

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

API NUMBER: 073 25468

Approval Date: 12/14/2016
Expiration Date: 06/14/2017

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 30 Twp: 15N Rge: 9W County: KINGFISHER
SPOT LOCATION: SE NW NW NW FEET FROM QUARTER: FROM NORTH FROM WEST
SECTION LINES: 374 506

Lease Name: THUNDER-ROTHER 30-15N-9W Well No: 1H Well will be 374 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 73102-5010

EDWARD H. ROTHER
225 S. 4TH ST.
OKARCHE OK 73762

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

Name	Depth	Name	Depth
1 MISSISSIPPIAN	9360	6	
2 WOODFORD	10790	7	
3		8	
4		9	
5		10	

Spacing Orders: 657910

Location Exception Orders: 658781

Increased Density Orders:

Pending CD Numbers:

Special Orders:

Total Depth: 14989

Ground Elevation: 1297

Surface Casing: 1999

Depth to base of Treatable Water-Bearing FM: 470

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: BLAINE

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

PERMIT NO: 16-31919

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: BLAINE

HORIZONTAL HOLE 1

Sec 30 Twp 15N Rge 9W County KINGFISHER

Spot Location of End Point: SE SW SW SW

Feet From: SOUTH 1/4 Section Line: 50

Feet From: WEST 1/4 Section Line: 380

Depth of Deviation: 9872

Radius of Turn: 477

Direction: 182

Total Length: 4367

Measured Total Depth: 14989

True Vertical Depth: 10790

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

Notes:

Category

Description

COMPLETION INTERVAL

12/14/2016 - G64 - WILL BE GREATER THAN 165' FNL, 165' FSL, 330' FWL PER STAKING PLAT

DEEP SURFACE CASING

12/14/2016 - 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

12/12/2016 - G71 - OCC 165:10-3-10 REQUIRES: 1) THE CHEMICAL DISCLOSURE OF HYDRAULIC FRACTURING INGREDIENTS FOR ALL WELLS BE REPORTED TO FRACFOCUS USING THE FOLLOWING LINK [HTTP://FRACFOCUS.ORG/](http://fracfocus.org/) WITH NOTICE GIVEN 48 HOURS IN ADVANCE OF FRACTURING TO THE LOCAL OCC DISTRICT OFFICE; AND, 2) PRIOR TO COMMENCEMENT OF FRACTURING OPERATIONS FOR HORIZONTAL WELLS, NOTICE ALSO GIVEN FIVE BUSINESS DAYS IN ADVANCE TO OFFSET OPERATORS WITH WELLS COMPLETED IN THE SAME COMMON SOURCE OF SUPPLY WITHIN 1/2 MILE.

INTERMEDIATE CASING

12/12/2016 - 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

LOCATION EXCEPTION - 658781

12/13/2016 - G64 - (I.O.) 30-15N-9W
X657910 MSSP, WDFD
COMPL. INT. NCT 165' FNL, NCT 165' FSL, NCT 330' FWL
DEVON ENERGY PRODUCTION COMPANY, L.P.
12-12-2016

MEMO

12/12/2016 - G71 - PITS 1 & 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, PIT 2 - OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT

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.

Category

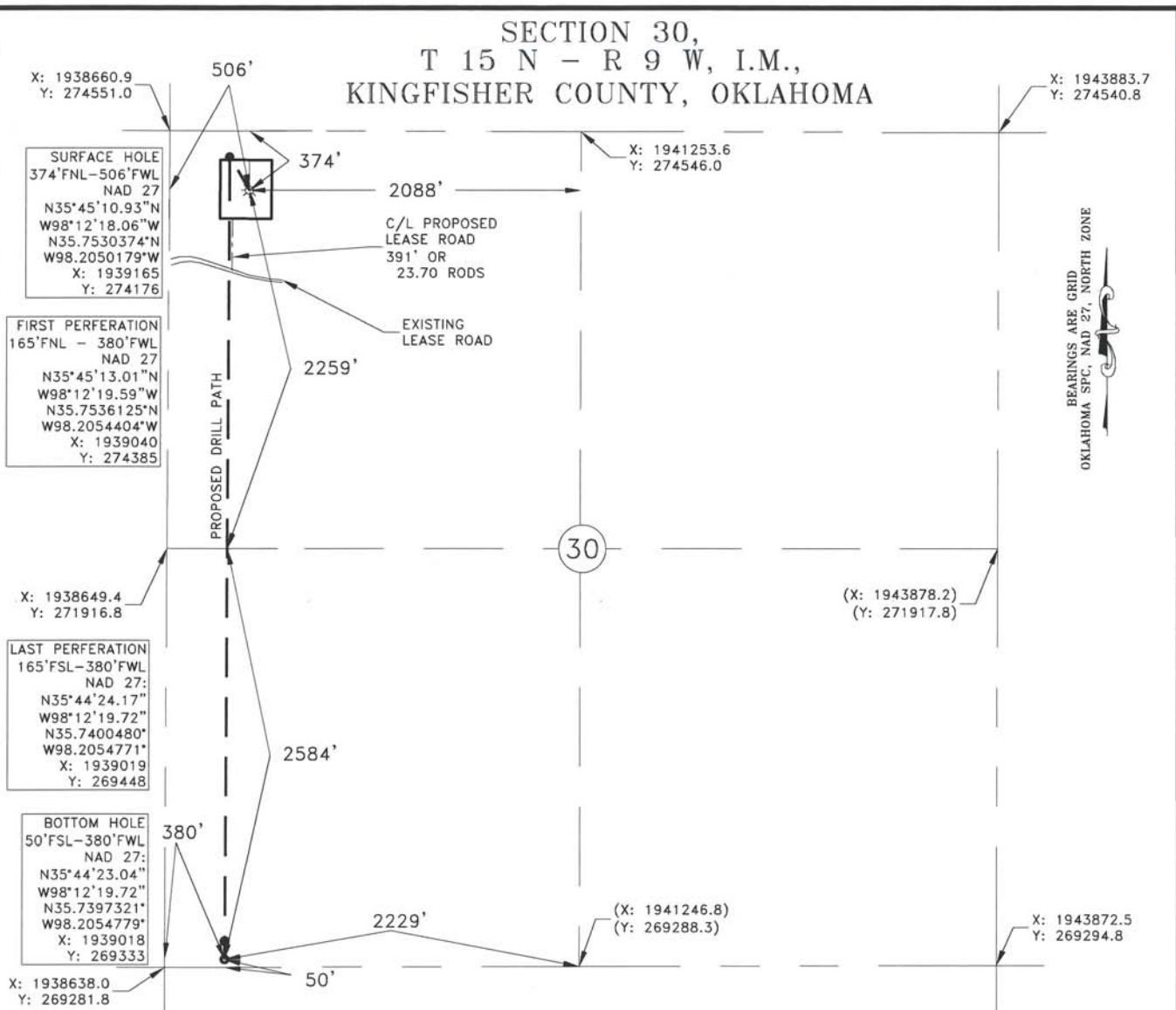
Description

SPACING - 657910

12/13/2016 - G64 - (640)(HOR) 30-15N-9W
EXT 649977 MSSP, WDFD
POE TO BHL (MSSP) NCT 660' FB
POE TO BHL (WDFD) NCT 165' FNL & FSL, NCT 330' FEL & FWL
(COEXIST SP. ORDER 176175 MCSTR, MNNG, MSSSD)

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

SECTION 30,
T 15 N - R 9 W, I.M.,
KINGFISHER COUNTY, OKLAHOMA



BEARINGS ARE GRID
OKLAHOMA SFC, NAD 27, NORTH ZONE

SURFACE HOLE
374'FNL-506'FWL
NAD 27
N35°45'10.93"N
W98°12'18.06"W
N35.7530374°N
W98.2050179°W
X: 1939165
Y: 274176

FIRST PERFORATION
165'FNL - 380'FWL
NAD 27
N35°45'13.01"N
W98°12'19.59"W
N35.7536125°N
W98.2054404°W
X: 1939040
Y: 274385

LAST PERFORATION
165'FSL-380'FWL
NAD 27:
N35°44'24.17"
W98°12'19.72"
N35.7400480°
W98.2054771°
X: 1939019
Y: 269448

BOTTOM HOLE
50'FSL-380'FWL
NAD 27:
N35°44'23.04"
W98°12'19.72"
N35.7397321°
W98.2054779°
X: 1939018
Y: 269333

Operator: DEVON ENERGY PRODUCTION COMPANY, LP. Date Staked: 10/21/16
Lease Name: THUNDER-ROTHER 30-15N-9W Well No.: 1H Elevation: 1297'
Topography and Vegetation: PASTURE
Good Drill Site? YES Reference or Alt. Location Stakes Set: NONE
Best Accessibility to Location: FROM LEASE ROAD
Distance and Direction from Hwy. Jct. or town: FROM ALTONA, GO SOUTH ON CO. RD. N2710, 2 MILES, TURN WEST ON CO. RD. E0870, 1 MILE, CONTINUE WESTERLY ON LEASE ROAD 1.3 MILES, TURN NORTH INTO LOCATION.

LEGEND

- SURFACE HOLE LOCATION =
- PROPOSED BOTTOM HOLE LOCATION = (INFORMATION PROVIDED BY CLIENT)
- EXISTING WELL = (INFORMATION PROVIDED BY OTHERS)
- PROPOSED LATERAL =

Devon Energy Production Company, LP.
333 W. Sheridan
Oklahoma City, OK 73102

Gateway
Gateway Services Group, LLC

PO. BOX 960
MEEKER, OK 74855
OFF. (405) 273-0954
FAX (405) 273-0580
C.A. NO. 4091 (LS)
EXP. DATE 6-30-2018

J. Wyatt Bishop
12.12.16
1649

LICENSED PROFESSIONAL LAND SURVEYOR
OKLAHOMA

EXHIBIT "A" PRELIMINARY
THUNDER-ROTHER 30-15N-9W 1H
374'FNL - 506'FWL
SECTION 30, T 15 N - R 9 W, I.M.,
KINGFISHER COUNTY, OKLAHOMA

DRAWN BY: RLG	DATE: 10/27/16	CHK'D: ASD	
GATEWAY NO.: 16-0654-001 R2	SCALE: 1"=1000'		
W.B.S. NO.: XX-120639.01			
REV.	DWN.	DESCRIPTION	DATE
1	CLC	NAME CHANGE	11/18/16
2	RLG	LIST ADDTN'L COORDINATES	12/12/16

J. Wyatt Bishop
J. WYATT BISHOP
OKLAHOMA L.P.L.S. NO.: 1649
DATE: 12.12.16

NOTES:
This plat represents a proposed well site and does not represent a true boundary survey. This location has been very carefully staked on the ground according to the latest G.L.O. records, U.S.G.S. maps and photographs available to us, but its accuracy is not guaranteed. Review this plat and notify Gateway Services Group, LLC immediately of any possible discrepancy.
Coordinates shown in (parentheses) are based upon local occupation and improvements or calculated per proportional measurement and/or G.L.O. record distance.