

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

API NUMBER: 093 25225

Approval Date: 05/02/2019

Expiration Date: 11/02/2020

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 18 Twp: 20N Rge: 14W County: MAJOR

SPOT LOCATION: FEET FROM QUARTER: FROM NORTH FROM WEST

SECTION LINES: 265 2210

Lease Name: HARLEY 2014 Well No: 2-18H Well will be 265 feet from nearest unit or lease boundary.

Operator Name: SANDRIDGE EXPLORATION & PRODUCTION LLC

Telephone: 4054295610

OTC/OCC Number: 22281 0

SANDRIDGE EXPLORATION & PRODUCTION LLC
123 ROBERT S KERR AVE STE 1702
OKLAHOMA CITY, OK 73102-6406

MICHAEL CURTIS PEMBROOK
52496 S. CR 252
FAIRVIEW OK 73737

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

Name	Depth	Name	Depth
1 MISSISSIPPI SOLID	8887	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: 143398

Location Exception Orders: 691308

Increased Density Orders: 690289

Pending CD Numbers:

Special Orders:

Total Depth: 13393

Ground Elevation: 1776

Surface Casing: 1500

Depth to base of Treatable Water-Bearing FM: 430

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: 10000 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 AP/TE DEPOSIT

Pit Location Formation: TERRACE

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

PERMIT NO: 18-36039

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: 500000 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 AP/TE DEPOSIT

Pit Location Formation: TERRACE

HORIZONTAL HOLE 1

Sec 18 Twp 20N Rge 14W County MAJOR

Spot Location of End Point: S2 S2 S2 S2

Feet From: SOUTH 1/4 Section Line: 150

Feet From: WEST 1/4 Section Line: 2640

Depth of Deviation: 8184

Radius of Turn: 382

Direction: 178

Total Length: 4609

Measured Total Depth: 13393

True Vertical Depth: 8980

End Point Location from Lease,
Unit, or Property Line: 150

Notes:

Category

Description

DEEP SURFACE CASING

5/1/2019 - 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

5/1/2019 - 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 - 690289

5/2/2019 - G56 - 18-20N-14W
143398 MSSSD
4 WELLS
NO OP NAMED
1/24/2019

INTERMEDIATE CASING

5/1/2019 - 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.

093 25225 HARLEY 2014 2-18H

Category	Description
LOCATION EXCEPTION - 691308	5/2/2019 - G56 - (I.O.) 18-20N-14W X143398 MSSSD COMPL INT NCT 150' FNL, NCT 150' FSL, NCT 1320' FWL NO OP NAMED 2/13/2019
MEMO	5/1/2019 - G71 - PITS 1 & 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, PIT 2 - OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT
SPACING - 143398	5/2/2019 - G56 - (640) 18-20N-14W EXT OTHER EXT 87492 MSSSD, OTHERS

TOPOGRAPHIC LAND SURVEYORS OF OKLAHOMA

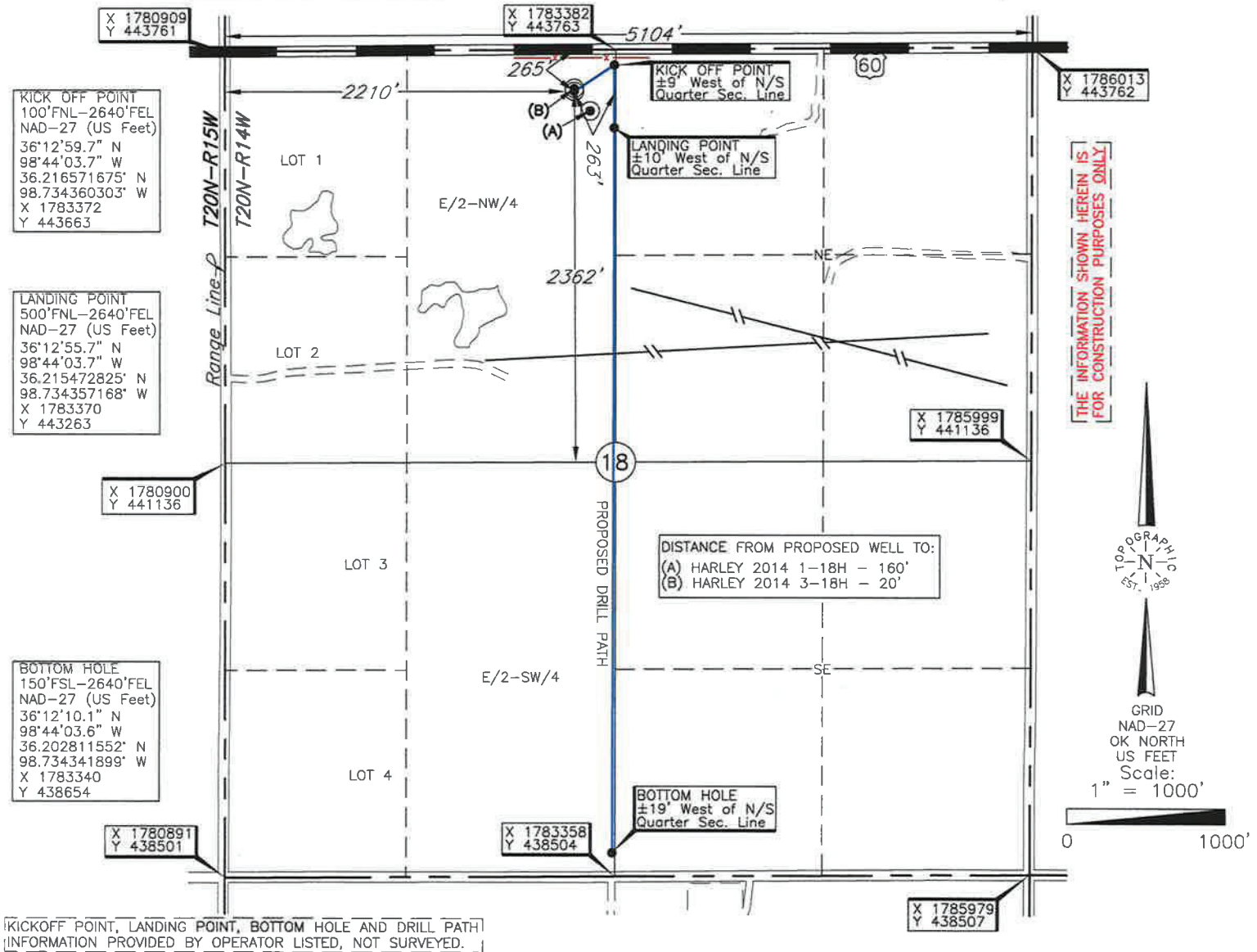
13800 Wireless Way, Okla. City, OK. 73134 (405) 843-4847 * OUT OF STATE (800) 654-3219

Certificate of Authorization No. 1293 LS

MAJOR

County, Oklahoma

265' FNL - 2210' FWL Section 18 Township 20N Range 14W I.M.



KICKOFF POINT, LANDING POINT, BOTTOM HOLE AND DRILL PATH
INFORMATION PROVIDED BY OPERATOR LISTED, NOT SURVEYED.

Operator: SANDRIDGE EXPLORATION & PRODUCTION, LLC

Lease Name: HARLEY 2014

Well No.: 2-18H

ELEVATION:

1776' Gr. at Stake

Topography & Vegetation Loc. fell rolling sandy pasture, ±506' SE of house

Good Drill Site? Yes Reference Stakes or Alternate Location
Stakes Set None

Best Accessibility to Location From North off US Hwy 60

Distance & Direction
from Hwy Jct or Town From Seiling, OK, go ± 4.5 mi. North on US Hwy. 281, then ±10.0 mi. East
on US Hwy. 60 to the NW Cor. of Sec. 18-T20N-R14W

Revision ☒ A

Date of Drawing: Apr. 24, 2019

Project # 123402A Date Staked: Jan. 25, 2018

ST/AC

CERTIFICATE:

I, Thomas L. Howell an Oklahoma Licensed Land
Surveyor and an authorized agent of Topographic Land
Surveyors of Oklahoma, do hereby certify to the
information shown herein

Thomas L. Howell
Oklahoma Lic. No. 1433



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

DATUM: NAD-27
LAT: 36°12'58.0" N
LONG: 98°44'06.8" W
LAT: 36.216112743° N
LONG: 98.735218819° W
STATE PLANE
COORDINATES: (US Feet)
ZONE: OK NORTH
X: 1783118
Y: 443498