

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

API NUMBER: 045 23307

Approval Date: 02/07/2013  
Expiration Date: 08/07/2013

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 20 Twp: 21N Rge: 25W County: ELLIS  
SPOT LOCATION: SE SW SW SE FEET FROM QUARTER: FROM SOUTH FROM EAST  
SECTION LINES: 265 2155

Lease Name: TOP OF TEXAS 20-21-25 Well No: 1H Well will be 265 feet from nearest unit or lease boundary.

Operator Name: CHESAPEAKE OPERATING INC Telephone: 4059358143 OTC/OCC Number: 17441 0

CHESAPEAKE OPERATING INC  
PO BOX 18496  
OKLAHOMA CITY, OK 73154-0496

ARCHIE MANSKE  
BOX 37  
SHATTUCK OK 73858

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

Name	Depth	Name	Depth
1 CLEVELAND	7660	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: 172810 Location Exception Orders: 603256 Increased Density Orders: 603476  
607024

Pending CD Numbers:

Special Orders:

Total Depth: 12900 Ground Elevation: 2226 Surface Casing: 770 Depth to base of Treatable Water-Bearing FM: 520

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? Y  
Wellhead Protection Area? Y  
Pit is located in a Hydrologically Sensitive Area.

Category of Pit: 1A

Liner required for Category: 1A

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: 13-22459  
H. SEE MEMO

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? Y
Wellhead Protection Area? Y
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 20 Twp 21N Rge 25W County ELLIS
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: 7367
Radius of Turn: 361
Direction: 360
Total Length: 4441
Measured Total Depth: 12900
True Vertical Depth: 7728
End Point Location from Lease,
Unit, or Property Line: 330

Notes:

Table with 2 columns: Category, Description. Rows include INCREASED DENSITY - 603476, LOCATION EXCEPTION - 603256, MEMO, MUNICIPAL WATER WELL, SPACING - 172810, SPACING - 607024.

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.