

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

API NUMBER: 093 25156

Approval Date: 08/28/2018

Expiration Date: 02/28/2019

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 14 Twp: 20N Rge: 15W County: MAJOR

SPOT LOCATION: ☐ NW ☐ NW ☐ NE ☐ NW FEET FROM QUARTER: FROM NORTH FROM WEST

SECTION LINES: 260 1525

Lease Name: COTTER 2015 Well No: 1-11H2H Well will be 260 feet from nearest unit or lease boundary.

Operator SANDRIDGE EXPLORATION & PRODUCTION LLC  
Name:

Telephone: 4054295610

OTC/OCC Number: 22281 0

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

JAMES L. WARNER  
55283 S. COUNTY RD  
FAIRVIEW OK 73737

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

	Name	Depth	Name	Depth
1	MISSISSIPPI LIME	8910	6	
2	MISS'AN LM	8911	7	
3			8	
4			9	
5			10	

Spacing Orders: 134401  
141045

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201805783  
201805782  
201805781

Special Orders:

Total Depth: 19564 Ground Elevation: 1783 Surface Casing: 1500 Depth to base of Treatable Water-Bearing FM: 450

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: 18-35202

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 AP/TE DEPOSIT

Pit Location Formation: TERRACE

## HORIZONTAL HOLE 1

Sec 02 Twp 20N Rge 15W County MAJOR

Spot Location of End Point: NW NE NW NW

Feet From: NORTH 1/4 Section Line: 150

Feet From: WEST 1/4 Section Line: 880

Depth of Deviation: 8229

Radius of Turn: 477

Direction: 350

Total Length: 10586

Measured Total Depth: 19564

True Vertical Depth: 8946

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

### Notes:

#### Category

#### Description

#### DEEP SURFACE CASING

8/21/2018 - 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

8/21/2018 - 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

8/21/2018 - 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

8/21/2018 - 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.

093 25156 COTTER 2015 1-11H2H

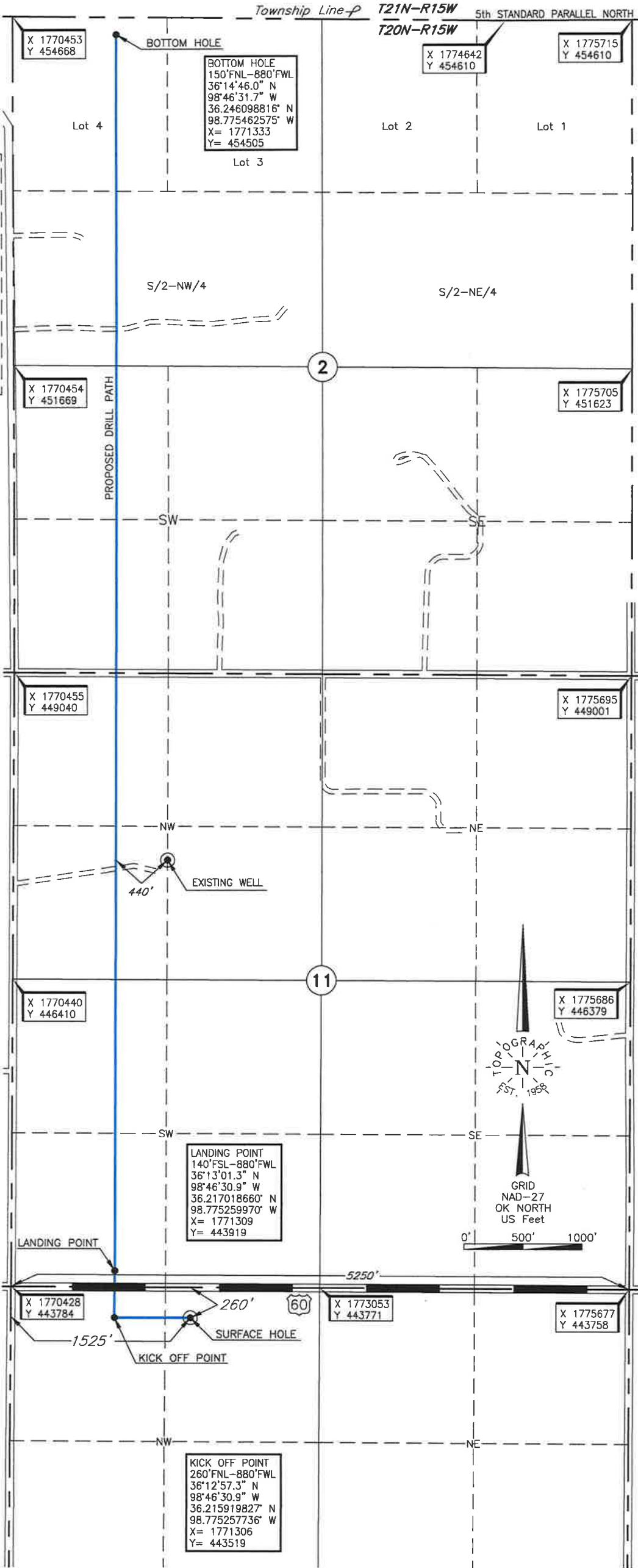
Category	Description
PENDING CD - 201805781	8/28/2018 - G58 - 11-20N-15W X141045 MPLM 1 WELL NO OP. NAMED REC 8/13/2018 (NORRIS)
PENDING CD - 201805782	8/28/2018 - G58 - (I.O.) 2 & 11-20N-15W EST MULTIUNIT HORIZONTAL WELL X134401 MSSLM 2-20N-15W X141045 MPLM 11-20N-15W 50% 2-20N-15W 50% 11-20N-15W NO OP. NAMED REC 8/13/2018 (NORRIS)
PENDING CD - 201805783	8/28/2018 - G58 - (I.O.) 2 & 11-20N-15W X134401 MSSLM 2-20N-15W X141045 MPLM 11-20N-15W COMPL. INT. 2-20N-15W NCT 150' FNL, NCT 0' FSL, NCT 560' FWL COMPL. INT. 11-20N-15W NCT 0' FNL, NCT 150' FSL, NCT 560' FWL NO OP. NAMED REC 8/13/2018 (NORRIS)
SPACING - 134401	8/28/2018 - G58 - (640) 2-20N-15W EXT OTHERS EST MSSLM, OTHERS
SPACING - 141045	8/28/2018 - G58 - (640) 11-20N-15W EXT OTHERS EST MPLM

TOPOGRAPHIC LAND SURVEYORS OF OKLAHOMA

13800 WIRELESS WAY, OKLA. CITY, OKLA. 73134 \* LOCAL (405) 843-4847 \* OUT OF STATE (800) 654-3219  
MAJOR Certificate of Authorization No. 1293 LS County Oklahoma

260' FNL - 1525' FWL Section 14 Township 20N Range 15W 1.M.

093-25156



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

ELEVATION:

1783' Gr. at Stake

NOTE: The information shown herein is for  
construction purposes ONLY.

Operator: SANDRIDGE EXPLORATION & PRODUCTION, LLC  
Lease Name: COTTER 2015

Well No.: 1-11H2H

Topography & Vegetation Loc. fell on rolling pasture

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 Fairview, OK, go  $\pm$ 18 miles West on U.S. Highway 60 to the  
Northwest Corner of Section 14-T20N-R15W.

Date of Drawing: June 27, 2018  
Invoice # 296947 Date Staked: June 22, 2018

CERTIFICATE:

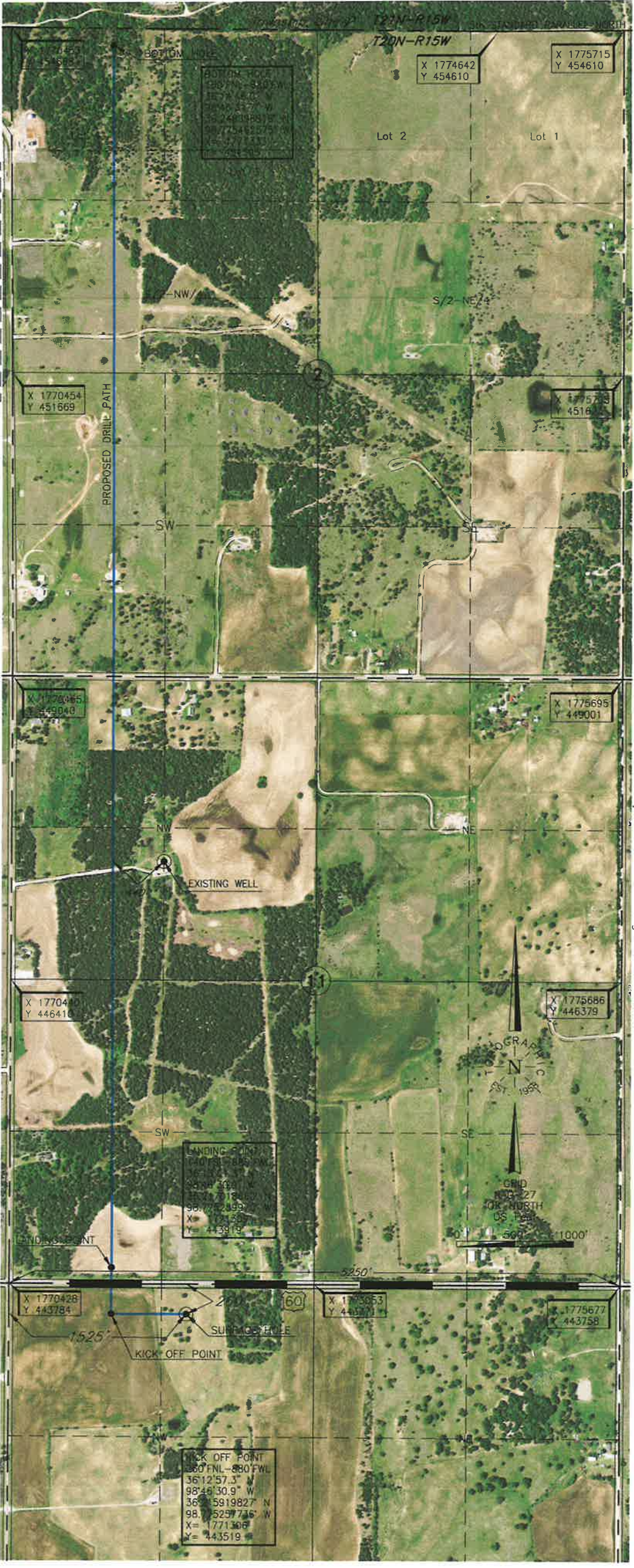
I, Thomas L. Howell, an Oklahoma  
Licensed Land Surveyor and an authorized agent  
of Topographic Land Surveyors of Oklahoma, do  
hereby certify to the information shown herein.

Oklahoma Lic. No. 1433





260'FNL - 1525'FWL Section 14 Township 20N Range 15W I.M.



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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 Fairview, OK, go  $\pm 18$  miles West on U.S. Highway 60 to the  
Northwest Corner of Section 14-T20N-R15W.

DATUM: NAD-27  
LAT: 36°12'57.3" N  
LONG: 98°46'23.1" W  
LAT: 36.215925627° W  
LONG: 98.773071861° W  
STATE PLANE  
COORDINATES: (US Feet)  
ZONE: OK NORTH  
X: 1771951  
Y: 443516

This information was  
gathered with a GPS receiver  
with  $\pm 1$  foot Horiz./Vert. accuracy.

Date of Drawing: June 27, 2018  
Invoice # 296947 Date Staked: June 22, 2018 JP

CERTIFICATE:

I, Thomas L. Howell, on Oklahoma  
Licensed Land Surveyor and an authorized agent  
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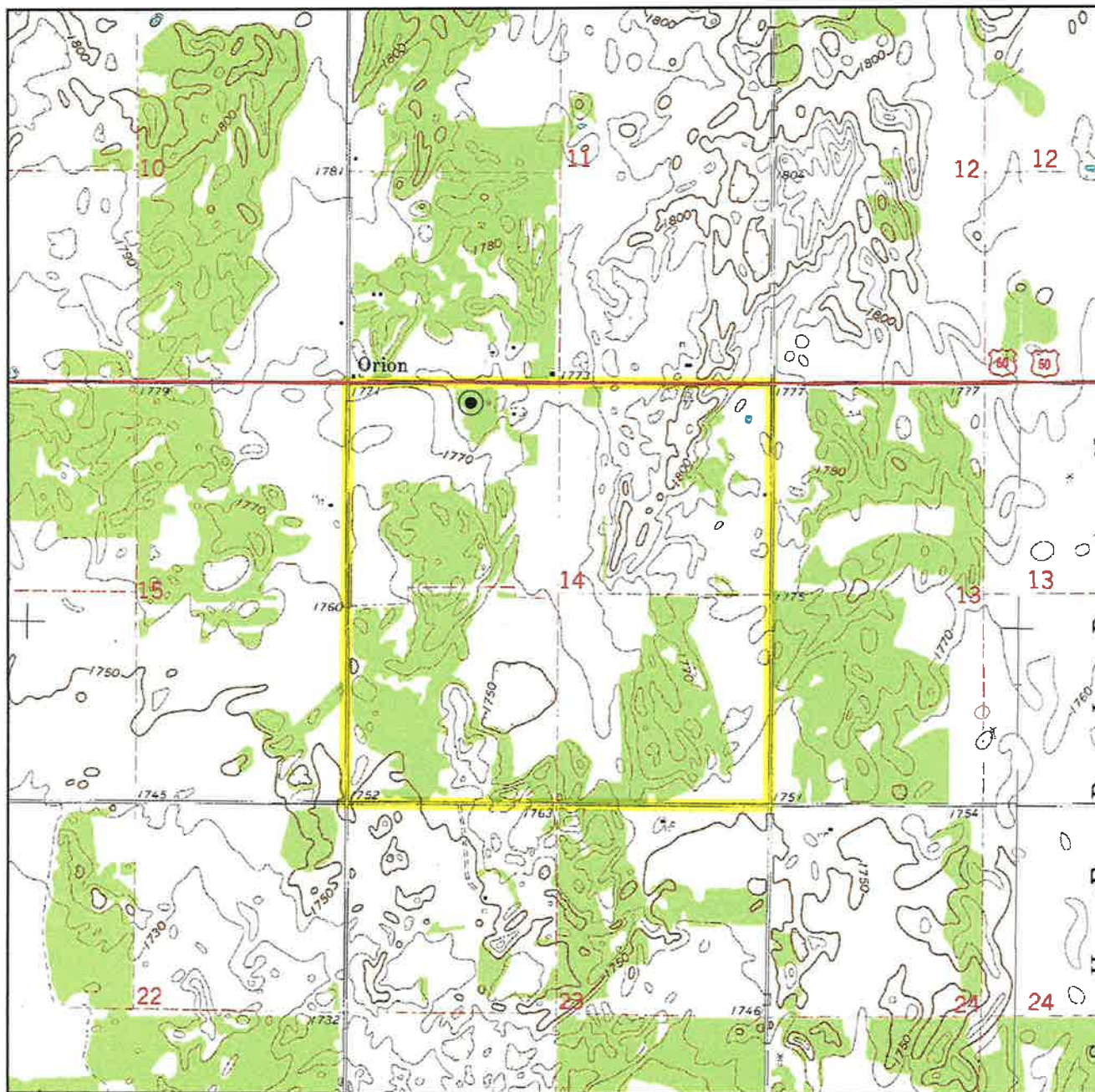




# TOPOGRAPHIC LAND SURVEYORS OF OKLAHOMA

*Surveying and Mapping for the Energy Industry*  
13800 Wireless Way, Oklahoma City, OK 73134 [www.topographic.com](http://www.topographic.com)  
Telephone Numbers: Local (405) 843-4847 Toll Free (800) 654-3219

## LOCATION & ELEVATION VERIFICATION MAP



Sec. 14 Twp. 20N Rng. 15W IM

County MAJOR State OK

Operator SANDRIDGE EXPLORATION & PRODUCTION, LLC

Description 260'FNL - 1525'FWL

Lease COTTER 2015 1-11H2H

Elevation 1783' Gr. at Stake

Above Background Data from  
U.S.G.S. Topographic Map  
Scale: 1"=2000'

Contour Interval 10'

When elevation is shown hereon it is the ground  
elevation of the location stake.  
Review this plat and inform us immediately of  
any possible discrepancy.



**LAND SURVEYORS OF OKLAHOMA**

JUNE 22, 2018



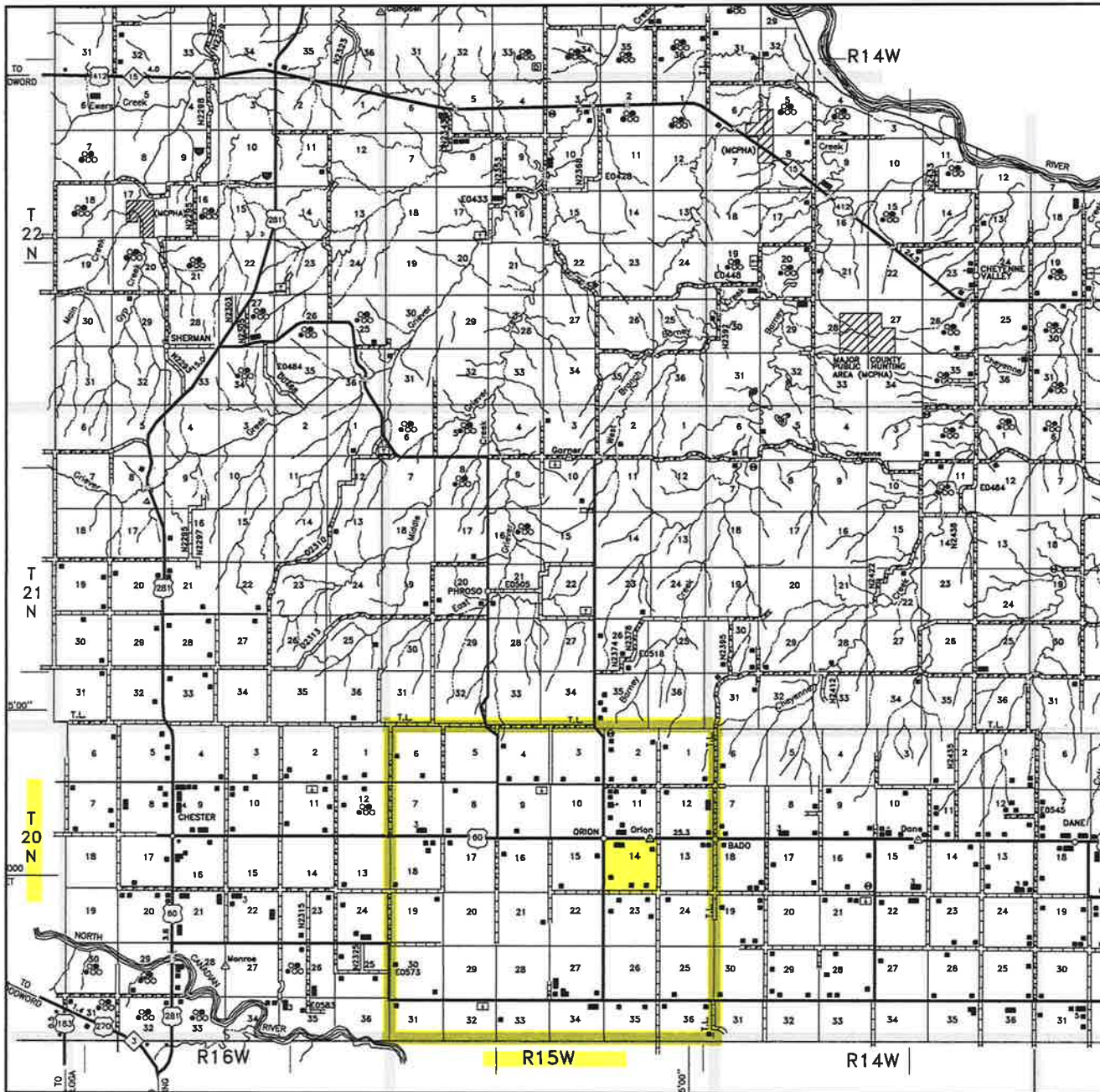
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## VICINITY MAP



Scale: 1" = 3 Miles

Sec. 14 Twp. 20N Rng. 15W IM

County MAJOR State OK

Operator SANDRIDGE EXPLORATION & PRODUCTION, LLC



LAND SURVEYORS OF OKLAHOMA