

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

API NUMBER: 011 24078

Approval Date: 08/27/2018

Expiration Date: 02/27/2019

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 36 Twp: 16N Rge: 10W

County: BLAINE

SPOT LOCATION: ☐ NW ☐ NW ☐ SE ☐ SE

FEET FROM QUARTER: FROM SOUTH FROM EAST

SECTION LINES: 1000 1230

Lease Name: MORNING THUNDER 36-16N-10W

Well No: 2H

Well will be 1000 feet from nearest unit or lease boundary.

Operator Name: DEVON ENERGY PRODUCTION CO LP

Telephone: 4052353611; 4052353

OTC/OCC Number: 20751 0

DEVON ENERGY PRODUCTION CO LP
333 W SHERIDAN AVE
OKLAHOMA CITY, OK 73102-5015

COMMISSIONERS OF THE LAND OFFICE
204 N. ROBINSON, SUITE 900
OKLAHOMA CITY OK 73102

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

Name	Depth	Name	Depth
1 MISSISSIPPI SOLID	9759	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: 635274

Location Exception Orders:

Increased Density Orders: 681805

Pending CD Numbers: 201804942

Special Orders:

Total Depth: 14204

Ground Elevation: 1240

Surface Casing: 1999

Depth to base of Treatable Water-Bearing FM: 40

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: 8000 Average: 5000

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 not located in a Hydrologically Sensitive Area.

Category of Pit: C

Liner not required for Category: C

Pit Location is NON HSA

Pit Location Formation: FLOWERPOT

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

PERMIT NO: 18-34904

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 not located in a Hydrologically Sensitive Area.

Category of Pit: C

Liner not required for Category: C

Pit Location is NON HSA

Pit Location Formation: FLOWERPOT

HORIZONTAL HOLE 1

Sec 36 Twp 16N Rge 10W County BLAINE

Spot Location of End Point: NE NE NE NW

Feet From: NORTH 1/4 Section Line: 50

Feet From: WEST 1/4 Section Line: 2537

Depth of Deviation: 9441

Radius of Turn: 477

Direction: 341

Total Length: 4014

Measured Total Depth: 14204

True Vertical Depth: 9919

End Point Location from Lease,
Unit, or Property Line: 50

Notes:

Category	Description
DEEP SURFACE CASING	8/9/2018 - G71 - APPROVED; NOTIFY OCC FIELD INSPECTOR IMMEDIATELY FOR ANY LOSS OF CIRCULATION OR FAILURE TO CIRCULATE CEMENT TO SURFACE ON CONDUCTOR OR SURFACE CASING
HYDRAULIC FRACTURING	8/9/2018 - 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
INCREASED DENSITY - 681805	8/24/2018 - G75 - 36-16N-10W X635274 MSSSD 4 WELLS DEVON ENERGY PROD. CO., L.P. 8-21-2018
INTERMEDIATE CASING	8/9/2018 - G71 - DUE TO THE KNOWN POTENTIAL RISK OF ENCOUNTERING AN OVER-PRESSURED ZONE IN THE MORROW SERIES IN THIS AREA, THE TECHNICAL MANAGER RECOMMENDS SETTING AN INTERMEDIATE STRING OF CASING IMMEDIATELY ABOVE THE MORROW SERIES

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011 24078 MORNING THUNDER 36-16N-10W
2H

Category	Description
MEMO	8/9/2018 - G71 - PIT 1 & 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST; PIT 2 - OBM TO VENDOR, OBM CUTTINGS PER DISTRICT
PENDING CD - 201804942	8/24/2018 - G75 - (I.O.) 36-16N-10W X635274 MSSSD X165:10-3-28(C)(2)(B) MAY BE CLOSER THAN 600' TO EXISTING/PROPOSED WELL COMPL. INT. NCT 165' FSL, NCT 165' FNL, NCT 660' FWL NO OP. NAMED REC 7-17-2018 (MILLER)
SPACING - 635274	8/24/2018 - G75 - (640)(HOR) 36-16N-10W VAC 168134/169097 MSSSD, OTHER SW4 EST MSSSD, OTHERS POE TO BHL NCT 660' FB (COEXIST SP. ORDER # 168134/169097 MSSSD N2 & SE4)

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