

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

API NUMBER: 129 24004

Approval Date: 09/17/2014

Expiration Date: 03/17/2015

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 26 Twp: 17N Rge: 25W

County: ROGER MILLS

SPOT LOCATION:

FEET FROM QUARTER: FROM NORTH FROM EAST

SECTION LINES: 250 1980

Lease Name: CATHERINE

Well No: 2H-23

Well will be 250 feet from nearest unit or lease boundary.

Operator Name: LE NORMAN OPERATING LLC

Telephone: 4055481200

OTC/OCC Number: 22738 0

LE NORMAN OPERATING LLC  
4700 GAILLARDIA PKWY STE 200  
OKLAHOMA CITY, OK 73142-1881

BOBBY CANNON  
7571 N. 1780 RD.  
CRAWFORD OK 73638

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

	Name	Depth	Name	Depth
1	TONKAWA	8060	6	
2			7	
3			8	
4			9	
5			10	

Spacing Orders: 603398

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201404978

Special Orders:

Total Depth: 13325

Ground Elevation: 2198

**Surface Casing: 1500**

Depth to base of Treatable Water-Bearing FM: 370

Under Federal Jurisdiction: No

Fresh Water Supply Well Drilled: No

Surface Water used to Drill: Yes

**PIT 1 INFORMATION**

Approved Method for disposal of Drilling Fluids:

Type of Pit System: ON SITE

A. Evaporation/dewater and backfilling of reserve pit.

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 BED AQUIFER

Pit Location Formation: OGALLALA

H. SOIL COMPACTED PIT, NOTIFY DISTRICT PRIOR TO TESTING SOIL PIT LINER

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.

# HORIZONTAL HOLE 1

Sec 23 Twp 17N Rge 25W County ROGER MILLS

Spot Location of End Point: C N2 NW NE

Feet From: NORTH 1/4 Section Line: 330

Feet From: EAST 1/4 Section Line: 1980

Depth of Deviation: 7480

Radius of Turn: 580

Direction: 360

Total Length: 4934

Measured Total Depth: 13325

True Vertical Depth: 8060

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

## Notes:

Category	Description
DEEP SURFACE CASING	9/17/2014 - G76 - APPROVED CONTINGENT ON NOTIFYING OCC FIELD STAFF IMMEDIATELY OF ANY LOSS OF CIRCULATION OR FAILURE TO CIRCULATE CEMENT TO SURFACE ON ANY CONDUCTOR OR SURFACE CASING
PENDING CD - 201404978	9/17/2014 - G91 - (I.O.) 23-17N-25W X 603398 TNKW SHL 250 FNL, 1980 FEL COMP. INT. NCT 165 FSL, NCT 165 FNL, NCT 1320 FEL NO OP. NAMED REC. 8-11-2014 (STUCK)
SPACING - 603398	9/17/2014 - G91 - (640)(HOR) 23-17N-25W EST TNKW POE TO BHL NCT 660' FB (SUPERCEDED NON-DEVELOP NON-HORIZONTAL) SPACING UNITS; COEXIST PRODUCING NON-HORIZONTAL SPACING UNITS)

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129 24004 CATHERINE 2H-23