

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

API NUMBER: 093 25116

Approval Date: 12/28/2017  
Expiration Date: 06/28/2018

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 05 Twp: 20N Rge: 16W County: MAJOR  
SPOT LOCATION: ☐ SE ☐ SW ☐ SW ☐ SW FEET FROM QUARTER: FROM SOUTH FROM WEST  
SECTION LINES: 235 650

Lease Name: KOPPER 2016 Well No: 1-5H Well will be 235 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

ELEANOR JOAN KOPPER TRUST  
2613 NW 153RD ST  
EDMOND OK 73013

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

Name	Depth	Name	Depth
1 MISSISSIPPIAN(MERAMEC-OSAGE)	9009	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: 80604

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201707682

Special Orders:

Total Depth: 14213 Ground Elevation: 1760 Surface Casing: 1500 Depth to base of Treatable Water-Bearing FM: 680

Under Federal Jurisdiction: No Fresh Water Supply Well Drilled: Yes Surface Water used to Drill: No

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

E. Haul to Commercial pit facility: Sec. 33 Twn. 26N Rng. 15W Cnty. 151 Order No: 627651

Is depth to top of ground water greater than 10ft below base of pit? Y

H. SEE MEMO

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

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 05 Twp 20N Rge 16W County MAJOR

Spot Location of End Point: NE NW NW NW

Feet From: NORTH 1/4 Section Line: 150

Feet From: WEST 1/4 Section Line: 430

Depth of Deviation: 8652

Radius of Turn: 800

Direction: 355

Total Length: 4305

Measured Total Depth: 14213

True Vertical Depth: 9059

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

Notes:

Category

Description

DEEP SURFACE CASING

12/5/2017 - 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

12/5/2017 - 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

12/5/2017 - 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

12/5/2017 - 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.

093 25116 KOPPER 2016 1-5H

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
PENDING CD - 201707682	12/28/2017 - G58 - (I.O.) 5-20N-16W X80607 MNMCO COMPL. INT. NCT 150' FNL, NCT 150' FSL, NCT 330' FWL NO OP. NAMED REC 12/11/2017 (THOMAS)
SPACING - 80604	12/28/2017 - G58 - (640) 5-20N-16W EXT OTHERS EXT 76570 MNMCO, OTHERS



# Well Location Plat

Sec. 5-20N-16W I.M.

Operator: SANDRIDGE ENERGY

Lease Name and No.: KOPPER 2016 1-5H

Footage: 235' FSL - 650' FWL Gr. Elevation: 1760'

Section: 5 Township: 20N Range: 16W I.M.

County: Major State of Oklahoma

Terrain at Loc.: Location fell in a pasture, North of a barbed-wire fence and aerial power line. Pad is split by existing lease road.

## API: 093-25116



All bearings shown  
are grid bearings.

0' 500' 1000' 1500'

1" = 1000'

GPS DATUM

NAD 27

OK NORTH ZONE

Surface Hole Loc.:

Lat: 36.23160538

Lon: -98.93620062

X: 1723885

Y: 449647

Landing Point:

Lat: 36.23434987

Lon: -98.93694811

X: 1723674

Y: 450648

Bottom Hole Loc.:

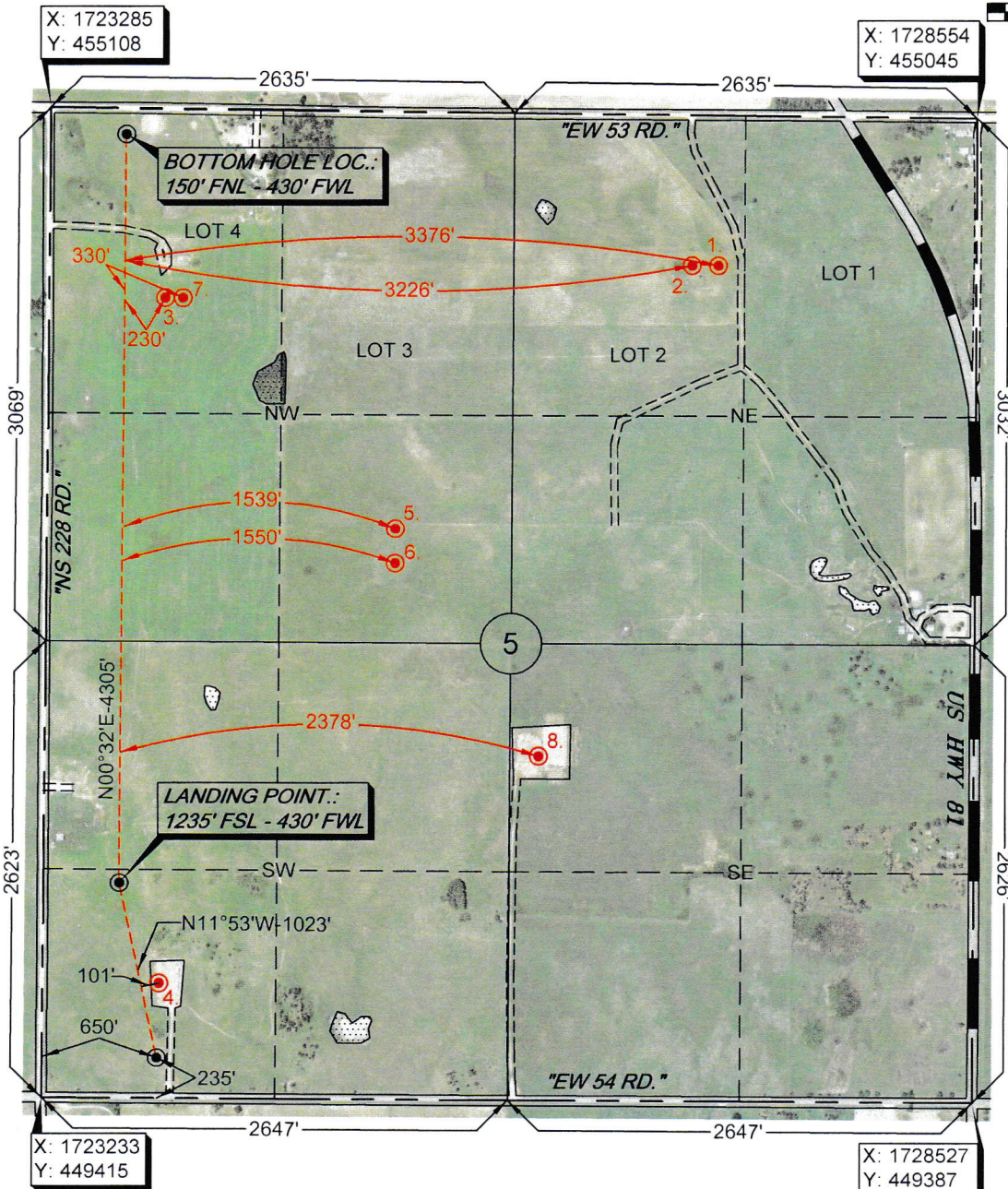
Lat: 36.24617601

Lon: -98.93695507

X: 1723714

Y: 454953

-Please note that this location was staked on the ground under the supervision of a Licensed Professional Land Surveyor, but the accuracy of this survey is not guaranteed. Please contact Arkoma Surveying and Mapping 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.



Survey and plat by:

Arkoma Surveying and Mapping, PLLC

P.O. Box 238 Wilburton, OK 74578

Ph. 918-465-5711 Fax 918-465-5030

Certificate of Authorization No. 5348

Expires June 30, 2018

Invoice #7479

Date Staked: 11/07/17 By: J.W.

Date Drawn: 11/14/17 By: P.B.

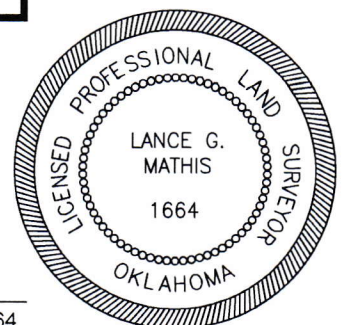
### Certification:

This is to certify that this Well Location Plat represents the results of a survey made on the ground performed under the supervision of the undersigned.

*Lance G. Mathis*  
LANCE G. MATHIS

11/16/17

OK LPLS 1664







A circular professional seal for a land surveyor. The outer ring contains the text "LICENSED PROFESSIONAL LAND SURVEYOR" at the top and "OKLAHOMA" at the bottom. Inside this ring is a smaller circle with a beaded border. Within the beaded circle, the text "LANCE G. MATHIS" is centered above the license number "1664".



# Anti-Collision Info

Sec. 5-20N-16W I.M.

Operator: SANDRIDGE ENERGY  
Lease Name and No.: KOPPER 2016 1-5H  
Footage: 235' FSL - 650' FWL Gr. Elevation: 1760'  
Landing Point: 1235' FSL - 430' FWL  
Bottom Hole Location: 150' FNL - 430' FWL  
Section: 5 Township: 20N Range: 16W I.M.  
County: Major State of Oklahoma

## SECTION 5-20N-16W

1. OTC/OCC NOT ASSIGNED <i>CHAPMAN 1</i> 2180' FSL - 1170' FWL (NE/4) OCC STATUS: PA	2. CHESAPEAKE OPERATING <i>CHAPMAN E-17</i> 2180' FSL - 1020' FWL (NE/4) OCC STATUS: PA	3. J-BREX COMPANY <i>HARMS 1-5</i> 1980' FSL - 660' FWL (NW/4) OCC STATUS: PA
4. CHESAPEAKE OPERATING <i>KOPPER 1</i> 660' FSL - 660' FWL (SW/4) OCC STATUS: PA	5. OTC/OCC NOT ASSIGNED <i>HARMS GAS UNIT 1</i> 660' FSL - 660' FEL (NW/4) OCC STATUS: PA	6. OTC/OCC NOT ASSIGNED <i>HARMS GAS UNIT 1-A</i> 460' FSL - 660' FEL (NW/4) OCC STATUS: PA
7. J-BREX COMPANY <i>HARMS A 1-5</i> 1980' FSL - 760' FWL (NW/4) OCC STATUS: PA	8. LOBO EXPLORATION CO. <i>DUKER 1-5</i> 1980' FSL - 165' FWL (SE/4) OCC STATUS: PA	

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Date Drawn: 11/14/17 By: P.B.

ANTI-COLLISION DATA SHOWN HEREON:

BLUE BOX: FOUND AND SHOT ON GROUND

RED BOX: PLACED FROM FOOTAGES ON OCC WEBSITE





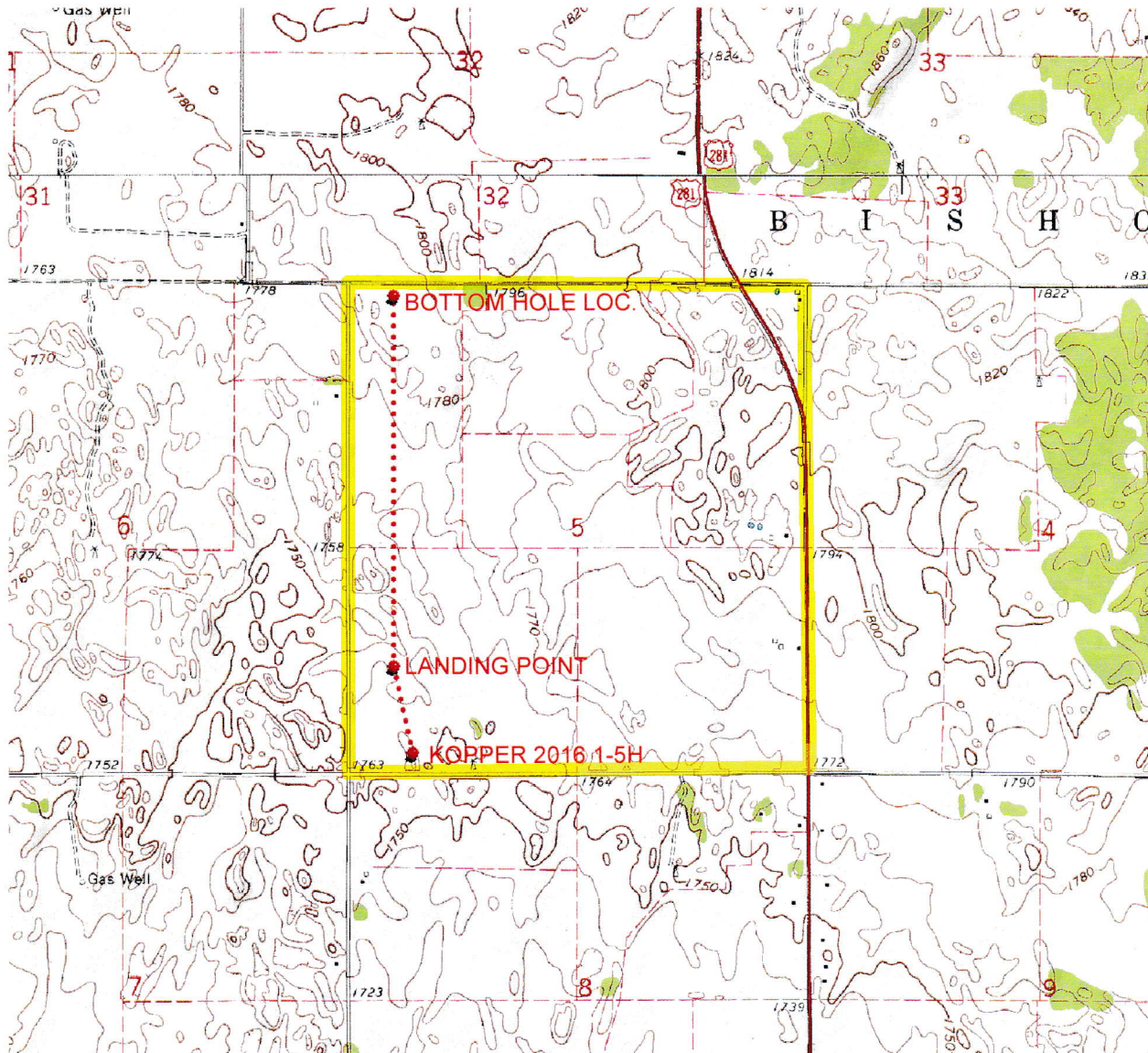
# Topographic Vicinity Map

Operator: SANDRIDGE ENERGY  
Lease Name and No.: KOPPER 2016 1-5H  
Surface Hole Location: 235' FSL - 650' FWL  
Landing Point: 1235' FSL - 430' FWL  
Bottom Hole Location: 150' FNL - 430' FWL  
Sec. 5 Twp. 20N Rng. 16W I.M.  
County: Major State of Oklahoma



Scale 1" = 2000'  
Contour Interval: 10'

Ground Elevation at Surface Hole Location: 1760'



Provided by:  
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Certificate of Authorization No. 5348  
Expires June 30, 2018

Date Staked: 11/07/17

The purpose of this map is to verify the location and elevation as staked on the ground and to show the surrounding Topographic features. The footage shown hereon is only as SCALED onto a U.S.G.S. Topographic Map.

Please note that this location was staked carefully on the ground under the supervision of a Licensed Professional Land Surveyor, but the accuracy of this survey is not guaranteed.

Please contact Arkoma Surveying and Mapping promptly if any inconsistency is determined.

# County Highway Vicinity Map



Job #: 7479

Operator: SANDRIDGE ENERGY

Lease Name and No.: KOPPER 2016 1-5H

Accessibility: From the South.

Directions: From the junction of US HWY 60 & US HWY 281 in the town of Chester, OK, go 1.0 mile North on US HWY 281, then go 0.9 miles West on "EW 54 RD." to the Southeast Quarter of Section 5-20N-16W on the North side of the road.

1 inch = 0.5 mile

provided by:  
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