

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

API NUMBER: 045 23255

Approval Date: 10/05/2012
Expiration Date: 04/05/2013

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 17 Twp: 16N Rge: 23W County: ELLIS
SPOT LOCATION: SW SE SE SE FEET FROM QUARTER: FROM SOUTH FROM EAST
SECTION LINES: 300 425

Lease Name: CR Well No: 2-17HD 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

OKLAHOMA DEPARTMENT OF WILDLIFE
CONSERVATION
P.O. BOX 53465
OKLAHOMA CITY OK 73105

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

Name	Depth	Name	Depth
1 TONKAWA	8338	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: 577439

Location Exception Orders: 601241

Increased Density Orders: 601316

Pending CD Numbers:

Special Orders:

Total Depth: 13000

Ground Elevation: 2076

Surface Casing: 550

Depth to base of Treatable Water-Bearing FM: 420

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: 8000 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: 12-21389

H. CLOSED SYSTEM=STEEL PITS REQUIRED - CANADIAN RIVER

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 17 Twp 16N Rge 23W County ELLIS

Spot Location of End Point: W2 NE NE NE

Feet From: NORTH 1/4 Section Line: 330

Feet From: EAST 1/4 Section Line: 581

Depth of Deviation: 7566

Radius of Turn: 573

Direction: 357

Total Length: 4648

Measured Total Depth: 13000

True Vertical Depth: 8338

End Point Location from Lease,
Unit, or Property Line: 330

Notes:

Category	Description
INCREASED DENSITY - 601316	10/5/2012 - G30 - 17-16N-23W X577439 TNKW 1 WELL APACHE CORPORATION 8/24/12
LOCATION EXCEPTION - 601241	10/5/2012 - G30 - (I.O.) 17-16N-23W X577439 TNKW SHL NCT 300 FSL, NCT 425 FEL POE NCT 300 FSL, NCT 500 FEL 1ST PERF NCT 300 FSL, NCT 500 FEL LAST PERF NCT 300 FNL, NCT 500 FEL BHL NCT 200 FNL, NCT 500 FEL APACHE CORPORATION 8/22/12
SPACING - 577439	10/5/2012 - G30 - (640) 17-16N-23W VAC 164006 TNKW EXT 573851 TNKW

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