

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

API NUMBER: 043 23596

Approval Date: 02/13/2018

Expiration Date: 08/13/2018

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 06 Twp: 19N Rge: 16W

County: DEWEY

SPOT LOCATION: ☐ NE ☐ SW ☐ SE ☐ SE

FEET FROM QUARTER: FROM SOUTH FROM EAST

SECTION LINES: 440 985

Lease Name: MERCURY 6\_31-19N-16W

Well No: 1HX

Well will be 440 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

SANDER FAMILY LLC  
226465 E. 590 ROAD  
SEILING OK 73663

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

	Name	Depth	Name	Depth
1	MISSISSIPPIAN	9993	6	
2	WOODFORD	11015	7	
3			8	
4			9	
5			10	

Spacing Orders: 672241

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201708176  
201801098  
201801099

Special Orders:

Total Depth: 19791

Ground Elevation: 1768

**Surface Casing: 1500**

Depth to base of Treatable Water-Bearing FM: 100

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 located in a Hydrologically Sensitive Area.

Category of Pit: C

Liner not required for Category: C

Pit Location is BED AQUIFER

Pit Location Formation: RUSH SPRINGS

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

PERMIT NO: 18-33725

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: RUSH SPRINGS

## HORIZONTAL HOLE 1

Sec 31 Twp 20N Rge 16W County MAJOR

Spot Location of End Point: NW NE NE NE

Feet From: NORTH 1/4 Section Line: 50

Feet From: EAST 1/4 Section Line: 380

Depth of Deviation: 9010

Radius of Turn: 413

Direction: 5

Total Length: 10133

Measured Total Depth: 19791

True Vertical Depth: 11075

End Point Location from Lease,  
Unit, or Property Line: 0

### Notes:

#### Category

#### Description

#### DEEP SURFACE CASING

2/1/2018 - 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

2/1/2018 - 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)

#### INTERMEDIATE CASING

2/1/2018 - 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

#### MEMO

2/1/2018 - 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.

043 23596 MERCURY 6\_31-19N-16W 1HX

Category	Description
PENDING CD - 201708176	2/7/2018 - G58 - (640)(HOR) 6-19N-16W EST OTHER EXT 66109 MSSP, WDFD COMPL. INT. (MSSP) NCT 660' FB COMPL. INT. (WDFD) NCT 165' FNL & FSL, NCT 330' FEL & FWL (COEXIST SP. ORDER 209346 CSTR, MSSSD) REC 1/2/2018 (MILLER)
PENDING CD - 201801098	2/7/2018 - G58 - (E.O.) 6-19N-16W & 31-20N-16W EST MULTIUNIT HORIZONTAL WELL X201708176 MSSP, WDFD (6-19N-16W) X672241 MSSP, WDFD (31-20N-16W) (WDFD ADJACENT COMMON SOURCE OF SUPPLY TO MSSP) 50% 6-19N-16W 50% 31-20N-16W NO OP. NAMED REC 2/12/2018 (NORRIS)
PENDING CD - 201801099	2/7/2018 - G58 - (E.O.) 6-19N-16W & 31-20N-16W X201708176 MSSP, WDFD (6-19N-16W) X672241 MSSP, WDFD (31-20N-16W) COMPL. INT. (6-19N-16W) NCT 165' FSL, NCT 0' FNL, NCT 330' FEL COMPL. INT. (31-20N-16W) NCT 0' FSL, NCT 165' FNL, NCT 330' FEL NO OP. NAMED REC 2/12/2018 (NORRIS)
SPACING - 672241	2/7/2018 - G58 - (640)(HOR) 31-20N-16W EST OTHER EXT 666109 MSSP, WDFD COMPL. INT. (MSSP) NCT 660' FB COMPL. INT. (WDFD) NCT 165' FNL & FSL, NCT 330' FEL & FWL (COEXIST SP. ORDER 52348 CRLM)

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

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043-23596

OPERATOR: DEVON ENERGY PRODUCTION COMPANY, L.P.

LEASE NAME: MERCURY 6\_31-19N-16W

WELL NO. 1HX

GOOD DRILL SITE: YES

DEWEY COUNTY, STATE: OK

GROUND ELEVATION: 1768.41' GR. AT STAKE

SURFACE HOLE FOOTAGE: 985' FEL - 440' FSL

SECTION: 6 TOWNSHIP: 19N RANGE: R16W

BOTTOM HOLE: 31-T20N-R16W, I.M.

ACCESSIBILITY TO LOCATION: FROM SOUTH LINE

TOPOGRAPHY & VEGETATION:

LOCATION: FEL IN A FIELD

DISTANCE & DIRECTION FROM HWY JCT OR TOWN:

AT THE JCT. OF US-270 AND US-60, WEST 1 MI., JUST

ACROSS SEILING CREEK, ENTRANCE IS ON THE NORTH SIDE OF US-60

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 CRAFTER TULL PROMPTLY IF ANY INCONSISTENCY IS DETERMINED. GPS DATA IS OBSERVED FROM RTK-GPS.

NOTES: 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.

#### SURFACE HOLE DATA

STATE PLANE COORDINATES:

ZONE: OK-NORTH NAD27

X: 1722021.7

Y: 418351.4

GPS DATUM: NAD27

LAT: 36.14558827

LONG: -98.94148984

STATE PLANE COORDINATES:

ZONE: OK-NORTH NAD83

X: 1690418.3

Y: 418377.9

GPS DATUM: NAD83

LAT: 36.14562847

LONG: -98.94186299

#### BOTTOM HOLE DATA

STATE PLANE COORDINATES:

ZONE: OK-NORTH NAD27

X: 1722712.8

Y: 428319.1

GPS DATUM: NAD27

LAT: 36.17298781

LONG: -98.93947601

STATE PLANE COORDINATES:

ZONE: OK-NORTH NAD83

X: 1691109.4

Y: 428345.7

GPS DATUM: NAD83

LAT: 36.17302751

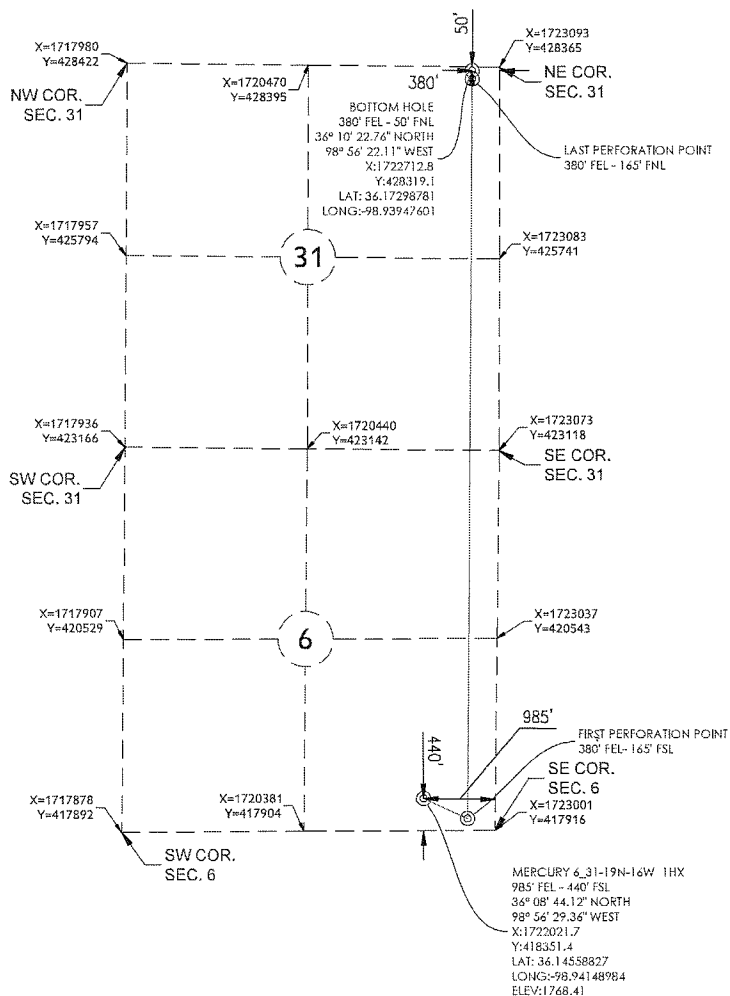
LONG: -98.93984902

BOTTOM HOLE  
INFORMATION PROVIDED  
BY OPERATOR LISTED.

2018.01.03 09:23:15-06'00'



DEWEY COUNTY, OKLAHOMA  
985' FEL - 440' FSL SECTION 6 TOWNSHIP 19N RANGE 16W I.M.



GRAPHIC SCALE IN FEET



REVISION		"MERCURY 6_31-19N-16W 1HX"	
R1	LATERAL SHIFT	PART OF THE SE/4 OF SECTION 6, T-19-N, R-16-W PROPOSED DRILL SITE DEWEY COUNTY, OKLAHOMA	
R2	SHL SHIFT		
		SCALE: 1" = 2000'	devon
		PLOT DATE: 01-03-2018	
		DRAWN BY: DW	SHEET NO.: 1 OF 6