API NUMBER: 119 24312

Oil & Gas

Horizontal Hole

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

Approval Date: 12/04/2014 06/04/2015 **Expiration Date**

PERMIT TO DRILL

WELL LOCATION: Sec: 05 Twp: 17N Rge: 4E County: PAYNE

FEET FROM QUARTER: SPOT LOCATION: SW FROM NORTH EAST NE ll NE NE SECTION LINES:

Lease Name: OBSIDIAN 33-18N-4E Well No: 1MH Well will be 345 feet from nearest unit or lease boundary.

470

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

345

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 MISSISSIPPIAN 1 3940 6 2 7 3 8 4 9 5 10 596282 Spacing Orders: Location Exception Orders: Increased Density Orders:

Pending CD Numbers: 201408191 Special Orders:

201408192

Total Depth: 10000 Ground Elevation: 880 Surface Casing: 900 Depth to base of Treatable Water-Bearing FM: 130

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

Approved Method for disposal of Drilling Fluids: PIT 1 INFORMATION

Type of Pit System: CLOSED Closed System Means Steel Pits

Type of Mud System: WATER BASED PERMIT NO: 14-28397 D. One time land application -- (REQUIRES PERMIT) H. CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST 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

is located in a Hydrologically Sensitive Area.

Category of Pit: C

Wellhead Protection Area?

Liner not required for Category: C Pit Location is BED AQUIFER Pit Location Formation: VANOSS

HORIZONTAL HOLE 1

Sec 33 Twp 18N Rge 4E County **PAYNE** Spot Location of End Point: NE NW NW NW Feet From: NORTH 1/4 Section Line: 165 Feet From: WEST 1/4 Section Line: 450

Depth of Deviation: 3650 Radius of Turn: 1006

Direction: 20
Total Length: 4770

Measured Total Depth: 10000

True Vertical Depth: 4656

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

Notes:

Category Description

PENDING CD - 201408191 12/4/2014 - G91 - 33-18N-4E

X596282 MSSP 1 WELL

NO OP. NAMED

REC. 12-2-2014 (NORRIS)

PENDING CD - 201408192 12/4/2014 - G91 - (I.O.) 33-18N-4E

X596282 MSSP

NO OP. NAMED

1ST PERF NCT 165 FSL, NCT 330 FWL LAST PERF NCT 165 FNL, NCT 330 FWL

REC.12-2-2014 (NORRIS)

SPACING - 596282 12/4/2014 - G91 - (640)(HOR) 33-18N-4E

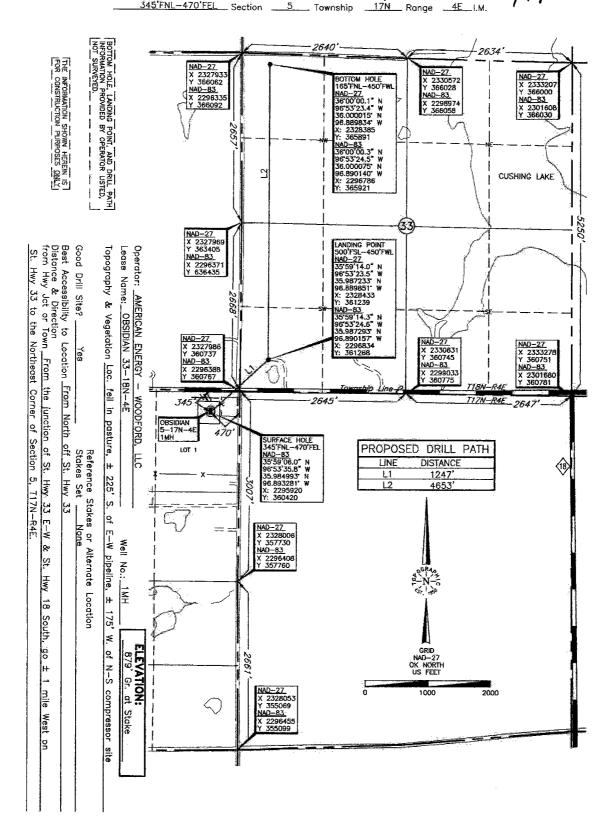
EST MSSP, OTHERS POE TO BHL NCT 660' FB

(SUPERCEDE NON-DEVELOP NON-HORIZONTAL SPACING UNITS)

SURFACE CASING 12/4/2014 - G71 - MIN. 750' REQUIRED PER CITY OF CUSHING

TOPOGRAPHIC LAND SURVEYORS OF OKLAHOMA
6709 NORTH CLASSEN BLVD., OKIA. CITY, OKIA. 73116 * LOCAL (405) 843-4847 * OUT OF STATE (800) 654-3219

Certificate of Authorization No. 1293. PAYNE County, Oklahoma 345'FNL-470'FEL



~	DATE NAME OF
∕ ₹₹	DATUM: NAD-27
racelve accuracy.	LAT: <u>35*59'05.8" N</u>
\$ ∰ 8	LONG: 96'53'34.7" W
PS F	LAT: _35.984933* N
20 S	LONG: 96.892975 W
हें इंडे	STATE PLANE
돌돌병	COORDINATES (US FEET):
£8±	ZONE: OK NORTH
- 5 =	X: 2327519
<u>_</u>	Y: 360391

Y Mm Mimu Oklahoma Lic. No. 1433

Invoice # 230827A Date Staked: _



Thomas L. Howell _a Oklahoma Licensed Land Surveyor and an authorized agent of Topographic Land Surveyors of Oklahoma, do hereby certify to the information, shown herein

Date of Drawing: <u>Sept. 30, 2014</u>
Date Staked: <u>Sept. 25, 2014</u>

