

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

API NUMBER: 045 23237 A

Approval Date: 08/31/2012
Expiration Date: 02/28/2013

Horizontal Hole Oil & Gas

Amend reason: CHANGE SURFACE LOCATION

AMEND PERMIT TO DRILL

WELL LOCATION: Sec: 18 Twp: 21N Rge: 25W

County: ELLIS

SPOT LOCATION: SE SW SW SW

FEET FROM QUARTER: FROM SOUTH FROM WEST

SECTION LINES: 238 654

Lease Name: HOWARD 18-21-25

Well No: 1H

Well will be 238 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

SUSAN MARIE HOWARD & BILL HOWARD
P.O. BOX 261
SHATTUCK OK 73858

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

Name	Depth	Name	Depth
1 PENNSYLVANIAN VIRGIL SERIES	6647	6	
2 PENNSYLVANIAN MISSOURI SERIES	7137	7	
3 PENNSYLVANIAN DES MOINES	7587	8	
4		9	
5		10	

Spacing Orders: 96901

Location Exception Orders: 601552

Increased Density Orders:

Pending CD Numbers:

Special Orders:

Total Depth: 12850

Ground Elevation: 2202

Surface Casing: 740

Depth to base of Treatable Water-Bearing FM: 490

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: 8000

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: 1A

Liner required for Category: 1A

Pit Location is ALLUVIAL

Pit Location Formation: ALLUVIUM

Approved Method for disposal of Drilling Fluids:

A. Evaporation/dewater and backfilling of reserve pit.

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

PERMIT NO: 12-21218

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? 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 ALLUVIAL
Pit Location Formation: ALLUVIUM

HORIZONTAL HOLE 1

Sec 18 Twp 21N Rge 25W County ELLIS
Spot Location of End Point: C N2 NW NW
Feet From: NORTH 1/4 Section Line: 330
Feet From: WEST 1/4 Section Line: 660
Depth of Deviation: 7309
Radius of Turn: 567
Direction: 1
Total Length: 4650
Measured Total Depth: 12850
True Vertical Depth: 7670
End Point Location from Lease,
Unit, or Property Line: 330

Notes:

Table with 2 columns: Category, Description. Includes notes on LOCATION EXCEPTION - 601552, MEMO, and SPACING - 96901.

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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.