

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

API NUMBER: 011 24077

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 1170

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

Well No: 4H

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	9703	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: 635274

Location Exception Orders:

Increased Density Orders: 681805

Pending CD Numbers: 201804944

Special Orders:

Total Depth: 13922

Ground Elevation: 1241

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: 18-34905

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: NW NE NE NE

Feet From: NORTH 1/4 Section Line: 50

Feet From: EAST 1/4 Section Line: 630

Depth of Deviation: 9390

Radius of Turn: 477

Direction: 7

Total Length: 3783

Measured Total Depth: 13922

True Vertical Depth: 9868

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

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.

011 24077 MORNING THUNDER 36-16N-10W
4H

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 - 201804944	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 330' FEL 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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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.

OPERATOR:DEVON ENERGY PRODUCTION COMPANY, L.P.

LEASE NAME:MORNING THUNDER 36-16N-10W

WELL NO. 4H

GOOD DRILL SITE:YES

BLAINE COUNTY, STATE:OK

GROUND ELEVATION:1240.62' GR. AT STAKE

SURFACE HOLE FOOTAGE:1170' FEL - 1000' FSL

SECTION: 36 **TOWNSHIP:**T16N **RANGE:**R10W

BOTTOM HOLE:36-T16N-R10W,I.M.

ACCESSIBILITY TO LOCATION:FROM EAST LINE

TOPOGRAPHY & VEGETATION:

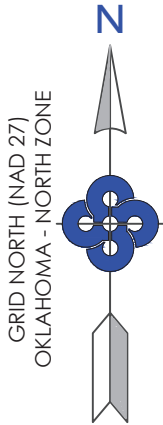
LOCATION FELL IN A FIELD

DISTANCE & DIRECTION FROM HWY JCT OR TOWN:
AT THE JCT. OF HWY 281 & HWY 3 GO EAST ON HWY 33,
12 MILES, SOUTH 1.7 MILES ON N2690 RD TO LEASE RD.

PLEASE NOTE THAT THIS LOCATION WAS STAKED ON THE GROUND UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL LAND SURVEYOR, BUT ACCURACY OF THIS EXHIBIT IS NOT GUARANTEED. PLEASE CONTACT CRAFTON TULL PROMPTLY IF ANY INCONSISTENCY IS DETERMINED, GPS DATA IS OBSERVED FROM RTK-GPS.
NOTE:X AND Y DATA SHOWN HEREON FOR SECTION CORNERS MAY NOT HAVE BEEN SURVEYED ON THE GROUND, AND FURTHER, DOES NOT REPRESENT A TRUE BOUNDARY SURVEY.
QUARTER SECTION DISTANCES MAY BE ASSUMED FROM A GOVERNMENT SURVEY PLAT OR ASSUMED AT A PROPORTIONATE DISTANCE FROM OPPOSING SECTION CORNERS, OR OCCUPATION THEREOF, AND MAY NOT HAVE BEEN MEASURED ON THE GROUND, AND FURTHER, DOES NOT REPRESENT A TRUE BOUNDARY SURVEY.

API 011-24077

BLAINE COUNTY, OKLAHOMA
1170' FEL - 1000' FSL SECTION 36 TOWNSHIP 16N RANGE 10W I.M.



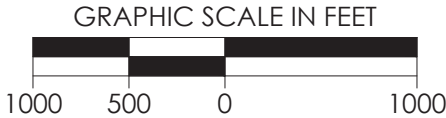
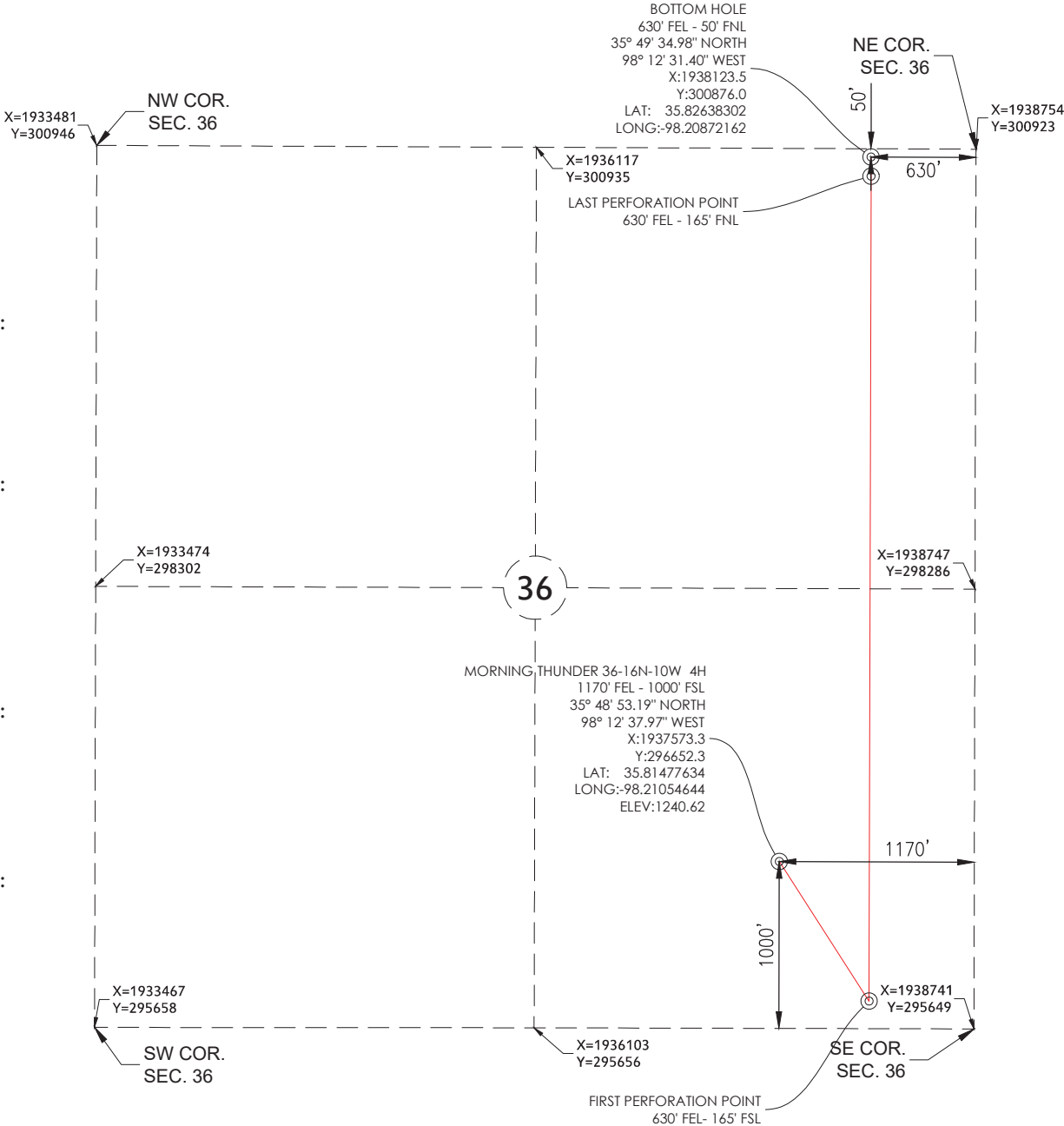
SURFACE HOLE DATA
STATE PLANE COORDINATES:
ZONE: OK-NORTH NAD27
X: 1937573.3
Y: 296652.3
GPS DATUM: NAD27
LAT: 35.81477634
LONG: -98.21054644


STATE PLANE COORDINATES:
ZONE: OK-NORTH NAD83
X: 1905973.7
Y: 296676.0
GPS DATUM: NAD83
LAT: 35.81481926
LONG: -98.21088744

BOTTOM HOLE DATA
STATE PLANE COORDINATES:
ZONE: OK-NORTH NAD27
X: 1938123.5
Y: 300876.0
GPS DATUM: NAD27
LAT: 35.82638302
LONG: -98.20872162

STATE PLANE COORDINATES:
ZONE: OK-NORTH NAD83
X: 1906523.8
Y: 300899.7
GPS DATUM: NAD83
LAT: 35.82642562
LONG: -98.20906277

BOTTOM HOLE
INFORMATION PROVIDED
BY OPERATOR LISTED.



REVISION		"MORNING THUNDER 36-16N-10W 4H"		<div> devon</div>
		PART OF THE SE/4 OF SECTION 36, T-16-N, R-10-W PROPOSED DRILL SITE BLAINE COUNTY, OKLAHOMA		
		SCALE: 1" = 1000'		
		PLOT DATE: 08-01-2018	DRAWN BY: JJ	SHEET NO.: 1 OF 6