

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

API NUMBER: 093 25196

Approval Date: 01/28/2019

Expiration Date: 07/28/2020

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 29 Twp: 20N Rge: 15W

County: MAJOR

SPOT LOCATION: ☐ NW ☐ NE ☐ NW ☐ NW

FEET FROM QUARTER: FROM NORTH FROM WEST

SECTION LINES: 220 810

Lease Name: STEWART

Well No: 29-20-1H

Well will be 220 feet from nearest unit or lease boundary.

Operator Name: COMANCHE EXPLORATION CO LLC

Telephone: 4057555900

OTC/OCC Number: 20631 0

COMANCHE EXPLORATION CO LLC  
6520 N WESTERN AVE STE 300  
OKLAHOMA CITY, OK 73116-7334

THELMA WOODRING TRUST  
101 E. ASH  
P.O. BOX 349  
FAIRVIEW OK 73737

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

Name	Depth	Name	Depth
1 MERAMEC	9292	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: 132765

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201900172  
201805613

Special Orders:

Total Depth: 14411

Ground Elevation: 1731

**Surface Casing: 800**

Depth to base of Treatable Water-Bearing FM: 440

Under Federal Jurisdiction: No

Fresh Water Supply Well Drilled: No

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: 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

D. One time land application -- (REQUIRES PERMIT)

PERMIT NO: 19-36106

H. SEE MEMO

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 20 Twp 20N Rge 15W County MAJOR

Spot Location of End Point: N2 N2 NW NW

Feet From: NORTH 1/4 Section Line: 135

Feet From: WEST 1/4 Section Line: 660

Depth of Deviation: 8800

Radius of Turn: 484

Direction: 359

Total Length: 4850

Measured Total Depth: 14411

True Vertical Depth: 9292

End Point Location from Lease,  
Unit, or Property Line: 135

### Notes:

#### Category

#### Description

#### DEEP SURFACE CASING

1/16/2019 - 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

1/16/2019 - 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](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

1/16/2019 - 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

1/16/2019 - 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.

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.

093 25196 STEWART 29-20-1H

Category	Description
PENDING CD - 201805613	1/28/2019 - GB1 - (I.O.) 20-20N-15W X132765 MPMC, OTHER COMPL. INT. NCT 165' FSL, NCT 165' FNL, NCT 560' FWL NO OP. NAMED REC. 1/15/2019 (NORRIS)
PENDING CD - 201900172	1/28/2019 - GB1 - 20-20N-15W X132765 MPMC, OTHER 1 WELL COMANCHE EXPLORATION COMPANY, LLC HEARING 2/4/2019
SPACING - 132765	1/28/2019 - GB1 - (640) 20-20N-15W EST OTHER EXT OTHER EXT 128899 MPMC, OTHERS

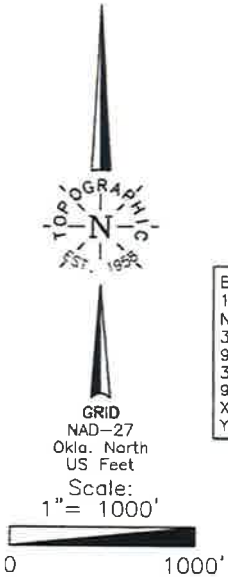
TOPOGRAPHIC LAND SURVEYORS OF OKLAHOMA

13800 Wireless Way, Okla. City, OK. 73134 (405) 843-4847 \* OUT OF STATE (800) 654-3219  
Certificate of Authorization No. 1293 LS

MAJOR

County, Oklahoma

220'FNL - 810'FWL Section 29 Township 20N Range 15W I.M.



BOTTOM HOLE  
135'FNL-660'FWL  
NAD-27 (US FEET)  
36°12'05.8" N  
98°49'45.5" W  
36.201598953° N  
98.829318209° W  
X=1755315  
Y=438438

X= 1754665  
Y= 435926

LANDING POINT  
200'FSL-660'FWL  
NAD-27 (US FEET)  
36°11'17.1" N  
98°49'45.0" W  
36.188095924° N  
98.829164409° W  
X=1755318  
Y=433523

X= 1757281  
Y= 433275

X= 1759905  
Y= 433212

X= 1759895  
Y= 430677

X= 1759883  
Y= 428042

X= 1757249  
Y= 428056

X= 1754657  
Y= 433338

X= 1754636  
Y= 430704

X= 1754614  
Y= 428069

PROPOSED DRILL PATH

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

Operator: COMANCHE EXPLORATION CO., LLC  
Lease Name: STEWART  
Topography & Vegetation: Loc. fell in sandy pasture with rough thick brush and trees  
Good Drill Site? Yes  
Reference Stakes or Alternate Location: Stakes Set  
Best Accessibility to Location: From North off county road  
Distance & Direction from Hwy Jct or Town: From Jct. US Hwy. 281 N-S and US Hwy. 60 E-W, East of Chester, OK, go ±2.0 mi. South on US Hwy. 60, then ±5.0 mi. East to the NW Cor. of Sec. 29-T20N-R15W

ELEVATION:  
1731' Gr. at Stake

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

DATUM: NAD-27  
LAT: 36°11'13.0"N  
LONG: 98°49'43.2"W  
LAT: 36.186934983° N  
LONG: 98.828653140° W  
STATE PLANE  
COORDINATES: (US Feet)  
ZONE: OK NORTH  
X: 1755465  
Y: 433099

Date of Drawing: Aug. 01, 2018

Invoice # 299975A

Date Staked: Jul. 31, 2018

AC

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

