API NUMBER: 129 23863

Oil & Gas

Horizontal Hole

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

Approval Date: 08/15/2013
Expiration Date: 02/15/2014

PERMIT TO DRILL

WELL LOCATION:	Sec:	21	Twp:	16N	Rge:	22W	County:	ROGER MILLS
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SPOT LOCATION: SE SW SE SE FEET FROM QUARTER: FROM SOUTH FROM EAST SECTION LINES: 250 800

Lease Name: SWITZER Well No: 3-21H Well will be 250 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

LARRY SWITZER AND GARY SWITZER

8235 N. 1970 ROAD

LEEDEY OK 73654

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

	Name	Depth	Name	Depth	ı
1	TONKAWA	8459	6		
2			7		
3			8		
4			9		
5			10		
Spacing Orders:	61659	Location Exception Orders:	614800	Increased Density Orders:	614763

Pending CD Numbers: Special Orders:

Total Depth: 13300 Ground Elevation: 2155 Surface Casing: 670 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: ON SITE

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: 1B

Liner required for Category: 1B
Pit Location is AP/TE DEPOSIT
Pit Location Formation: TERRACE

Approved Method for disposal of Drilling Fluids:

A. Evaporation/dewater and backfilling of reserve pit.

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

PERMIT NO: 13-23905

H. SEE MEMO

PIT 2 INFORMATION

Type of Pit System: ON SITE

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: 3

Liner required for Category: 3
Pit Location is AP/TE DEPOSIT
Pit Location Formation: TERRACE

## **HORIZONTAL HOLE 1**

Sec 21 Twp 16N Rge 22W County ROGER MILLS

Spot Location of End Point: N2 N2 NE NE
Feet From: NORTH 1/4 Section Line: 200
Feet From: EAST 1/4 Section Line: 660

Depth of Deviation: 8022 Radius of Turn: 573

Direction: 3

Total Length: 4825

Measured Total Depth: 13300

True Vertical Depth: 8500

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

Notes:

Category Description

INCREASED DENSITY - 614763 8/15/2013 - G30 - 21-16N-22W

X61659 TNKW

1 WELL

APACHE CORPORATION

8/12/13

LOCATION EXCEPTION - 614800 8/15/2013 - G30 - (I.O.) 21-16N-22W

X61659 TNKW

SHL NCT 200 FSL, NCT 500 FEL 1ST PERF NCT 300 FSL, NCT 500 FEL LAST PERF NCT 300 FNL, NCT 500 FEL

APACHE CORPORATION

8/13/13

MEMO 8/15/2013 - G71 - PITS 1 & 2 - CONCRETE LINED PIT PER OPERATOR REQUEST, PIT 2 - OBM

RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT

SPACING - 61659 8/15/2013 - G30 - (640) 21-16N-22W

**EST TNKW**