API NUMBER: 093 25224 A

Horizontal Hole Oil & Gas

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

Approval Date: 03/22/2022
Expiration Date: 09/22/2023

PERMIT TO DRILL

WELL LOCATION: Section: 18 Township: 20N Range: 14W County: MAJOR

SPOT LOCATION: NW NE NE NW FEET FROM QUARTER: FROM **NORTH** FROM **WEST**
SECTION LINES: **245** **2210**

Lease Name: **HARLEY 2014** **Well No:** **3-18H** **Well will be** **245** **feet from nearest unit or lease boundary.**

Operator Name: **SANDRIDGE EXPLORATION & PRODUCTION** Telephone: 4052092407 OTC/OCC Number: 22281 0

SANDRIDGE EXPLORATION & PRODUCTION LLC
1 E SHERIDAN AVE #500
OKLAHOMA CITY, OK 73104-2496

MICHAEL CURTIS PEMBROOK
52496 S. CR 252
FAIRVIEW OK 73737

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

	Name	Code	Depth
1	MISSISSIPPI SOLID	351MSSSD	8872

Spacing Orders: 143398 Location Exception Orders: No Exceptions Increased Density Orders: No Density

Pending CD Numbers: 202200558
202200557

Working interest owners' notified: *** Special Orders: No Special

Total Depth: 13393 Ground Elevation: 1775 **Surface Casing: 800** Depth to base of Treatable Water-Bearing FM: 430

Deep surface casing has been approved

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

Approved Method for disposal of Drilling Fluids:

D. One time land application -- (REQUIRES PERMIT) PERMIT NO: 18-36040
H. (Other) SEE MEMO

PIT 1 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

Section: 18 Township: 20N Range: 14W Meridian: IM
County: MAJOR
Spot Location of End Point: SE SW SE SE
Feet From: **SOUTH** 1/4 Section Line: 150
Feet From: **EAST** 1/4 Section Line: 900

Total Length: 4609
Measured Total Depth: 13393
True Vertical Depth: 8980
End Point Location from Lease,Unit, or Property Line: 150

NOTES:

This permit does not address the right of entry or settlement of surface damages. The duration of this permit is 18 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
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	3/22/2022 - G56 - OCC 165:10-3-10 REQUIRES: 1) NOTICE SHALL BE GIVEN AT LEAST 5 BUSINESS DAYS PRIOR TO COMMENCEMENT OF HYDRAULIC FRACTURING OPERATIONS ON A HORIZONTAL WELL TO OPERATORS PRODUCING WELLS WITHIN 1 MILE OF THE COMPLETION INTERVAL OF THE SUBJECT WELL. THE NOTICE TO SUCH OPERATORS SHALL CONTAIN THE INFORMATION IN FORM 6000NOO. IF THE HYDRAULIC FRACTURING OPERATIONS SCHEDULE CHANGES AFTER NOTICE HAS BEEN PROVIDED, RESULTING IN A DELAY OF OPERATIONS OF MORE THAN 5 DAYS FROM THE INITIAL NOTICE, NEW NOTICE IS REQUIRED TO BE GIVEN; 2) NOTICE WILL BE GIVEN TO THE OCC CENTRAL OFFICE AND LOCAL DISTRICT OFFICES AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF HYDRAULIC FRACTURING OPERATIONS. FORM 6000NHF SHALL BE USED AND IS FOUND AT THIS LINK: OCCEWEB.COM/OG/OGFORMS.HTML; AND, 3) THE CHEMICAL DISCLOSURE OF HYDRAULIC FRACTURING INGREDIENTS FOR ALL WELLS IS TO BE REPORTED TO FRACFOCUS WITHIN 60 DAYS AFTER THE CONCLUSION OF HYDRAULIC FRACTURING OPERATIONS, FOUND AT FRACFOCUS.ORG
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
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
PENDING CD - 202200557	[3/22/2022 - G56] - 18-20N-14W X143398 MSSSD 1 WELL NO OP NAMED REC 3/7/2022 (MYLES)
PENDING CD - 202200558	[3/22/2022 - G56] - (I.O.) 18-20N-14W X143398 MSSSD COMPL INT NCT 150' FNL, NCT 150' FSL, NCT 560' FEL*** NO OP NAMED REC 3/7/2022 (MYLES) *** AMENDED TO NCT 165' FNL, NCT 165' FSL AT HEARING PER ATTORNEY FOR OPERATOR;
SPACING - 143398	3/22/2022 - G56 - (640) 18-20N-14W EXT OTHER EXT 87492 MSSSD, OTHERS

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WELL LOCATION

HARLEY 2014 3-18H
SANDRIDGE ENERGY
SECTION 18, TOWNSHIP 20N, RANGE 14W, I.M.
MAJOR COUNTY, OKLAHOMA

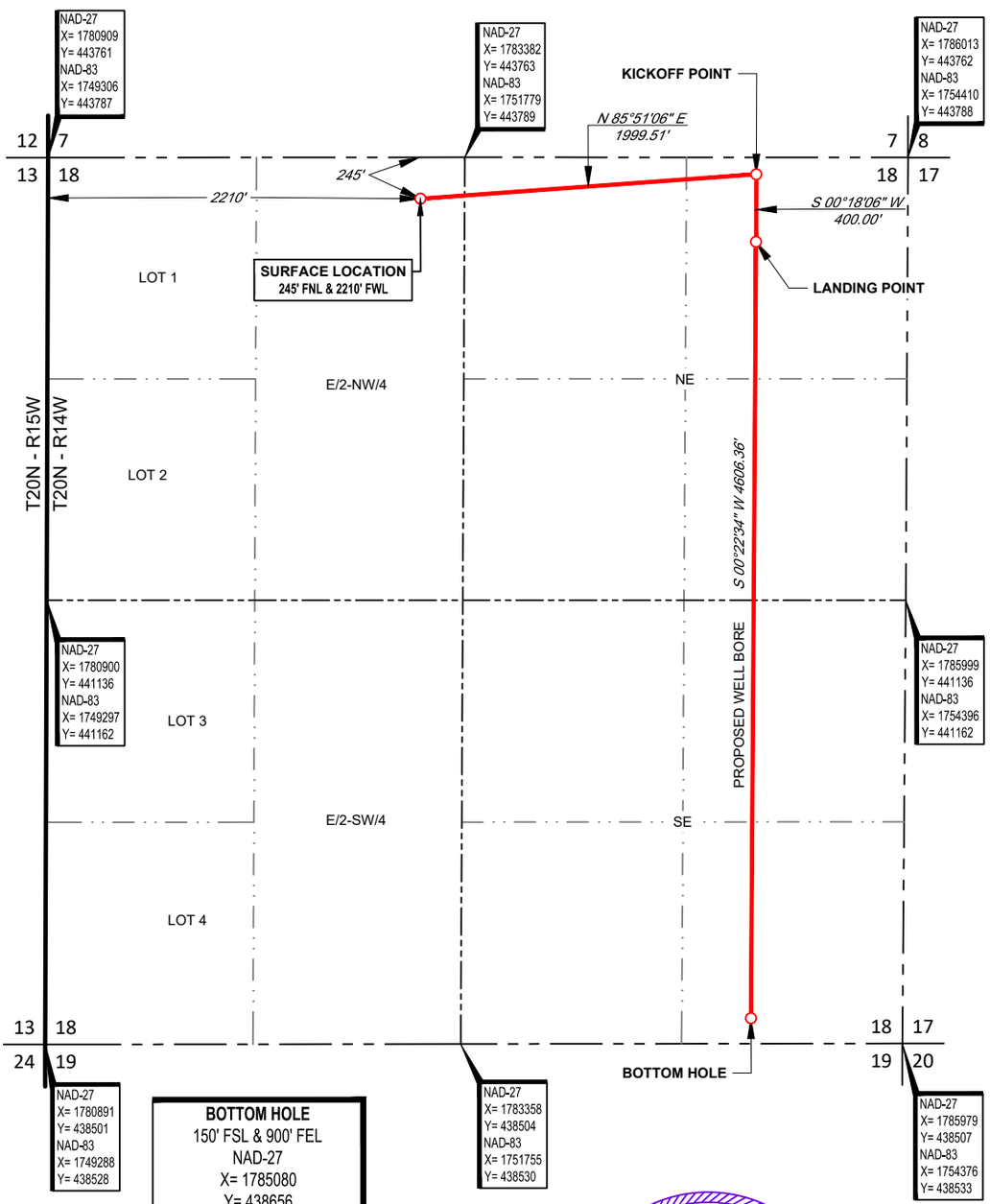
GRID
OK NORTH
US FEET

SCALE: 1" = 1000'

0' 500' 1000'

LEGEND

- SECTION LINE
- QUARTER SECTION LINE
- 16TH LINE
- RANGE LINE
- PROPOSED WELL BORE



SURFACE LOCATION
245' FNL & 2210' FWL
NAD-27
X= 1783118
Y= 443518
LAT.: 36°12'58.2" N
LONG.: 98°44'06.8" W
LAT.: 36.216170° N
LONG: 98.735216° W
ELEV.: 1773' (NGVD29)
NAD-83
X= 1751515
Y= 443544
LAT.: 36°12'58.3" N
LONG.: 98°44'08.1" W
LAT.: 36.216208° N
LONG.: 98.735582° W
ELEV.: 1774' (NAVD88)

KICKOFF POINT
100' FNL & 900' FEL
NAD-27
X= 1785112
Y= 443662
LAT.: 36°12'59.8" N
LONG.: 98°43'42.5" W
LAT.: 36.216608° N
LONG: 98.728460° W
NAD-83
X= 1753510
Y= 443689
LAT.: 36°12'59.9" N
LONG.: 98°43'43.8" W
LAT.: 36.216646° N
LONG.: 98.728826° W

LANDING POINT
500' FNL & 900' FEL
NAD-27
X= 1785110
Y= 443262
LAT.: 36°12'55.8" N
LONG.: 98°43'42.4" W
LAT.: 36.215509° N
LONG: 98.728457° W
NAD-83
X= 1753507
Y= 443289
LAT.: 36°12'56.0" N
LONG.: 98°43'43.8" W
LAT.: 36.215547° N
LONG.: 98.728823° W

BOTTOM HOLE
150' FSL & 900' FEL
NAD-27
X= 1785080
Y= 438656
LAT.: 36°12'10.3" N
LONG.: 98°43'42.4" W
LAT.: 36.202855° N
LONG: 98.728442° W
NAD-83
X= 1753477
Y= 438682
LAT.: 36°12'10.4" N
LONG.: 98°43'43.7" W
LAT.: 36.202894° N
LONG.: 98.728808° W

LICENSED PROFESSIONAL LAND SURVEYOR
T. WAYNE FISCH
1378
02-25-2022
OKLAHOMA

SURVEYOR'S CERTIFICATE:

I, T. WAYNE FISCH, AN OKLAHOMA LICENSED LAND SURVEYOR AND AN AUTHORIZED AGENT OF TOPOGRAPHIC CO., DO HEREBY CERTIFY TO THE INFORMATION SHOWN HEREIN.

T. Wayne Fisch

T. Wayne Fisch, P.L.S. No. 1378
Authorized Agent of Topographic Co.

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FAX: (405) 843-0975
CERTIFICATE OF AUTHORIZATION NO. 1292 LS
WWW.TOPOGRAPHIC.COM

LEASE NAME & WELL NO. HARLEY 2014 3-18H

SECTION 18 TWP 20N RGE 14W MERIDIAN I.M.

COUNTY MAJOR STATE OKLAHOMA

DESCRIPTION 245' FNL & 2210' FWL

HARLEY 2014 3-18H	REVISION: INT	DATE
DATE: 02/22/2022		
FILE:LO_HARLEY_2014_3-18H		
DRAWN BY: KEU		
SHEET : 1 OF 2		

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 14"
2. ALL BEARINGS SHOWN HEREON ARE GRID OKLAHOMA COORDINATE SYSTEM OF 1983 NORTHZONE ACCORDING TO THE RESULT OF STATIC GPS OBSERVATION PROCESSED THROUGH OPUS ON THE CONTROL POINT OCCUPIED WHILE MEASURING SAID LINES. OPUS RESULTS ARE CORRELATED TO OKLAHOMA COORDINATE SYSTEM THROUGH NORTH ZONE AND THE NORTH AMERICAN VERTICAL DATUM OF 1988.
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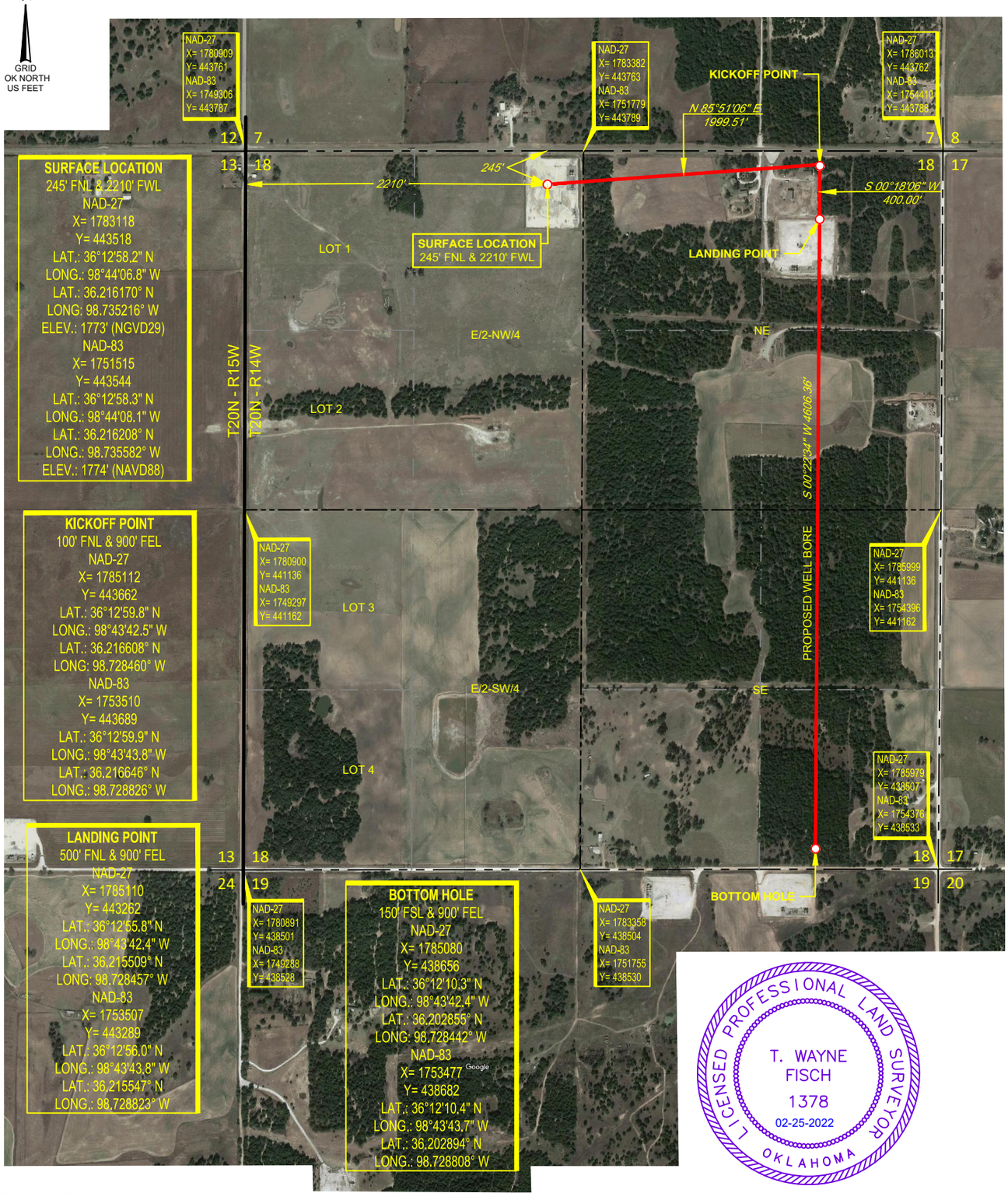
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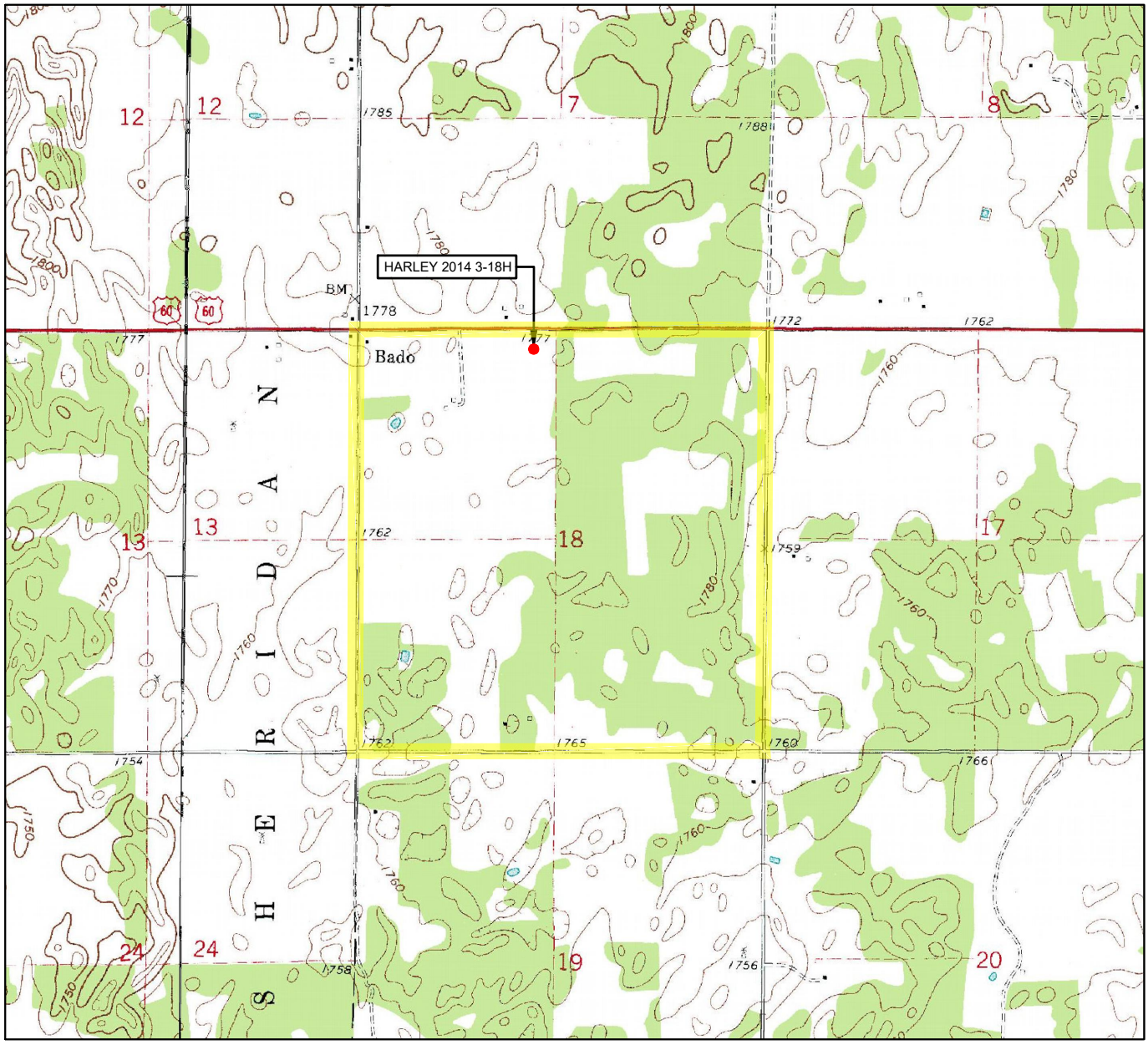
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LOCATION & ELEVATION VERIFICATION MAP



LEASE NAME & WELL NO. HARLEY 2014 3-18H

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COUNTY MAJOR STATE OKLAHOMA
DESCRIPTION 245' FNL & 2210' FWL
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ELEV.: 1774' (NAVD88)

SCALE: 1" = 2000'

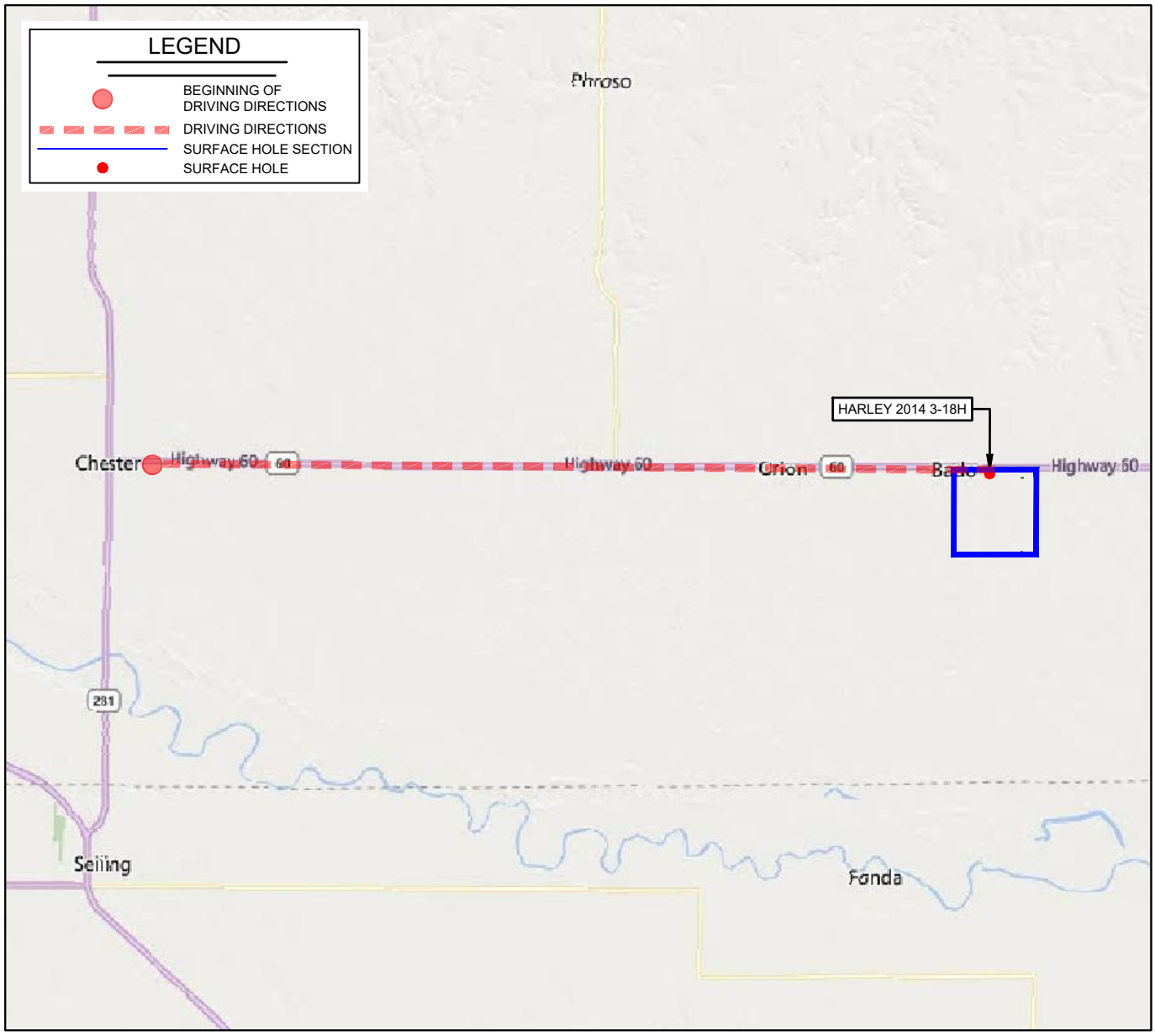
0' 1000' 2000'

THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY SANDRIDGE ENERGY. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE OKLAHOMA STATE PLANE COORDINATE SYSTEM, NORTH ZONE OF THE NORTH AMERICAN DATUM, U.S. SURVEY FEET.

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VICINITY MAP



LEASE NAME & WELL NO. HARLEY 2014 3-18H

SECTION 18 TWP 20N RGE 14W MERIDIAN I.M.
COUNTY MAJOR STATE OKLAHOMA
DESCRIPTION 245' FNL & 2210' FWL
DISTANCE & DIRECTION
FROM CHESTER, OKLAHOMA GO EAST ON HWY 60 FOR ±10 MILES
TO THE N4 OF SECTION 18-T20N-R14W.

SCALE: 1" = 10000'

0' 5000' 10000'

THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY SANDRIDGE ENERGY. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

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