

OKLAHOMA CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION  
P.O. BOX 52000  
OKLAHOMA CITY, OK 73152-2000  
(Rule 165:10-3-1)

API NUMBER: 129 23898

Approval Date: 12/09/2013  
Expiration Date: 06/09/2014

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 20 Twp: 16N Rge: 22W County: ROGER MILLS  
SPOT LOCATION:  N2  N2  NW  NW FEET FROM QUARTER: FROM NORTH FROM WEST  
SECTION LINES: 300 660

Lease Name: JOE 20-16-22 Well No: 1H Well will be 300 feet from nearest unit or lease boundary.  
Operator Name: APACHE CORPORATION Telephone: 9184914900 OTC/OCC Number: 6778 0

APACHE CORPORATION  
6120 S YALE AVE STE 1500  
TULSA, OK 74136-4224

JOE WEST AND BRENDA WEST  
19453 E. 820 RD.  
LEEDEY OK 73654

Formation(s) (Permit Valid for Listed Formations Only):

Name	Depth	Name	Depth
1 TONKAWA	8000	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: 61659 Location Exception Orders: 618011 Increased Density Orders: 618387

Pending CD Numbers:

Special Orders:

Total Depth: 12886 Ground Elevation: 2041 **Surface Casing: 600** Depth to base of Treatable Water-Bearing FM: 450

Under Federal Jurisdiction: No Fresh Water Supply Well Drilled: No Surface Water used to Drill: No

PIT 1 INFORMATION

Type of Pit System: CLOSED Closed System Means Steel Pits

Type of Mud System: WATER BASED

Chlorides Max: 90000 Average: 5000

Is depth to top of ground water greater than 10ft below base of pit? Y

Within 1 mile of municipal water well? N

Wellhead Protection Area? N

Pit is located in a Hydrologically Sensitive Area.

Category of Pit: C

Liner not required for Category: C

Pit Location is BED AQUIFER

Pit Location Formation: RUSH SPRINGS

Approved Method for disposal of Drilling Fluids:

D. One time land application -- (REQUIRES PERMIT)

PERMIT NO: 13-25072

H. SEE MEMO

This permit does not address the right of entry or settlement of surface damages.  
The duration of this permit is SIX MONTHS, except as otherwise provided by Rule 165: 10-3-1.  
Rule 165: 10-3-4 (c) (7) (e) - The Operator shall give 24 Hours notice by telephone to the appropriate District Office of the Conservation Division as to when Surface Casing will be run.

PIT 2 INFORMATION

Type of Pit System: CLOSED Closed System Means Steel Pits

Type of Mud System: OIL BASED

Chlorides Max: 300000 Average: 200000

Is depth to top of ground water greater than 10ft below base of pit? Y

Within 1 mile of municipal water well? N

Wellhead Protection Area? N

Pit is located in a Hydrologically Sensitive Area.

Category of Pit: C

Liner not required for Category: C

Pit Location is BED AQUIFER

Pit Location Formation: RUSH SPRINGS

HORIZONTAL HOLE 1

Sec 20 Twp 16N Rge 22W County ROGER MILLS

Spot Location of End Point: S2 S2 SW SW

Feet From: SOUTH 1/4 Section Line: 200

Feet From: WEST 1/4 Section Line: 660

Depth of Deviation: 7821

Radius of Turn: 573

Direction: 181

Total Length: 4737

Measured Total Depth: 12886

True Vertical Depth: 8443

End Point Location from Lease,  
Unit, or Property Line: 200

Notes:

Category

Description

INCREASED DENSITY - 618387

12/9/2013 - G30 - 20-16N-22W  
X61659 TNKW  
2 WELLS  
APACHE CORPORATION  
11/21/13

LOCATION EXCEPTION - 618011

12/9/2013 - G30 - (I.O.) 20-16N-22W  
X61659 TNKW  
SHL NCT 100 FNL, NCT 100 FWL  
1ST PERF NCT 300 FNL, NCT 500 FWL  
LAST PERF NCT 300 FSL, NCT 500 FWL  
APACHE CORPORATION  
11/12/13

MEMO

12/9/2013 - G71 - PITS 1 & 2 - CLOSED SYSTEM=STEEL PITS REQUIRED - CANADIAN RIVER,  
PIT 2 - OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT

SPACING - 61659

12/9/2013 - G30 - (640) 20-16N-22W  
EST TNKW, OTHERS

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