

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

API NUMBER: 087 22164

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 WEST

SECTION LINES: 250 790

Lease Name: KATMANDU

Well No: 5-31H

Well will be 250 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

MERCER FAMILY TRUST
20538 SH 76
BLANCHARD OK 73010

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: 1208

Surface Casing: 1500

Depth to base of Treatable Water-Bearing FM: 220

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 BED AQUIFER

Pit Location Formation: DUNCAN

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

PERMIT NO: 18-34930

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 BED AQUIFER

Pit Location Formation: DUNCAN

HORIZONTAL HOLE 1

Sec 31 Twp 7N Rge 3W County MCCLAIN

Spot Location of End Point: NW NE NW NW

Feet From: NORTH 1/4 Section Line: 165

Feet From: WEST 1/4 Section Line: 882

Depth of Deviation: 9500

Radius of Turn: 775

Direction: 2

Total Length: 4283

Measured Total Depth: 15000

True Vertical Depth: 9750

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

Notes:

Category

Description

DEEP SURFACE CASING

7/18/2018 - 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

7/18/2018 - 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; 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

MEMO

7/18/2018 - 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 22164 KATMANDU 5-31H

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 & FSL, NLT 330' FEL & FWL</p> <p>(EXIST CONCURRENTLY WITH NON-HORIZONTAL DRILLING AND SPACING UNITS)</p>

087-22164

A topographic map showing a small area. At the top is a north arrow pointing upwards. Below the arrow is a circular compass rose with the letter 'N' in the center. The words 'TOPOGRAPHIC' are written around the top half of the circle, and 'FST. 1958' is written around the bottom half. Below the compass rose is another north arrow pointing upwards. Below the second arrow is the text 'GRID NAD-27 OK SOUTH US Feet'. At the bottom is a scale bar with markings for 0', 500', and 1000'.

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

DATUM: NAD-27
 LAT: 35°01'49.1"N
 LONG: 97°33'42.5"W
 LAT: 35.030303152°N
 LONG: 97.561794848°W
 STATE PLANE
 COORDINATES: (US Feet)
 ZONE: OK SOUTH
 X: 2131192
 Y: 617841