OSAGE TABULATION OF WELLS WITHIN 1/4 MILE OF PROPOSED INJECTION WELL WHICH PENETRATE THE INJECTION ZONE

Proposed Inj Well _____

****

Well Name NBU 40-1 Company Name Gypsy Oil Company Date Drilled 6/14/1923 Depth 2960 '

Location 300 ' F S L & 300 ' F E L, NE /4, Sec. 23 , T 27 N, R 05 E Status Shut in oil

Elevation 1103 [X] GL [ ] KB

Hole Size	Casing Size	Landed Depth	Cement & Additive Data	Top of Cement	If well is TA or P&A Describe How:
"	20 "	18 '	pmp 100 sx class H cmt 3% CC 5# Gilsonite. Cmt circ out of 7" csgshut off 7" csg & disp cmt @ 60'.	'	
"	15 1/2 "	pld all bt 6jts		'	
"	12 1/2 "	pld all bt 23jts		'	
"	10 "	pld all bt 36jts		'	
	8 5/8 "	2240 '		'	
	7 "	2811 '	Dmpd 2 sx cmt @ 2940'.	'	
"	5 1/2 "	'	From 2786' to 2880'	'	

Formations Open To Wellbore: Burbank (Open Hole 2880' - 2960')

****

Well Name NBU 40-2 Company Name Gypsy Oil Company Date Drilled 6/24/1923 Depth 3018 '

Location 300 ' F S L & 980 ' F E L, NE /4, Sec. 23 , T 27 N, R 05 E Status P & A'd 4/7/2006

Elevation 1114 [X] GL [ ] KB

Hole Size	Casing Size	Landed Depth	Cement & Additive Data	Top of Cement	If well is TA or P&A Describe How:
"	15 1/2 "	861 '	pld all bt 682'.	'	Shot 2 holes @ 1300'. 7" cmt retainer @ 2777'. Pmp 200 sx reg cmt below retainer. POOH to 1310'. Spot 50 sx reg cmt mid plug. Shot holes in csgs 375 to 75'. Pmp 300 sx reg cmt to circ to surf outside 7" & 8 5/8" csg. Pmp 64 sx reg cmt to GL.
"	10 "	1222 '	pld all bt 7 jts	'	
"	8 5/8 "	2288 '		'	
"	7 "	2819 '	pld 179' of 5 1/2" csg	'	
	5 1/2 "	liner '	2794' to 2930'	'	

Formations Open To Wellbore: None

****

Well Name NBU 40-3 Company Name Gypsy Oil Company Date Drilled 6/7/1923 Depth 3036 '

Location 300 ' F S L & 980 ' F W L, NE /4, Sec. 23 , T 27 N, R 05 E Status Injector well

Elevation 1138 [X] GL [ ] KB

Hole Size	Casing Size	Landed Depth	Cement & Additive Data	Top of Cement	If well is TA or P&A Describe How:
"	15 1/2 "	883 '	pld 1 jt, left 45 jts	'	
"	8 5/8 "	2315 '	Squeeze W/600 sx Reg along W/ 4 1/2"throught perforations from 350' to 50'	Surface '	
"	7 "	2852 '	Cmt w/160 sx reg w/2% gel. Squeeze W/600 sx Reg along W/ 4 1/2"throught perforations from 350' to 50'	2852 Surface '	
"	5 1/2 "	liner '	2844' to 3036'. Cmt w/91 sx reg w/2% CC. Sqzd lnr w/30 sx reg.	'	
"	4 1/2 "	2953 '	120 sx Reg w/2% gel- Bottom Stage. Upper stg. DV tool@384' . Cmt to surface W/600 sx reg	2953 '	
"	"	'		Surface '	

Formations Open To Wellbore: Burbank (Perf 3010' - 3036')

****

OSAGE TABULATION OF WELLS WITHIN 1/4 MILE OF PROPOSED INJECTION WELL
WHICH PENETRATE THE INJECTION ZONE

Proposed Inj Well _____

****

Well Name NBU 40-4 Company Name Gypsy Oil Company Date Drilled 6/4/1923 Depth 2994 '

Location 300 ' F S L & 300 ' F W L, NE /4, Sec. 23 , T 27 N, R 05 E Status Shut In Oil

Elevation 1131 [X] GL [ ] KB

Hole Size	Casing Size	Landed Depth	Cement & Additive Data	Top of Cement	If well is TA or P&A Describe How:
"	15 1/2 "	614 '		'	
"	8 5/8 "	2235 '		'	
"	7 "	2833 '		'	
"	5 1/2 "	Liner '	From 2815' to 2983'	'	
"	"	'		'	

Formations Open To Wellbore: Burbank (Open Hole 2983' to 2994') PBTD @ 2925'

****

Well Name NBU 40-5 Company Name Gypsy Oil Company Date Drilled 7/17/1923 Depth 2993 '

Location 980 ' F S L & 300 ' F E L, NE /4, Sec. 23 , T 27 N, R 05 E Status P & A'd 4/9/62

Elevation 1101 [X] GL [ ] KB

Hole Size	Casing Size	Landed Depth	Cement & Additive Data	Top of Cement	If well is TA or P&A Describe How:
"	8 5/8 "	2344 '		'	Spot 35 sx common w/950# Diacel D & 2% CC @ 2930'. TOC @ 2870'. Part & POOH 7" csg @ 2755'. Dmpd 10 sx cmt @ 2650'. Part & POOH 8 5/8" csg @ 2270'. Mudded hole to surf.
"	7 "	2821 '		'	
"	5 1/2 "	liner '	From 2796' to 2942'	'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: None

****

Well Name NBU 40-6 Company Name Gypsy Oil Company Date Drilled 3/29/1924 Depth 3010 '

Location 980 ' F S L & 980 ' F E L, NE /4, Sec. 23 , T 27 N, R 05 E Status P & A'd 4/19/62

Elevation 1113 [X] GL [ ] KB

Hole Size	Casing Size	Landed Depth	Cement & Additive Data	Top of Cement	If well is TA or P&A Describe How:
"	15 1/2 "	900 '		'	Spot 65 sx common w/ 1800# Diacel D & 2% CC @ 2950'. TOC @ 2650'. Part & POOH 7 " csg @ 2400. Dmpd 10 sx cmt @ 2400'. Part & POOH 8 5/8" csg @ 2260'. Part & POOH 10 3/4" csg @ 1360'. Part & POOH 16" csg @ 400'. Mudded hole to surf.
"	10 "	1505 '		'	
"	8 5/8 "	2288 '		'	
"	7 "	2763 '		'	
"	5 1/2 "	liner '	From 2738 to 2950'	'	
"	"	'		'	

Formations Open To Wellbore: None

****

OSAGE TABULATION OF WELLS WITHIN 1/4 MILE OF PROPOSED INJECTION WELL
WHICH PENETRATE THE INJECTION ZONE

Proposed Inj Well _____

****

Well Name NBU 40-7 Company Name Gypsy Oil Company Date Drilled 7/17/1923 Depth 3029 '

Location 980 ' F S L & 980 ' F W L, NE /4, Sec. 23 , T 27 N, R 05 E Status P & A'd 4/26/62

Elevation 1132 [X] GL [ ] KB

Hole Size	Casing Size	Landed Depth	Cement & Additive Data	Top of Cement	If well is TA or P&A Describe How:
"	8 5/8 "	2297 '		'	Spot 90 sx common w/2850# Diacel D & 2% CC @ 2900'. TOC @ 2500'. Part & POOH 7" csg @ 2410'. Dmpd 10 sx cmt @ 2390'. Part & POOH 8 5/8" csg @ 1550'. Mudded hole to surf.
"	7 "	2841 '		'	
"	5 1/2 "	liner '	From 2816' to 2983'	'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: None

****

Well Name NBU 40-8 Company Name Gypsy Oil Company Date Drilled 6/16/1923 Depth 3015 '

Location 300 ' F W L & 980 ' F S L, NE /4, Sec. 23 , T 27 N, R 05 E Status P & A'd 5/1/62

Elevation 1139 [X] GL [ ] KB

Hole Size	Casing Size	Landed Depth	Cement & Additive Data	Top of Cement	If well is TA or P&A Describe How:
"	15 1/2 "	pld 7 jts '		'	Spot 35 sx common cmt w/950# Diacel D @ 2994'. TOC @ 2807'. Pld 127 jts of 8 5/8" csg. Mudded hole to surf.
"	8 5/8 "	2296 '		'	
"	7 "	2839 '		'	
"	5 1/2 "	liner '	From 2814' to 2958'	'	
"	"	'		'	

Formations Open To Wellbore: None

****

Well Name NBU 40-9 Company Name Gypsy Oil Company Date Drilled 1/18/1924 Depth 3022 '

Location 300 ' F N L & 300 ' F E L, NE /4, Sec. 23 , T 27 N, R 05 E Status P & A'd 11/6/61

Elevation 1117 [X] GL [ ] KB

Hole Size	Casing Size	Landed Depth	Cement & Additive Data	Top of Cement	If well is TA or P&A Describe How:
"	15 1/2 "	853 '		'	Cmtd form @ 2970' w/105 sx common w/2950# Diacel D. TOC @ 2625'. Part & POOH 7" csg @ 2602'. Dmpd 10 sx cmt 2590'. Part & POOH 8 5/8" csg @ 2050'. Mudded hole to surf.
"	10 "	1437 '		'	
"	8 5/8 "	2255 '		'	
"	7 "	2805 '		'	
"	5 3/16 "	liner '	From 2780' to 2960'	'	
"	"	'		'	

Formations Open To Wellbore: None

****

OSAGE TABULATION OF WELLS WITHIN 1/4 MILE OF PROPOSED INJECTION WELL
WHICH PENETRATE THE INJECTION ZONE

Proposed Inj Well _____

****

Well Name NBU 40-10 Company Name Gypsy Oil Company Date Drilled 2/17/1924 Depth 3033 '

Location 300 ' F N L & 980 ' F E L, NE /4, Sec. 23 , T 27 N, R 05 E Status P & A'd 11/10/61

Elevation 1121 [X] GL [ ] KB

Hole Size	Casing Size	Landed Depth	Cement & Additive Data	Top of Cement	If well is TA or P&A Describe How:
"	15 1/2 "	874 '		'	Cmtd form @ 2970' w/55 sx common w/1550# Diacel D. TOC @ 2508'. Part & POOH 7" csg @ 2436'. Part & POOH 8 5/8" csg @ 2090'. Mudded hole to surf
"	12 1/2 "	1191 '		'	
"	8 5/8 "	2281 '		'	
"	7 "	2825 '		'	
"	5 1/2 "	liner '	From 2800' to 2961'	'	

Formations Open To Wellbore: None

****

Well Name NBU 40-11 Company Name Gypsy Oil Company Date Drilled 1/31/1924 Depth 3036 '

Location 300 ' F N L & 980 ' F W L, NE /4, Sec. 23 , T 27 N, R 05 E Status P & A'd 11/22/61

Elevation 1131 [X] GL [ ] KB

Hole Size	Casing Size	Landed Depth	Cement & Additive Data	Top of Cement	If well is TA or P&A Describe How:
"	15 1/2 "	882 '		'	cmtd form @ 2980' w/35 sx common w/1000# Diacel D. TOC @ 2630'. Part & POOH 7" csg @ 2465'. Dmpd 10 sx cmt @ 2450'. Part & POOH 8 5/8" csg @ 1850'. Part & POOh 15 1/2 csg @ 480'. Mudded hole to surf.
"	8 5/8 "	2304 '		'	
"	7 "	2837 '		'	
"	5 1/2 "	liner '	From 2813' to 2983'	'	
"	"	'		'	

Formations Open To Wellbore: None

****

Well Name NBU 40-12 Company Name Gypsy Oil Company Date Drilled 1/16/1924 Depth 3046 '

Location 300 ' F N L & 300 ' F W L, NE /4, Sec. 23 , T 27 N, R 05 E Status P & A'd 12/5/61

Elevation 1140 [X] GL [ ] KB

Hole Size	Casing Size	Landed Depth	Cement & Additive Data	Top of Cement	If well is TA or P&A Describe How:
"	15 1/2 "	884 '		'	cmtd form @ 2980' w/90 sx common w/2550# Diacel D. TOC @ 2400'. Part & POOH 7" csg @ 2350'. Dmpd 10 sx cmt @ 2340'. Part & POOH 8 5/8" csg @ 1600'. Part & POOH 16" csg @ 440'. Mudded hole to surf.
"	8 5/8 "	2311 '		'	
"	7 "	2846 '		'	
"	5 1/2 "	liner '	From 2821' to 2959'	'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: None

****

OSAGE TABULATION OF WELLS WITHIN 1/4 MILE OF PROPOSED INJECTION WELL
WHICH PENETRATE THE INJECTION ZONE

Proposed Inj Well _____

****

Well Name NBU 40-13 Company Name Gypsy Oil Company Date Drilled 2/17/1924 Depth 3051 '

Location 980 ' F N L & 300 ' F W L, NE /4, Sec. 23 , T 27 N, R 05 E Status Oil Producer

Elevation 1142 [X] GL [ ] KB

Hole Size	Casing Size	Landed Depth	Cement & Additive Data	Top of Cement	If well is TA or P&A Describe How:
"	15 1/2 "	885 '		'	
"	12 1/2 "	1200 '		'	
"	8 5/8 "	2295 '		'	
"	7 "	2835 '	squeezed leaks from 40' to 2820' w/600 sx reg cmt	'	
"	5 1/2 "	liner '	From 2820' to 2988'	'	

Formations Open To Wellbore: Burbank (Open Hole 2988' to 3051')

****

Well Name NBU 40-14 Company Name Gypsy Oil Company Date Drilled 2/22/1924 Depth '

Location 980 ' F N L & 980 ' F W L, NE /4, Sec. 23 , T 27 N, R 05 E Status moved LOC

Elevation 1128 [X] GL [ ] KB

Hole Size	Casing Size	Landed Depth	Cement & Additive Data	Top of Cement	If well is TA or P&A Describe How:
"	20 "	37 '		'	plg to surf w/sand pumpings. Unable to recover string of tools. Skidded to 2nd loc.
"	15 1/2 "	875 '		'	
"	12 1/2 "	1275 '		'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: None

****

Well Name NBU 40-14 (2) Company Name Gypsy Oil Company Date Drilled 4/26/1924 Depth 3034 '

Location 1000 ' F N L & 965 ' F W L, NE /4, Sec. 23 , T 27 N, R 05 E Status Shut in oil

Elevation 1130 [X] GL [ ] KB

Hole Size	Casing Size	Landed Depth	Cement & Additive Data	Top of Cement	If well is TA or P&A Describe How:
"	20 "	38 '		'	
"	8 5/8 "	2305 '		'	
"	7 "	2832 '		'	
"	5 1/2 "	liner '	From 2815' to 2962'	'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: Burbank (Open Hole 2962' to 3034')

****

OSAGE TABULATION OF WELLS WITHIN 1/4 MILE OF PROPOSED INJECTION WELL WHICH PENETRATE THE INJECTION ZONE

Proposed Inj Well _____

****

Well Name NBU 40-15 Company Name Gypsy Oil Company Date Drilled 03/17/1924 Depth 3030 '

Location 980 ' F N L & 980 ' F E L, NE /4, Sec. 23 , T 27 N, R 5 E Status Injection

Elevation _____ ☐ GL ☐ KB

Hole Size	Casing Size	Landed Depth	Cement & Additive Data	Top of Cement	If well is TA or P&A Describe How:
"	20 "	79 '		'	
"	8 5/8 "	2288 '	Squeeze W/693 sx Reg along W/ 4 1/2"throught perforations from 300' to Surface	Surface '	
"	7 "	2787 '	Squeeze W/693 sx Reg along W/ 4 1/2"throught perforations from 300' to Surface	Surface '	
"	5 1/2 "	Liner '	From 2736' to 2965'	'	
"	4 1/2 "	2953 '	120 sx Reg w/2% gel- Bottom Stage. Upper stg. DV tool@340' . Cmt to surface W/693 sx reg	2953 Surface '	

Formations Open To Wellbore: Burbank (Open Hole 2965' - 3030')

****

Well Name NBU 40-16 Company Name Gypsy Oil Company Date Drilled 02/280/1924 Depth 3024 '

Location 980 ' F N L & 300 ' F E L, NE /4, Sec. 23 , T 27 N, R 5 E Status Oil Producer

Elevation 1118 ☒ GL ☐ KB

Hole Size	Casing Size	Landed Depth	Cement & Additive Data	Top of Cement	If well is TA or P&A Describe How:
"	15 1/2 "	853 '		'	
"	8 5/8 "	2403 '		'	
"	7 "	2797 '		'	

Formations Open To Wellbore: Burbank (Open Hole 2797' - 3024')

****

Well Name NBU 40-21 Company Name Phillips Petroleum Co. Date Drilled 09/22/1960 Depth 3061 '

Location 860 ' F S L & 565 ' F W L, NE /4, Sec. 23 , T 27 N, R 5 E Status P&A'd in 2004

Elevation 1142' ☐ GL ☒ KB

Hole Size	Casing Size	Landed Depth	Cement & Additive Data	Top of Cement	If well is TA or P&A Describe How:
"	8 5/8 "	111 '	Cmt w/105 sks reg cmt	Surface '	Csg bad @ 2100' after milling outside csg from 2100 to top of fish @ 2434. RIH w/tbg to 2213' & spot bottom plug of 100 sks Reg w/3% CaCl. POOH w/ tbg & SDON. TOC @ 1988'. Perf 4½ @ 1100' & squeeze 50 sk 50/50 poz behind pipe. Shotoff 4½ @ 413' & POOH w/same. RIH w/tbg to 432' and circ 450 sks 50/50 poz to surf.
"	4 1/2 "	3007 '	Cmt w/77 sks reg w/30% DD	'	
"	"	'		'	
"	"	'		'	
"	"	'		'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: None

****

OSAGE TABULATION OF WELLS WITHIN 1/4 MILE OF PROPOSED INJECTION WELL WHICH PENETRATE THE INJECTION ZONE

Proposed Inj Well _____

****

Well Name NBU 40-23 Company Name Phillips Petroleum Co. Date Drilled 09/17/1960 Depth 3025 '

Location 890 ' F S L & 715 ' F E L, NE /4, Sec. 23 , T 27 N, R 5 E Status P&A'd in 2005

Elevation 1109' ☐ GL ☒ KB

Hole Size	Casing Size	Landed Depth	Cement & Additive Data	Top of Cement	If well is TA or P&A Describe How:
9 5/8 "	8 5/8 "	119 '	Cmt w/110 sks reg cmt	'	Tbg parted @ 2100'. RIH to 2100' Pump 200 sks Reg bottom plug. At 1200' parted csg & pump 100 sks Reg mid plug. Part 4½ @ 465. RIH to 465' & circ 270 sks 50/50 poz to surf.
7 7/8 "	4 1/2 "	2965 '	Cmt w/77 sks reg w/30% DD	'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: None

****

Well Name NBU 40-25 Company Name Phillips Petroleum Co. Date Drilled 05/12/1961 Depth 3069 '

Location 420 ' F N L & 749 ' F W L, NE /4, Sec. 23 , T 27 N, R 5 E Status P&A'd in 1967

Elevation 1129' ☒ GL ☐ KB

Hole Size	Casing Size	Landed Depth	Cement & Additive Data	Top of Cement	If well is TA or P&A Describe How:
9 5/8 "	8 5/8 "	124 '	Cmt w/120 sks reg cmt	Surface '	Csg failed at 370' & could not get tools below part. RIH w/tbg to 2735. Cmt'd w/30 sks cmt w/20% DD. POOH w/tbg to 1908 pmpd 25 sks. POOH w/tbg to 399 & spot 25 sk plug. POOH w/tbg to 104' & pmpd 25 sks to surf. Cmt fell to 277 fill w/mud to 120 &spot 10sks reg. Fill cellar w/5 sks cmt.
7 7/8 "	4 1/2 "	3004 '	Cmt w/114 sks reg cmt	'	
"	"	'		'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: None

****

Well Name NBU 40-27 Company Name Phillips Petroleum Co. Date Drilled 05/06/1961 Depth 3055 '

Location 420 ' F N L & 715 ' F E L, NE /4, Sec. 23 , T 27 N, R 5 E Status P&A'd in 2004

Elevation 1112' ☒ GL ☐ KB

Hole Size	Casing Size	Landed Depth	Cement & Additive Data	Top of Cement	If well is TA or P&A Describe How:
9 5/8 "	8 5/8 "	128 '	Cmt w/115 sks reg cmt	Surface '	Pumped 50 sxs reg cmt for bottom plug. Perforated 4 1/2" csg every 50' from 400' to 100'. RIH w/tbg to 400'. Spotted 200 sxs 50/50 pozmix cmt to surface. Squeezed 4 1/2" csg w/57 sks to surface. Cut off 8 5/8" & 4 1/2" csg 3' below G.L.
7 7/8 "	4 1/2 "	2992 '	Cmt w/114 sks reg w/30% DD	'	
"	"	'		'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: None

****

● CORE ANALYSIS ● WATER REPRESSURING ENGINEERING ● WATER ANALYSIS ● FLOODING WATER TREATMENT ● SURVEYING

OILFIELD RESEARCH LABORATORIES

- REGISTERED ENGINEERS -

813 EAST SIXTH
OKMULGEE, OKLAHOMA
PHONE: 4444

Chanute, Kansas

536 N. HIGHLAND
CHANUTE, KANSAS
PHONE: 728

October 7, 1960

40-W21

Phillips Petroleum Company
Production Department
Bartlesville, Oklahoma

Gentlemen:

Enclosed herewith are the results of permeability and porosity tests run on the 3½" Rotary core taken from the North Burbank Unit, Well No. 40-W21, Osage County, Oklahoma, and submitted to our laboratory on October 4, 1960.

This core was taken and shipped to our laboratory by a representative of Phillips Petroleum Company.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Carl L. McElrea

Carl L. McElrea

CLM:db

1 c. - Mr. S. I. Betzer

10/10

RECEIVED
OCT 10 1960
SHIDLER OFFICE

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Phillips Petroleum Company Lease N.B.U. Well No. 40-W21

Location NE¼

Section 23 Twp. 27N Rge. 5E County Osage State Oklahoma

Name of Sand	Burbank
Top of Core	3002.5
Bottom of Core	3061.0
Top of Sand	?
Bottom of Sand	3052.5
Total Feet of Permeable Sand	56.5
Total Feet of Floodable Sand	-

Good

Distribution of Permeable Sand:

Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 1	6.1	6.1
1 - 5	12.4	18.5
5 - 10	11.0	29.5
10 - 100	7.0	36.5
100 - 1000	13.0	49.5
1000 & above	7.0	56.5

Average Permeability Millidarcys	288.8
Average Percent Porosity	18.3
Average Percent Oil Saturation	
Average Percent Water Saturation	
Average Oil Content, Bbls./A. Ft.	
Total Oil Content, Bbls./Acre	
Average Percent Oil Recovery by Laboratory Flooding Tests	
Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.	
Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre	
Total Calculated Oil Recovery, Bbls./Acre	
Packer Setting, Feet	
Viscosity, Centipoises @	
A. P. I. Gravity, degrees @ 60 °F	
Elevation, Feet	

OILFIELD RESEARCH LABORATORI

LOG

Company Phillips Petroleum Company Lease N.B.U. Well No. 40-W21

Depth Interval, Feet	Description
3002.5 - 3015.5	Soft light brown sandstone.
3015.5 - 3035.1	Brown sandstone.
3035.1 - 3052.5	Brown to dark sandstone.
3052.5 - 3061.0	Dark carbonaceous shaley sandstone.

Oilfield Research Laboratories

RESULTS OF PERMEABILITY AND POROSITY TESTS

TABLE I A

Company Phillips Petroleum Company Lease N.B.U. Well No. 40-W2

Sample No.	Depth, Feet	Permeability Millidarcys	Feet of Core		Permeability Capacity Ft. x Md.	Percent Porosity
			Ft.	Cum. Ft.		
1	3003.0	138.	1.0	1.0	138.00	25.2
2	3004.0	461.	1.0	2.0	461.00	27.5
3	3005.0	143.	1.0	3.0	143.00	24.8
4	3006.0	535.	1.0	4.0	535.00	25.8
5	3007.0	845.	1.0	5.0	845.00	27.5
6	3008.0	994.	1.0	6.0	994.00	29.0
7	3009.0	483.	1.0	7.0	483.00	26.8
8	3010.0	1,029.	1.0	8.0	1,029.00	27.8
9	3011.0	1,563.	1.0	9.0	1,563.00	30.4
10	3012.0	1,295.	1.0	10.0	1,295.00	28.9
11	3013.0	829.	1.0	11.0	829.00	25.8
12	3014.0	171.	1.0	12.0	171.00	23.8
13	3015.0	525.	1.0	13.0	525.00	26.4
14	3016.0	514.	1.0	14.0	514.00	28.8
15	3017.0	1,480.	1.0	15.0	1,480.00	29.4
16	3018.0	1,328.	1.0	16.0	1,328.00	27.8
17	3019.0	167.	1.0	17.0	167.00	22.8
18	3020.0	2,043. Wow!	1.0	18.0	2,043.00	28.0
19	3021.0	1,279.	1.0	19.0	1,279.00	26.6
20	3022.0	155.	1.0	20.0	155.00	21.7
21	3023.0	31.	1.0	21.0	31.00	17.2
22	3024.0	12.	1.0	22.0	12.00	16.4
23	3025.0	34.	1.0	23.0	34.00	15.7
24	3026.0	61.	1.0	24.0	61.00	17.2
25	3027.0	5.9	1.0	25.0	5.90	13.7
26	3028.0	12.	1.0	26.0	12.00	14.9
27	3029.0	50.	1.0	27.0	50.00	17.0
28	3030.0	4.6	1.0	28.0	4.60	13.5
29	3031.0	6.1	1.0	29.0	6.10	14.1
30	3032.0	5.0	1.0	30.0	5.00	14.9
31	3033.0	6.0	1.0	31.0	6.00	14.9
32	3034.0	0.44	1.0	32.0	0.44	9.0
33	3035.0	0.22	0.6	32.6	0.13	8.4
34	3036.0	4.9	1.4	34.0	6.86	14.3
35	3037.0	5.6	1.0	35.0	5.60	14.0
36	3038.0	2.9	1.0	36.0	2.90	13.8
37	3039.0	2.3	1.0	37.0	2.30	12.3
38	3040.0	7.3	1.0	38.0	7.30	14.7
39	3041.0	7.4	1.0	39.0	7.40	14.9
40	3042.0	34.	1.0	40.0	34.00	16.2

Oilfield Research Laboratories

RESULTS OF PERMEABILITY AND POROSITY TESTS

TABLE I A

Company Phillips Petroleum Company Lease N.B.U. Well No. 40-

Sample No.	Depth, Feet	Permeability Millidarcys	Feet of Core		Permeability Capacity Ft. x Md.	Percent Porosity
			Ft.	Cum. Ft.		
41	3043.0	3.6	1.0	41.0	3.60	14.9
42	3044.0	7.6	1.0	42.0	7.60	15.0
43	3045.0	6.5	1.0	43.0	6.50	15.4
44	3046.0	6.0	1.0	44.0	6.00	13.4
45	3047.0	2.5	1.0	45.0	2.50	14.4
46	3048.0	5.0	1.0	46.0	5.00	14.8
47	3049.0	4.4	1.0	47.0	4.40	13.9
48	3050.0	2.5	1.0	48.0	2.50	11.9
49	3051.0	4.7	1.0	49.0	4.70	12.8
50	3052.0	1.1	1.0	50.0	1.10	11.9
51	3053.0	Imp.	1.0	51.0	0.00	-
52	3054.0	1.8	1.0	52.0	1.80	13.7
53	3055.0	0.53	1.0	53.0	0.53	10.0
54	3056.0	0.29	1.0	54.0	0.29	8.6
55	3057.0	0.25	1.0	55.0	0.25	9.2
56	3058.0	1.2	1.0	56.0	1.20	11.2
57	3059.0	0.63	1.0	57.0	0.63	11.4
58	3060.0	Imp.	1.0	58.0	0.00	-
59	3060.9	0.33	0.5	58.5	0.16	11.6

Oilfield Research Laboratories

SUMMARY OF PERMEABILITY & POROSITY TESTS

TABLE II A

Company Phillips Petroelum Company Lease N.B.U. Well No. 40-W21

Depth Interval, Feet	Feet of Core Analyzed	Average Air Permeability, Millidarcys	Average Effective Permeability, Millidarcys	Permeability Capacity Ft. x Md.	Average Percent Porosity
3002.5 - 3022.5	20.0	798.9	-	15,977.00	26.7
3022.5 - 3061.0	36.5	9.4	-	343.29	13.6
3002.5 - 3061.0	56.5	288.8	-	16,320.29	18.3

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Chanute, Kansas

June 12, 1961

Phillips Petroleum Company
Production Department
Bartlesville, Oklahoma

Gentlemen:

Enclosed herewith are the results of permeability and porosity tests run on the Rotary core taken from the North Burbank Unit, Well No.39-W25, Osage County, Oklahoma and submitted to our laboratory on June 1, 1961.

This core was taken and shipped to our laboratory by a representative of the Phillips Petroleum Company.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Benjamin R. Pearman

Benjamin R. Pearman

BRP:rf

1 c. - S.I. Betzer

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GENERAL INFORMATION & SUMMARY

Company Phillips Petroleum Co. Lease North Burbank Unit Well No. 39-W25

Location NW¼

Section 23 Twp. 27N Rge. 5E County Osage State Oklahoma

Name of Sand	Burbank
Top of Core	2999.0
Bottom of Core	3059.0
Top of Sand	2999.0
Bottom of Sand	3059.0
Total Feet of Permeable Sand	58.0
Total Feet of Floodable Sand	

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 10	5.0	5.0
10 - 100	18.0	23.0
100 - 1000	20.0	43.0
1000 - 2000	12.0	55.0
2000 & above	3.0	58.0

Average Permeability Millidarcys	626.5
Average Percent Porosity	22.5
Average Percent Oil Saturation	
Average Percent Water Saturation	
Average Oil Content, Bbls./A. Ft.	
Total Oil Content, Bbls./Acre	
Average Percent Oil Recovery by Laboratory Flooding Tests	
Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.	
Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre	
Total Calculated Oil Recovery, Bbls./Acre	
Packer Setting, Feet	
Viscosity, Centipoises @	
A. P. I. Gravity, degrees @ 60 °F	
Elevation, Feet	

Oilfield Research Laboratories

RESULTS OF PERMEABILITY AND POROSITY TESTS

TABLE I A

Company Phillips Petroleum Co. Lease NBU Well No. 39-W25

Sample No.	Depth, Feet	Permeability Millidarcys	Feet of Core		Permeability Capacity Ft. x Md.	Percent Porosity
			Ft.	Cum. Ft.		
44	3042.5	15.	1.0	44.0	15.00	15.5
45	3043.5	12.	1.0	45.0	12.00	16.3
46	3044.5	26.	1.0	46.0	26.00	16.7
47	3045.5	28.	1.0	47.0	28.00	17.2
48	3046.5	32.	1.0	48.0	32.00	17.0
49	3047.5	45.	1.0	49.0	45.00	17.9
50	3048.5	112.	1.0	50.0	112.00	19.6
51	3049.5	67.	1.0	51.0	67.00	19.1
52	3050.5	105.	1.0	52.0	105.00	21.0
53	3051.5	9.2	1.0	53.0	9.20	16.1
54	3052.5	38.	1.0	54.0	38.00	16.9
55	3053.5	23.	1.0	55.0	23.00	15.3
56	3054.5	22.	1.0	56.0	22.00	14.9
57	3055.5	10.	1.0	57.0	10.00	15.0
58	3056.5	1.9	1.0	58.0	1.90	10.9
59	3057.5	Imp.	1.0	59.0	0.00	-
60	3058.5	Imp.	1.0	60.0	0.00	-

Oilfield Research Laboratories

SUMMARY OF PERMEABILITY & POROSITY TESTS

TABLE II A

Company Phillips Petroleum Co. Lease NBU Well No. 39-W25

Depth Interval, Feet	Feet of Core Analyzed	Average Air Permeability, Millidarcys	Average Effective Permeability, Millidarcys	Permeability Capacity Ft. x Md.	Average Percent Porosity
2999.0 - 3019.0	20.0	1472.4		29,447.00	28.8
3019.0 - 3032.0	13.0	421.0		5480.00	25.0
3032.0 - 3059.0	25.0	32.7		816.70	16.3
2999.0 - 3059.0	58.0	626.5		35,743.70	22.5