

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

API NUMBER: 119 24296 A

Approval Date: 10/27/2014  
Expiration Date: 04/27/2015

Horizontal Hole Oil & Gas

Amend reason: AMEND SHL, MSC

AMEND PERMIT TO DRILL

WELL LOCATION: Sec: 05 Twp: 17N Rge: 4E County: PAYNE  
SPOT LOCATION:  NW  NE  NE  NE FEET FROM QUARTER: FROM NORTH FROM EAST  
SECTION LINES: 315 470

Lease Name: OBSIDIAN 5-17N-4E Well No: 1MH Well will be 315 feet from nearest unit or lease boundary.

Operator Name: AMERICAN ENERGY-WOODFORD LLC Telephone: 4056085540; 4054188 OTC/OCC Number: 23358 0

AMERICAN ENERGY-WOODFORD LLC  
PO BOX 18756  
OKLAHOMA CITY, OK 73154-0756

WAYNE DODRILL  
25580 BRIAR DRIVE  
CLAREMORE OK 74019

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

Name	Depth	Name	Depth
1	MISSISSIPPIAN	3865	6
2			7
3			8
4			9
5			10

Spacing Orders: 593184 Location Exception Orders: 633022 Increased Density Orders: 632834

Pending CD Numbers: Special Orders:

Total Depth: 10000 Ground Elevation: 880 **Surface Casing: 750** Depth to base of Treatable Water-Bearing FM: 130

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 BED AQUIFER

Pit Location Formation: VANOSS

Approved Method for disposal of Drilling Fluids:

D. One time land application -- (REQUIRES PERMIT) PERMIT NO: 14-28398  
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 05 Twp 17N Rge 4E County PAYNE

Spot Location of End Point: SW SE SE SE

Feet From: SOUTH 1/4 Section Line: 165

Feet From: EAST 1/4 Section Line: 550

Depth of Deviation: 3400

Radius of Turn: 1155

Direction: 181

Total Length: 4785

Measured Total Depth: 10000

True Vertical Depth: 3940

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

Notes:

Category	Description
INCREASED DENSITY - 632834	11/26/2014 - G91 - 5-17N-4E X593184 MSSP 2 WELLS AMERICAN ENERGY - WOODFORD, LLC. 11-10-2014
LOCATION EXCEPTION - 633022	11/26/2014 - G91 - (I.O.) 5-17N-4E X593184 MSSP COMPL. INT. NCT 165 FNL, NCT 165 FSL, NCT 330 FEL AMERICAN ENERGY - WOODFORD, LLC. 11-14-2014
SPACING - 593184	10/27/2014 - G91 - (640)(HOR) 5-17N-4E EST MSSP POE TO BHL NCT 660' FB (SUPERCEDE EXISTING NON-DEVELOP NON-HORIZONTAL SPACING UNITS)
SURFACE CASING	11/25/2014 - G71 - 750' OF SURFACE CASING REQUIRED PER CITY OF CUSHING

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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.