

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

API NUMBER: 137 27593

Approval Date: 11/14/2019
Expiration Date: 05/14/2021

Horizontal Hole Oil & Gas
Multi Unit

PERMIT TO DRILL

WELL LOCATION: Sec: 09 Twp: 1S Rge: 4W County: STEPHENS
SPOT LOCATION: SW SW SW SW FEET FROM QUARTER: FROM SOUTH FROM WEST
SECTION LINES: 315 220

Lease Name: GUS MCCRAE 01S04W Well No: 16-21-1MH Well will be 220 feet from nearest unit or lease boundary.
Operator Name: 89 ENERGY II LLC Telephone: 4056006040 OTC/OCC Number: 24204 0

89 ENERGY II LLC
123 NW 8TH ST
OKLAHOMA CITY, OK 73102

MACK ENERGY COMPANY
PO BOX 400
DUNCAN OK 73534

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

Name	Depth	Name	Depth
1 SYCAMORE	8309	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: No Spacing

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201904615
201904616
201902735
201902736

Special Orders:

Total Depth: 19028 Ground Elevation: 984 Surface Casing: 1500 Depth to base of Treatable Water-Bearing FM: 440

Deep surface casing has been approved

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

PIT 1 INFORMATION

Type of Pit System: CLOSED Closed System Means Steel Pits

Type of Mud System: WATER BASED

Chlorides Max: 5000 Average: 3000

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 ALLUVIAL

Pit Location Formation: ALLUVIUM

Approved Method for disposal of Drilling Fluids:

D. One time land application -- (REQUIRES PERMIT) PERMIT NO: 19-37090

H. SEE MEMO

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.

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 ALLUVIAL

Pit Location Formation: ALLUVIUM

HORIZONTAL HOLE 1

Sec 21 Twp 1S Rge 4W County STEPHENS

Spot Location of End Point: SE SW SW SW

Feet From: SOUTH 1/4 Section Line: 100

Feet From: WEST 1/4 Section Line: 380

Depth of Deviation: 7755

Radius of Turn: 621

Direction: 179

Total Length: 10298

Measured Total Depth: 19028

True Vertical Depth: 10199

End Point Location from Lease,
Unit, or Property Line: 100

Notes:

Category

Description

DEEP SURFACE CASING

11/12/2019 - 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

11/12/2019 - 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; 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

MEMO

11/12/2019 - G71 - PITS 1 & 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, PIT 2 - OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT

PENDING CD - 201902735

11/13/2019 - G56 - (640)(HOR) W2 16-1S-4W
VAC OTHERS
EST OTHERS
VAC 98305 SCMR NW4
VAC 283164 SCMR SW4
EST SCMR
COMPL INT NLT 660' FB***
REC 11/12/2019 (THOMAS)

***WILL BE ADDED AT FINAL HEARING PER ATTORNEY FOR OPERATOR

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.

137 27593 GUS MCCRAE 01S04W 16-21-1MH

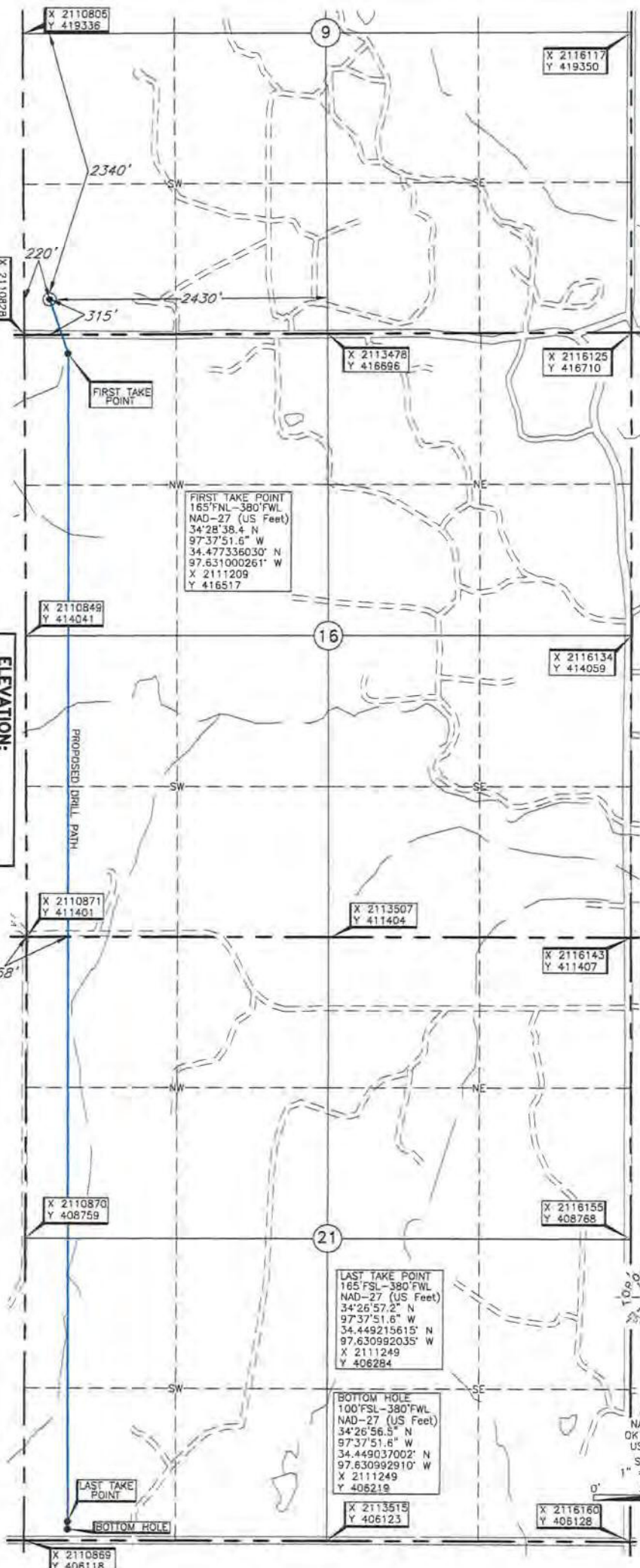
Rule 165: 10-3-4 (c) (7) (e) - The Operator shall give 24 Hours notice by telephone to the appropriate District Office of the Conservation Division as to when Surface Casing will be run.

PENDING CD - 201902736	<p>11/13/2019 - G56 - (320)(HOR) W2 21-1S-4W EST OTHERS EST SCMR COMPL INT NLT 660' FB*** REC 11/12/2019 (THOMAS)</p> <p>***WILL BE ADDED AT FINAL HEARING PER ATTORNEY FOR OPERATOR</p>
PENDING CD - 201904615	<p>11/13/2019 - G56 - (E.O.) W2 16 & W2 21-1S-4W X201902735 SCMR 16-1S-4W X201902736 SCMR 21-1S-4W COMPL INT (16-1S-4W) NCT 165' FNL, NCT 0' FSL, NCT 330' FWL COMPL INT (21-1S-4W) NCT 0' FNL, NCT 165' FSL, NCT 330' FWL 89 ENERGY II, LLC REC 11/12/2019 (THOMAS)</p>
PENDING CD - 201904616	<p>11/13/2019 - G56 - (E.O.) W2 16 & W2 21-1S-4W EST MULTIUNIT HORIZONTAL WELL X201902735 SCMR 16-1S-4W X201902736 SCMR 21-1S-4W 50% 16-1S-4W 50% 21-1S-4W 89 ENERGY II, LLC REC 11/12/2019 (THOMAS)</p>
WATERSHED STRUCTURE	<p>11/12/2019 - G71 - WELL WITHIN 1/2 MILE OF AN OKLAHOMA CONSERVATION COMMISSION WATERSHED STRUCTURE. CONTACT THE LOCAL CONSERVATION DISTRICT OFFICE AT (580) 255-5798 PRIOR TO DRILLING</p>

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Office of the Conservation Division as to when Surface Casing will be run.

NOTES:
 ● THE INFORMATION SHOWN HEREIN IS FOR CONSTRUCTION PURPOSES ONLY.
 ● FIRST TAKE POINT, LAST TAKE POINT, BOTTOM HOLE AND DRILL PATH INFORMATION PROVIDED BY OPERATOR USER, NOT SURVEYED.

TOPOGRAPHIC LAND SURVEYORS OF OKLAHOMA
 13800 Wireless Way, Okla. City, OK, 73134 • LOCAL (405) 843-4847 • OUT OF STATE (900) 654-3219
 Certificate of Authorization No. 1295 LS
 STEPHENS County, Oklahoma
 Section 9 Township 15S Range 4W 1.M.



Operator: **89 ENERGY**
 Lease Name: **Gus McCroe 01504W**
 Well No.: **16-21-1M**
 Topography & Vegetation: Location fell in extremely heavy brush creek running through pad
 Good Drill Site? **No**
 Reference Stakes or Alternate Location: **None**
 Stakes Set: **None**
 Best Accessibility to Location: **From South off county road**
 Distance & Direction: **From Hwy. 7 at Stephens-Carter county line, go ±3 miles West, then ±2.2 miles North to the SE Cor. Sec.9-T15-R4W**

ELEVATION:
 984' Gr. at Stake

DATUM: **NAD-27**
 LAT: **34°28'43.2"N**
 LONG: **97°37'53.5"W**
 LAT: **34.478654241° N**
 LONG: **97.631538228° W**
 STATE PLANE
 COORDINATES: (US Feet)
 ZONE: **OK South**
 X: **2111045**
 Y: **416996**

(This information was gathered with a GPS receiver with ±1 foot Horiz./Vert. accuracy.)

Revision B Date of Drawing: **Nov. 12, 2019**
 Project # **128856** Date Staked: **Aug. 09, 2019** LC

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**

