been developed to estimate mineral resources (oil, gas and other minerals), the conditions where these resources are exploited, and conditions at industrial sites. Qualifications for survey teams and programs to train team member in collecting field information using the developed procedures will be developed in the future. The protocol in this report includes the procedure for initiating site-access permits and appointments with land owners and mineral exploitation operators for field site visits and surveys.

2.0 PROCEDURES AND PROTOCOLS

2.1 ESTABLISHMENT OF SURVEY AREAS AND TEAMS

The Osage Mineral Reservation Estate was divided into four equal areas for four teams of investigators to gather data, estimate mineral resources (oil, gas, and other minerals), and conduct surveys based on information gathered from records (Figure 2-1). Each of the four teams will be made up of a team leader and eight team members. The teams will be under the supervision of a BDM-Oklahoma project leader. Team members, under the supervision of a team leader, will review production records, citation records, and lease files of the Bureau of Indian Affairs (BIA), Osage Agency, Branch of Minerals and citation records of the U.S. Environmental Protection Agency (EPA).

2.2 REVIEW OF RECORDS

The review of production and lease file records will be done to determine the mineral resources remaining on the Osage Mineral Reservation Estate and to estimate conditions in

the field before field surveys are conducted. In the record review, the teams will identify surface environmental violation citations and corrective action taken by operators. EPA regulatory record violations will be reviewed for all operators who received citations. The teams will document the production status of leases reviewed as to primary, secondary, or tertiary oil recovery methods applied to current or past oil production. The teams also will document current production, cumulative oil production for each production method, and the aerial extent of production. Oil and/or gas reservoir characteristics (lithology, porosity, permeability, water saturation, gas saturation, etc.) will be recorded for each lease (whether active or inactive) where these data are available in the lease files. Reservoir characteristics and production records will be used to calculate the original resource and the remaining resource in each lease.

2.3 LOCATION OF SITES

Survey teams will identify and locate surface sites where oil, gas, or other mineral exploration or exploitation have occurred which may have affected or changed environmental conditions. Before conducting any survey of these facilities, the teams will document activities and products produced at these sites.

2.4 SURVEY TEAMS

There are approximately 2,700 active oil and gas leases in Osage County. Each quadrant of the county will be surveyed by a team made up of eight members and a team leader. Each team will be divided into four groups of two members for field inspection of active and inactive leases and industrial sites. Field surveys will be conducted by two members of the group surveying a particular lease or leases, so that four leases in each quadrant will be under inspection at a given time. All survey team members will receive safety training for field survey operations before going into the field and a safety refresher course each year thereafter. Survey teams also will receive hands-on training in the field on field survey procedures for recognizing and documenting of changes that may have occurred to the surface as a result of contamination. Figure 2-2 shows the survey check list developed for survey groups to use while inspecting leases in the field.

When a team has identified oil and/or gas leases for field investigation, the operator of the lease(s) will be contacted for access to the lease(s). A lease in Osage County is considered to be 160 acres. Owners/operators of industrial sites and surface mining leases also are to be contacted for access to those sites. After arrangements are made for access to these sites, an on-site field survey will be conducted.

Qualified members of the Osage Tribes will be contracted to survey the estate. Survey groups will follow the protocol developed for surveying the estate.

3.0 TESTING AND EVALUATION OF PROCEDURES AND PROTOCOLS

Procedures and protocols were tested by data collection at the Osage Agency, Branch of Minerals operated by BIA in Pawhuska, Oklahoma; estimation of the oil resource in Bighorse, Northeast field; and a field survey. A check list prepared for conducting the field survey by modifying the Osage Agency check list was used in checking field operations (see Figure 2-2).

3.1 BIGHORSE, NORTHEAST FIELD

Lease records for Bighorse, Northeast field (located in Sec. 6, 7, 8, and 17, T27N, R12E) were reviewed and analyzed for oil reservoir data, surface violations, and mechanical integrity test failures for class II injection wells. A base map (Figure 3-1) and a lease ownership map (Figure 3-2) for Bighorse, Northeast field were prepared for use in the survey. Oil resource estimate was made from data collected at the Osage Agency. Bighorse, Northeast field was originally developed in the north half of Sec. 17, T27N, R12E during the 1920s in the Bartlesville sandstone and in the late 1970s and early 1980s in the Wayside sandstone. Most of the discovery and development in the Wayside sandstone reservoir occurred during the last 15 years. Therefore, it was assumed that the surface conditions would be clean with little or no surface damage and with a high oil resource remaining in place. Two Osage Tribal Council members and two Native American college students (who are also members of the Osage Tribe) were trained to conduct field surveys following the procedures and protocols developed for Task 1. Beside Bighorse, Northeast field, the Bartlesville-Dewey field waterflood area in T27N, R12E was also surveyed.

The field survey of Bighorse, Northeast field was completed. The field was found to be clean with no significant surface contamination by oil and no contamination by salt water. Reservoir data collected at the Osage Agency were used to estimate resources in the Bartlesville and Wayside reservoirs. Because of the age of the Bartlesville sandstone reservoir data—it was collected during the 1920s—no logs are available to evaluate for porosity data. Therefore, the porosity value used in these calculations is from the Bartlesville sandstone reservoir in the Bartlesville-Dewey field (Table 3-1). Reservoir data for the Wayside sandstone reservoir is from evaluation and analysis of induction and porosity logs run in the late 1970s and early 1980s. The oil resource for the Wayside sandstone reservoir is shown in Table 3-1.

3.2 BARTLESVILLE-DEWEY FIELD WATERFLOOD

Osage Agency lease records and MIT records for the Bartlesville-Dewey field waterflood in T27N, R12E were reviewed for citations. None were found. This area produces oil from a Bartlesville sandstone reservoir. The reservoir was developed before 1920 and has been producing ever since. A field survey also was made in Sec. 21, T27N, R12E in the Bartlesville-Dewey field waterflood (Figure 3-3). The field survey was conducted to test the protocol for surveying the status of the Osage Mineral Reservation Estate. Surface conditions are good for a mature waterflood in an oil field that has produced for more than 80 years.

3.3 SURFACE MINING AND INDUSTRIAL SITES

Lease records at the Osage Agency for active and inactive surface mining operations on the Osage Mineral Reservation Estate were reviewed for the status of each lease. A tabulation of these sites is provided in Tables 3-2 through 3-4 and a location map in Figure 3-4. These sites will be surveyed for surface conditions by members of the Osage Tribe.

Active and inactive industrial sites in Osage County were identified as part of Task 1. There are five active industrial sites and one inactive industrial site in the county (Figure 3-5; Table 3-5). Osage County was divided into four areas for investigation (Figure 2-1). These areas are not equal in area but are more or less equal in leases to be checked to determine the status of the mineral resource and conditions on leases. Producing trends on the estate are listed by field, reservoir, location, etc. in Table 3-6. The field number in Table 3-6 corresponds with the field numbers shown on Figure 2-1.

3.4 TRAINING PROGRAM

A training program was started for two Osage Tribal Council members and two Native American college students (who are members of the Osage Tribe). They successfully completed investigation training at two producing oil fields in Osage County: Bighorse, Northeast field and Bartlesville-Dewey field waterflood. The procedures and protocols established will be used in establishing the status of the Osage Mineral Reservation Estate and training investigation teams in the future.

4.0 SUMMARY

The county was divided into four areas for investigation of the status of the mineral resource. The elements of Task 1 of this project have been completed and tested.

Training in field survey techniques for two Osage Tribal Council members and two Native American college students (who are members of the Osage Tribe) was provided as a test of the procedures and protocols in Task 1. Furthermore, active and inactive mining leases were marked on a road map of Osage County, and industrial sites in the county were identified.

Procedures and protocols were developed and tested through data collection at the Osage Agency, estimation of the oil resource in a selected field (Bighorse, Northeast), and conducting field surveys in two selected oil fields (Bighorse, Northeast field and Bartlesville-Dewey field waterflood) in Osage County, Oklahoma. No significant contamination from oil and salt water was found in the Bighorse, Northeast field. At the Bartlesville-Dewey field, the surface was found in good condition for a mature waterflood in an oil field that has produced for more than 80 years.

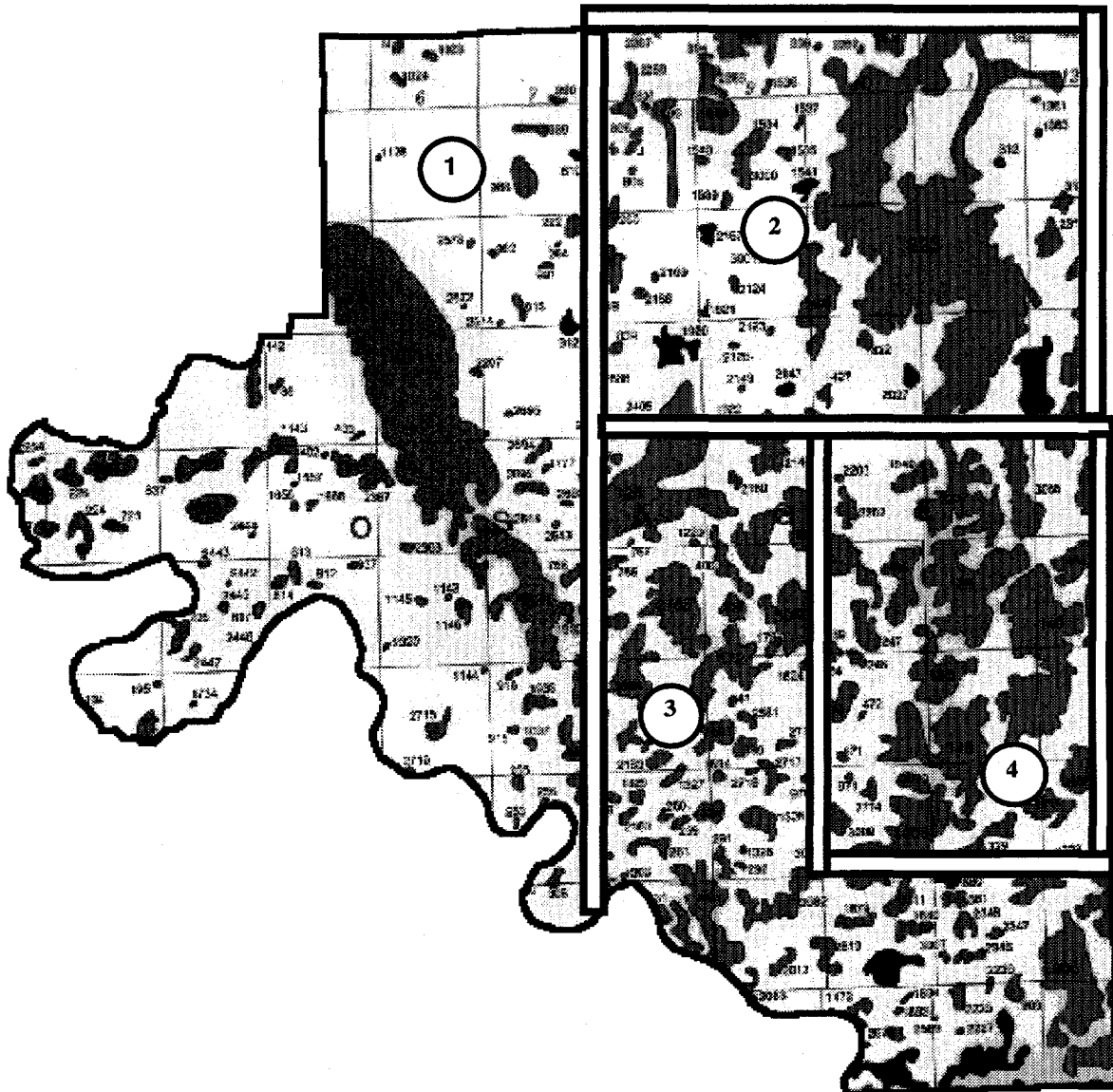


Figure 2-1 Areas for Investigation, Osage County, Oklahoma

**OIL AND GAS LEASE SURVEY CHECK LIST
OSAGE COUNTY, OKLAHOMA**

LEASE INFORMATION

OPERATOR: _____ **LEASE:** _____
ADDRESS: _____ **SURVEY DATE:** _____
CITY: _____ **NO. PRODUCING WELLS:** _____
PHONE: _____ **NO. DISPOSAL WELLS:** _____

POINT OF CONTACT: _____ **NO. WELLS P & A:** _____
PHONE: _____ **NO. WELLS ABANDONED NOT P & A:** _____
NO. WATERFLOOD INJECTION WELLS: _____

Surface Violations for Osage County, Oklahoma

(BDM Oklahoma Code number)

VIOLATION CODE	DESCRIPTION	NUMBER OF VIOLATIONS
001	Leak at well location, conditions are sloppy	
002	No descriptive signs: Wells Tank Battery	
003	No locking devices at tank	
004	Equalizer lines need lock stop valve	
005	Pipelines leaking	
006	Conditions sloppy at tank battery, clean up	
007	Pits not leveled or fenced	
008	Empty pits and level location	
009	Pit at tank battery not kept empty	
010	Fence at tank battery needs repairs	
011	Not confining vehicles to existing roads	
012	Remove all equipment not necessary to operate lease	
013	Lease not producing: subject to termination	
014	Lease roads in need of repair	
015	Tanks not numbered	
016	Saltwater tank leaking, repair or replace	
017	Gates or cattle guards not in proper condition	
018	Keep oil cans and other trash picked up	
019	Lease needs equipment moved off for termination	
020	Location needs leveling	
021	Wiring needs to be buried	
022	Oil on surface	
023	Saltwater damage on surface	
024	Other	
	Total Violations	

LEASE SURVEYED BY: _____
 Signature

DATE OPERATOR CONTACTED FOR LEASE ACCESS: _____

DATE SURVEY RESULTS MAILED TO OPERATOR: _____

Figure 2-2 Oil and Gas Lease Survey Checklist, Osage County, Oklahoma

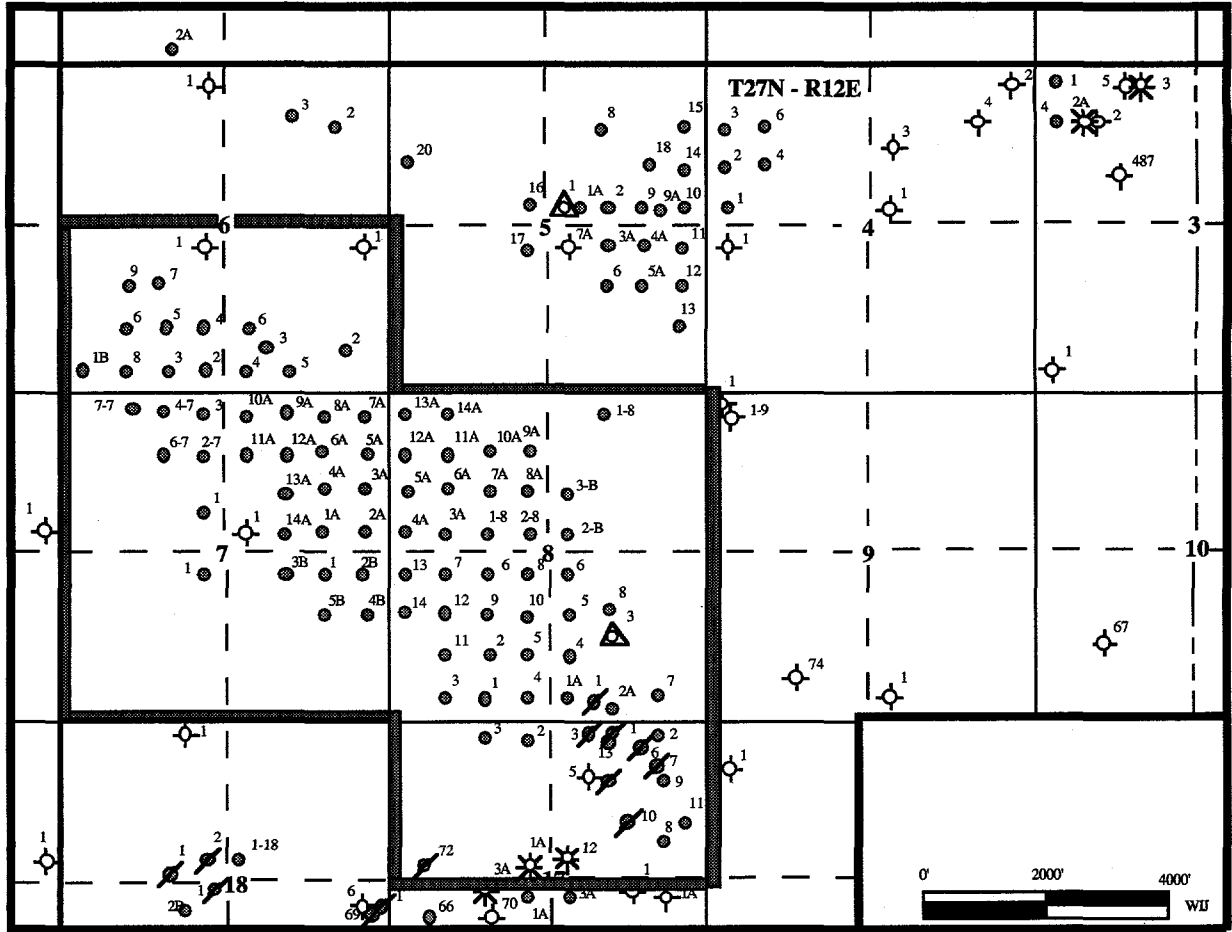


Figure 3-1 Base Map of Bighorse, Northeast Field, Osage County, Oklahoma

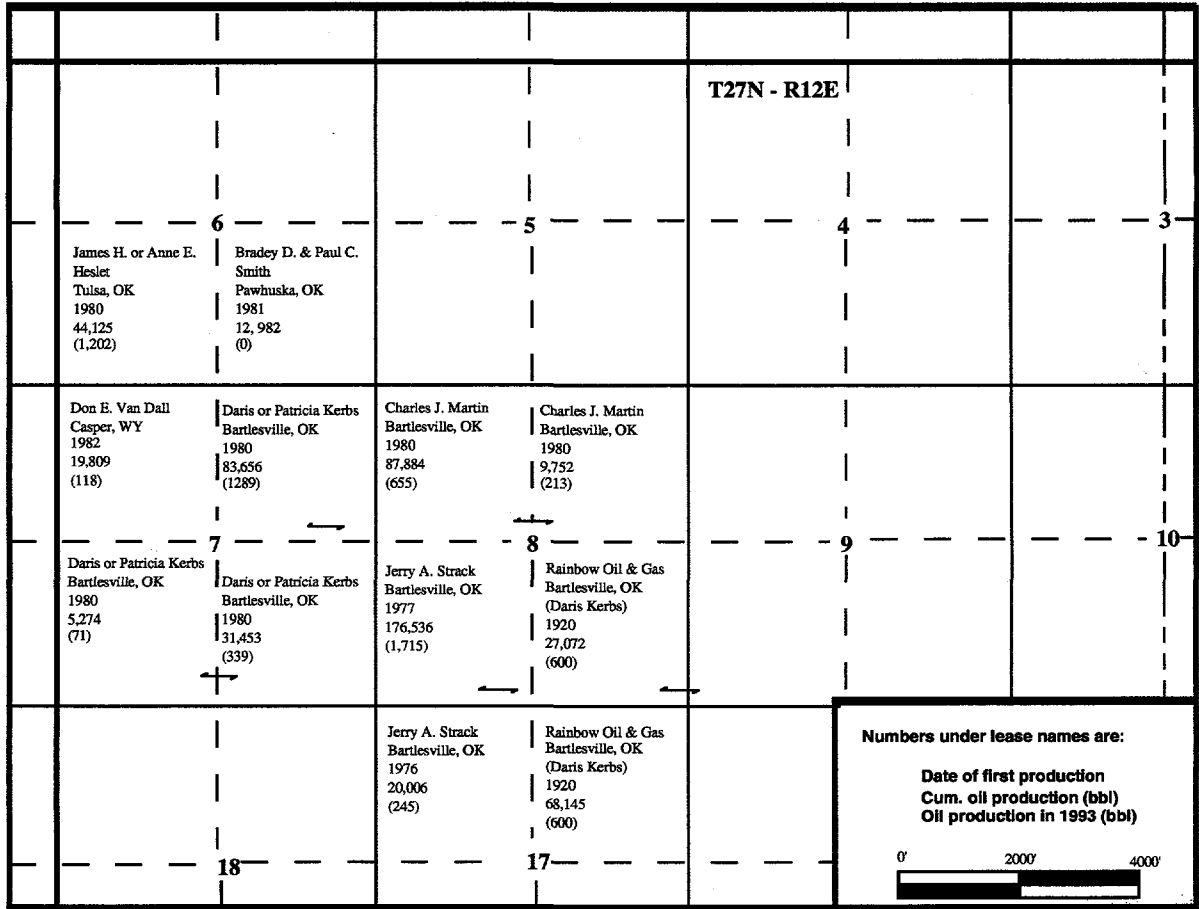


Figure 3-2 Lease Ownership Map of Bighorse, Northeast Field, Osage County, Oklahoma

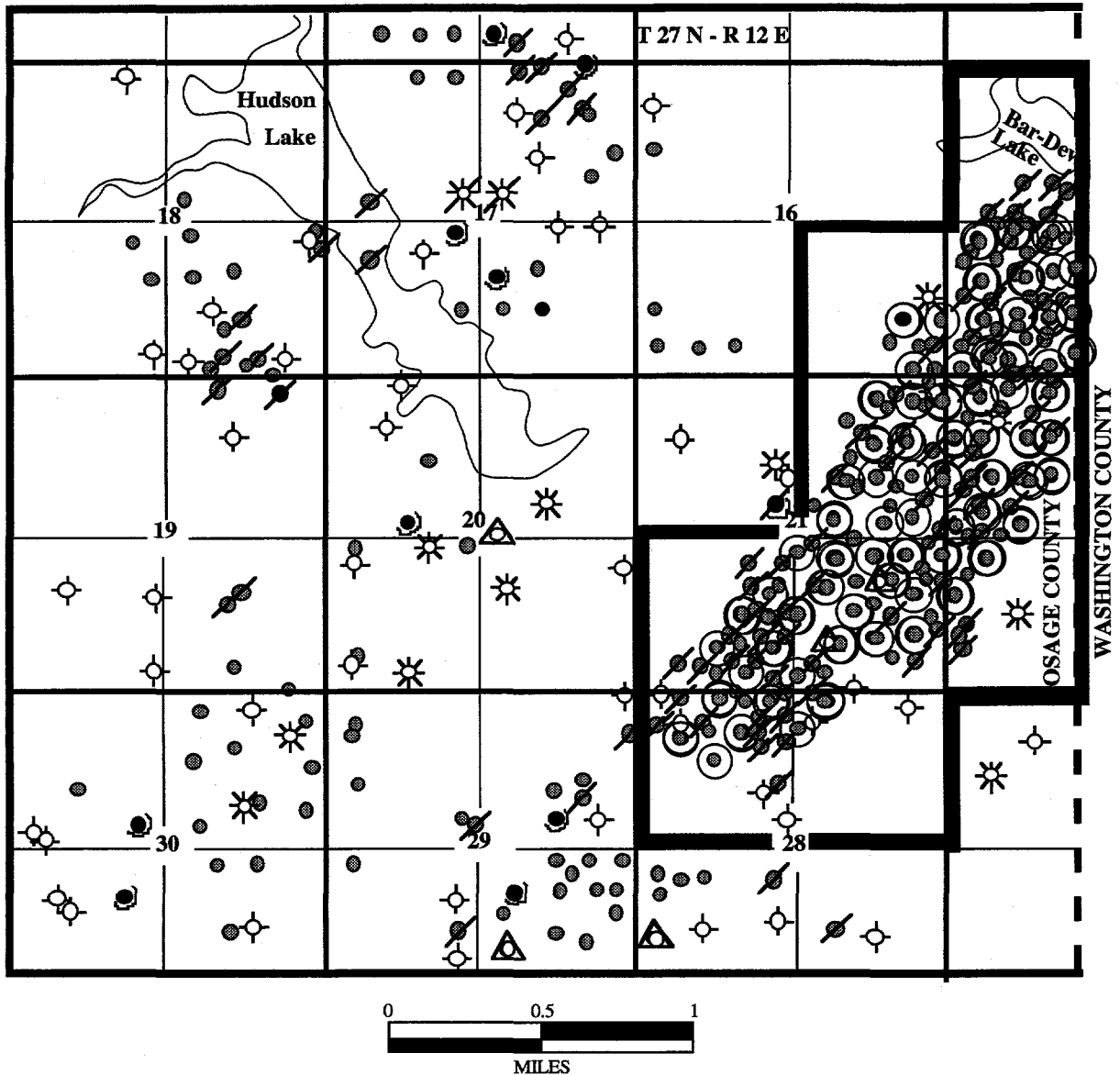


Figure 3-3 Base Map of Bartlesville-Dewey Field Waterflood and Vicinity, Osage County, Oklahoma

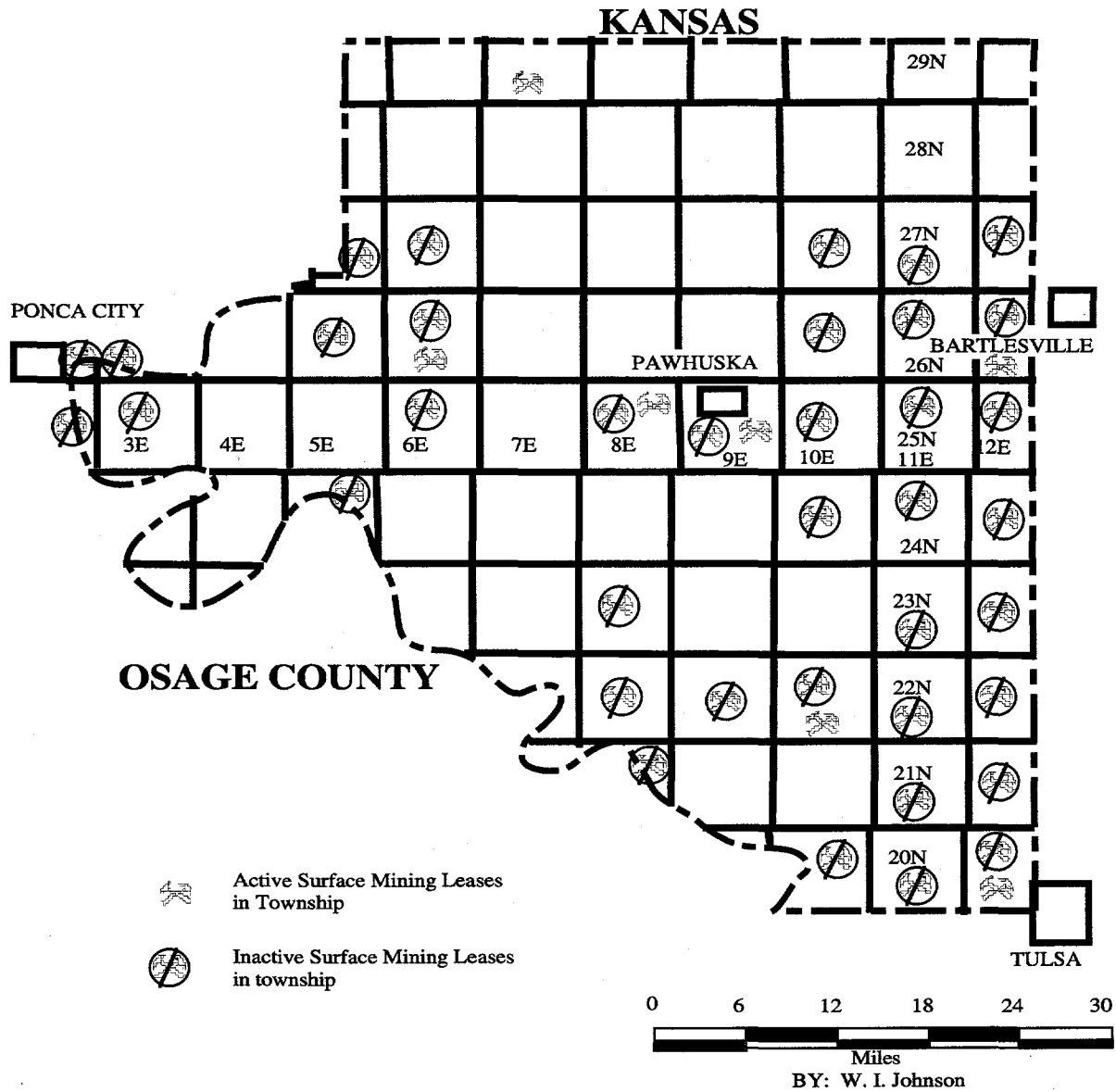


Figure 3-4 Active and Inactive Surface Mining Leases, Osage County, Oklahoma

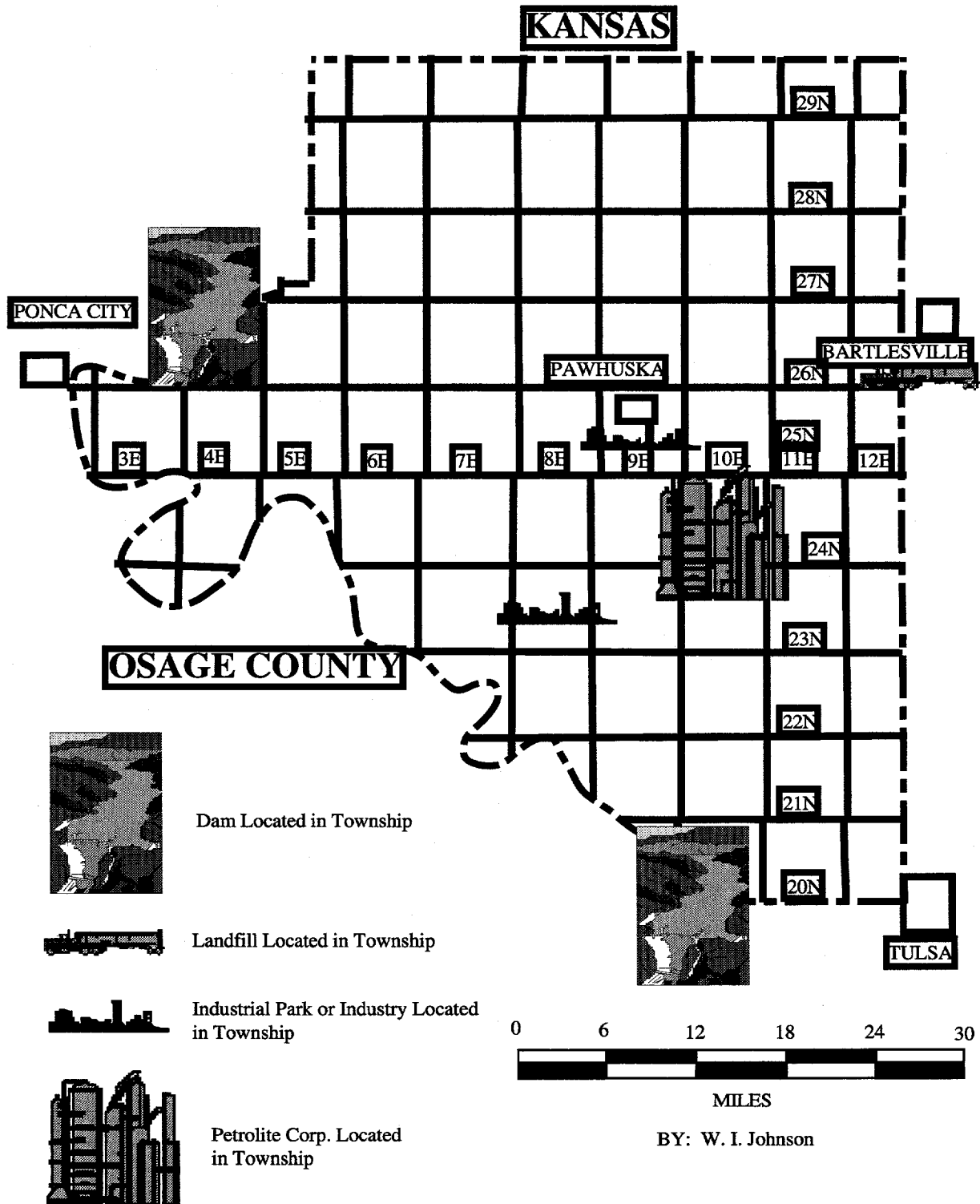


Figure 3-5 Industrial Sites in Osage County, Oklahoma

Table 3-1 Estimated Oil Resource for Bighorse, Northeast Field, Osage County, Oklahoma

Reservoir	Area (ac)	Number of Wells	Average Porosity (%)	Average pay (ft)	Cumulative Oil Production (bbl)	Estimated Original Oil in Place (bbl)
Bartlesville Sandstone	100	10	18.5 (est)	26	68,146	2,574,935
Wayside Sandstone	830	83	15	19	514,149	9,200,670

Table 3-2 Active Surface Mining Permits, Osage County, Oklahoma

Operator	Address	City	Zip Code	Location (S-T-R)	Type of Operation
Blake Stone Co.		Pawhuska		N/2 NE 11-25-08	Limestone mining lease
Blake Stone Co.		Pawhuska		NW NW 12-25-08	Limestone mining lease
Henry Banks	Rt. 5, Box 352	Bartlesville		NW NW 22-26-12	Sandy soil permit
Jay Crow	HC 63, PO Box 69	Pawhuska	74056	NE NE 10-25-09	Sandy soil permit
Jay Crow	HC 63, PO Box 69	Pawhuska	74056	NW NW 11-25-09	Sandy soil permit
Chuck or Tony Hurt	Route 2, Box 552	Catoosa	74015	NE & SE 07-20-12	Sandstone permit
Parks Concrete Co.	HC 66 - 500	Hominy	74035	NW 19-22-10-	Rock permit
David Roberson	PO Box 990	Seminole	74818	SE 2526-06	Rock mining permit
David Roberson	PO Box 990	Seminole	74818	NW 21-29-07	Rock mining permit
Sooner Cattle Co.	PO Box 638	Pawhuska	74056	SW/NW 21-29-07	Limestone and shale mining permit
Stewart Stone Inc.	PO Box 179	Pawnee	74058	SE 33-26-06	Limestone and dolomite mining permit
Rick Whaling	Route 3, Box 1200	Bartlesville	74003	NE/NE 18-26-12	Sandy soil permit

Table 3-3 Inactive Undesignated Surface Mining Permits (by S-T-R), Osage County, Oklahoma

NE/SE 09-22-09	NE/SE 27-22-11	NW 31-21-12	NW/2 SE 32-25-12
NE 24-24-05	SE/NE 34-25-10	NW 17-22-12	E/2 E/2 SE/SE 33-25-12
N/2 SE 03-21-08	NE/SE 34-26-10	E/2 E/2 NW/SE 27-22-11	W/2 S/2 SW 34-15-12
N/2 SE/SE 03-21-08	SW/NW 35-20-10	W/2 NE 21-22-11	E/2 33-25-12
N/2 S/2 SE SE 03-21-08	NW/SW 35-25-10	SW/SE 16-22-11	W/2 34-25-12
NE/SW 03-21-08	SE/NE 34-25-10	SE 35-22-11	SE 30-26-12
S/2 NE 26-22-08	NE/SE 34-25-10	NE/SE 14-23-11	SE 21-27-12
N/2 SE 26-22-08	SW/NW 35-25-10	NW 23-23-11	
SW/SE 26-22-08	NW/SW 35-25-10	NW 13-24-11	
W/2 SW 09-20-11	W/2 NW 05-20-11	S/2 SW 21-26-11	
E/2 SW 09-20-11	S/2 31-21-11	NE 21-26-11	
S/2 SE 02-21-11	SE 35-24-11	SE 28-25-09	
W/2 NE 11-21-11	SW/NE 35-24-11	E/2 NW 29-27-12	
SE 02-21-11	W/2 W/W NE/SE 23-26-11	W/2 SW 29-27-12	
W/2 SW 02-21-11	SE/SE 13-26-11	SE 23-22-11	
NW/NE/NW 12-21-11	Lots 1, 2, & 3 W of Hwy 70 NW/SW & NW 30-26-12	SW 24-22-11	
NW/NW 12-21-11	S/2 SW 21-26-11	SE 10-15-09	
N/2 N/2 NW 12-21-11	NE 21-16-11	NE 33-25-09	
W/2 SE 28-21-11	SE 28-15-09	N/2 S/2 10-24-10	
E/2 SW 28-21-11	E/2 NW/SW 29-17-12	N/2 NW 16-22-12	
E/2 E/2 SW 17-22-11	SE 23-22-11	NW 29-23-12	
E/2 W/2 SW 17-22-11	NW 24-22-11	N/2 SW 32-25-12	
E/2 SW/NE 18-22-11	19-26-11	S/2 NE 32-25-12	
N/2 NW/NE 18-22-11	21-26-11	SW 28-25-12	
N/2 N/2 SE 18-22-11	NE 01-27-11	S/2SE 28-25-12	
S/2 NW 262211	NE 072012	NW 332312	
NW/NW 26-22-11	NW 05-20-12	N/2 SW/NE 33-25-12	
W/2 W/2 NE/NW 26-22-11	NE 22-20-12	SW 33-25-12	
E/2 NE 27-22-11	NW 22-20-12	N/2 32-15-12	

Table 3-4 Inactive Mineral-Specific Surface Mining Permits (by S-T-R), Osage County, Oklahoma

Limestone	Limestone	Sand	Sand and Gravel	Gravel
NW 14-25-08	NW 24-22-11	NE 01-25-02	W/2 W/2 NE 02-25-02	SWW 01-26-05
N/2 NW 09-22-10	SE 04-22-10	02-25-02	E/2 E/2 NW 02-25-02	SE 13-26-05
SE/NE 09-22-10	S/2 25-26-05	11-25-02	NW 35-26-02	N/2 SE 25-27-05
N/2 SW/NE 09-22-10	S/2 NE 25-26-05 (except S/W SW/SE)	NE 23-25-02	SW 35-26-02	NW 05-25-06
W/2 N/2 S/2 SW/NE 09-22-10	SE 04-22-10	E/2 W/2 SW 34-21-11	SE 01-26-05	SE 07-25-06
NE 23-22-11	SW 04-22-10	E/2 SW 34-21-11	N/2 SE/NE 13-25-09	SE 08-25-06
NW 24-22-11	NE 19-22-10	SE/NW 03-25-03	N/2 SW/NE 08-25-10	NE 09-26-06
NE/NE 36-26-05	N/2 NE 19-22-10	NE/SW 34-26-03	NW/SW/NW 20-25-10	NE 09-26-06
S/2 SW 30-26-06	SE/NE 19-22-10	SE/2 02-21-08	W/2 SE 11-21-11	NW 10-26-06
W/2 NW 31-26-06	N/2 SW/NE 19-22-10	N/2 SW 02-23-08	E/2 11-21-11	SW 03-27-06
SW/NW (S of Hwy 60) 30-26-06	W/2 N/2 S/2 SW/NE 19-22-10	SE/SW 02-23-08	E/2 14-21-11	07-25-06
NW/NW 30-26-06	E/2 NW 19-22-10	NE/NW 02-23-08	E/2 E/2 E/2 W/2 14-21-11	08-25-06
N/2 SW/SW 30-26-06	N/2 NW/NW/NW 04-27-10	NW 14-27-10	S/2 23-22-11	25-27-06
NE/NE 36-26-05	N/2 NE/SW/NW 04-27-10	SW 09-20-11	NW/SE N/2 SE 33-22-11	26-27-06
S/2 SW/SW 30-26-06	N/2 SW/NE 17-27-10	W/2 NW/NW 16-20-11	SW/NE/SE 33-22-11	N/2 SE 31-27-06
W/2 NW 31-26-06	S/2 NW/NE 17-27-10	N/2 NW 01-25-11	NW/SW/SE 33-22-11	SW/SE 31-27-06
SW/NE 03-22-08	23-27-10	25-12	NE/NE 33-22-11	NW 31-27-06
NW/SE 03-22-08	NW/SW 17-23-12	25-12	SW/SW/SE 33-22-11	SE 34-27-06
NE/SW 03-22-08	S/2 NW 17-23-12	25-11	S/2 NE 33-22-11	
NW 14-25-08	NE 23-22-11	NW/NE/SE 06-20-12	N/2 NW 36-22-11	
NW 23-25-08	NW 24-22-11	S/2 22-20-12	SW/NW 36-22-11	
SW/SW 14-25-08	SE 04-22-10	NW 29-21-12	NE 06-23-12	
NW/NW 23-25-08	SE 08-23-12	NE/NE 09-25-12	W/2 06-23-12	
NE 04-22-10	S/2 SE 08-23-12	NW/SW 32-25-12	S/2 SW 30-24-12	
SE 08-23-12	N/2 NE 17-23-12		E/2 NW 31-24-12	
NE 14-22-11	E/2 25-26-05 (Burbank Quarry)	SE 09-23-11 (Lot 11, Block 2 Bull Creek Subdivision)	NW/NW 22-26-12	
23-22-11 (?)		SE 34-21-11	NW/SE/SW 15-26-12	

Table 3-5 Industrial Sites in Osage County, Oklahoma

Company	Location	Section	Township	Range
Petrolite	Barnsdall	SE/4 - 18	24 North	11 East
Don Greeve Carpet Mill	Pawhuska	E/2 NW/4 - 3	25 North	9 East
Osage Industrial Park	Hominy	S/2 Se/4 - 13	23 North	8 East
Kaw Dam	Pawhuska	29-31	26 North	4 East
Bartlesville Landfill	Bartlesville	21	26 North	12 East
Keystone Dam	Sand Springs	29, 32	20 North	10 East

Table 3-6 Producing Trends, Osage County, Oklahoma

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
41	Alko	23N-9E	7/50	1328		Cleveland SS	1					
45	Almeda	26N-11&12E	1913	1500	10	Bartlesville SS	186	33	2,792,279		450,385	408,804
						Burgess SS						
				1700	20	Mississippian LS (Gas)						
			1/75	1941	3	Arbuckle (Gas)						
	Almeda NW		1/58	830	10	Wayside SS						
89	Apperson SW	26N-5E	8/46	2372	13	Layton SS		35	11,261			
			7/64			Mississippian LS		42	47,036,804		279,320	1,929,638
126	Atlantic	25N-7E	1924	1600	10	Wayside SS	495	36				
		25N-8E		1850		Bartlesville SS						
		25N-9E		2000		Blurgess SS						
		26N-8E		2100		Skinner SS						
		26N-9E				Mississippian Chat						
				2419	21	Mississippian LS						
				2640		Arbuckle						
				2750	15	Silicious LS (Arbuckle)						
	Atlantic E		1924				1		4,296		25,551	
127	Atlantic N	25N-8E	7/56	2382	12	Mississippian Chat		36	1,707			
145	Avant	23&24N-11E	1904	1400	65	Bartlesville SS	440	36	109,144,845		869,971	947,318
		23&24N-12E		1450	150	Burgess SS						
146	Avant W	22N-11E	1905	1162	10	Big Lime	551	32	4,681,869	637	2,111,554	249,158
		23N-10E		1697	12	Bartlesville SS						
		23N-11E		1844	9	Burgess SS						
	Backius		1919	1050		Wayside SS	75	34	961,327			
				1500		Bartlesville SS						

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
				1700		Mississippian LS						
173	Band-wheel	24N-9E	1921	700			207		5,995,922		159,105	948,269
				2050		Penn. SS		34				
				2200		Mississippian LS						
177	Barker	23N-7E	1/32	1029	3	Penn. SS	162	36	6,139,805		140,790	
		23N-8E				Ordovician						
		24N-7E				Cambrian						
		24N-8E		1610	9	Layton SS						
				2055	2	Big Lime						
				2178	20	Oswego LS						
				2386	16	L. Skinner SS						
						Mississippian LS						
				2872	24	Hominy SS (L. Simpson)						
			1941	2870		Arbuckle						
			8/68	2343	15	Skinner SS						
			8/68	2567	7	Mississippian Chat						
184	Barnsdall	24N-10E	1916	1100	79	Bartlesville SS	332	33	8,234,314		2,430,155	1,041,178
		24N-11E		1200	20	Penn. SS						
						Mississippian LS						
				1900		Arbuckle						
185	Barnsdall S	23&24N-10E	1921	1800	30	Bartlesville SS	249	34	2,226,287	1,335	464,107	444,309
		23&24N-11E				Burgess SS						
			7/67	2047	4	Arbuckles (Gas)						
186	Barnsdall W	24N-10E	1922	1900	60	Bartlesville SS	143	36	4,723,095			207,819
				1450	20	Big Lime						

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)		
187	Bartlesville	26N-12E	4/1897	1303	17	Bartlesville SS	152	36	874,914					
				27N-12E	260	9							Dewey SS	
				650	70	Big Lime								
				700	30	Peru SS								
				900	80	Oswego LS								
				1050	25	Skinner SS								
				1500	35	Burgess SS								
				2/70	1447	19							Mississippian LS	
				2/70									Arbuckle (Gas)	
		205		Belford NW	24N-4E	4/56							3710	13
1/57	1464		6				U.Tonkawa SS							
	3410		20				Mississippian Chat							
	3249		5				U. Skinner SS							
	3326		3				L. Skinner SS							
	3506		14				Mississippian Chat	40						
	3650		30				Mississippian LS							
224	Big Bend	25N-3E	4/43	2850	25	L. Layton SS	34	41	4,004,687		46,497			
225	Big Bend E	25N-3E	10/49	2649	20	Layton SS	8		304,691					
226	Big Bend N	25N-3E	5/60	3832	22	Mississippian Chat	14	39	592,805			295,853		
				11/60	4156	10							Wilcox SS (Simpson)	
													Layton SS	
	Big Bend S	25N-3E	2/62	2756	4	Cottage Grove	4	40	110,708					
227	Big Bend W	25N-2E	4/55	2739	12	Osage Layton SS	6	40	103,979					

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
			3/66	3818	19	Mississippian Chat		41				
	Bighorse	27N-12E	1927	1700	40	Bartlesville SS	84	47	930,055			
				1900	10	Mississippian LS						
				1050	20	Wayside SS						
231	Bighorse NE	27N-12E	4/68				44		390,312			
	Bighorse NE	27N-12E	4/68				91		633,846		99,726	349,650
247	Birch Creek	24N-10E	1920			Bartlesville SS	81	36	2,553,885		102,209	162,769
						Burgess SS						
				1950	40	Cleveland SS		35				
			1/75	2041	6	Bartlesville SS		35				
			1/75	2070	24	Mississippian Chat						
249	Birch Creek W	24N-10E	4/53	1360	7	Cleveland SS	6		18,177		10,249	459,47
259	Black Dog	22N-8E	1951	2603		Hominy SS (L. Simpson)	16		386,111		110,654	
	Black Dog E	22N-8E	8/75				3		104,986			
261	Black Dog S	22N-8E	12/55	2750		Arbuckle	17		145,167			391,528
				2290	20	Red Fork SS						
260	Black Dog W	22N-8E	6/45	2531	16	Burgess SS	24	40	849,115	1,847	78,645	50229
				2828	15	Arbuckle						
			1/75	1950	26	Oswego LS						
			1/75	2023	5	Peru SS						
			1975	2222	8	L. Skinner SS						
			1975	2294	36	Red Fork SS						
			1975	2518	27	Hominy SS (L. Simpson)						
			1975			Oil (?)						

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
253	Blackburn	22N-7E	4/67	2909	8	Tyner SS (Simpson)	8	37	366,459			11,927
			1967	2810	4	Wilcox SS (Simpson)						
255	Blackburn N	22N-7E	7/55	3023	187	Arbuckle	11	42	787,434		109,685	6,093
			5/68	2846	10	Wilcox SS (Simpson)						
			5/75		6	Peru SS (Gas)						
256	Blackburn NE	22N-7E	7/55	2952	20	Arbuckle	25	39	705,824			259,660
			2/63	2541	6	Burgess SS						
			4/75			Gas (?)						
262	Blackland	27N-7E	9/45	2487	10	Burgess SS	39	37	3,523,721			317,870
				2489	10	Mississippian Chat						
				2504	16	Mississippian LS						
263	Blackland NE	27&28N-8E	10/41	2570	10	Mississippian Chat	44		1,224,163			1,380,585
264	Blackland SW	27N-7E	7/56	2491	12	Burbank SS	1	38	5,177			
291	Boar Creek	22N-9E	1939	510	11	Okesa SS Clam Creek SS	39		273,017			62,580
292	Boar Creek East	22N-9E	10/53			Skinner SS	19	38	128,429		34073	
305	Boston	21N-7E	1904	1500		Penn. SS	308	37	1,203,520		6,279	1,269,754
		22N-7E				Mississippian LS						
		21N-8E 22N8E			1960	Arbuckle Cambrian						
306	Boston E	22N-8E	8/29	2117	13	Peru SS	6		7,732			
307	Boston N	22N-7E	1921			Wilcox (Simpson)	15		740,475		226,922	
		22N-8E		1935	40	Arbuckle						

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
			9/69	2938	4	1st L. Hominy SS (L. Simpson)						
308	Boston W	22N-7E	10/41	3032	24	Hominy SS (L. Simpson)	12	38	438,411			
			4/60	2736	9	Wilcox SS (Simpson)						
			4/62	2901	7	Tyner SS (Simpson)						
			8/76	2488	8	Skinner SS						
309	Boulangier NW	29N-10E	7/68	1986	6	Mississippian Chat (Gas)						
	Bowring	28N-11E	1921	800	60	Layton SS (Gas)	49		332,279		93,936	
				1275	20	Peru SS		34				
						Oswego LS						
				1800	20	Mississippian LS						
312	Bowring E	28N-11E	11/48	765	13	Penn. SS	2		4,230		347,450	
313	Bowring SE	27N-12E	8/75	1596	8	Bartlesville SS	49		359,498		272,604	
329	Bran-stetter	22N-11E	1928			Bartlesville SS	38	38	502,279		222,282	116,610
			1/35			Burgess SS						
						Mississippian LS						
	Breene		1950			Taneha (?)			109			
389	Buell	23N-9E	1922	2000		Penn. SS	25	37	742,739			957,626
						Mississippian LS						
				330	12	Okesa SS						
			1/77	1908	10	Skinner Sandstone						
				2092	8	Bartlesville SS						
399	Bulldog	24N-9E	1920	1775	80	Penn. SS	57	34	2,225,211			45,857

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
				1830	15	Oswego LS						
				2200	15	Bartlesville SaS						
						Mississippian LS						
400	Bulldog N	24N-9E	10/55				16		122,722			77,724
		25N-9E	4/56	2498	10	Mississippian LS						
401	Burbank	25N-6&7E 26N-5,6&7E 27N-5&6E				Burbank SS						
	Burbank S					Burbank SS Skinner SS		38				
402	Burbank SW	25N-5E	3/57	3088	10	Mississippian Chat	6		112,220			
403	Burbank Townsite	26N5E	9/61	3004	5	Burbank SS	1		715			
464	Candy Creek	24N-12E	1920	1700	20	Bartlesville SS	144	36	2,008,233		11,809	696,287
				2770	10	Arbuckle (Gas)						
465	Caney	28N-12&13E 29N-12&13E	8/62	1060 1149	14 8	Wiser SS Pawnee LS	107		285,641		1,015,527	361,278
466	Caney NW	29N-12E	10/60	1055	10	Big Lime						
470	Canyon Creek	23N-10E	1923		10	Bartlesville SS	56	39	5,093,639		3,934	176,049
						Blurgess SS Arbuckle						
471	Canyon Creek South	23N-10E	11/55	2125	12	Bartlesville SS	1	39	25,998			
631	Cleveland E	21N-8E	1/50 2/50 8/50	483 501 1868	8 11 45	Buzzard (?) Okesa SS Oswego LS			381,346			

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
			3/55	2234	10	Bartlesville SS						
			6/64	300	42	Topeka SaS						
				1156	18	Cleveland SS						
	Country Club	1923				Red Fork SS	25	33	1,217,059			
						Penn SS						
						Ordovician						
						Mississippian LS						
			8/60	2008	3	Bergen SS (Simpson)						
756	Dalton	24N-7E	1926			Bartlesville SS	52	38	1,438,334			189,511
		24N-8E		2430	40	Burgess SS						
					20	Mississippian LS						
					30	Ordovician						
				2794	4	Simpson SS		36				
				2842	1	Burgess SS		38				
				2814	63	Arbuckle		41				
				2509	8	Mississippian Chat						
				2832	6	Hominy SS (L. Simpson)						
				1600	10	L. Layton SS		37				
				2384	13	L. Skinner SS		42				
757	Dalton NE	25N-8E	1/58	2493	9	Mississippian Chat	1	40	62			
	Dalton S		1941	2500		Arbuckle	3		201,664			
758	Dalton W	24N-7E	7/33	2890	30	Siliceous LS (Arbuckle)	15		447,759			
			12/46	2926	1	Hominy SS (L. Simpson)						

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
	Dog Creek		5/56	2440	10	Mississippian Chat	13		222,129			167,371
806	Dog Creek N	28N-8E	8/56	2438	18	Mississippian Chat	1	27	204			
807	Dog Creek NE	28N-8E	12/60	2338	5	Mississippian Chat	4	33	143,145			70,776
808	Dog Creek S	28N-8E	10/75				81		4,497,082			3,154,133
809	Dog Creek SE	28N-8E	9/81				1		30			
810	Dog Creek SW	28N-7E 28N-8E	4/80				5		38,281	947	364,243	75,125
811	Dog Creek W	28N-8E	4/56				7		46,906			1,179,008
812	Doga E	24N-5E	4/51	2942	12	Skinner SS	3	40	73,349			
813	Doga N	24N-5E	12/51	3163	30	Mississippian LS	25	37	671,068			358,538
814	Doga NW	24N-5E	8/61	3221	8	Mississippian Chat		40				
817	Doga SW	24N-4E	7/52	3336	12	Mississippian Chat	5	38	496,293			
822	Domes SW	26N-10E	7/56	1962	5	Mississippian LS	7	36	396,200		124,453	405,039
				1736	10	Bartlesville SS						
823	Domes-Pond Creek	26N-10E	1917	1510	67	Stray SS	1435	36	25,294,826	14,184	4,556,414	8,664,596
		26N-11E		1680	100	Bartlesville SS						
		27N-10E		1880	45	Mississippian LS						
		27N-11E		2175	15	Ordovician						
		27N-12E		1050		Wayside SS						
		28N-10E		800	60	Layton SS						
		28N-11E		1275	20	Peru SS						
		28N-12E		1500		Oswego LS						
		29N-10E		500	15	Musselman SS						

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
		29N-11E		1800	5	Burgess SS						
		29N-12E				Mississippian Chat						
			7/73	1891	3	Peru SS						
835	Drum Creek	25N-4E	9/46	2852	28	Arbuckle	33	42	954,326			
				3470	15	Cleveland S						
						Mississippian Chat						
836	Drum Creek N	25N-4E	10/51	3432	38	Mississippian LS	40	43	1,947,062			11,631
837	Drum Creek, NW	25N-4E	7/59	3503	6	Mississippian Chat	4	44	148,721			
838	Drummond Ranch	26N-8E	12/45	2300	28	Peru SS	1		32,441			
839	Drummond Ranch, N	26N-8E	4/58	2416	9	Mississippian Chat	40	38	181,941		1,018,010	1,560,556
880	Edgewood	21N-11E	1921	2000	7	Bartlesville SS	11	35	55,250		201,598	98,435
		22N-11E				Burgess SS						
						Mississippian LS						
881	Edgewood S	21N-11E	1924			Bartlesville SS	31		232,431			
			2/60			Cleveland SS						
893	Elgin S	29N-9E	1915			Ramsey SS	236	33	3,386,561	542	10,035,204	
						Penn SS						
						Oswego LS						
				2100		Mississippian Chat						
894	Elgin SW	29N-9E	5/75	2025	10	Red Fork SS	11		97,752		33,866	
912	Enfisco	26N-7E	1921		10	Stray Penn SS	8	36	1,201,722		57,379	494,615
		27N-7E	11/56			Oswego LS						
				2530	4	Mississippian LS						
913	Enfisco W	27N-7E	4/80				2		4,325			

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
915	Enterprise	23N-7E	4/68	3044	6	Simpson SS	4	42	209,298			
			4/68	3082	10	Arbuckle		41				
			11/68	2638	9	Burbank SS		34				
916	Enterprise N	23N-7E	8/53	2740	4	Mississippian Chat	2		4,061			
						Oswego LS		38				
	Fairfax		1925			Burbank SS						
						Wilcox SS (Simpson)						
937	Fairfax NW Falls Dome	24N-5E	9/79				1		115			
			1920	1850		Oswego LS		36				
						Bartlesville SS						
965	Flat Rock	20N-12E					1119	36	3,897,555		624,360	936,860
				1110	95	Bartlesville SS						
				1345	20	Burgess SS						
966	Flat Rock W	20&21N-11E	4/58	2014	44	Arbuckle	44	40	586,349		211,957	
			3/51	2045	6	Hominy-Wilcox SS (L. Simpson)						
970	Flesher	22N-9&10E	1919		40	Bartlesville SS	10	35	199,950			
			10/55			Mississippian LS						
971	Flesher E	22N-10E	1/51	2238	26	Mississippian LS	4	38	37,547			
			5/34	2425	10	Arbuckle						
988	Foraker	28N-7E	1920	1100		Cleveland SS	65		1,985,745		63,986	297,984
			1922	1250		Oswego LS						
			1942	1800		Burbank SS						
				2700	10	Mississippian LS						
989	Foraker N	28N-7E	1/71	2805	10	Mississippian Chat	5		15,959			

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
996	Foraker NE	29N-7E					3		622	7,276	210,884	10,082
991	Foraker S	27N-7E					6		28,296		595,737	
992	Foraker SW	27N-7E					2		16,355			
1011	Forty-Five	25N-12E	1916			Oswego LS	72	34	2,913,266	850	656,562	442,649
		26N-12E		1400		Skinner SS						
				1500	35	Bartlesville SS						
			6/74	1995	4	Arbuckle (Gas)						
	Frankfort		1920	2040	50	Peru	6		414,429			
				2905	40	Mississippian LS						
1023	Frankfort E	29N-6E	10/83				1		7,372			
1024	Frankfort S	29N-6E	5/67	2866	5	Mississippian LS	1		180			
	GI Joe		12/45	1604	18	Tucker SS	18		575,727			
1096	Gilliland	22N-7E	9/19	2800	20	Layton SS (Gas)	153		8,311,915			238,010
		23N-7E			60	Oswego LS (Gas)						
		23N-8E			10	Prue SS		36				
					15	Bartlesville SS						
						Mississippian LS						
						Arbuckle						
				2222	4	Prue SS		40				
				2330	8	L. Skinner SS						
				2815	4	Arbuckle						
			1970	2741	1	Misener U. Hominy SS (L. Simpson)						
			1970	2771	1	M. Hominy SS (L. Simpson)						

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbbl)	Cum. Cond. Prod. (bbbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
			1970	2791	2	Tyner SS (Simpson)						
	Gilliland S		1945	2900	10	Hominy SS (L. Simpson)	26		455,318			
						Arbuckle						
1097	Gilliland W	23N-7E	7/56	2432	6	Skinner	2	37	770			
1129	Grainola SW	28N-6E	5/56	3045	4	Mississippian Chat	1	34	600			
1146	Grayhorse	24N-6E	6/58	2859	10	Mississippian Chat	6	36	59,183			
			9/58	2681	17	Burbank SS						
1143	Grayhorse N	24N-6E	6/50	2705	10	Cherokee SS	1		18,499			
1144	Grayhorse SE	23N-6E	11/76	3147	6	L. Hominy SS (L. Simpson)	2	31	7,774			
1145	Grayhorse W	24N-6E	8/56	2886	14	Mississippian Chat	2	41	18,280			
1160	Greenup N	22N-7E	4/60	2728	18	Wilcox (Simpson)	6	40	292,762		6,180	30,399
	Happy Hollow		1919	1945	15	Oswego	95	36	1,982,354			
				2200	20	Bartlesville SS						
				2392	6	Burgess SS						
			10/58	2736	20	Arbuckle						
				2416	10	Mississippian Chat						
1220	Happy Hollow NE	25N-8E	3/79				3		111,628			
1234	Hardy	25N-3E	1934	2567	20	Layton SS	48		3,997,819		4,605	2,585,119
				2359	8	Perry (Gas)						
			5/62	3376	16	Skinner SS		46				
			2/64	3521	7	Mississippian Chat		42				
	Hardy SE		11/54	2555	12	Osage-Layton SS	5	40	204,664			

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
	Hardy SW		1/56	3468	20	Skinner SS	1	38	522			
	Herd District		1919	500	15	Musselman SS						
				1100	15	Wayside SS						
	Herd E		9/50	1416	12	Peru SS	16	37	86,273		1,096,557	
				2050	10	Mississippian Chat						
	Herd N		1955	1706	8	Mississippian Chat	14		61,759			
	Herd NW		10/53	1800	5	Burgess SS	85		1,157,209			
	Herd SW		10/54	2026	18	Mississippian	53	39	375,604			
	Hickory Creek		1914			Oswego LS			3,700,040			
						Bartlesville SS						
				1700	10	Mississippian						
				2050	10	Ordovician						
	Hickory Creek S		1939	1050	20	Wayside SS	91	36	1,160,443			
1324	Hominy	22N-8E	1916			Penn SS	34	34	311,543		67,166	
		22N-9E				Mississippian						
						Ordovician						
						Cambrian						
			10/64	2546	66	Arbuckle		40				
1325	Hominy E	22N-9E	1918		30	Bartlesville SS	23	34	652,487			
			4/47			Mississippian LS						
						Hominy SS (L. Simpson)						
						Arbuckle						
			10/75	2535	48	1st Wilcox (Simpson)		38				
1328	Hominy Falls	21N-11E	1919		20	Bartlesville SS	42	36	414,420		165,344	2,959

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
		21N-12E			55	Taneha SS						
		22N-11E			10	Burgess SS						
		22N-12E			20	Mississippian LS						
			1/75	2178	2	Arbuckle						
1329	Hominy Lake S	22N-8E	7/52	2851	8	Red Fork SS	22	40	441,102		42,632	
				2864	37	Hominy SS (L. Simpson)						
				2974	23	Arbuckle						
1326	Hominy S	22N-9E	6/40			Oswego LS	7	37	48,857			
1327	Hominy W	22N-8E	1982				17		339,354	442	217,611	329,559
		Horn SW	8/63	1768	16	Bartlesville SS	12	31	50,942			
1361	Hulah	28N-12E	1979				2				454,568	
1362	Hulah N	29N-12E	8/62	1060	14	Wiser SS	2		13,081			
			8/62	1149	3	Pawnee LS						
1414	Javine	22N-11E	1919	1750	12	Burgess SS	59	36	1,792,782			
		22N-12E	2/46			Tucker SS						
1427	Johnson W	26N-10E	8/69	866	33	Musselman SS	6		22,517		437,911	
			1/73	2421	38	Arbuckle (Gas)						
	Kasishke		1921			Burbank SS		40	436,314			
				2480	10	Mississippian Chat						
			1956	2800	10	Ordovician						
	Kasishke S		11/25	2816	68	Hominy SS (L. Simpson)	25					
				2880	10	Arbuckle						
				2790	25	Mississippian Chat						
1443	Kaw S	25N-4E	2/47	3304	41	Mississippian LS	44	41	6,594,531			
		25&26N-5E		2350	10	Layton SS						

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)	
1471	Kaw SW		10/58	3194	7	Skinner SS	1	37	118				
	Keystone E	19N-10E	1948	2550	30	Wilcox SS (Simpson)	13		60,046				
		20N-10N	9/75	1960	20	Bartlesville SS							
	Keystone N		12/73	1935	9	Red Fork SS							
			6/74	2530	4	1st Hominy SS (L. Simpson)		38					
1534	Keystone SE		1953	2613		Hominy SS (L. Simpson)	4		111,675				
						3rd Simpson SS		38					
						Prue	109	35	601,824				
1535	Landon E	28N-9E	1914			Oswego LS							
			1919			Bartlesville SS							
						Wayside SS							
			7/74	2021	8	Mississippian Chat	2		39,823		137,411		
			1/75	1991	5	Pink LS							
1536	Landon N	29N-9E	8/75	2003	17	Mississippian Chat							
			5/75	1328	4	Wayside SS							
			4/61	1605	13	Wayside SS	3	35	43,621				
1537	Landon NE	28N-9E	3/73	1916	22	Mississippian Chat	1						
1538	Landon NW	28N-9E	7/53	1620	19	Wayside SS	92		1,137,273			861,993	
			1/74			Mississippian Chat (Gas)							
1539	Landon SW	28N-9E	5/56	2286	39	Mississippian LS	7	39	31,031	3,013	111,772		
1540	Landon W	28N-9E	6/56	1590	12	Wayside SS	34	35	101,143			79,932	
			1926	1940	30	Oswego LS							
				2200	35	Bartlesville SS		36					

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
				2320	20	Burgess SS						
				2525	15	Ordovician						
	Little Chief NE		4/52	2701	14	Red Fork SS		39				
				2814	20	Burbank SS						
				2882	10	Mississippian Chat						
	Little Chief NW		5/54									
	Little Chief SE		10/53	2811	25	Burbank SS		40	19,973			
	Little Chief W		9/53			Burbank SS						
	Lone Spring E		1/52	2585	16	Arbuckle	1	30	13,266			
33	1624 Lone Spring N	23N-9E	10/55	1567	18	L. Cleveland SS	17	37	166,230		205,576	39,080
	1655 Lucy Creek	25N-5E	1/57	2176	6	Osage-Layton SS	1	35	2,206			
			1/69	3212	6	Mississippian Chat		37				
	1656 Lucy Creek E	25N-5E	8/66	1851	3	Avant SS	9		265,397			
			9/67	3238	6	Mississippian LS						
	1657 Lucy Creek N	25N-5E	2/58	3273	10	Mississippian Chat	1					
	1679 Madalene	21N-10E	1920	1562	19	Prue SS	48		695,350			72,964
					65	Oswego LS		35				
					35	Bartlesville SS						
	1680 Madalene E	21N-10E	1923			Bartlesville SS	46	35	1,160,779	929	150,082	
	1693 Manion	23N-8E	1/18			Layton SS	75		2,969,317		40,912	134,530
		23N-9E	1927			Oswego LS		38				
					17	Bartlesville SS						

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
					30	Burgess SS						
						Okesa						
	Manion N		1920	2050	40	Bartlesville SS	81	38				
						Wilcox SS (Simpson)						
1694	Manion S	22N-9E	6/55	2621	4	Wilcox Hominy SS (L. Simpson)	5	41	125,486			
1737	Masham NW	22N-04E	10/57	3536	21	Mississippian Chat	13	38	192,391			442,269
1772	McCord SW	25N-2&3E	12/64	2748	14	1st Osage Layton SS	30		1,364,410			
1776	McInnis	25N-8E	6/57	2813		Arbuckle	22	39	402,110			55,156
1777	McInnis W	25N-7E	1156	3033	13	Arbuckle	2	37	7,660			
	Me-Gra-To-Moie		1939									
1894	Mud Creek SE	20N-10E	1943	2150	15	Tucker SS	12		36,294			
			4/51	358		Penn SS						
1920	Myers	26N-8E	1916	2101	6	Mississippian Chat	56		847,732		727,776	344,576
				2280	4	Mississippian LS						
				1400	10	Layton SS (Gas)						
						Skinner SS						
				2700		Simpson SS						
1921	Myers NE	27N-9E	9/55	2304	12	Mississippian Chat	4	33	22,924			
1922	Myers S	26N9E	1928	1600	10	Wayside			917,728			
				2110		Skinner						
				2364		Mississippian Chat						

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
1931	Naval Reserve	23&24N-7E	4/28	2940	110	Bartlesville SS	335	38	60,388,703		182,888	343,719
		24N-6E		3000	10	Arbuckle						
		25N-6&7E		2670	40	Burbank SS Mississippian Chat						
1932	Naval Reserve E	24N-7E	8/52	2570	8	Mississippian Chat	10		148,416			
	Naval Reserve NW		5/51	2695	15	Burbank SS	104	39	2,103,193			
1933	Naval Reserve S	23N-7E	2/38	2944	28	2nd Wilcox SS	16	38	1,538,080			
				2987	96	Hominy SS (L. Simpson) Burbank SS						
	Naval Reserve W	6/55	2767	35	Mississippian Chat	27	40	803,184				
1940	Nelagoney	25N-10E	1917	1200	15	Skinner SS	41		349,067		749,402	111,682
		25N-11E	8/77	1400	15	Bartlesville SS						
	New England		1920	2350								
						Bartlesville SS		34				
						Burgess SS Arbuckle						
						Mississippian Chat						
2009	Ochelata N	25N-12E	1910	1154		Prue SS	232		4,038,421			
			1650	40	Bartlesville SS							
2012	Ohio-Osage	21N-9E	1932			Cleveland SS	14		394,319			
			4/56			Bartlesville SS Layton SS						

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
			6/59	2788	28	Tyner SS						
	Okesa		1904			Prue SS	46		1,017,115			
				1575	35	Bartlesville SS		35				
				1700	20	Mississippian LS						
	Okesa N			1345	19	Peru SS	4	37	23,934			
				1625		Bartlesville SS						
2027	Okesa W	26N-10E	3/17	1926	34	Mississippian LS (Gas)	4		43,051			
			12/19	1693	15	Bartlesville SS						
2081	Osage City	21N-8&9E 22N-8&9E	11/04			Burbank SS	253	37	9,324,716	332	215,184	261,626
						Burgess SS						
						Arbuckle						
2082	Osage City E	21N-9E	1920	1620	25	Cleveland SS	85	37	1,231,972		232,800	
		22N-9E		2250	30	Bartlesville SS		38				
				2597	18	Arbuckle						
2084	Osage-Hominy	23N-8E	1917			Layton SS	254	37	13,605,381			1,068,590
		24N-8E				Oswego LS (Gas)						
						Bartlesville SS						
						Burgess						
			2/56	2613	2	Arbuckle						
2111	Page	20N-11E	1918			Penn SS	90		1,115,945	262	1,885,904	175,425
						Ordovician		33				
						Cambrian						
2123	Pappin	26N-9E	2/56	2000	27	Mississippian LS	2		711			
				1946		Bartlesville SS						
				1575		Peru SS						
2124	Pappin NW	27N-9E	8/66	2206	10	Mississippian Chat	6	36	47,718		104,944	1,884

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
2125	Pappin W	26N-9E	1/56	2204	5	Mississippian Chat	3	39	879			
2146	Pawhuska	25N-9E 26N-9E	10/19	1850 2000	20 20	Bartlesville SS Burgess SS Burgess SS (Simpson) Arbuckle	134	35	3,365,165		219,285	211,726
2147	Pawhuska N	26N-9E	5/72 6/72 6/72 10/72 9/73 9/73	2376 980 308 648 2018 2048	9 18 44 31 3 26	Arbuckle (Gas) Osage Layton (Gas) Nelagoney Stray SS Stray SS (Gas) Burgess SS Mississippian LS	18		81,157		1,442,115	678,297
2148	Pawhuska NE	26N-9&10E	6/48	2090	62	Mississippian Chat	25		519,469			1,828,141
2149	Pawhuska NW	26N-9E	11/57	2201	6	Burgess SS	9	36	112,940			1,224
	Pawhuska W		1/58 1919	2022 2200	7 10	L. Skinner Bartlesville SS	60	36	763,995			
				2400	20	Burgess Burgess SS (Simpson) Arbuckle Mississippian LS						
2159	Paxton E	22N-8E	4/50	2520		Prue (Gas) Red Fork SS	30		725,482		169,984	369,502
								39				

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
2160	Paxton SE	22N-8E	4/52	2425	16	Skinner SS	8	41	126,749		294,244	84,207
						Red Fork SS (Gas)						
			10/67	2949	18	M. Hominy SS (Simpson)						
2165	Pearsonia	27N-7E	8/19			Layton SS	67	36	5,933,607		8,105	11,202
		27N-8E				Oswego						
				2410	40	Burgess						
						Mississippian LS						
2167	Pearsonia NE	27N-9E	7/69	2254	1	Mississippian Chat	1	34	810,834		222,833	5,117,629
	Pearsonia S		10/45									
			5/74	2054	12	Big Lime						
2168	Pearsonia SE	27N-8E	4/65	2480	10	Burgess SS	13	38	150,097			
2183	Penn Creek	23N-8E	1922			Bartlesville SS	21	35	486,241			106,446
						Mississippian LS						
			11/57	2410	12	Burbank SS						
2201	Pershing	24N-9E	3/17	2033	30	Bartlesville SS	430	35	5,928-740	496	266,838	1,215,008
		24N-10E	1/57	2072	14	Burgess SS						
		25N-9E		1400	10	Wayside SS						
		25N-10E		1520	10	Big Lime						
				1700	10	Oswego LS						
2202	Pershing E	25N-10E	7/49	1982	21	Bartlesville SS	28		165,295	9,527	5,427	
2203	Pershing NE	25N-10E	1950	1906	37	Bartlesville SS	1		562			
2206	Pettit SE	23N-8E	12/61	1368	6	Peoples SS	1		1,036			
2207	Phillips Lake E	22N-6E	3/58	3212	4	Burgen SS (Simpson)		41	27,377			
	Piggot		1924			Burgess SS			9,776			
2225	Pioneer	20N-11E	1920			Bartlesville SS	26	34	308,175			
		21N-11E				Simpson SS						

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
2226	Pioneer E	20N-11E	3/49	2259	28	Hominy SS (Simpson)	2	39	127,849			
		21N-11E		2349	15	Arbuckle						
2227	Pioneer S	20N-11E	1951	2057	16	Bartlesville SS	1		3,386			
				2181	10	Burgess SS						
				2195	5	Mississippian LS						
	Platter		1939									
2254	Ponca City SE	25N-2E	7/65	3835	4	Mississippian Chat	3	40	56,516		12,487	
	Pond Creek		1912	1600	10	Penn SS	78		2,251,686			
						Mississippian LS						
2257	Pond Creek NW	29N-10E	3/56	1800	27	Mississippian Chat	7	33	1,292,608			
	Pond Creek SW		1/56	1760		Mississippian Chat			24,028			
2287	Prairie Springs NW	29N-8E	11/79				14		81,238			
2288	Prairie Springs SW	29N-9E	6/58	1597	8	Wayside SS	30	34	386,630			190,812
			8/73	2050	33	Mississippian Chat (Gas)						
2289	Prairie Springs W	28&29N-8E	8/79				19		140,986		22,586	1,525
2297	Prue	21N-10E	1920	1990	25	Bartlesville SS	29	36	217,775		427,216	22,105
				1648	20	Prue (Gas)						
				1495	20	Oswego LS						
				2450	20	Simpson SS						
2307	Quapaw	24N-11E	1914	1420	10	Oswego LS	269	34	2,001,591		1,228,333	1,163,090
		25N-10E		1600	20	Skinner SS						
		25N-11E		1630	50	Bartlesville SS						
			6/1967	2105	10	Arbuckle						

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
2320	Ralston NE	24N-6E	9/56	2867	7	Skinner SS	2	34	54,670			
2324	Ramona	24N-12E	1911	934	100	Big Lime	157	33	1,708,240	221	3,281,281	154,239
				1687	20	Bartlesville SS						
				1753	20	Burgess SS						
2346	Red Bluff	12N-11E	7/50	1904		Burgess SS	1	36	109,976			
						Mississippian LS						
						Hominy SS (Simpson)						
2348	Red Bluff N	21N-11E	1924	1863	2	Bartlesville SS	8		108,979			2,264
2347	Red Bluff NE	21N-11E	8/60	1896	10	Tucker SS						
2367	Remington	25N-5&6E	1/49	2970	10	Mississippian Chat	40	41	2,930,604			
				2820	15	Burbank SS						
						Burgess SS						
	Burbank N		8/61	3004	5	Burbank SS	2		1,886,071			
	Remington NW		1/56	3094	8	Mississippian Chat						
	Remington SW		1/57	2176	6	Osage-Layton SS	1	35	2,206			
	Revard S		2/57	1640	12	Bartlesville SS	9	38	38,342			
2405	Ritberger E	26N-8E	7/59	2441	3	Mississippian Chat	5	38	71,828			
2406	Ritberger SE	26N-8E	9/58	2300	10	Skinner SS	1	39	389			
2407	Ritberger SW	26N-8E	6/56	2540	10	Mississippian Chat	8	38	99,388			
	Ross Day		9/51	3374	10	Mississippian LS	2	40	5,777			
2442	Ross Day E	24N-4E	5/56	3375	8	Mississippian Chat	25		992,862			
2443	Ross Day N	24N-4E	6/73	3484	4	Mississippian Chat						
2444	Ross Day NE	25N-4E	2/67	2432	12	L. Layton SS	1		19,824			

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
2445	Ross Day S	24N-4E	5/58	3510	4	Mississippian Chat	3	42	10,970			
2446	Ross Day SE	24N-4E	6/77	3230	47	Mississippian Chat						
2447	Ross Day SW	24N-4E	10/77	3465	21	Burbank SS						
			11/77	3544	16	Mississippian Chat						
2569	Shall Lake N	20N-11E	2/50	2249	16	Burgess SS	2	39	19,155		165,251	
2570	Shell Lake NW	20N-10E	10/47	2193	20	Tucker SS	13		411,173			
				1935	9	Red Fork SS						
				1960	20	Bartlesville SS						
				2550	30	Wilcox SS (Simpson)						
2572	Shidler E	27N-6E	1/55	2714	12	Prue SS	1	36	14,450			
	Shidler NW		12/80				2		8,166			
2574	Shidler SE	27N-7E	3/72	2899	10	Mississippian Chat	4	39	22,914		24,024	
2582	Signal Hills	23N-9E	4/44	430	20	Okesa SS	23		306,346		849,176	670,620
						Cleveland SS						
						Hominy SS (Simpson)						
						Arbuckle						
2602	Skiatook	22&23N-12E	2/11	1370	20	Bartlesville SS	46	34	479,022		355,477	266,877
						Burgess SS						
	Solomon Creek		1939	2722	37	Skinner SS	1	30	18,980			
2643	St Johns N	25N-7E	8/55	2466	6	Skinner SS	4	37	7,785			
	St Johns W		6/52	2657	66	Burbank						
2692	Strohm	25N-7E	8/56	2693	13	Mississippian Chat	6	40	291,007			

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
2693	Strohm E	25N-7E	6/55	2645	8	Mississippian Chat	3	39	34,303			
2694	Strohm N	25N-7E	5/54	2550	16	Skinner SS	11	40	259,671			
				3010		Ordovician						
				2620	10	Mississippian Chat						
2695	Strohn NW	26N-7E	2/64	3088	5	Arb Lime (?)	2		1,883			
2714	Sundown SW	22N-10E					3		235			
2715	Sunny Slope NE	23N-6E	8/57	3170	11	Simpson SS	14	39	592,528			5,136
			12/57	2726	20	Skinner SS						
				3138	11	Wilcox SS (Simpson)						
2716	Sunny Slope SW	22&23N-6E	6/58	3152	5	Wilcox SS (Simpson)		43				
2717	Sunset	22&23N-9E	1919			Bartlesville SS	39	36	311,817			8,730
						Hominy SS (Simpson)						
						Arbuckle						
2718	Sunset NE	23N-9E	6/28	2524	3	Simpson SS	8	39	224,481			1,145
			7/55	2130	8	Bartlesville SS						
2719	Sunset W	22N-9E	8/77				4		36,897			
2765	Tidal-Osage	24N-8&9E	1916	2450	10	Ordovician	294	36	13,840,963			942,207
				460	20	Okesa SS						
				1600	20	Big Lime						
				1700	15	Peru SS						
				1800	20	Oswego LS						
				2150	40	Bartlesville SS						
				2250	15	Burgess SS						
			7/60	2168	15	Mississippian LS						

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
2808	Turkey Creek	29N-10E	1917	1080	15	Wayside SS	102	33	470,919		174,589	
			2/52	1720	10	Burgess SS						
						Mississippian LS						
	Turkey Creek W		1917	1100	20	Wayside SS	57		294,476			
2819	Twin Creek	21N-9&10E	11/28	2071	27	Bartlesville SS	34		553,826			
			3/76				4		27,368		2,265,247	
							4					
2999	Whitetail	26N-9E	1919			Stray SS	218		3,394,742		273,671	278,724
						Bartlesville SS						
					1735	20	Mississippian Chat					
					1750	20	Mississippian LS					
				1/56	2093	3	Arbuckle					
				12/56	1526	13	Big Lime					
				12/56	880	12	Layton (Gas)					
	Whitetail N		6/35	2106	24	Mississippian Chat	24	39	53,684			
3000	Whitetail NW	28N-9E	4/60	1556	14	Wayside SS	5	38	46,251			
							12	40	18,866			
				2612	8	Mississippian LS						
3001	Whitetail W	27N-9E	12/59	2060	14	Mississippian Chat	7	36	5,205	1,786	302,763	
3007	Wildcat Hill	21N-7E	6/38	1932		Bartlesville SS (Gas)	36		188,472		1,683,194	26,666

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
			8/45	2445	15	Tyner SS (Simpson)		35				
			9/45	2000		Hominy Wilcox SS (Simpson)						
3008	Wildhorse	21N-10E	8/12	3550		Penn SS	639	36	11,206,282			62,704
		22N-10E				Orcovician						
		22N-11E	6/75			Burgess SS						
						Bartlesville						
						Taneka SS						
						Mississippian Chat						
						Red Fork SS						
3009	Wildhorse N	22N-10E	1919			Penn SS	24	35	80,878		327,399	76,109
						Ordovician						
			9/75		34	Bartlesville SS						
3010	Wildhorse NE	22N-10E	5/72	1703	15	Bartlesville SS	13		348,428			
			3/66	2240	6	Arbuckle		40				
3011	Wildhorse S	21N-10E	1923			Penn SS	27	35	703,004			610,430
						Tyner SS (Simpson)						
						Arbuckle						
	Wildhorse SE		12/85				1		97,546			148,372
3012	Wildhorse W	22N-9E	8/40			Arbuckle	1		97,546			148,372
3055	Woolaroc	24&25N-11E	1917	1720		Skinner SS	203	36	7,592,912		1,274,660	926,790
		25N-12E		1800	40	Bartlesville SS						
3063	Wynona	24N-9E	1905	2050	100	Bartlesville SS	171	35	20,901,234		32,197	542,737
		24N-10E	1917	1600	60	Miss-Oswego LS						
				1050	30	Layton SS						

Table 3-6 Producing Trends, Osage County, Oklahoma (Cont.)

Field No.	Field Name	Location (Twn.-Rge.)	Disc. Date	Top of Pay (ft)	Net Pay (ft)	Producing Formation	No. of Wells	API Grav.	Cumulative Oil Production (bbl)	Cum. Cond. Prod. (bbl)	Cum. Dry Gas Prod. (mcf)	Cum. Casing-head Gas Prod. (mcf)
				1375	20	Wayside SS						
			1919	1520	30	Big Lime						
				2281	20	Mississippian LS						
				2506	20	Ordovician						
			1/69	2267	5	Mississippian Chat						
3064	Wynona S	23N-10E	11/51	2129	15	Bartlesville SS	13	36	11,176			
	X-686		11/48	2542		Hominy SS (Simpson)	6	236,276				