

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

API NUMBER: 083 24306

Approval Date: 05/19/2014  
Expiration Date: 11/19/2014

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 30 Twp: 17N Rge: 2W County: LOGAN  
SPOT LOCATION:  NE  NE  NE  NE FEET FROM QUARTER: FROM NORTH FROM EAST  
SECTION LINES: 280 250

Lease Name: NEELY CAREY Well No: 1-20WH Well will be 250 feet from nearest unit or lease boundary.  
Operator Name: OSAGE EXPLORATION & DEVELOPMENT INC Telephone: 4052700989 OTC/OCC Number: 23098 0

OSAGE EXPLORATION & DEVELOPMENT INC  
100 PARK AVE STE 1040  
OKLAHOMA CITY, OK 73102-8018

MICHAEL & MARY JANE CAREY  
5175 WEST COUNTY ROAD 75  
GUTHRIE OK 73044

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

| Name       | Depth | Name | Depth |
|------------|-------|------|-------|
| 1 WOODFORD | 5706  | 6    |       |
| 2          |       | 7    |       |
| 3          |       | 8    |       |
| 4          |       | 9    |       |
| 5          |       | 10   |       |

Spacing Orders: 614840

Location Exception Orders: 615177  
622337

Increased Density Orders:

Pending CD Numbers:

Special Orders:

Total Depth: 11070

Ground Elevation: 1051

**Surface Casing: 450**

Depth to base of Treatable Water-Bearing FM: 200

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: 5000 Average: 3000

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 AP/TE DEPOSIT

Pit Location Formation: TERRACE

Approved Method for disposal of Drilling Fluids:

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

PERMIT NO: 14-27027

H. CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST

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 20 Twp 17N Rge 2W County LOGAN

Spot Location of End Point: N2 NW NW NW

Feet From: NORTH 1/4 Section Line: 200

Feet From: WEST 1/4 Section Line: 330

Depth of Deviation: 4980

Radius of Turn: 738

Direction: 5

Total Length: 4931

Measured Total Depth: 11070

True Vertical Depth: 5750

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

Notes:

Category

Description

LOCATION EXCEPTION - 615177

5/19/2014 - G75 - (I.O.) 20-17N-2W  
X614840 WDFD, OTHERS  
COMPL. INT. NCT 200 FSL, NCT 200 FNL, NCT 660 FWL \*\*  
SLAWSON EXPLOR. CO., INC,  
8-26-2013

\*\* ITD HAS BHL AS 330' FWL; TO BE CORRECTED AT HEARING FOR FINAL ORDER LOCATION  
EXCEPTION PER OPERATOR

LOCATION EXCEPTION - 622337

5/19/2014 - G75 - MOD 615177 CHANGING OPERATOR TO OSAGE EXPLOR. & DEVELOP., INC.  
3-7-2014

SPACING - 614840

5/19/2014 - G75 - (640)(HOR) 20-17N-2W  
VAC OTHERS  
EST WDFD, OTHERS  
POE TO BHL NCT 330' FB  
(SUPERSEDE NON-DEVELOPED NON-HORIZONTAL SPACING UNITS)