

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

API NUMBER: 119 24212

Approval Date: 04/11/2014  
Expiration Date: 10/11/2014

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 28 Twp: 18N Rge: 4E County: PAYNE  
SPOT LOCATION:  NW  NW  NW  NE FEET FROM QUARTER: FROM NORTH FROM EAST  
SECTION LINES: 328 2389

Lease Name: HELDRETH 21 18N 4E Well No: 1WH Well will be 328 feet from nearest unit or lease boundary.

Operator Name: AMERICAN ENERGY-WOODFORD LLC Telephone: 4054188001; 4054188 OTC/OCC Number: 23358 0

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

HELDRETH FAMILY TRUST  
7624 E. DEEP ROCK ROAD  
RIPLEY OK 74062

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

Name	Depth	Name	Depth
1 WOODFORD	4010	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: No Spacing

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201401587  
201401864

Special Orders:

Total Depth: 9750 Ground Elevation: 883 **Surface Casing: 330** Depth to base of Treatable Water-Bearing FM: 280

Under Federal Jurisdiction: No Fresh Water Supply Well Drilled: No Surface Water used to Drill: Yes

PIT 1 INFORMATION

Approved Method for disposal of Drilling Fluids:

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? Y

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

D. One time land application -- (REQUIRES PERMIT) PERMIT NO: 14-26830  
H. CLOSED SYSTEM=STEEL PITS (REQUIRED - CUSHING LAKE)

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 21 Twp 18N Rge 4E County PAYNE

Spot Location of End Point: N2 N2 N2 NE

Feet From: NORTH 1/4 Section Line: 165

Feet From: EAST 1/4 Section Line: 1320

Depth of Deviation: 3600

Radius of Turn: 637

Direction: 10

Total Length: 5149

Measured Total Depth: 9750

True Vertical Depth: 4200

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

Notes:

Category	Description
PENDING CD - 201401587	4/11/2014 - G75 - (640)(HOR) 21-18N-4E EST WDFD, OTHER COMPL. INT. NCT 330' FB (SUPERSEDE NON-DEVELOPED NON-HORIZONTAL SPACING UNITS; COEXIST WDFD, NW4, LEASE BASIS) REC 3-28-2014 (JOHNSON)
PENDING CD - 201401864	4/11/2014 - G75 - (I.O.) 21-18N-4E X201401587 WDFD COMPL. INT. NCT 165 FSL, NCT 165 FNL, NCT 990 FEL NO OP. NAMED REC 4-7-2014 (MCKEOWN)
WELLHEAD PROTECTION AREA	4/7/2014 - G71 - RIPLEY PWA, NW4 28-18N-R4E

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Office of the Conservation Division as to when Surface Casing will be run.