Osage Form 139

United States
Department of the Interior
Osage Indian Agency
Pawhuska, Oklahoma

Date: April 12, 2010

Application For the Operation or Report on Wells

North Burbank Unit Tract 17

Empire Gasoline Co.	January 7, 2025	$100.00
(Commencement money paid to whom)	(Date)	(Amount)

Well No.: 1 is located 300 Ft. from S line and 300 Ft. from W line

SW/4 Sec 12	27N	05E	Osage County, Oklahoma
(¼ Sec. & Sec. No.)	(Twp)	(Range)	

The elevation of the ground level above sea level is 1135 Ft.

Use This Side to Request Authority for Work
(Three Copies Required)

Notice of Intention To:

- Drill..... ☐
- Plug..... ☐
- Deepen or plug back.. ☐
- Convert..... ☐
- Pull or alter casing..... ☒
- Formation Treatment.. ☐
- ..... ☐

Details of Work

Drilling applications will state proposed TD & horizons to be tested. Show size & length of casings to be used. Indicate proposed mudding, cementing & other work.
Plugging applications shall set forth reasons for plugging & detailed statement of proposed work
Plugging will not commence until 10 days following approval date unless authority granted for earlier commencement.
A $15.00 plugging fee is also required with each application to plug.

0 Bbls oil 0 Bbls water in 24 hrs

To reactivate & set up for production in CO2 test area Will MIRU POOH w/tbg, rods, & pump. Fish all junk from hole if needed. RIH w/bit & scraper to TD. Set CIBP at end of casing or liner. Perf & cement csg or liner to 700' above end. WOC. Shoot off & POOH w/top 500' of csg. (or shoot every 50 ft to surface).Install new 3½" production casing w/bottom 500 ft chrome lined. Cement this to surface w/DV tool set @ 600'. WOC. RIH w/ bit & clean out to CIBP. Run CBL. Will drill CIBP & put on production when needed for CO2 flood.

I understand that this plan of work must receive approval in writing of the Osage Indian Agency before operations may be commenced.

Lessee: Chaparral Energy, L.L.C.

Signature: _____
David P. Spencer

Title: Manager of Regulatory Affairs

Address: 701 Cedar Lake Blvd., Oklahoma City, Oklahoma 73114

Use This Side To Report Completed Work
(One Copy Required)

Character of Well (oil, gas or dry) _____

Subsequent Report of:

- Conversion..... ☐
- Formation Treatment.. ☐
- Altering casing..... ☐
- Plugging Back..... ☐
- Plugging..... ☐

Details of Work & Results Obtained

Work commenced: _____
Work completed: _____
(Continue on reverse if necessary)

This block for plugging information only

Casing Record

Size	In Hole When Started	Amt. Recovered	If Parted Depth	How

Original TD _____

Lessee:

By:

Subscribed and sworn to before me this _____day of _____, 2010.

X

Jane A. Kitchens #10000641 Notary Public My Commission Expires January 29, 2014

Osage Form 139

United States
Department of the Interior
Osage Indian Agency
Pawhuska, Oklahoma

Date: April 9, 2010

Application For the Operation or Report on Wells

North Burbank Unit Tract 17

Fee Land

(Commencement money paid to whom) (Date) (Amount)

Well No.: 9 is located 981 Ft. from N line and 300 Ft. from W line

SW/4 Sec 12 27N 05E Osage County, Oklahoma

(¼ Sec. & Sec. No.) (Twp) (Range)

The elevation of the ground level above sea level is 1149 Ft.

Use This Side to Request Authority for Work
(Three Copies Required)

Notice of Intention To:

- Drill..... ☐
- Plug..... ☐
- Deepen or plug back.. ☐
- Convert..... ☐
- Pull or alter casing..... ☒
- Formation Treatment.. ☐
- ..... ☐

Details of Work

Drilling applications will state proposed TD & horizons to be tested. Show size & length of casings to be used. Indicate proposed mudding, cementing & other work.
Plugging applications shall set forth reasons for plugging & detailed statement of proposed work
Plugging will not commence until 10 days following approval date unless authority granted for earlier commencement.
A $15.00 plugging fee is also required with each application to plug.

0 Bbls oil 0 Bbls water in 24 hrs

To reactivate & set up for production in CO2 test area Will MIRU POOH w/tbg, rods, & pump. Fish all junk from hole if needed. RIH w/bit & scraper to TD. Set CIBP at end of casing or liner. Perf & cement csg or liner to 700' above end. WOC. Shoot off & POOH w/top 500' of csg. (or shoot every 50 ft to surface).Install new 3½" production casing w/bottom 500 ft chrome lined. Cement this to surface w/DV tool set @ 600'. WOC. RIH w/ bit & clean out to CIBP. Run CBL. Drill out BP & put on production w/ceramic coated tbg & pump.

I understand that this plan of work must receive approval in writing of the Osage Indian Agency before operations may be commenced.

Lessee: Chaparral Energy, L.L.C.

Signature: _____

David P. Spencer

Title: Manager of Regulatory Affairs

Address: 701 Cedar Lake Blvd., Oklahoma City, Oklahoma 73114

Use This Side To Report Completed Work
(One Copy Required)

Character of Well (oil, gas or dry) _____

Subsequent Report of:

- Conversion..... ☐
- Formation Treatment.. ☐
- Altering casing..... ☐
- Plugging Back..... ☐
- Plugging..... ☐

Details of Work & Results Obtained

Work commenced: _____

Work completed: _____

(Continue on reverse if necessary)

This block for plugging information only

Casing Record

Size	In Hole When Started	Amt. Recovered	If Parted Depth	How

Original TD _____

Lessee:

By: _____

Subscribed and sworn to before me this _____day of _____, 2010.

X

Jane A. Kitchens #10000641 Notary Public My Commission Expires January 29, 2014

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

Proposed Inj Well

****

Well Name NBU 17-1 Company Name Phillips Petroleum Co. Date Drilled 3/1/1925 Depth 3037 '

Location 300 ' F S L & 300 ' F W L, SW /4, Sec. 12 , T 27 N, R 05 E Status Shut In Oil

Elevation 1135 [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 "	20 '		'	
"	8 5/8 "	2316 '		'	
"	7 "	2816 '		'	
"	5 1/2 "	Liner '	2819' - 2958'	'	
"	"	'		'	

Formations Open To Wellbore: Burbank (Openhole 2958' - 3044')

****

Well Name NBU 17-2 Company Name Phillips Petroleum Co. Date Drilled 3/9/1925 Depth 3044 '

Location 300 ' F S L & 984 ' F W L, SW /4, Sec. 12 , T 27 N, R 05 E Status Shut In Oil

Elevation 1127 [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 "	98 '		'	
"	8 5/8 "	2307 '		'	
"	7 "	2825 '		'	
"	5 1/2 "	Liner '	2800' - 2959'	'	
"	"	'		'	

Formations Open To Wellbore:

Burbank (Openhole 2959' - 3044')

****

Well Name NBU 17-3 Company Name Phillips Petroleum Co. Date Drilled 3/15/1925 Depth 3068 '

Location 300 ' F S L & 984 ' F E L, SW /4, Sec. 12 , 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 "	20 '		'	
"	15 1/2 "	248 '		'	
"	8 5/8 "	2307 '		'	
"	7 "	2857 '		'	
"	5 1/2 "	Liner '	2832' - 2952'	'	
"	"	'		'	

Formations Open To Wellbore: Burbank (Openhole 2952' - 3068')

****

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

Proposed Inj Well

****

Well Name NBU 17-4 Company Name Phillips Petroleum Co. Date Drilled 3/17/1925 Depth 3059 '

Location 300 ' F S L & 300 ' F E L, SW /4, Sec. 12 , T 27 N, R 05 E Status Shut In Oil

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:
"	20 "	20 '		'	
"	8 5/8 "	2319 '		'	
"	7 "	2832 '		'	
"	5 1/2 "	Liner '	2791' - 2972'	'	
"	"	'		'	

Formations Open To Wellbore: Burbank (Openhole 2972' - 3059')

****

Well Name NBU 17-5 Company Name Phillips Petroleum Co. Date Drilled 4/7/1925 Depth 3034 '

Location 981 ' F S L & 300 ' F W L, SW /4, Sec. 12 , T 27 N, R 05 E Status P&A'd 4/4/1963

Elevation 1141 [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 "	2319 '		'	Spot 130 sx reg cmt w/ 30% Diacel "D" & 2% CC @ 2972. WOC. TOC @ 2800'. Part and POOH w 2780' 7" csg. Fill hole w/ heavy mud. Spot 10 sx cmt @ 2775'. WOC. Part and POOH w/ 168' 8 5/8" csg. Mudded hole to surf.
"	7 "	2833 '		'	
"	5 1/2 "	Liner '	2813' - 2962'	'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: None

****

Well Name NBU 17-6 Company Name Phillips Petroleum Co. Date Drilled 4/14/1925 Depth 3034 '

Location 980 ' F S L & 985 ' F W L, SW /4, Sec. 12 , T 27 N, R 05 E Status P&A'd 7/18/1963

Elevation 1134 [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 '		'	Sqz cmt formation through pkr set @ 2780' w/ 70 sx reg cmt w/ 30% Diacel "D" & 2% CC. WOC. Part and POOH w/ 2750' 7" csg. Fill hole w/ heavy mud. Part and POOH w/ 218' 8 5/8" csg. Mudded hole to surf.
"	8 5/8 "	2325 '		'	
"	7 "	2857 '		'	
"	5 1/2 "	Liner '	2835' - 3034'	'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: None

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

Proposed Inj Well

****

Well Name NBU 17-7 Company Name Phillips Petroleum Co. Date Drilled 4/4/1925 Depth 3054 '

Location 980 ' F S L & 985 ' F W L, SW /4, Sec. 12 , T 27 N, R 05 E Status P&A'd 3/27/1963

Elevation 1146 [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 "	19 '		'	Spot 40 sx reg cmt w/ 30% Diacel "D" & 2% CC @ 3002'. WOC. TOC @ 2659'. Part and POOH w/ 2645' 7" csg. Fill hole w/ heavy mud. Spot 10 sx cmt @ 2640'. Part and POOH w/ 390' 8 5/8" csg. Mudded hole to surf.
"	15 1/2 "	318 '		'	
"	8 5/8 "	2322 '		'	
"	7 "	2852 '		'	
"	5 1/2 "	Liner '	2830' - 2963'	'	

Formations Open To Wellbore: None

****

Well Name NBU 17-8 Company Name Phillips Petroleum Co. Date Drilled 3/18/1925 Depth 3043 '

Location 980 ' F S L & 300 ' F E L, SW /4, Sec. 12 , T 27 N, R 05 E Status P&A'd 3/22/1963

Elevation 1136 [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 "	19 '		'	Spot 80 sx reg cmt w/ 30% Diacel D & 2% CC @ 2976'. WOC. TOC @ 2750'. Part and POOH w/ 1610' 7" csg. Fill hole w/ heavy mud. Part and POOH w/ 470' 8 5/8" csg. Mudded hole to surf.
"	8 5/8 "	2305 '		'	
"	7 "	2835 '		'	
"	5 1/2 "	Liner '	2815' - 2958'	'	
"	"	'		'	

Formations Open To Wellbore: None

****

Well Name NBU 17-9 Company Name Phillips Petroleum Co. Date Drilled 3/26/1925 Depth 3049 '

Location 981 ' F N L & 300 ' F W L, SW /4, Sec. 12 , T 27 N, R 05 E Status Oil Producer

Elevation 1149 [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 "	20 '		'	
"	8 5/8 "	2318 '		'	
"	7 "	2823 '		'	
"	5 1/2 "	Liner '	2803' - 2980'	'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: Burbank (Openhole 2980' - 3049')

****

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

Proposed Inj Well

****

Well Name NBU 17-10 Company Name Phillips Petroleum Co. Date Drilled 3/27/1925 Depth 3045 '

Location 981 ' F N L & 984 ' F W L, SW /4, Sec. 12 , T 27 N, R 05 E Status Oil Producer

Elevation 1143 [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 "	19 '	Spot 70 sx cmt w/ 30 sx Cal-Seal through 100' between 8 5/8" & 20" csg to shut off leak.	'	
"	8 5/8 "	2307 '		'	
"	7 "	2821 '		'	
"	5 1/2 "	Liner '	2813' - 3000'	'	
"	"	'		'	

Formations Open To Wellbore: Burbank (Openhole 3000' - 3045')

****

Well Name NBU 17-11 Company Name Phillips Petroleum Co. Date Drilled 3/30/1925 Depth 3041 '

Location 980 ' F N L & 984 ' F E L, SW /4, Sec. 12 , T 27 N, R 05 E Status Shut In Oil

Elevation 1150 [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 "	12 '		'	
"	8 5/8 "	2327 '		'	
"	7 "	2895 '		'	
"	5 1/2 "	Liner '	2824' - 2978'	'	
"	"	'		'	

Formations Open To Wellbore: Burbank (Openhole 2978' - 3041')

****

Well Name NBU 17-12 Company Name Phillips Petroleum Co. Date Drilled 3/3/1925 Depth 3060 '

Location 980 ' F N L & 300 ' F E L, SW /4, Sec. 12 , T 27 N, R 05 E Status Shut In Oil

Elevation 1152 [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 "	20 '	Squeezed leaks @ 2294' - 2395' w/ 125 sx w/ 20% DD. Cmt leaks @ 698' - 714' w/ 125 sx reg. Spot 30 sx class H cmt 20% DD 2% CC w/ 50 sx cmt 3% CC & 5# Gilsonite displ. Cmt sqz leak @ 2269'.	'	
"	8 5/8 "	2325 '		'	
"	7 "	2812 '		'	
"	"	'		'	
"	"	'		'	
"	5 1/2 "	Liner '	2806' - 2993'	'	

Formations Open To Wellbore: Burbank (Openhole 2993' - 3060')

****

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

Proposed Inj Well

****

Well Name NBU 17-13 Company Name Phillips Petroleum Co. Date Drilled 3/26/1925 Depth 3025 '

Location 300 ' F N L & 300 ' F W L, SW /4, Sec. 12 , T 27 N, R 05 E Status P&A'd 12/6/1965

Elevation 1141 [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 "	12 '		'	Spot 50 sx cmt w/ 30% DD @ 2744'. WOC. Part and POOH w/ 2570' 7" csg. Fill hole w/ heavy mud. Spot 10 sx cmt @ 2450'. WOC. Part and POOH w/ 5 jts 8 5/8" csg and spot w/ 10 sx cmt @ 87'. Spot 45 sx cmt @ 45'. Spot 10 sx cmt to 14'. Capped w/ 5 sx cmt.
"	8 5/8 "	2320 '		'	
"	7 "	2803 '		'	
"	5 1/2 "	Liner '	2780' - 2955'	'	
"	"	'		'	

Formations Open To Wellbore: None

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Well Name NBU 17-14 Company Name Phillips Petroleum Co. Date Drilled 3/17/1925 Depth 3032 '

Location 300 ' F N L & 985 ' F W L, SW /4, Sec. 12 , T 27 N, R 05 E Status P&A'd 7/11/1963

Elevation 1134 [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 "	17 '		'	Spot 55 sx reg cmt w/ 30% Diacel "D" & 2% CC @ 2969'. WOC. TOC @ 2596'. Part and POOH w/ 2590' 7" csg. Fill hole w/ heavy mud. Spot 10 sx cmt @ 2550'. Part and POOH w/ 1800' 8 5/8" csg. Mudded hole to surf.
"	8 5/8 "	2307 '		'	
"	7 "	2808 '		'	
"	5 1/2 "	Liner '	2788' - 2960'	'	
"	"	'		'	

Formations Open To Wellbore: None

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Well Name NBU 17-15 Company Name Phillips Petroleum Co. Date Drilled 3/16/1925 Depth 3036 '

Location 300 ' F N L & 985 ' F E L, SW /4, Sec. 12 , T 27 N, R 05 E Status P&A'd 7/5/1963

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:
"	20 "	20 '		'	Spot 90 sx reg cmt w/ 30% Diacel "D" & 2% CC. WOC. TOC @ 2540'. Part and POOH w/ 2440' 7" csg. Fill hole w/ heavy mud. Spot 10 sx cmt @ 2400'. WOC. Part and POOH w/ 1490' 8 5/8" csg. Mudded hole to surf.
"	8 5/8 "	2307 '		'	
"	7 "	2821 '		'	
"	5 1/2 "	Liner '	2800' - 2941'	'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: None

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

Proposed Inj Well

****

Well Name NBU 17-16 Company Name Phillips Petroleum Co. Date Drilled 4/4/1925 Depth 3060 '

Location 300 ' F N L & 300 ' F E L, SW /4, Sec. 12 , T 27 N, R 05 E Status P&A'd 3/28/1966

Elevation 1161 [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 "	19 '		'	Spot 60 sx cmt w/ 30% DD. WOC. Part and POOH w/ 2755' 7" csg. Fill hole w/ heavy mud. Spot 10 sx cmt @ 2600'. WOC. Part and POOH w/ 117' 8 5/8" csg. Hole caved @ 117'. MI CT & CO to 100' & spotted 45 sx cmt. Spot 10 sx cmt @ 25'. Filled to cellar and capped w/ 5 sx cmt.
"	8 5/8 "	2337 '		'	
"	7 "	2840 '		'	
"	5 1/2 "	Liner '	2820' - 2954'	'	
"	"	'		'	

Formations Open To Wellbore: None

****

Well Name NBU 17-17 Company Name Phillips Petroleum Co. Date Drilled 12/8/1938 Depth 3031 '

Location 1334 ' F S L & 642 ' F W L, SW /4, Sec. 12 , T 27 N, R 05 E Status P&A'd 4/8/1963

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:
"	8 5/8 "	82 '		'	CO to 3025'. Spot 20 sx reg cmt w/ 30% DD & 2% CC @ 2980'. WOC. TOC @ 2490'. Part and POOH w/ 2977'. Mudded hole to surf.
"	4 "	2997 '		'	
"	"	'		'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: None

****

Well Name NBU 17-W21 Company Name Phillips Petroleum Co. Date Drilled 5/8/1963 Depth 3033 '

Location 890 ' F S L & 565 ' F W L, SW /4, Sec. 12 , T 27 N, R 05 E Status P&A'd 1/22/1997

Elevation 1137 [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 "	105 '	100 sx	surf '	MIRU. RIH w/ tbg to 3015'. Fill hole w/ heavy mud. Spot 35 sx 50-50 poz cmt bottom plug. POOH w/ tbg. Tag bottom plug @ 2600'. Part and POOH w/ 4 1/2"csg @ 424'. Spot 200 sx 50-50 oz cmt and circ from 400' to surf. POOH w/ tbg. Part and POOH w/ 8 5/8" csg 3' below GL and restore loc.
"	4 1/2 "	3002 '	75 sx w/ 30% Diacel "D"	'	
"	"	'		'	
"	"	'		'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: None

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

Proposed Inj Well

****

Well Name NBU 17-W22 Company Name Phillips Petroleum Co. Date Drilled 5/4/1963 Depth 3055 '

Location 890 ' F S L & 1245 ' F W L, SW /4, Sec. 12 , T 27 N, R 05 E Status P&A'd 6/27/1990

Elevation 1143 [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 "	109 '	Cmt w/100 sx	surf '	Spot 6 sx Class H cmt @ 1920'. WOC. Loaded Hole w/ 35 BBLS Haliburton Gel. Part and POOH w/ 267' 4 1/2" csg/Spot 100 sx Class H cmt w/ 2% CC @ 310'. WOC. Top off hole w/ 25 sx Class H cmt w/ 2% CC. Cut 8 5/8" csg 3' below GL and restore loc.
"	4 1/2 "	3006 '	75 sx cmt w/ 30% Diacel "D"	'	
"	"	'		'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: None

****

Well Name NBU 17-W23 Company Name Phillips Petroleum Co. Date Drilled 4/28/1963 Depth 3055 '

Location 890 ' F S L & 715 ' F E L, SW /4, Sec. 12 , T 27 N, R 05 E Status P&A'd 1/31/1997

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:
"	8 5/8 "	120 '	Cmt w/105 sx	surf '	Fill hole w/ heavy mud. Spot 30 sx 50-50 poz cmt @ 2966'. WOC. Part and POOH w/ 4 1/2" csg @ 430'.Circ top plug to surf. w/ 200 sx 50-50 poz cmt. Cut off top 3' of 8 5/8" csg and restore loc.
"	4 1/2 "	3032 '	75 sx w/ 30% Diacel "D"	'	
"	"	'		'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: None

****

Well Name NBU 17-W24 Company Name Phillips Petroleum Co. Date Drilled 4/23/1963 Depth 3065 '

Location 890 ' F S L & 75 ' F E L, SW /4, Sec. 12 , T 27 N, R 05 E Status Injection Well

Elevation 1141 [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 "	104 '	Cmt w/105 sx	Surface '	
"	4 1/2 "	3004 '	Cmt w/75 sx w/ 30% Diacel "D". Cmt w/238 sx reg from 320' to surf, between 4 1/2" & 8 5/8" csg	1825 '	
"	3 1/2 "	2982 '	Cmt w/150 sx reg, 2% gel	'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: Burbank (Openhole 3004' - 3064')

****

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

Proposed Inj Well

****

Well Name NBU 17-W25 Company Name Phillips Petroleum Co. Date Drilled 9/20/63 Depth 3026 '

Location 345 ' F N L & 565 ' F W L, SW /4, Sec. 12 , T 27 N, R 05 E Status Injection Well

Elevation 1135 [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 "	103 '	90 sx	Surf '	
"	4 1/2 "	2975 '	Cmt w/75 sx w/ 30% Diacel "D". Cmt w/150 sx reg from 320' to surf, between 4 1/2" & 8 5/8" csg	1700 '	
"	3 1/2 "	2955 '	Cmt w/150 sx reg, 2% gel	'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: Burbank (Openhole 2975' - 3026')

****

Well Name NBU 17-W26 Company Name Phillips Petroleum Co. Date Drilled 9/15/1963 Depth 3031 '

Location 420 ' F N L & 1245 ' F W L, SW /4, Sec. 12 , T 27 N, R 05 E Status P&A'd 5/29/1992

Elevation 1135 [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 "	106 '	90 sx	Surf '	Fill hole w/ gel and spot 10 sx cmt @1850'. WOC. Spot 55 sx cmt @ 1402'. WOC. Part and POOH w/ 323' 4 1/2" csg. Circ cmt to surf. From 323'. WOC. Circ cmt to surface w/ 115 sx. WOC. Cut off 8 5/8" csg 4' from GL.
"	4 1/2 "	2976 '	75 sx w/ 30% Diacel "D"	'	
"	"	'		'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: None

****

Well Name NBU 17-W27 Company Name Phillips Petroleum Co. Date Drilled 9/10/1963 Depth 3059 '

Location 420 ' F N L & 715 ' F E L, SW /4, Sec. 12 , T 27 N, R 05 E Status Injection Well

Elevation 1151 [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 "	104 '	Cmt w/90 sx	Surf '	
"	4 1/2 "	3002 '	Cmt w/75 sx w/ 30% Diacel "D". Cmt w/175 sx reg from 320' to surf, between 4 1/2" & 8 5/8" csg	1735 '	
"	3 1/2 "	2965 '	Cmt w/150 sx reg, 2% gel	'	
"	"	'		'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: Burbank (Openhole 3002' - 3059')

****

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

Proposed Inj Well

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Well Name NBU 17-W28 Company Name Phillips Petroleum Co. Date Drilled 9/6/1963 Depth 3076 '

Location 420 ' F N L & 75 ' F E L, SW /4, Sec. 12 , T 27 N, R 05 E Status P&A'd 6/22/1992

Elevation 1165 [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 "	101 '	90 sx cmt	surf '	Part and POOH w/ 1873' 2 3/8" tbg. Fill hole w/ heavy mud. Spot 20 sx Class H cmt & 2% CC @ 1868' - 1620'. WOC. Spot 55 sx Class H & 2% CC cmt @1402' - 1250'. WOC. Part and POOH w/ 353' 4 1/2" csg. Spot 125 sx Class H & 2% CC cmt @ 281' - 3'. WOC. Cut off 8 5/8" csg 3' below GL and restore loc.
"	4 1/2 "	3021 '	75 sx cmt w/ 30% Diacel "D"	'	
"	"	'		'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: None

****

Well Name Company Name Date Drilled Depth '

Location ' F L & ' F L, /4, Sec. , T N, R E Status

Elevation [ ] GL [ ] KB

Hole Size	Casing Size	Landed Depth	Cement & Additive Data	Top of Cement	If well is TA or P&A Describe How:
"	"	'		'	
"	"	'		'	
"	"	'		'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore:

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Well Name Company Name Date Drilled Depth '

Location ' F L & ' F L, /4, Sec. , T N, R E Status

Elevation [ ] GL [ ] KB

Hole Size	Casing Size	Landed Depth	Cement & Additive Data	Top of Cement	If well is TA or P&A Describe How:
"	"	'		'	
"	"	'		'	
"	"	'		'	
"	"	'		'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore:

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

Proposed Inj Well

****

Well Name NBU 11-1 Company Name Phillips Petroleum Co. Date Drilled 6-2-1925 Depth 3023 '

Location 300 ' F S L & 300 ' F W L, NW /4, Sec. 12 , T 27 N, R 05 E Status Oil Producer

Elevation 1126 [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 "	21.8 '		'	
"	8 5/8 "	2308 '		'	
"	7 "	2812 '	Squeezed leaks from 1724' to 2575' w/100 sx reg, 20% DD, 1/4 Flocele & 2% CC	'	
"	5 1/2 "	Liner '	From 2799 to 2952	'	

Formations Open To Wellbore: Burbank (Openhole 2952' - 3023')

****

Well Name NBU 11-2 Company Name Phillips Petroleum Co. Date Drilled 5-25-1925 Depth 3015 '

Location 300 ' F S L & 1005 ' F W L, NW /4, Sec. 12 , T 27 N, R 5 E Status Oil Producer

Elevation 1119 [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 "	20 '		'	
"	8 1/4 "	2302 '		'	
"	6 5/8 "	2812 '		'	
"	5 1/2 "	Liner '	From 2817' - 2973'	'	
"	"	'		'	

Formations Open To Wellbore: Burbank (Open Hole 2973'- 3015')

****

Well Name NBU 11-3 Company Name Phillips Petroleum Co. Date Drilled 7-7-1925 Depth 3038 '

Location 300 ' F S L & 980 ' F E L, NW /4, Sec. 12 , T 27 N, R 5 E Status Shut-in Oil

Elevation 1141 [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 "	11.8 '		'	
"	8 5/8 "	2315 '		'	
"	7 "	2810 '		'	
"	5 1/2 "	Liner '	From 2793' - 2965'	'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: Burbank (Open Hole 2965' - 3038')

****

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

Proposed Inj Well

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Well Name NBU 11-4 Company Name Phillips Petroleum Co. Date Drilled 5-28-1925 Depth 3085 '

Location 300 ' F S L & 300 ' F E L, NW /4, Sec. 12 , T 27 N, R 5 E Status Shut-in Oil

Elevation 1161 [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 "	2344 '		'	
"	7 "	2851 '		'	
"	5 1/2 "	Liner '	From 2843' to 3022'	'	
"	"	'		'	

Formations Open To Wellbore: Burbank (Open Hole 3022'-3085')

****

Well Name NBU 11-5 Company Name Phillips Petroleum Co. Date Drilled 5-29-1925 Depth 3001 '

Location 984 ' F S L & 300 ' F W L, NW /4, Sec. 12 , T 27 N, R 5 E Status P&A'd 5/8/1964

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:
"	20 "	21 '		'	Spot 40 sx reg cmt 30% Diacel "D" at 2801' WOC. TOC at 2768'. Fill hole w/heavy mud. Part and POOH with 1725' 7" csg. Part and POOH with 1324' 8 5/8" csg. Spot 15 sx cmt 30% Diacel "D" 115' to 85'. TOC 85'. Capped well with 5 sx reg cmt.
"	8 5/8 "	2275 '		'	
"	7 "	2813 '		'	
"	5½ "	Liner '	2790' - 2931'	'	
"	"	'		'	

Formations Open To Wellbore: None

****

Well Name NBU 11-6 Company Name Phillips Petroleum Co. Date Drilled 6-12-1925 Depth 3007 '

Location 1004 ' F S L & 985 ' F W L, NW /4, Sec. 12 , T 27 N, R 5 E Status P&A'd 3/3/1966

Elevation 1112 [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 "	20 '		'	Spot 60 sx cmt &30% DD @ 3007'. Part and POOH w/ 2550' 7" csg. Spot 10 sx cmt @ 2550'. Part and POOH w/ 8 5/8" csg @1575'. Fill hole w/heavy mud. Spot 45 sx @150'. Spot 10 sx cmt @23'. Filled cellar w/ 5 sx cmt.
"	8-5/8 "	2288 '		'	
"	7 "	2798 '		'	
"	5½ "	Liner '	2778' - 2915'	'	
"	"	'		'	

Formations Open To Wellbore: None

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

Proposed Inj Well

****

Well Name NBU 11-7 Company Name Phillips Petroleum Co. Date Drilled 7-21-1925 Depth 3022 '

Location 984 ' F S L & 985 ' F E L, NW /4, Sec. 12 , T 27 N, R 5 E Status P&A'd 2/24/1964

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 "	20 '		'	Spot cmt w/ 105 sx reg cmt w/ 30% Diacel "D" & 50# Jelflake @ 2960. Part and POOH w/ 2528' 7" csg. Spot 10 sx cmt @ 2370'. Part and POOH w/ 173' 8 5/8" csg. Spot 15 sx reg cmt @ 105'. Cap well w/ 5 sx cmt @ surface.
"	8 5/8 "	2312 '		'	
"	7 "	2780 '		'	
"	5 1/2 "	Liner '	2760' - 2955'	'	
"	"	'		'	

Formations Open To Wellbore: None

****

Well Name NBU 11-8 Company Name Phillips Petroleum Co. Date Drilled 5-24-1925 Depth 3034 '

Location 984 ' F S L & 300 ' F E L, NW /4, Sec. 12 , T 27 N, R 5 E Status P&A'd in 4/17/1964

Elevation 1151 [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 '		'	Spot 80 sx reg cmt w/ 30% Diacel "D". WOC. TOC @ 2337'. Part and POOH w/ 2309' 7" csg. Fill hole w/ heavy mud. Spot 10 sx cmt @ 2270'. WOC. Part and POOH w/ 1580' 8 5/8" csg. Spot 15 sx reg cmt w/ 30% Diacel D @ 115'. Capped w/5 sx cmt.
"	8 5/8 "	2307 '		'	
"	7 "	2868 '		'	
"	5 1/2 "	Liner '	2848' - 2957'	'	
"	"	'		'	

Formations Open To Wellbore: None

****

Well Name NBU 11-9 Company Name Phillips Petroleum Co. Date Drilled 6-11-1925 Depth 2993 '

Location 984 ' F N L & 300 ' F W L, NW /4, Sec. 12 , T 27 N, R 5 E Status Oil Producer

Elevation 1106 [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 "	8.5 '		'	
"	8 5/8 "	2770 '		'	
"	7 "	2825 '	sqz holes from 0'-30' and 728'-759' w/ 200 sx reg cmt	'	
"	"	'		'	
"	5 1/2 "	Liner '	2812' - 2936'. Squeezed liner w/75 sx reg	'	
"	"	'		'	

Formations Open To Wellbore: Burbank (Openhole 2936' - 2993')

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

Proposed Inj Well

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Well Name NBU 11-10 Company Name Phillips Petroleum Co. Date Drilled 6-14-1925 Depth 3021 '

Location 984 ' F N L & 985 ' F W L, NW /4, Sec. 12 , T 27 N, R 5 E Status Shut In Oil

Elevation 1125 [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 "	20.5 '		'	
"	15 1/2 "	36 '		'	
"	8 5/8 "	2311 '		'	
"	7 "	2811 '		'	
"	5 1/2 "	Liner '	2789' - 2953'	'	

Formations Open To Wellbore: Burbank (Openhole 2953' - 3021')

****

Well Name NBU 11-11 Company Name Phillips Petroleum Co. Date Drilled 7-21-1925 Depth 3031 '

Location 984 ' F N L & 985 ' F E L, NW /4, Sec. 12 , T 27 N, R 5 E Status Oil Producer

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:
"	20 "	19 '		'	
"	15 1/2 "	840 '		'	
"	12 1/2 "	1230 '		'	
"	10 "	1470 '		'	
"	8 5/8 "	2295 '		'	
"	7 "	2820 '		'	
"	5 1/2 "	Liner '	2815' - 2972'	'	

Formations Open To Wellbore: Burbank (Open Hole 2972' - 3031')

****

Well Name NBU 11-12 Company Name Phillips Petroleum Co. Date Drilled 7-12-1925 Depth 3020 '

Location 980 ' F N 300 ' F E L, NW /4, Sec. 12 , T 27 N, R 5 E Status Shut in Oil

Elevation 1143 [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 "	5 '		'	
"	8 5/8 "	2297 '		'	
"	7 "	2822 '		'	
"	5 1/2 "	Liner '	2803' - 2957'	'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: Burbank (Openhole 2957' - 3020')

****

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

Proposed Inj Well

****

Well Name NBU 11-13 Company Name Phillips Petroleum Co. Date Drilled 5-18-1925 Depth 3000 '

Location 300 ' F N L & 300 ' F W L, NW /4, Sec. 12 , T 27 N, R 5 E Status P&A'd 6/9/1964

Elevation 1099 [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 "	19.5 '		'	Spot 40 sx reg cmt, 30% Diacel "D". WOC. TOC @ 2237'. Part and POOH w/ 7" csg. Fill hole w/ heavy mud. Part and POOH w/ 8 5/8" csg. Spot 15 sx reg cmt, 30% Diacel "D" @ 120'. Cap surface w/ 5 sx cmt.
"	8 5/8 "	2305 '		'	
"	7 "	2802 '		'	
"	5 1/2 "	Liner '	2780' - 2924'	'	
"	"	'		'	

Formations Open To Wellbore: None

****

Well Name NBU 11-14 Company Name Phillips Petroleum Co. Date Drilled 5-22-1925 Depth 3011 '

Location 300 ' F N L & 985 ' F W L, NW /4, Sec. 12 , T 27 N, R 5 E Status P&A'd in 6/9/1964

Elevation 1110 [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 "	6 '		'	Spot 50 sx reg cmt, 30% Diacel "D". WOC. TOC @ 2272'. Part and POOH w/ 2237' 7" csg. Fill hole w/ heavy mud. Part and POOH w/ 1813' 8 5/8" csg. Spot 15 sx cmt 30% Diacel "D" @ 150'. Cap surface w/ 5 sx cmt.
"	8 5/8 "	2280 '		'	
"	7 "	2820 '		'	
"	5 1/2 "	Liner '	2800' - 2943'	'	
"	"	'		'	

Formations Open To Wellbore: None

****

Well Name NBU 11-15 Company Name Phillips Petroleum Co. Date Drilled 7-10-1925 Depth 3014 '

Location 300 ' F N L & 980 ' F E L, NW /4, Sec. 12 , T 27 N, R 5 E Status P&A'd 5/19/1964

Elevation 1120 [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 "	20 '		'	Spot 50 sx reg cmt, 30% Diacel "D" @ 2945'. WOC. TOC @ 2620'. Part and POOH w/ 2626' 7" casing. Fill hole with heavy mud. Part and POOH w/ 1867' 8 5/8" csg. Part and POOH w/ 597' 10 3/4" csg. Spot 10 sx cmt @ 2560'. Spot 15 sx cmt @ 160'. Cap well w/ 5 sx cmt.
"	15 1/2 "	732 '		'	
"	10 "	1234 '		'	
"	8 5/8 "	2295 '		'	
"	7 "	2798 '		'	
"	5 1/2 "	Liner '	2775' - 2933'	'	

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 11-16 Company Name Phillips Petroleum Co. Date Drilled 5-19-1925 Depth 3027 '

Location 300 ' F N L & 300 ' F E L, NW /4, Sec. 12 , T 27 N,R 5 E Status P&A'd 5/8/1964

Elevation 1145 [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 "	7 '		'	Spot 50 sx reg cmt, 30% Diacel "D" @ 2945'. WOC. TOC @ 2597'. Part and POOH w/ 2503' 7" csg. Fill hole w/ heavy mud. Part and POOH w/ 821' 8 5/8" csg. Spot 15 sx reg cmt 30% Diacel "D" @ 120'. Cap w/ 5 sx cmt.
"	8 5/8 "	2300 '		'	
"	7 "	2842 '		'	
"	5 1/2 "	Liner '	2820' - 2941'	'	
"	"	'		'	

Formations Open To Wellbore: None

****

Well Name NBU 11-17 Company Name Phillips Petroleum Co. Date Drilled 12-18-1928 Depth 3027 '

Location 1271 ' F S L & 1272 ' F W L, NW /4, Sec. 12 , T 27 N, R 5 E Status P&A'd 5/1/1964

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 "	11 '		'	Spot 25 sx reg. cmt, w/ 500# Diacel "D" to 2386'. WOC. Fill hole w/ heavy mud. Part and POOH w/ 2050' of 7" csg. Spot 15 sx reg cmt 30% Diacel "D" @ 110'. Cap well w/ 5 sax reg cmt.
"	15 1/2 "	875 '		'	
"	12 1/2 "	441 '		'	
"	8 5/8 "	2320 '		'	
"	7 "	2975 '		'	
"	"	'		'	

Formations Open To Wellbore: None

****

Well Name NBU 11-W21 Company Name Phillips Petroleum Co. Date Drilled 12-31-1963 Depth 3010 '

Location 890 ' F S L & 425 ' F W L, NW /4, Sec. 12 , T 27 N, R 5 E Status Injection Well

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:
"	8 5/8 "	116 '	Cmt w/90 sks reg cmt	'	
"	4 1/2 "	2982 '	Cmt w/75 sx w/30% Diacel "D". Run 1" @ 330' between 4 1/2" & 8 5/8" csg cmt w/150 sx reg	1650 Surface '	
"	3 1/2 "	2948 '	Cmt w/150 sks reg cmt, 2% Gel	Surface '	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: Burbank (Open Hole 2982' - 3010')

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

Proposed Inj Well

****

Well Name NBU 11-W22 Company Name Phillips Petroleum Co. Date Drilled 12-27-1963 Depth 3018 '

Location 890 ' F S L & 1230 ' F W L, NW /4, Sec. 12 , T 27 N, R 5 E Status P&A'd 1/31/1997

Elevation 1120 [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 "	111 '	90 sx	surf '	MIRU. POOH w/ tbg & pkr. Set pkr @ 1700'. Drove to 2000'. RIH w/ tbg to 2000' and circ. 9#/gal mud to 400'. Spot 25 sks bottom plug of 50-50 poz cmt. POOH w/ tbg. Tag plug @ 1675'. Shot off 4 1/2" csg & circ to surf. w/ 200 sks 50-50 poz cmt top plug. POOH w/ csg. Cut off 8 5/8" 3' below GL and restore loc.
"	4 1/2 "	2988 '	75 sx w/ 30% Diacel "D"	'	
"	"	'		'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: None

****

Well Name NBU 11-W23 Company Name Phillips Petroleum Co. Date Drilled 12-21-1963 Depth 3034 '

Location 890 ' F S L & 730 ' F E L, NW /4, Sec. 12 , T 27 N, R 5 E Status Injection Well

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:
"	8 5/8 "	116 '	Cmt w/90 sks	Surf '	
"	4 1/2 "	3004 '	Cmt w/75 sks. w/ 30% Diacel "D". Run 1" @ 310' between 4 1/2" & 8 5/8" csg cmt w/103 sx reg	1650 Surface '	
"	3 1/2 "	2981 '	Cmt w/150 sks reg cmt, 2% Gel	'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: Burbank (Openhole 3004' - 3034')

****

Well Name NBU 11-W24 Company Name Phillips Petroleum Co. Date Drilled 12-16-1963 Depth 3045 '

Location 890 ' F S L & 90 ' F E L, NW /4, Sec. 12 , T 27 N, R 5 E Status P&A'd 1/22/1997

Elevation 1160 [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 "	118 '	Cmt w/90 sks.	Surface '	MIRU. RIH w/ tbg to 3010'. Circ 9.0 #/gal mud to 400'. Spot 30 sks 50-50 poz cmt bottom plug @ 3010'. POOH w/ tbg. Tag plug @ 2575'. Shoot off 4 1/2" csg @ 423' & POOH w/ same. RIH w/ tbg to 400' and pmp top plug of 190 sks 50-50 poz cmt and circ to surf. POOH w/ tbg. Cut off 8 5/8" 3' below GL and restore loc.
"	4 1/2 "	3015 '	Cmt w/75 sks. w/ 30% Diacel "D"	'	
"	"	'		'	
"	"	'		'	
"	"	'		'	

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

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Well Name NBU 11-W25 Company Name Phillips Petroleum Co. Date Drilled 3-28-1964 Depth 2993 '

Location 420 ' F N L & 550 ' F W L, NW /4, Sec. 12 , T 27 N, R 5 E Status P&A'd in 1977

Elevation 1107 [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 "	116 '	Cmt w/85 sks	Surf '	Pumped 147 sx cmt below retainer. Spot 3 sx cmt on top of retainer. Filled hole w/mud & pld tbg. Pmp 40 sx ready mix cmt which filled to 3' from surf.
"	4 1/2 "	2963 '	Cmt w/75 sks w/ 30% Diacel "D" & 2% CC	'	
"	"	'		'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: None

****

Well Name NBU 11-W26 Company Name Phillips Petroleum Co. Date Drilled 3-25-1964 Depth 3010 '

Location 420 ' F N L & 1230 ' F W L, NW /4, Sec. 12 , T 27 N, R 5 E Status Injection Well

Elevation 1118 [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 "	116 '	85 sks.	Surface '	
"	4 1/2 "	2975 '	75 sks. w/ 30% Diacel "D" & 2% CC	2400 '	
"	"	'		'	
"	"	'		'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: Burbank (Open Hole 2975' - 3010')

****

Well Name NBU 11-W27 Company Name Phillips Petroleum Co. Date Drilled 3-20-1964 Depth 3006 '

Location 420 ' F N L & 730 ' F E L, NW /4, Sec. 12 , T 27 N, R 5 E Status P&A'd 10/7/1989

Elevation 1127 [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 "	119 '	Cmt w/85 sks	Surface '	MIRU. Spot 3 sks cmt @ CIPB @ 1860'. TIH w/ tbg to 1740'. Mix and pmp 57 BBLS Howco Gel, Circ 5 BBLS gel. TOOH w/ tbg. Shot off 4 1/2" csg @ 270' TIH w/ tbg to 250'. Mix and pmp 150 sks clss "H" cmt w/ 2% CC. Circ 3 BBLS cmt. TOOH w/ tbg. RDMO.
"	4 1/2 "	2964 '	75 sks. w/ 30% Diacel "D" & 2% CC	'	
"	"	'		'	
"	"	'		'	
"	"	'		'	

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 11-W28 Company Name Phillips Petroleum Co. Date Drilled 3-17-1964 Depth 3022 '

Location 420 ' F N L & 90 ' F E L, NW /4, Sec. 12 , T 27 N, R 5 E Status Injection Well

Elevation 1147 [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 "	116 '	Cmt w/85 sks Reg cmt	Surface '	
"	4 1/2 "	2979 '	Cmt w/75 sks. w/ 30% Diacel "D" & 2%CC	1775 '	
"	"	'		'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore: Burbank (Openhole 2979' - 3022')

****

Well Name Company Name Date Drilled Depth '

Location ' F L & ' F L, /4, Sec. , T N, R E Status

Elevation [ ] GL [ ] KB

Hole Size	Casing Size	Landed Depth	Cement & Additive Data	Top of Cement	If well is TA or P&A Describe How:
"	"	'		'	
"	"	'		'	
"	"	'		'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore:

****

Well Name Company Name Date Drilled Depth '

Location ' F L & ' F L, /4, Sec. , T N, R E Status

Elevation [ ] GL [ ] KB

Hole Size	Casing Size	Landed Depth	Cement & Additive Data	Top of Cement	If well is TA or P&A Describe How:
"	"	'		'	
"	"	'		'	
"	"	'		'	
"	"	'		'	
"	"	'		'	
"	"	'		'	

Formations Open To Wellbore:

****

OILFIELD RESEARCH LABORATORIES
536 NORTH HIGHLAND - CHANUTE, KANSAS - PHONE HE1-2650
700 NORTH MISSION - OKMULGEE, OKLAHOMA - PHONE SK6-4444

Chanute, Kansas

April 11, 1964

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. 11-W26, Osage County, Oklahoma, and submitted to our laboratory on April 8, 1964.

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

John L. Pate R.F.

John L. Pate

JLP:rf

1 c - R. W. O'Neill

RECEIVED
APR 13 1964
SUPPLER OFFICE

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Phillips Petroleum Co. Lease N.B.U. Well No. 11-W26

Location NW¼

Section 12 Twp. 27N Rge. 5E County Osage State Oklahoma

Name of Sand	Burbank
Top of Core	2960.0
Bottom of Core	3010.0
Top of Pay Sand	2970.0
Bottom of Sand	3010.0
Total Feet of Permeable Sand	33.0
Total Feet of Floodable Sand	

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 0.5	7.0	7.0
0.5 - 1.0	8.0	15.0
1.0 - 5.0	8.0	23.0
5.0 -10.0	6.0	29.0
10.0 & above	4.0	33.0

Average Permeability Millidarcys	6.81
Average Percent Porosity	15.2
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	

-LOG-

Company Phillips Petroleum Co. Lease N.B.U. Well No. 11-W26

Depth Interval, Feet	Description
2960.0 - 2964.0	Grayish light brown, laminated, shaly sandstone.
2964.0 - 2968.0	Laminated sandy shale.
2968.0 - 2970.0	Brown, laminated, shaly sandstone.
2970.0 - 2978.0	Brown, slightly shaly sandstone.
2978.0 - 2985.0	Brown, laminated, shaly sandstone.
2985.0 - 2991.0	Brown, conglomeratic sandstone.
2991.0 - 2996.0	Brown to dark, laminated, shaly sandstone.
2996.0 - 2997.0	Sandy shale.
2997.0 - 3000.0	Brown shaly sandstone.
3000.0 - 3001.0	Sandy shale.
3001.0 - 3005.0	Brown, slightly shaly sandstone.
3005.0 - 3010.0	Dark carbonaceous sandstone.

Oilfield Research Laboratories

RESULTS OF PERMEABILITY AND POROSITY TESTS

TABLE I A

Company Phillips Petroleum Co. Lease N.B.U. Well No. 11-W26

Sample No.	Depth Feet	Permeability Millidarcys	Feet of Core		Permeability Capacity Ft. x Md.	Percent Porosity
			Ft.	Cum. Ft.		
1	2960.5	Imp.	1.0	1.0	0.00	-
2	2961.5	.73	1.0	2.0	0.73	13.0
3	2962.5	Imp.	1.0	3.0	0.00	-
4	2963.5	Imp.	1.0	4.0	0.00	-
5	2968.5	Imp.	1.0	5.0	0.00	-
6	2969.5	Imp.	1.0	6.0	0.00	-
7	2970.5	9.1	1.0	7.0	9.10	16.8
8	2971.5	7.2	1.0	8.0	7.20	16.5
9	2972.5	7.4	1.0	9.0	7.40	15.8
10	2973.5	6.3	1.0	10.0	6.30	17.6
11	2974.5	4.1	1.0	11.0	4.10	17.4
12	2975.5	4.6	1.0	12.0	4.60	16.8
13	2976.5	1.7	1.0	13.0	1.70	14.3
14	2977.5	3.4	1.0	14.0	3.40	17.1
15	2978.5	Imp.	1.0	15.0	0.00	-
16	2979.5	.38	1.0	16.0	0.38	11.9
17	2980.5	.44	1.0	17.0	0.44	12.6
18	2981.5	.55	1.0	18.0	0.55	12.3
19	2982.5	.88	1.0	19.0	0.88	12.9
20	2983.5	.26	1.0	20.0	0.26	11.2
21	2984.5	8.6	1.0	21.0	8.60	17.1
22	2985.5	2.9	1.0	22.0	2.90	17.4
23	2986.5	0.85	1.0	23.0	0.85	14.1
24	2987.5	3.6	1.0	24.0	3.60	17.6
25	2988.5	4.5	1.0	25.0	4.50	15.9
26	2989.5	6.2	1.0	26.0	6.20	18.4
27	2990.5	1.8	1.0	27.0	1.80	14.1
28	2991.5	Imp.	1.0	28.0	0.00	-
29	2992.5	Imp.	1.0	29.0	0.00	-
30	2993.5	.81	1.0	30.0	0.81	12.4
31	2994.5	.22	1.0	31.0	0.22	9.1
32	2995.5	.55	1.0	32.0	0.55	13.0
33	2997.5	Imp.	1.0	33.0	0.00	-
34	2998.5	.55	1.0	34.0	0.55	13.2
35	2999.5	Imp.	1.0	35.0	0.00	-
36	3001.5	25.	1.0	36.0	25.00	19.6
37	3002.5	52.	1.0	37.0	52.00	19.7
38	3003.5	16.	1.0	38.0	16.00	16.5
39	3004.5	52.	1.0	39.0	52.00	19.6
40	3005.5	.39	1.0	40.0	0.39	12.3
41	3006.5	.62	1.0	41.0	0.62	15.6
42	3007.5	Imp.	1.0	42.0	0.00	-
43	3008.5	.37	1.0	43.0	0.37	14.1
44	3009.5	.29	1.0	44.0	0.29	14.5

Oilfield Research Laboratories

SUMMARY OF PERMEABILITY & POROSITY TESTS

TABLE II A

Company Phillips Petroleum Co. Lease N.B.U. Well No. 11-W26

Depth Interval, Feet	Feet of Core Analyzed	Average Air Permeability, Millidarcys	Average Effective Permeability, Millidarcys	Permeability Capacity Ft. x Md.	Average Percent Porosity
2960.0 - 2978.0	9.0	4.95		44.53	16.2
2978.0 - 3000.0	16.0	2.1		33.09	13.9
3001.0 - 3010.0	8.0	18.3		146.67	16.5
2960.0 - 3010.0	33.0	6.8		224.29	15.2

NBU 11-W23

NBU 11W23

• CORE ANALYSIS • WATER REPRESSURIN NGINEERING • WATER ANALYSIS • ODING WATER TREATMENT • SURVEYING

OILFIELD RESEARCH LABORATORIES

- REGISTERED ENGINEERS -

700 NORTH MISSION
OKMULGEE, OKLAHOMA
PHONE: SK 6-4444

Chanute, Kansas

536 N. HIGHLAND
CHANUTE, KANSAS
PHONE: HE 1-2650

January 9, 1964

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. 11-W23, Osage County, Oklahoma, and submitted to our laboratory on January 3, 1964.

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. - R.W. O'Neill

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Phillips Petroleum Co. Lease N.B.U. Well No. 11-W23

Location NW

Section 12 Twp. 27N Rge. 5E County Osage State Oklahoma

Name of Sand	Burbank
Top of Core	2994.0
Bottom of Core	3033.5
Top of Sand	2994.0
Bottom of Sand	3033.5
Total Feet of Permeable Sand	26.5
Total Feet of Floodable Sand	

Distribution of Permeable Sand:

Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 10	9.5	9.5
10 - 50	5.0	14.5
50 - 100	3.0	17.5
100 - 300	5.0	22.5
300 & above	4.0	26.5

Average Permeability Millidarcys	117.1
Average Percent Porosity	19.4
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	

-LOG-

Company Phillips Petroleum Co. Lease N.B.U. Well No. 11-W23

Depth Interval, Feet	Description
2994.0 - 3010.0	Brown, slightly laminated, slightly shaly sandstone.
3010.0 - 3014.0	Brown to dark, laminated, shaly sandstone.
3014.0 - 3033.5	Dark carbonaceous sandstone.

Oilfield Research Laboratories

RESULTS OF PERMEABILITY AND POROSITY TESTS

TABLE I A

Company Phillips Petroleum Co. Lease N.B.U. Well No. 11-W23

Sample No.	Depth Feet	Permeability Millidarcys	Feet of Core		Permeability Capacity Ft. x Md.	Percent Porosity
			Ft.	Cum. Ft.		
1	2994.5	13.	1.0	1.0	13.00	16.7
2	2995.5	18.	1.0	2.0	18.00	17.3
3	2996.5	86.	1.0	3.0	86.00	21.5
4	2997.5	514.	1.0	4.0	514.00	26.7
5	2998.5	652.	1.0	5.0	652.00	26.7
6	2999.5	79.	1.0	6.0	79.00	22.6
7	3000.5	105.	1.0	7.0	105.00	23.1
8	3001.5	116.	1.0	8.0	116.00	22.5
9	3002.5	5.4	1.0	9.0	5.40	17.9
10	3003.5	392.	1.0	10.0	392.00	26.9
11	3004.5	533.	1.0	11.0	533.00	27.6
12	3005.5	108.	1.0	12.0	108.00	23.4
13	3006.5	207.	1.0	13.0	207.00	25.9
14	3007.5	113.	1.0	14.0	113.00	21.6
15	3008.5	2.9	1.0	15.0	2.90	13.0
16	3009.5	3.7	1.0	16.0	3.70	15.2
17	3010.5	Imp.	1.0	-	0.00	-
18	3011.5	54.	1.0	17.0	54.00	17.7
19	3012.5	10.	1.0	18.0	10.00	16.3
20	3013.5	14.	1.0	19.0	14.00	17.5
21	3014.5	3.0	1.0	20.0	3.00	12.3
22	3015.5	Imp.	1.0	-	0.00	-
23	3016.5	Imp.	1.0	-	0.00	-
24	3017.5	Imp.	1.0	-	0.00	-
25	3018.5	42.	1.0	21.0	42.00	20.0
26	3019.5	Imp.	1.0	-	0.00	-
27	3020.5	30.	1.0	22.0	30.00	17.2
28	3021.5	Imp.	1.0	-	0.00	-
29	3022.5	Imp.	1.0	-	0.00	-
30	3023.5	Imp.	1.0	-	0.00	-
31	3024.5	1.9	1.0	23.0	1.90	12.2
32	3025.5	Imp.	1.0	-	0.00	-
33	3026.5	Imp.	1.0	-	0.00	-
34	3027.5	Imp.	1.0	-	0.00	-
35	3028.5	1.8	1.0	24.0	1.80	16.0
36	3029.5	Imp.	1.0	-	0.00	-
37	3030.5	0.25	1.0	25.0	0.25	13.4
38	3031.5	Imp.	1.0	-	0.00	-
39	3032.5	1.7	1.5	26.5	2.55	15.9

Oilfield Research Laboratories

SUMMARY OF PERMEABILITY & POROSITY TESTS

TABLE II A

Company: Phillips Petroleum Co. Lease: N.B.U. Well No. 11-W23

Depth Interval, Feet	Feet of Core Analyzed	Average Air Permeability, Millidarcys	Average Effective Permeability, Millidarcys	Permeability Capacity Ft. x Md.	Average Percent Porosity
2994.0 - 3008.0	14.0	210.0		2,941.40	22.9
3008.0 - 3033.5	12.5	13.3		166.10	15.6
2994.0 - 3033.5	26.5	117.1		3,107.50	19.4