

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

API NUMBER: 045 23760 B

Approval Date: 08/14/2018

Expiration Date: 02/14/2019

Horizontal Hole Oil & Gas

Amend reason: OCC CORRECTION FOR WELL NUMER  
SHL, SURFACE OWNER, DISPOSAL METHOD, & TOTAL DEPTH

AMEND PERMIT TO DRILL

WELL LOCATION: Sec: 19 Twp: 18N Rge: 24W

County: ELLIS

SPOT LOCATION: ☐ NW ☐ NW ☐ NE ☐ NE

FEET FROM QUARTER: FROM NORTH FROM EAST

SECTION LINES: 300 995

Lease Name: BROWN 18

Well No: 4H

Well will be 300 feet from nearest unit or lease boundary.

Operator  
Name: EOG RESOURCES INC

Telephone: 4052463224

OTC/OCC Number: 16231 0

EOG RESOURCES INC  
3817 NW EXPRESSWAY STE 500  
OKLAHOMA CITY, OK 73112-1483

F. LEE & LONA B. DOWLING  
HCR 63, BOX 15  
ARNETT OK 73832

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

|   | Name     | Depth | Name | Depth |
|---|----------|-------|------|-------|
| 1 | MARMATON | 9300  | 6    |       |
| 2 |          |       | 7    |       |
| 3 |          |       | 8    |       |
| 4 |          |       | 9    |       |
| 5 |          |       | 10   |       |

Spacing Orders: 586080

Location Exception Orders: 684943

Increased Density Orders: 682230

Pending CD Numbers:

Special Orders:

Total Depth: 15200

Ground Elevation: 2251

**Surface Casing: 1500**

Depth to base of Treatable Water-Bearing FM: 540

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: OIL BASED

Chlorides Max: 300000 Average: 200000

E. Haul to Commercial pit facility: Sec. 34 Twn. 14N Rng. 24W Cnty. 129 Order No: 563353

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 BED AQUIFER

Pit Location Formation: CLOUD CHIEF

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: WATER BASED

Chlorides Max: 100000 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 BED AQUIFER

Pit Location Formation: CLOUD CHIEF

## HORIZONTAL HOLE 1

Sec 18 Twp 18N Rge 24W County ELLIS

Spot Location of End Point: NE NW NE NW

Feet From: NORTH 1/4 Section Line: 165

Feet From: WEST 1/4 Section Line: 1870

Depth of Deviation: 9100

Radius of Turn: 698

Direction: 350

Total Length: 5003

Measured Total Depth: 15200

True Vertical Depth: 9350

End Point Location from Lease,  
Unit, or Property Line: 165

### Notes:

#### Category

#### Description

#### DEEP SURFACE CASING

7/16/2018 - 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

7/16/2018 - 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)

#### INCREASED DENSITY - 682230

3/15/2019 - G58 - 18-18N-9W  
X586080 MRMN  
2 WELLS  
EOG RESOURCES, INC.  
8/28/2018

#### LOCATION EXCEPTION - 684943

3/15/2019 - G58 - (I.O.) 18-18N-24W  
X586080 MRMN  
COMPL. INT. NCT 165' FSL, NCT 2400' FWL, NCT 165' FNL, NCT 1870' FWL  
EOG RESOURCES, INC.  
10/15/2018

This permit does not address the right of entry or settlement of surface damages.

045 23760 BROWN 18 4H

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                                                                                                                                                                                                                                              |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MEMO             | 7/16/2018 - G71 - PIT 1 & 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST; PIT 1 – WBM & CUTTINGS TO BE SOIL FARMED; PIT 2 - OBM TO VENDOR, OBM CUTTINGS TO COMMERCIAL PIT OR LONE MOUNTAIN FACILITY, EPA ID # OKD065438376, 28 & 33-23N-15W, MAJOR CO |
| SPACING - 586080 | 8/14/2018 - G58 - (640)(HOR) 18-18N-24W<br>EST MRMN, OTHERS<br>COMPL. INT. NLT 660' FB<br>(SUPERSEDE NON-PRODUCING, NON-HORIZONTAL SPACING UNITS; COEXIST WITH PRODUCING, NON-HORIZONTAL SPACING UNITS)                                                  |

TOPOGRAPHIC LAND SURVEYORS OF OKLAHOMA

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

ELLIS

County, Oklahoma

045-23760 B

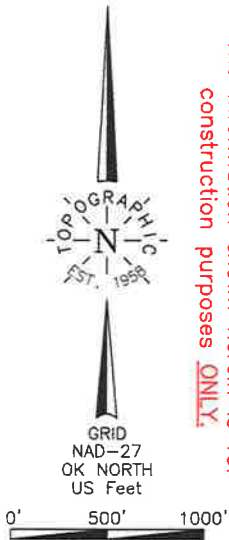
300'FNL-995'FEL

Section 19

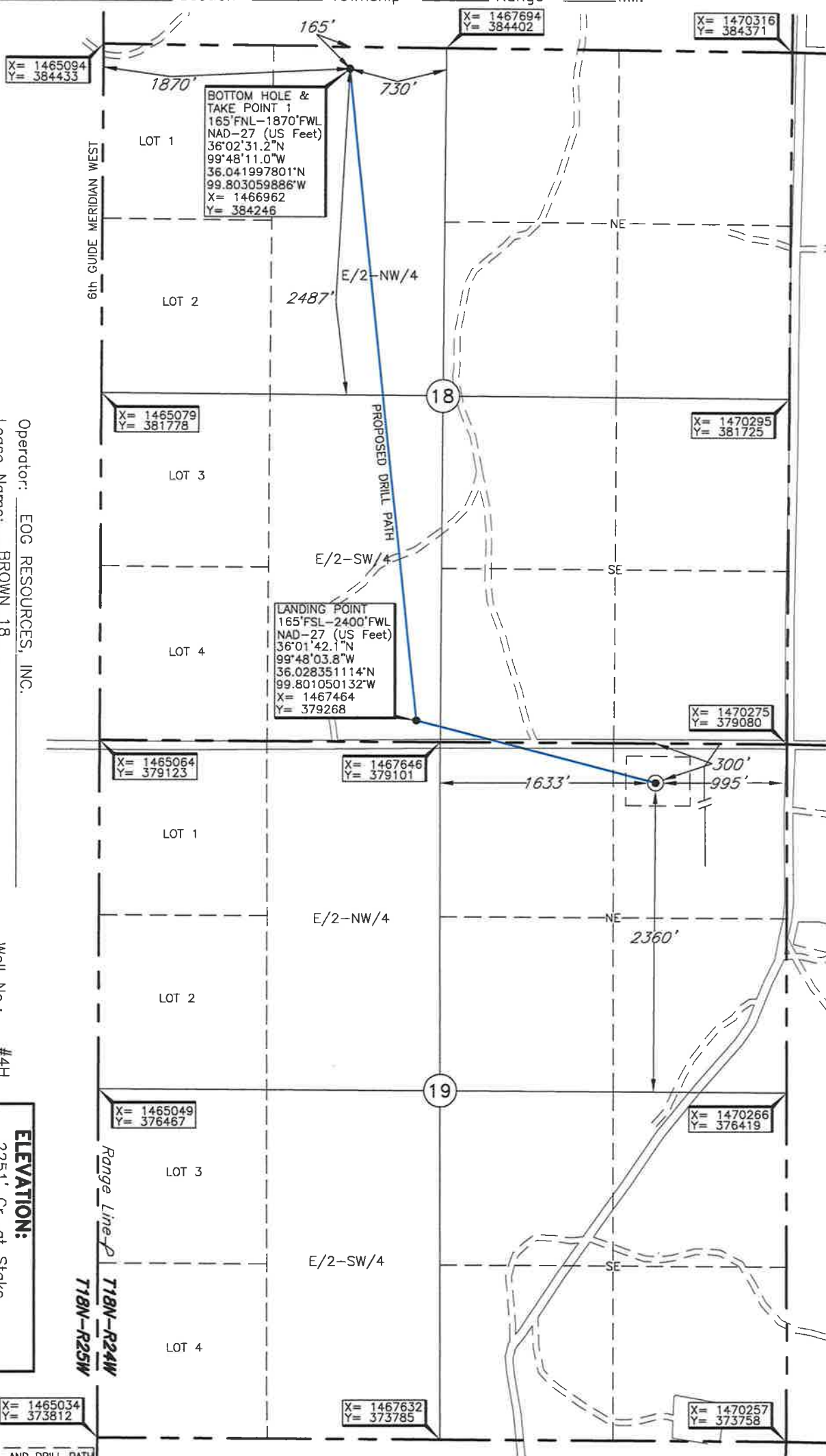
Township 18N

Range 24W

I.M.



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



Operator: EOG RESOURCES, INC.  
Lease Name: BROWN 18  
Topography & Vegetation: Loc. fell in sloped rolling pasture ±369' West of N-S pipeline.  
Good Drill Site? Yes  
Reference Stakes or Alternate Location: Stakes Set  
Best Accessibility to Location: From North off county road.  
Distance & Direction: From the junction of State Hwy. 51 E-W and US 283 S, East of Arnett,  
OK, go South ±7.5 miles, then West ±2 miles to the NE Cor. of Sec. 19-T18N-R24W.

**ELEVATION:**  
2251' Gr. at Stake

LANDING POINT, BOTTOM HOLE, TAKE POINT 1, AND DRILL PATH INFORMATION PROVIDED BY OPERATOR LISTED, NOT SURVEYED.

Date of Drawing: Sept. 21, 2018

Invoice # 303145A

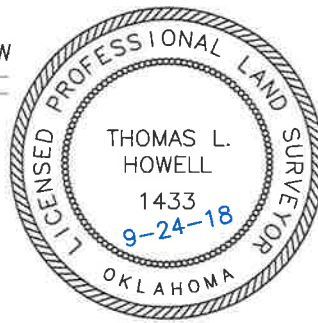
Date Staked: Sept. 19, 2018

TAW

**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



DATUM: NAD-27  
LAT: 36°01'37.7"N  
LONG: 99°47'41.6"W  
LAT: 36.027125408°N  
LONG: 99.794885209°W  
STATE PLANE  
COORDINATES: (US Feet)  
ZONE: OK NORTH  
X: 1469279  
Y: 378788



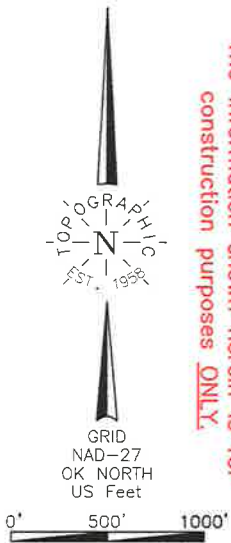
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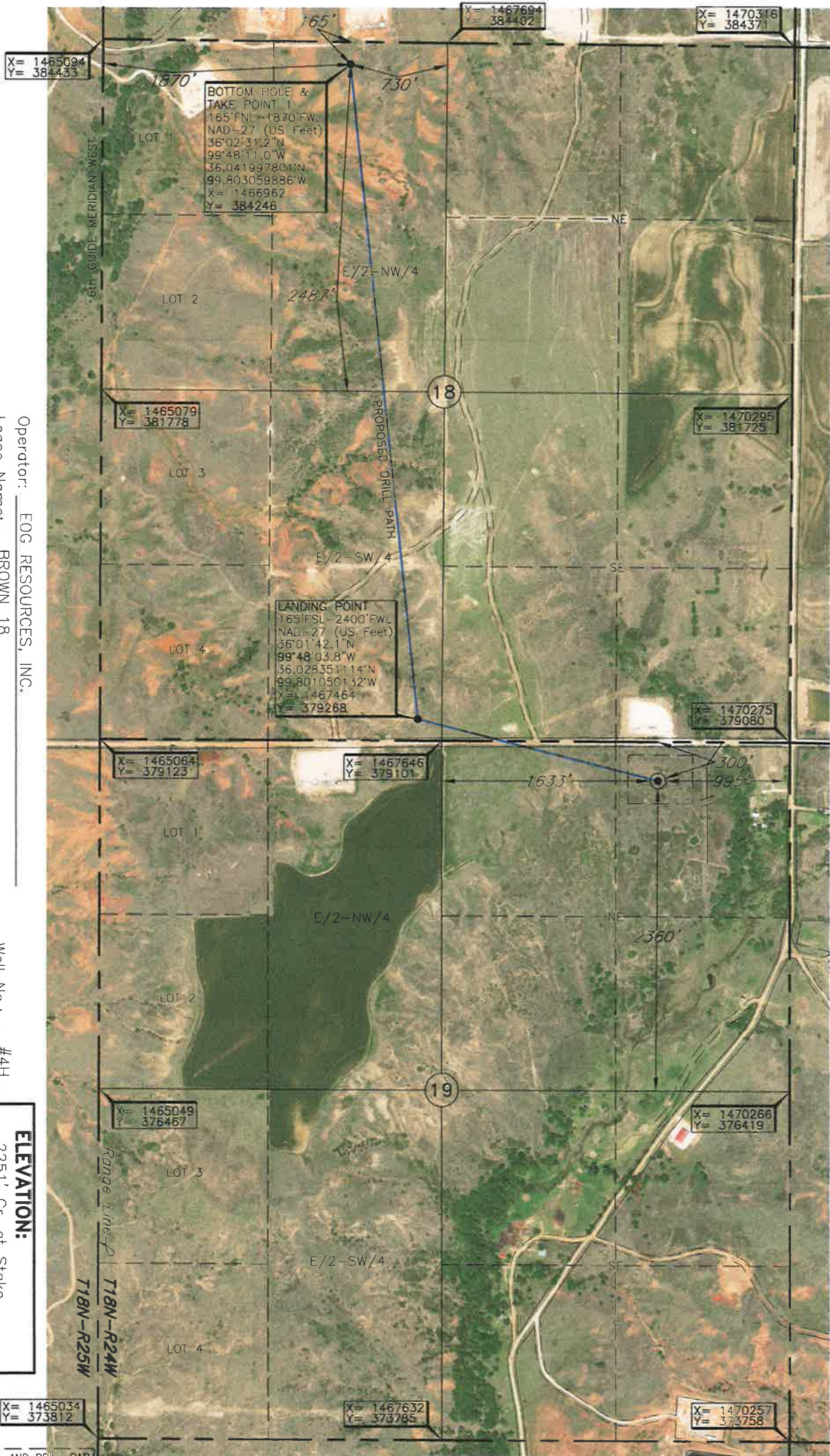
ELLIS

County, Oklahoma

300'FNL-995'FEL Section 19 Township 18N Range 24W I.M.



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from Hwy Jct or Town  
OK, go South ±7.5 miles, then West ±2 miles to the NE Cor. of Sec. 19-T18N-R24W.

ELEVATION:  
2251' Gr. at Stake

X= 1465034  
Y= 373812

LANDING POINT, BOTTOM HOLE, TAKE POINT 1, AND DRILL PATH  
INFORMATION PROVIDED BY OPERATOR LISTED, NOT SURVEYED.

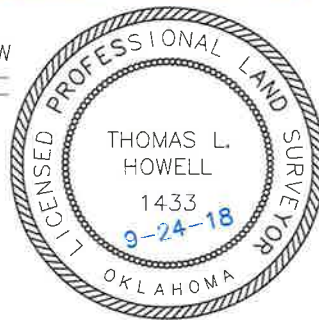
DATUM: NAD-27  
LAT: 36°01'37.7"N  
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LAT: 36.027125408°N  
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STATE PLANE  
COORDINATES: (US Feet)  
ZONE: OK NORTH  
X: 1469279  
Y: 378788

Invoice # 303145A Date of Drawing: Sept. 21, 2018  
Date Staked: Sept. 19, 2018 TAW

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

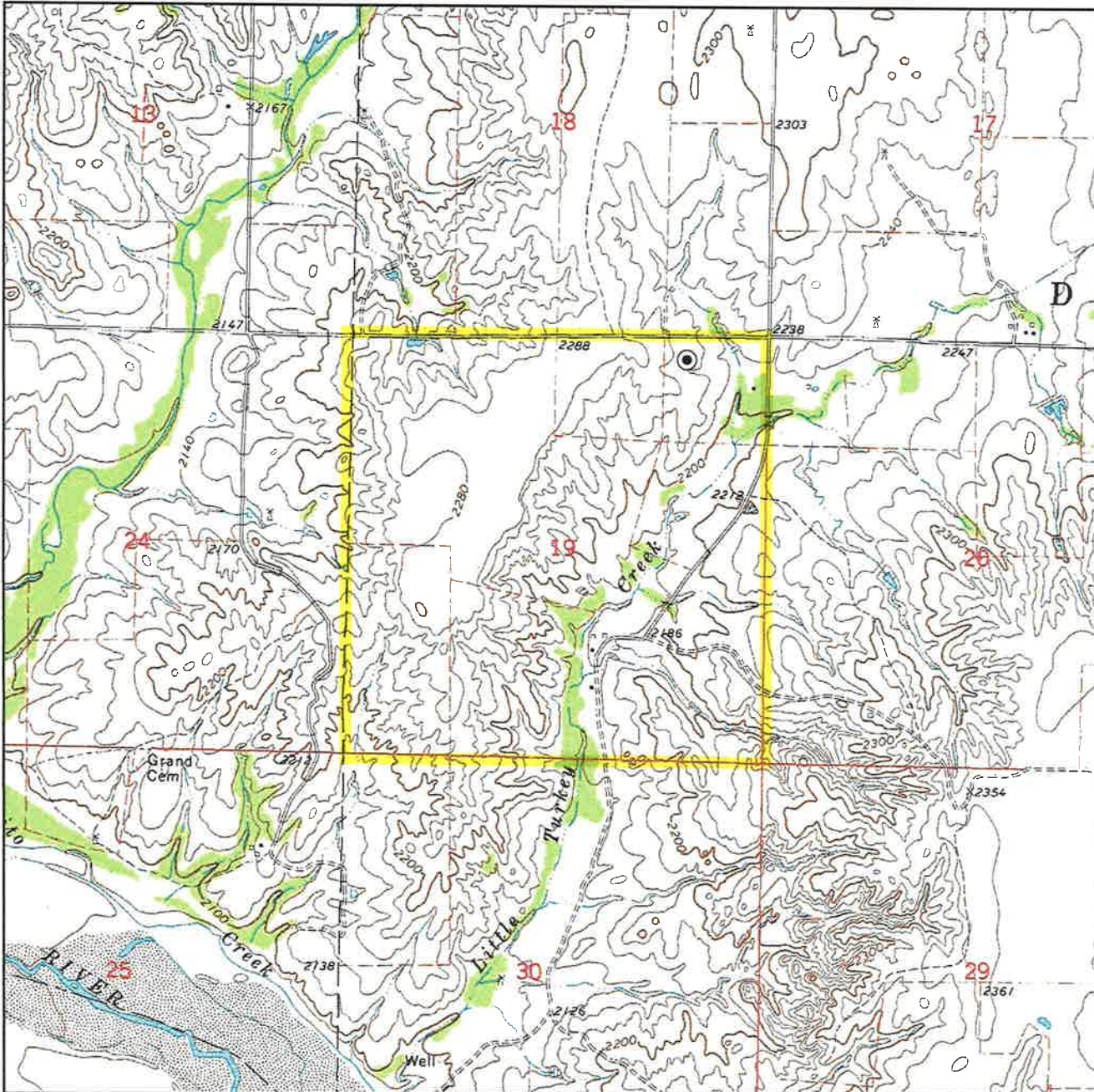




# TOPOGRAPHIC LAND SURVEYORS OF OKLAHOMA

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. 19 Twp. 18N Rng. 24W IM

County ELLIS State OK

Operator EOG RESOURCES, INC.

Description 300'FNL-995'FEL

Lease BROWN 18 #4H

Elevation 2251' Gr. at Stake

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

Contour Interval 20'

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

Sept. 21, 2018



*Surveying and Mapping for the Energy Industry*  
13800 Wireless Way, Oklahoma City, OK 73134 [www.topographic.com](http://www.topographic.com)  
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## LAND SURVEYORS OF OKLAHOMA

|                     |          |      |    |                                                                                                                      |                          |
|---------------------|----------|------|----|----------------------------------------------------------------------------------------------------------------------|--------------------------|
|                     |          |      |    | This plat was prepared exclusively for                                                                               | SCALE: 1"=100'           |
|                     |          |      |    | <b>EOG RESOURCES, INC.</b>                                                                                           | DATE: 9/21/18            |
| NO.                 | REVISION | DATE | BY | and may not be relied upon by any other entity without the written consent of Topographic Land Surveyors of Oklahoma | INVOICE NO.: 303145      |
| SUR. BY: RL 9/19/18 |          |      |    | <i>SURVEYING AND MAPPING BY</i>                                                                                      | FILE NAME: L2304A.DWG    |
| DRAWN BY: TAW       |          |      |    | <b>TOPOGRAPHIC LAND SURVEYORS OF OKLAHOMA</b>                                                                        | DWG NO.: 105048-L2-304-A |
| APPROVED BY: TH     |          |      |    | 13800 Wireless Way, Okla. City, OK. 73134 (405) 843-4847<br>Certificate of Authorization No. 1293 LS                 | SHEET 1 OF 1             |