

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

API NUMBER: 045 23264

Approval Date: 10/18/2012  
Expiration Date: 04/18/2013

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 08 Twp: 20N Rge: 25W County: ELLIS  
SPOT LOCATION:  SW  SW  SE  SW FEET FROM QUARTER: FROM SOUTH FROM WEST  
SECTION LINES: 300 1550

Lease Name: CATHERINE 8-20-25 Well No: 1H Well will be 300 feet from nearest unit or lease boundary.  
Operator Name: CHESAPEAKE OPERATING INC Telephone: 4059357853 OTC/OCC Number: 17441 0

CHESAPEAKE OPERATING INC  
P.O. Box 18496  
OKLAHOMA CITY, OK 73154-0496

CATHERINE BARNEY AND RONALD BARNEY  
24581 CANYON DRIVE  
CANYON TX 79015

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

Name	Depth	Name	Depth
1 PENNSYLVANIAN MISSOURI SERIES	7900	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: 132063 Location Exception Orders: 602837 Increased Density Orders: 602836  
Pending CD Numbers: 201205405 Special Orders:

Total Depth: 13271 Ground Elevation: 2293 **Surface Casing: 800** Depth to base of Treatable Water-Bearing FM: 550

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: 25000 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

Approved Method for disposal of Drilling Fluids:

A. Evaporation/dewater and backfilling of reserve pit.

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

H. SEE MEMO

PERMIT NO: 12-21366

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: 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 BED AQUIFER
Pit Location Formation: OGALLALA

HORIZONTAL HOLE 1

Sec 08 Twp 20N Rge 25W County ELLIS
Spot Location of End Point: C N2 NE NW
Feet From: NORTH 1/4 Section Line: 330
Feet From: WEST 1/4 Section Line: 1980
Depth of Deviation: 7759
Radius of Turn: 361
Direction: 360
Total Length: 4420
Measured Total Depth: 13271
True Vertical Depth: 8120
End Point Location from Lease,
Unit, or Property Line: 330

Notes:

Table with 2 columns: Category and Description. Contains notes such as 'INCREASED DENSITY - 602836', 'LOCATION EXCEPTION - 602837', 'PENDING CD - 201205405', 'PITS 1 & 2', and 'SPACING - 132063'.

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