

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

API NUMBER: 119 24181

Approval Date: 02/06/2014  
Expiration Date: 08/06/2014

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 24 Twp: 18N Rge: 3E

County: PAYNE

SPOT LOCATION:  NW  NE  NE  NE

FEET FROM QUARTER: FROM NORTH FROM EAST

SECTION LINES: 255 340

Lease Name: BERRY

Well No: 19-2WH

Well will be 255 feet from nearest unit or lease boundary.

Operator Name: CALYX ENERGY LLC

Telephone: 9189494224; 9189494

OTC/OCC Number: 22299 0

CALYX ENERGY LLC  
10820 E 45TH ST STE 208  
TULSA, OK 74146-3807

THOMS N. BERRY & CO  
P O BOX 1958  
STILLWATER OK 74076

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

|   | Name           | Depth | Name | Depth |
|---|----------------|-------|------|-------|
| 1 | WOODFORD       | 4030  | 6    |       |
| 2 | MISENER-HUNTON | 4060  | 7    |       |
| 3 |                |       | 8    |       |
| 4 |                |       | 9    |       |
| 5 |                |       | 10   |       |

Spacing Orders: 617455

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201400189  
201400190

Special Orders:

Total Depth: 8880

Ground Elevation: 885

**Surface Casing: 210**

Depth to base of Treatable Water-Bearing FM: 160

Under Federal Jurisdiction: No

Fresh Water Supply Well Drilled: No

Surface Water used to Drill: Yes

**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 BED AQUIFER

Pit Location Formation: OSCAR

Approved Method for disposal of Drilling Fluids:

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

PERMIT NO: 14-26378

H. CLOSED SYSTEM=STEEL PITS PER OPERATOR OPTION

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 19 Twp 18N Rge 4E County PAYNE

Spot Location of End Point: S2 SW SW SW

Feet From: SOUTH 1/4 Section Line: 165

Feet From: WEST 1/4 Section Line: 330

Depth of Deviation: 3345

Radius of Turn: 1425

Direction: 180

Total Length: 4750

Measured Total Depth: 8880

True Vertical Depth: 4060

End Point Location from Lease,  
Unit, or Property Line: 165

Notes:

| Category               | Description  |
|------------------------|--|
| PENDING CD - 201400189 | 2/5/2014 - G30 - 19-18N-4E<br>X617455 WDFD<br>1 WELL<br>NO OP. NAMED<br>REC 1/27/14 (JOHNSON)  |
| PENDING CD - 201400190 | 2/5/2014 - G30 - 19-18N-4E<br>X617455 WDFD, MSRH<br>SHL NCT 165 FNL, NCT 320 FEL 24-18N-3E<br>1ST PERF NCT 165 FNL, NCT 330 FWL 19-18N-4E<br>LAST PERF NCT 165 FSL, NCT 330 FWL 19-18N-4E<br>NO OP. NAMED<br>REC 1/27/14 (JOHNSON) |
| SPACING - 617455       | 2/5/2014 - G30 - (640 HOR) 19-18N-4E<br>DEL OTHER<br>EXT 598066 WDFD, MSRH, OTHERS<br>POE TO BHL (MSRH) NCT 660' FB<br>POE TO BHL (WDFD) NCT 330' FB<br>(SUPERCEDE NON-DEVELOPED NON-HORIZONTAL SPACING UNITS)                     |