

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

API NUMBER: 087 22163

Approval Date: 07/23/2018

Expiration Date: 01/23/2019

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 31 Twp: 7N Rge: 3W

County: MCCLAIN

SPOT LOCATION:

FEET FROM QUARTER: FROM SOUTH FROM EAST

SECTION LINES: 265 945

Lease Name: KATMANDU

Well No: 4-31H

Well will be 265 feet from nearest unit or lease boundary.

Operator Name: ECHO E & P LLC

Telephone: 4057534232

OTC/OCC Number: 23925 0

ECHO E & P LLC  
3817 NW EXPRESSWAY STE 840  
OKLAHOMA CITY, OK 73112-1400

THOMAS A CALVERT  
18067 SH 39  
PURCELL OK 73080

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

Name	Depth	Name	Depth
1 WOODFORD	9750	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: 680031

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201802398

Special Orders:

Total Depth: 15000

Ground Elevation: 1180

**Surface Casing: 1500**

Depth to base of Treatable Water-Bearing FM: 200

Under Federal Jurisdiction: No

Fresh Water Supply Well Drilled: No

Surface Water used to Drill: No

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? N

Pit is located in a Hydrologically Sensitive Area.

Category of Pit: C

Liner not required for Category: C

Pit Location is ALLUVIAL

Pit Location Formation: ALLUVIUM

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

PERMIT NO: 18-34929

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: CLOSED Closed System Means Steel Pits

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: C

Liner not required for Category: C

Pit Location is ALLUVIAL

Pit Location Formation: ALLUVIUM

## HORIZONTAL HOLE 1

Sec 31 Twp 7N Rge 3W County MCCLAIN

Spot Location of End Point: N2 NE NE NE

Feet From: NORTH 1/4 Section Line: 165

Feet From: EAST 1/4 Section Line: 330

Depth of Deviation: 9500

Radius of Turn: 785

Direction: 5

Total Length: 4266

Measured Total Depth: 15000

True Vertical Depth: 9750

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

### Notes:

#### Category

#### Description

#### DEEP SURFACE CASING

7/17/2018 - G71 - APPROVED; NOTIFY OCC FIELD INSPECTOR IMMEDIATELY OF ANY LOSS OF CIRCULATION OR FAILURE TO CIRCULATE CEMENT TO SURFACE ON ANY CONDUCTOR OR SURFACE CASING

#### HYDRAULIC FRACTURING

7/17/2018 - G71 - OCC 165:10-3-10 REQUIRES:

1) PRIOR TO COMMENCEMENT OF HYDRAULIC FRACTURING OPERATIONS FOR HORIZONTAL WELLS, NOTICE GIVEN FIVE BUSINESS DAYS IN ADVANCE TO OFFSET OPERATORS WITH WELLS COMPLETED IN THE SAME COMMON SOURCE OF SUPPLY WITHIN 1/2 MILE;

2) WITH NOTICE ALSO GIVEN 48 HOURS IN ADVANCE OF HYDRAULIC FRACTURING ALL WELLS TO BOTH THE OCC CENTRAL OFFICE AND LOCAL DISTRICT OFFICES, USING THE "FRAC NOTICE FORM" FOUND AT THE FOLLOWING LINK: [OCCEWEB.COM/OG/OGFORMS.HTML](http://OCCEWEB.COM/OG/OGFORMS.HTML); AND,

3) THE CHEMICAL DISCLOSURE OF HYDRAULIC FRACTURING INGREDIENTS FOR ALL WELLS TO BE REPORTED TO FRACFOCUS WITHIN 60 DAYS AFTER THE CONCLUSION THE HYDRAULIC FRACTURING OPERATIONS, USING THE FOLLOWING LINK: [FRACFOCUS.ORG](http://FRACFOCUS.ORG)

#### MEMO

7/17/2018 - G71 - PITS 1 & 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, PIT 2 - OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT

#### PENDING CD - 201802398

7/23/2018 - G58 - 31-7N-3W  
X680031 WDFD  
5 WELLS  
NO OP. NAMED  
REC 6/6/2018 (M. PORTER)

This permit does not address the right of entry or settlement of surface damages.

087 22163 KATMANDU 4-31H

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.

Category	Description
SPACING - 680031	<p>7/23/2018 - G58 - (640)(HOR) 31-7N-3W</p> <p>VAC OTHERS</p> <p>EXT 651990 WDFD, OTHER</p> <p>COMPL. INT. NLT 165' FNL &amp; FSL, NLT 330' FEL &amp; FWL</p> <p>(EXIST CONCURRENTLY WITH NON-HORIZONTAL DRILLING AND SPACING UNITS)</p>

# TOPOGRAPHIC LAND SURVEYORS OF OKLAHOMA

13800 WIRELESS WAY, OKLA. CITY, OKLA. 73134 \* LOCAL (405) 843-4847 \* OUT OF STATE (800) 654-3219

Certificate of Authorization No. 1293 LS

MCCLAIN

County, Oklahoma

087-22163

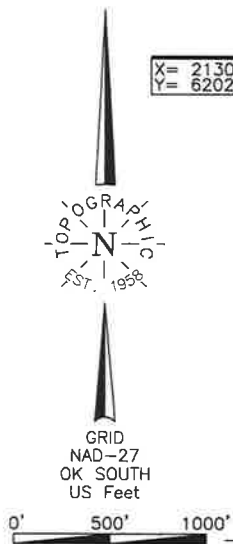
265' FSL - 945' FEL Section 31 Township 7N Range 3W I.M.

X= 2130391  
Y= 622884

X= 2132916  
Y= 622899

X= 2135560  
Y= 622915

NOTE:  
The information shown herein is for  
construction purposes ONLY.



X= 2130397  
Y= 620236

X= 2135563  
Y= 620267

X= 2130403  
Y= 617587

X= 2135566  
Y= 617619

LANDING POINT, BOTTOM HOLE, AND DRILL PATH INFORMATION  
PROVIDED BY OPERATOR LISTED, NOT SURVEYED.

Operator: ECHO E&P LLC.

Lease Name: KATMANDU

Well No.: 4-31H

**ELEVATION:**

1180' Gr. at level pad

Topography & Vegetation Loc. fell on level pad under construction

Good Drill Site? Yes Reference Stakes or Alternate Location  
Stakes Set None

Best Accessibility to Location From South off county road.

Distance & Direction

from Hwy Jct or Town From Jct. of St. Hwy. 39 and St. Hwy. 59, go ±1.0 mi, North, then ±1.0 mi. East  
to the SE Cor. of Sec. 31-T7N-R3W.

Date of Drawing: Jun. 20, 2018

Invoice # 295473C Date Staked: Jun. 19, 2018

AC

This information was  
gathered with a GPS receiver  
with ±1 foot Horiz./Vert. accuracy.

DATUM: NAD-27  
LAT: 35°01'49.3"N  
LONG: 97°33'01.2"W  
LAT: 35.030361965°N  
LONG: 97.550343597°W  
STATE PLANE  
COORDINATES: (US Feet)  
ZONE: OK SOUTH  
X: 2134621  
Y: 617878

## CERTIFICATE:

I, Dan W. Rogers an Oklahoma Licensed Land  
Surveyor and an authorized agent of Topographic Land  
Surveyors of Oklahoma, do hereby certify to the  
information shown herein

*Dan W Rogers*

Oklahoma Lic. No. 1200

