

API NUMBER: 093 25279

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

Approval Date: 06/15/2022
Expiration Date: 12/15/2023

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Section: 36 Township: 20N Range: 15W County: MAJOR

SPOT LOCATION: ☐ NE ☐ NW ☐ NE ☐ NW FEET FROM QUARTER: FROM NORTH FROM WEST
SECTION LINES: 250 1675

Lease Name: LIAM 2015 Well No: 1-36H Well will be 250 feet from nearest unit or lease boundary.

Operator Name: SANDRIDGE EXPLORATION & PRODUCTION Telephone: 8177063891 OTC/OCC Number: 22281 0

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

STATE OF OKLAHOMA, COMMISSIONERS OF THE LAND OFFICE
204 N. ROBINSON, SUITE 900
OKLAHOMA CITY OK 73105

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

Name	Code	Depth
1 MISSISSIPPIAN	359MSSP	9055

Spacing Orders: 705632

Location Exception Orders: No Exceptions

Increased Density Orders: No Density

Pending CD Numbers: 202102864

Working interest owners' notified: ***

Special Orders: No Special

Total Depth: 14000

Ground Elevation: 1674

Surface Casing: 800

Depth to base of Treatable Water-Bearing FM: 320

Deep surface casing has been approved

Under Federal Jurisdiction: Yes
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: 22-38382

H. (Other)

SEE MEMO

PIT 1 INFORMATION

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: AP/TE DEPOSIT

Pit Location Formation: TERRACE

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

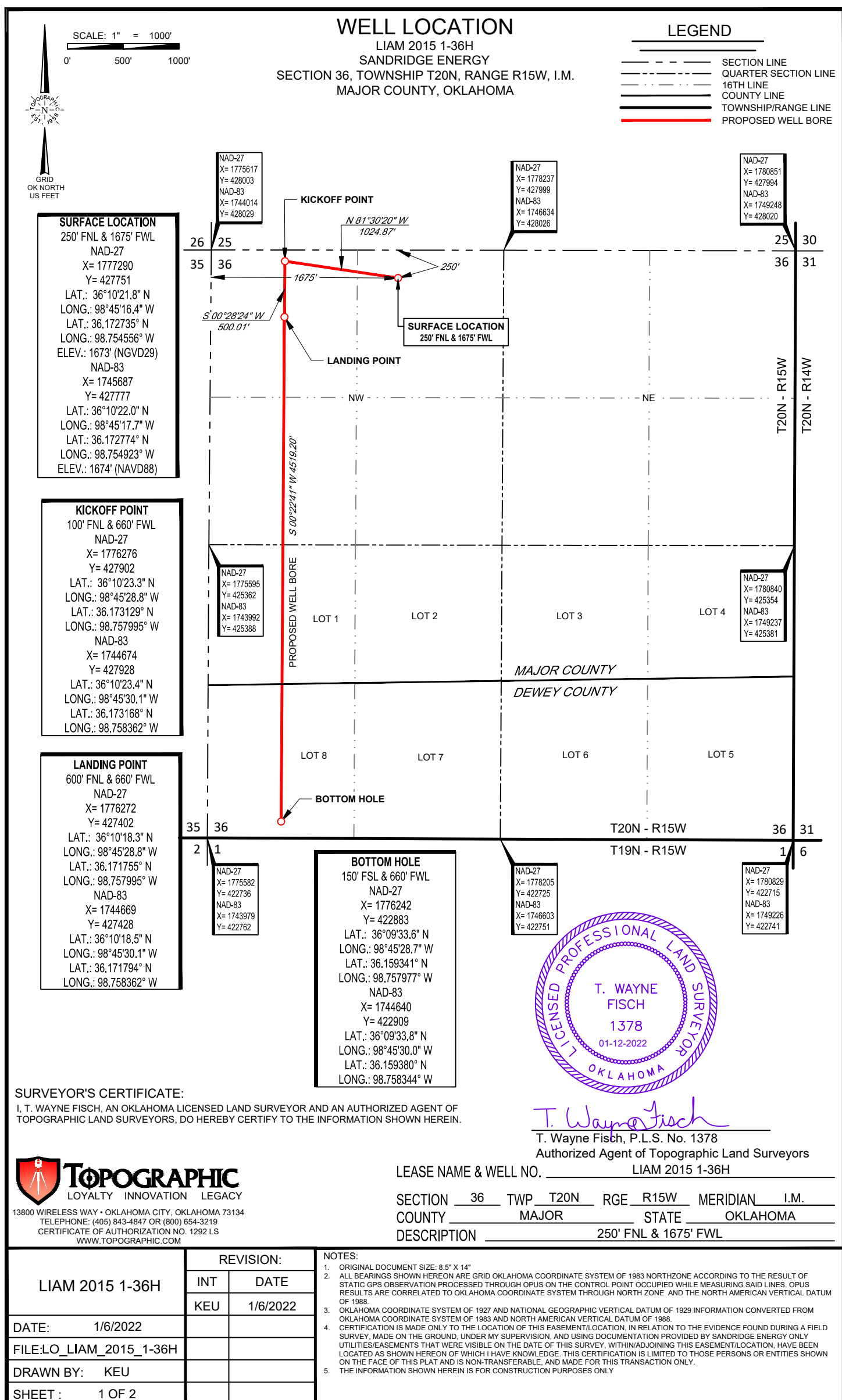
This permit does not address the right of entry or settlement of surface damages. The duration of this permit is 18 MONTHS, except as otherwise provided by Rule 165: 10-3-1. Rule 165: 10-3-4 (c) (7) (e) - The Operator shall give 24 Hours notice by telephone to the appropriate District Office of the Conservation Division as to when Surface Casing will be run.

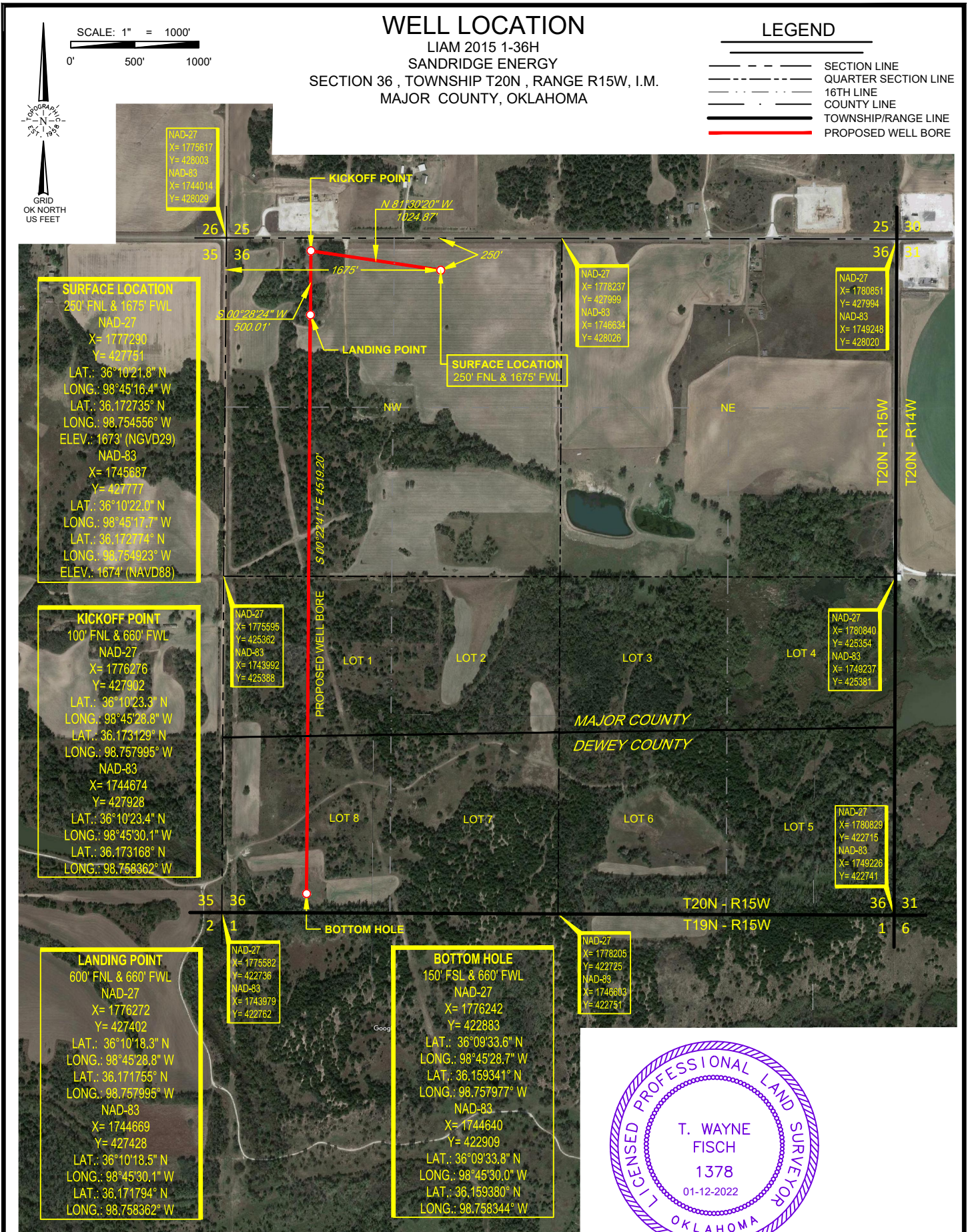
HORIZONTAL HOLE 1

Section: 36 Township: 20N Range: 15W Meridian: IM Total Length: 4900
County: DEWEY Measured Total Depth: 14000
Spot Location of End Point: S2 S2 SW SW True Vertical Depth: 9196
Feet From: **SOUTH** 1/4 Section Line: 150 End Point Location from
Feet From: **WEST** 1/4 Section Line: 660 Lease, Unit, or Property Line: 150

NOTES:

Category	Description
DEEP SURFACE CASING	[6/13/2022 - GC2] - 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	<p>[6/13/2022 - GC2] - OCC 165:10-3-10 REQUIRES:</p> <p>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;</p> <p>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,</p> <p>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</p>
INTERMEDIATE CASING	[6/13/2022 - GC2] - 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	[6/13/2022 - GC2] - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT
PENDING CD - 202102864	<p>[6/15/2022 - GB1] - (I.O.) 36-20N-15W</p> <p>X705632 MSSP</p> <p>COMPL INT NCT 150' FNL, NCT 150' FSL, NCT 560' FWL</p> <p>NO OP NAMED</p> <p>REC 5/25/2022 (MILLER)</p>
SPACING - 705632	<p>[6/15/2022 - GB1] - (640)(HOR) 36-20N-15W</p> <p>VAC 102031 CRLM</p> <p>VAC 174209 MSSLM</p> <p>VAC 667149 MSSP S2</p> <p>EST MSSP</p> <p>(COEXIST SP 667149 MSSP N2)</p>





SURVEYOR'S CERTIFICATE:

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



13800 WIRELESS WAY • OKLAHOMA CITY, OKLAHOMA 73134
TELEPHONE: (405) 843-4847 OR (800) 654-3219
CERTIFICATE OF AUTHORIZATION NO. 1292 LS
WWW.TOPOGRAPHIC.COM

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

LEASE NAME & WELL NO. LIAM 2015 1-36H

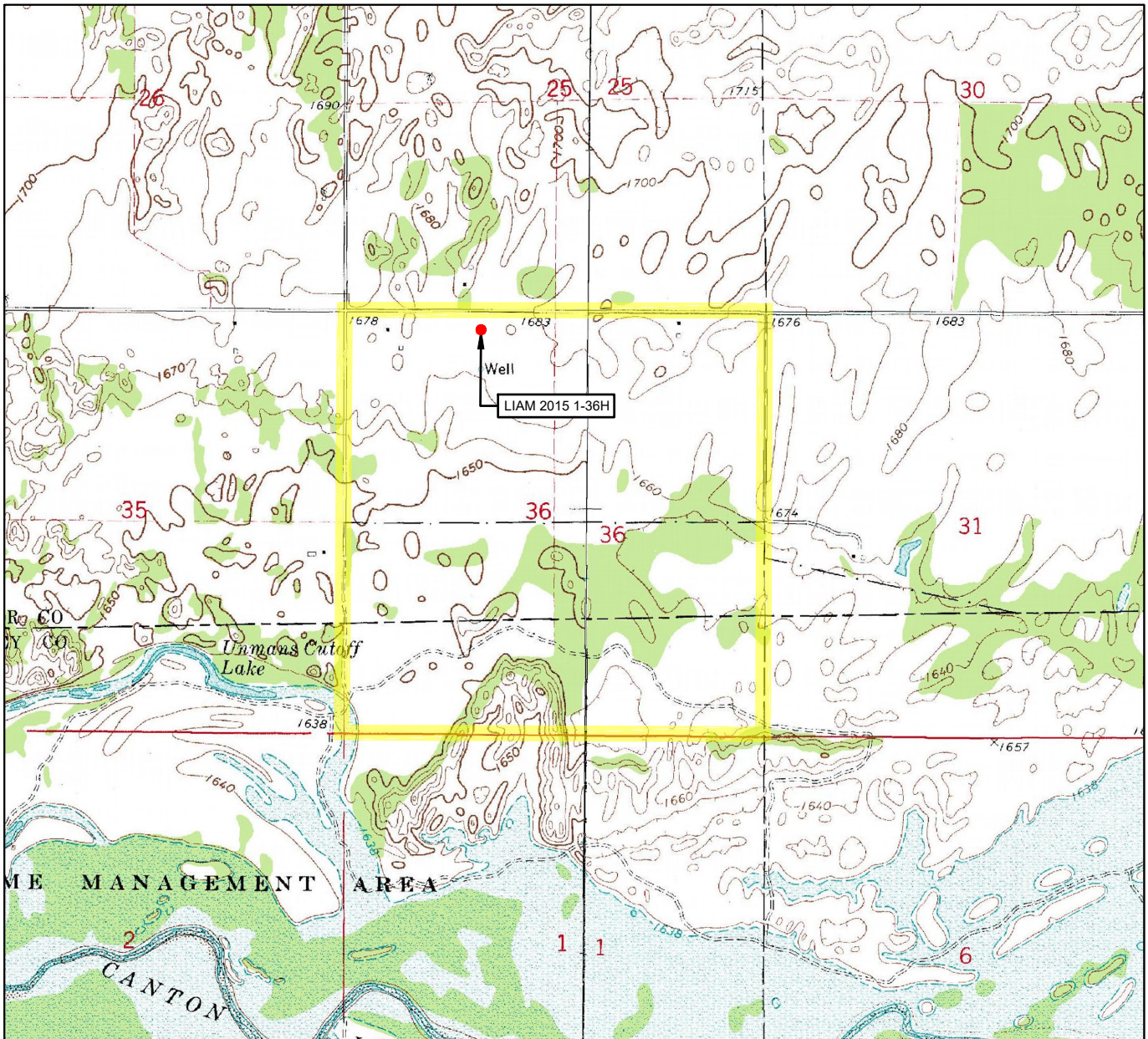
SECTION 36 TWP T20N RGE R15W MERIDIAN I.M.
COUNTY MAJOR STATE OKLAHOMA
DESCRIPTION 250' FNL & 1675' FWL

LIAM 2015 1-36H	REVISION:	
	INT	DATE
	KEU	1/6/2022
DATE:	1/6/2022	
FILE:LO_LIAM_2015_1-36H		
DRAWN BY:	KEU	
SHEET :	2 OF 2	

NOTES:

1. ORIGINAL DOCUMENT SIZE: 8.5" X 14"
2. ALL BEARINGS SHOWN HEREON ARE GRID OKLAHOMA COORDINATE SYSTEM OF 1983 NORTH ZONE 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.
3. OKLAHOMA COORDINATE SYSTEM OF 1927 AND NATIONAL GEOGRAPHIC VERTICAL DATUM OF 1929 INFORMATION CONVERTED FROM OKLAHOMA COORDINATE SYSTEM OF 1983 AND NORTH AMERICAN VERTICAL DATUM OF 1988.
4. CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT/LOCATION, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY SANDRIDGE ENERGY ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT/LOCATION, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.
5. THE INFORMATION SHOWN HEREIN IS FOR CONSTRUCTION PURPOSES ONLY

LOCATION & ELEVATION VERIFICATION MAP



LEASE NAME & WELL NO. LIAM 2015 1-36H

SECTION 36 TWP T20N RGE R15W MERIDIAN I.M.

COUNTY MAJOR STATE OKLAHOMA

DESCRIPTION 250' FNL & 1675' FWL

ELEV.: 1673' (NGVD29)

ELEV.: 1674' (NAVD88)

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.



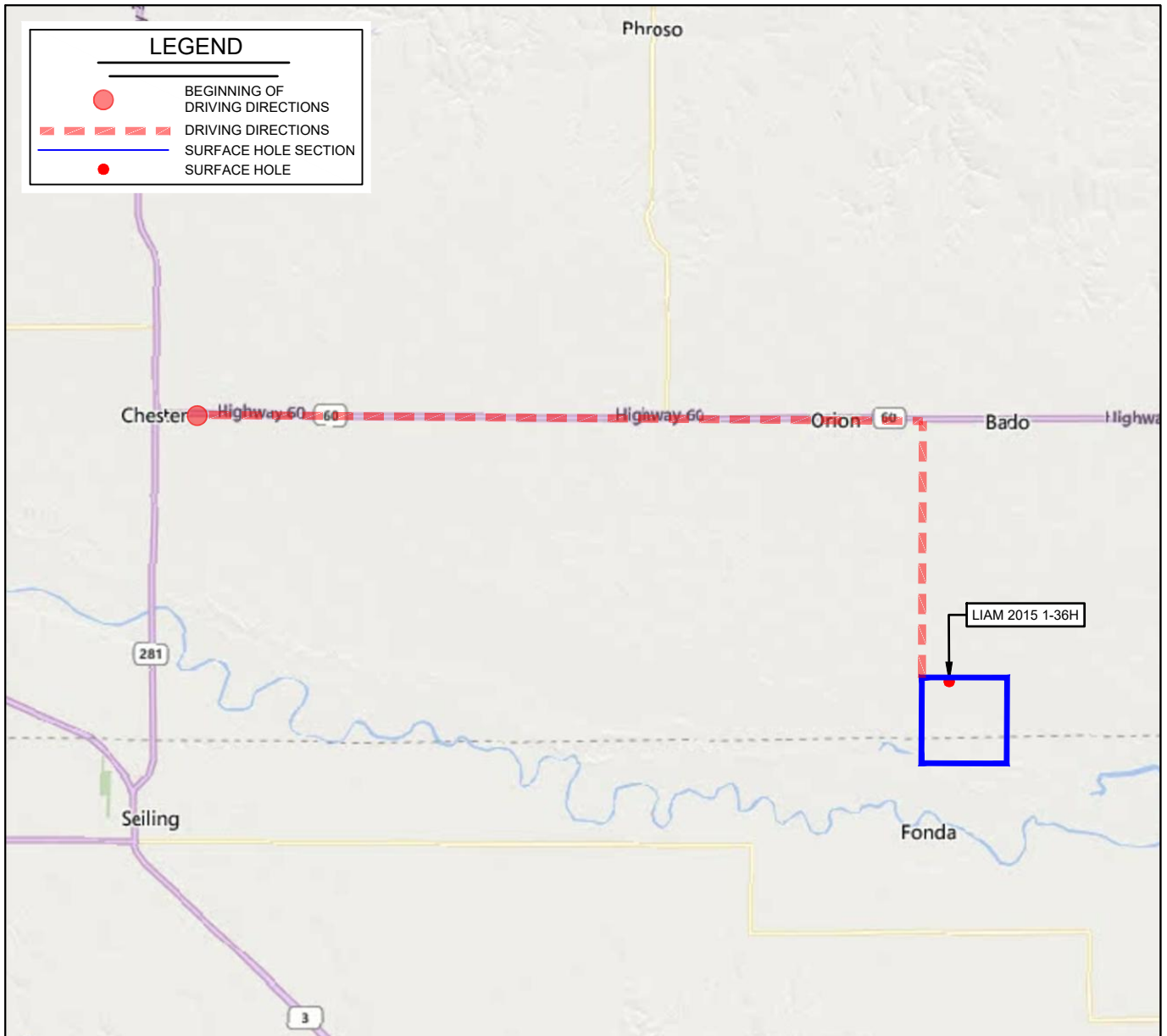
SCALE: 1" = 2000'
0' 1000' 2000'



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LOYALTY INNOVATION LEGACY

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VICINITY MAP



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COUNTY MAJOR STATE OKLAHOMA

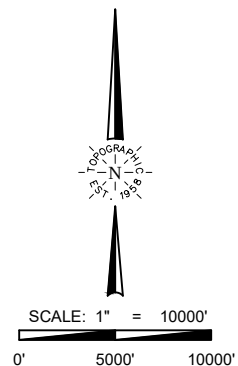
DESCRIPTION 250' FNL & 1675' FWL

DISTANCE & DIRECTION

FROM CHESTER, OKLA GO EAST ON HWY 60 FOR +/- 9 MILES. TURN
SOUTH ON N2380 RD FOR +/- 3 MILES TO THE NWC 36-T20N-R15W.

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 OF THE NORTH AMERICAN DATUM, U.S. SURVEY FEET.



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