

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

API NUMBER: 045 23454

Approval Date: 03/27/2014
Expiration Date: 09/27/2014

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 08 Twp: 16N Rge: 22W County: ELLIS
SPOT LOCATION: SE SW SW SW FEET FROM QUARTER: FROM SOUTH FROM WEST
SECTION LINES: 250 600

Lease Name: BERRYMAN TRUST Well No: 1-17H Well will be 250 feet from nearest unit or lease boundary.
Operator Name: APACHE CORPORATION Telephone: 9184914900; 9184914 OTC/OCC Number: 6778 0

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

BERRYMAN SHREWDER TRUST C/O FARMERS NAT'L
CO.
P.O. BOX 542016
OMAHA NE 68154

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

Name	Depth	Name	Depth
1 TONKAWA	8218	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: 577943 Location Exception Orders: 611584 Increased Density Orders: 610865

Pending CD Numbers:

Special Orders:

Total Depth: 13500 Ground Elevation: 1948 **Surface Casing: 500** 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 ALLUVIAL

Pit Location Formation: ALLUVIUM

Approved Method for disposal of Drilling Fluids:

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

PERMIT NO: 14-26645

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 ALLUVIAL

Pit Location Formation: ALLUVIUM

HORIZONTAL HOLE 1

Sec 17 Twp 16N Rge 22W County ROGER MILLS

Spot Location of End Point: SE SW SW SW

Feet From: SOUTH 1/4 Section Line: 299

Feet From: WEST 1/4 Section Line: 601

Depth of Deviation: 7694

Radius of Turn: 573

Direction: 179

Total Length: 4906

Measured Total Depth: 13500

True Vertical Depth: 8288

End Point Location from Lease,
Unit, or Property Line: 299

Notes:

Category

Description

INCREASED DENSITY - 610865

3/27/2014 - G75 - 17-16N-22W
X577943 TNKW
1 WELL
APACHE CORP.
4-26-2013

LOCATION EXCEPTION - 611584

3/27/2014 - G75 - (I.O.) 17-16N-22W
X577943 TNKW
SHL NCT 396 FSL, NCT 200 FWL **
FIRST PERF NCT 300 FSL, NCT 500 FWL ++
LAST PERF NCT 300 FNL, NCT 500 FWL ++
APACHE CORP.
5-14-2013

** ITD HAS SHL 250 FSL, 600 FWL 8-16N-22W; TO BE CORRECTED AT HEARING FOR FINAL ORDER LOCATION EXCEPTION PER OPERATOR

++ ITD HAS WELL BEING DRILLED IN OPPOSITE DIRECTION; TO BE CORRECTED AT HEARING FOR FINAL ORDER LOCATION EXCEPTION PER OPERATOR

MEMO

3/27/2014 - G75 - PIT 1 & 2 - CLOSED SYSTEM=STEEL PITS (REQUIRED - CANADIAN RIVER);
PIT 2 - OBM TO VENDOR, OBM CUTTINGS PER DISTRICT

SPACING - 577943

3/27/2014 - G75 - (640)(HOR) 17-16N-22W
EST TNKW
POE TO BHL NLT 660' FB
(SUPERSEDE NON-DEVELOPED NON-HORIZONTAL SPACING UNITS; COEXIST WITH PRODUCING NON-HORIZONTAL SPACING UNITS)

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045 23454 BERRYMAN TRUST 1-17H