

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

API NUMBER: 093 25227

Approval Date: 06/03/2019

Expiration Date: 12/03/2020

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 21 Twp: 20N Rge: 15W

County: MAJOR

SPOT LOCATION: ☐ SW ☐ NW ☐ SW ☐ SW

FEET FROM QUARTER: FROM SOUTH FROM WEST

SECTION LINES: 850 200

Lease Name: HAWK

Well No: 21-29-1JH

Well will be 200 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

BRAZOS RESOURCES, LP BRM, LLC
6520 N. WESTERN, SUITE 300
OKLAHOMA CITY, OK 73116
OKLAHOMA

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

Name	Depth	Name	Depth
1 MISSISSIPPIAN	8200	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: 610999

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201902604
201902603

Special Orders:

Total Depth: 15214

Ground Elevation: 1749

Surface Casing: 800

Depth to base of Treatable Water-Bearing FM: 410

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: 19-36408

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 29 Twp 20N Rge 15W County MAJOR

Spot Location of End Point: SW SE SE SE

Feet From: SOUTH 1/4 Section Line: 135

Feet From: EAST 1/4 Section Line: 600

Depth of Deviation: 8776

Radius of Turn: 804

Direction: 187

Total Length: 5174

Measured Total Depth: 15214

True Vertical Depth: 9340

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

Notes:

Category

Description

COMPLETION INTERVAL

5/24/2019 - GB1 - WILL BE GREATER THAN 165' FSL PER OPERATOR

DEEP SURFACE CASING

5/7/2019 - 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

5/7/2019 - 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: OCCWEB.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

INTERMEDIATE CASING

5/7/2019 - 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

5/7/2019 - 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.

093 25227 HAWK 21-29-1JH

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
PENDING CD - 201902603	5/24/2019 - GB1 - 29-20N-15W X610999 MSSP 2 WELLS COMANCHE EXPLORATION COMPANY LLC REC. 5/28/2019 (P. PORTER)
PENDING CD - 201902604	5/24/2019 - GB1 - (I.O.) 29-20N-15W X610999 MSSP X165:10-3-28 MPMC MAY BE CLOSER THAN 600' TO ALTIC 29-20-1H, GARD 1-28 COMPL. INT. NCT 165' FSL, NCT 165' FNL, NCT 560' FEL NO OP. NAMED REC. 5/28/2019 (P. PORTER)
SPACING - 610999	5/24/2019 - GB1 - (640)(HOR) 29-20N-15W EST MSSP, OTHERS POE TO BHL (MSSP) NCT 660' FB (SUPERCEDE EXISTING NON-DEVELOPED, NON-HORIZONTAL SPACING UNITS; COEXIST WITH PRODUCING NON-HORIZONTAL SPACING UNITS)

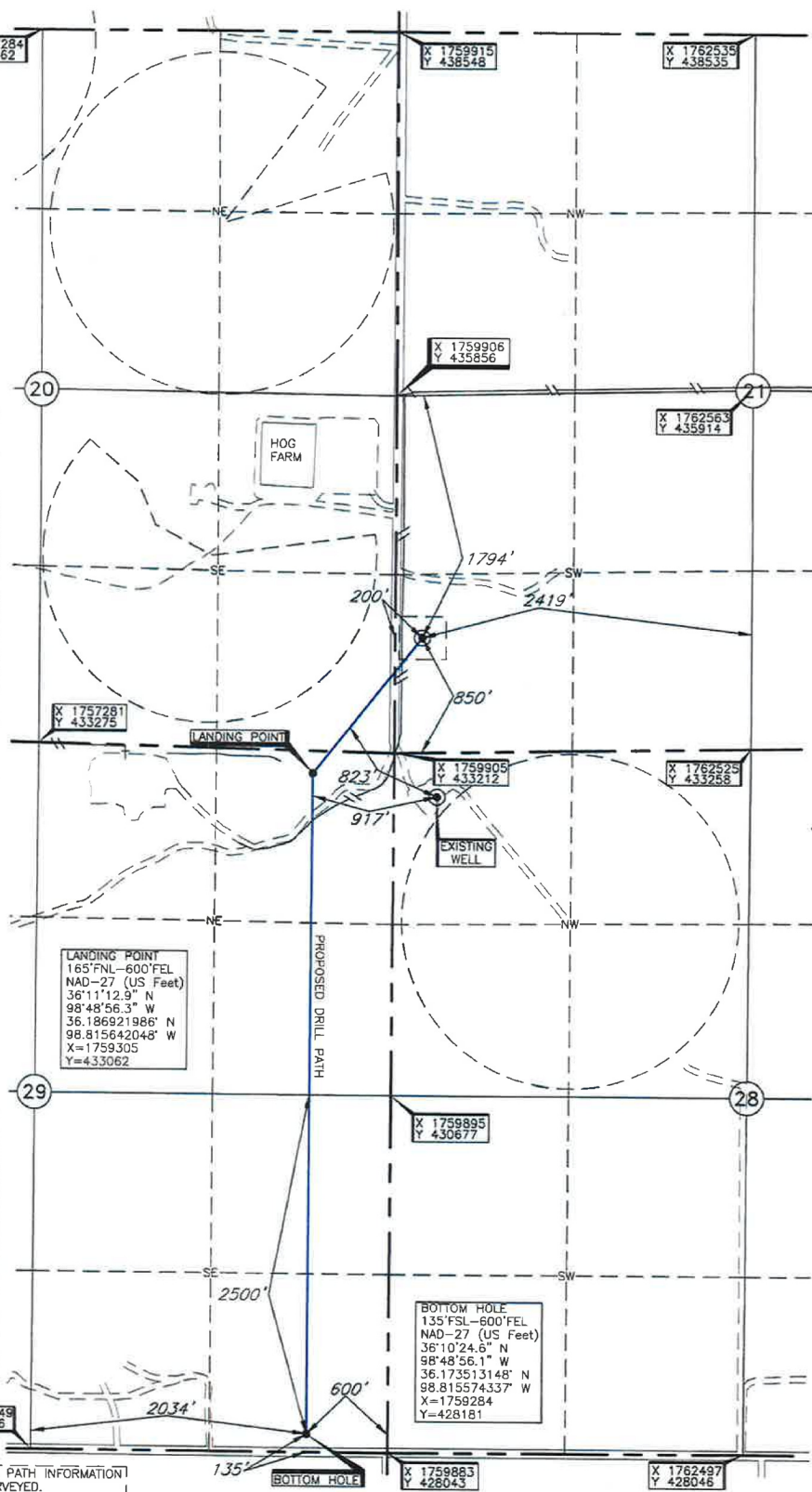
TOPOGRAPHIC LAND SURVEYORS OF OKLAHOMA
13800 Wireless Way, Okla. City, OK. 73134 (405) 843-4847 • OUT OF STATE (800) 654-3219
Certificate of Authorization No. 1293 LS

MAJOR County, Oklahoma
850' FSL - 200' FWL Section 21 Township 20N Range 15W I.M.



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

Operator: COMANCHE EXPLORATION CO., LLC
Lease Name: HAWK
Topography & Vegetation: Loc. fell in heavy brush, ±150' East of N-S SMD pipeline
Well No.: 21-29-1JH
ELEVATION: 1749' Cr. at Stake
Good Drill Site? Yes
Reference Stakes or Alternate Location: Stakes Set None
Best Accessibility to Location: From West off county road
Distance & Direction: From Chester, OK, go ±6.0 mi. East on US Hwy. 60, then ±2.0 mi. South to the SW Cor. of Sec. 21-T20N-R15W



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

DATUM: NAD-27
LAT: 36°11'22.9"N
LONG: 98°48'46.6"W
LAT: 36.189699751' N
LONG: 98.812956417' W
STATE PLANE
COORDINATES: (US Feet)
ZONE: OK NORTH
X: 1760106
Y: 434066

Date of Drawing: Nov. 07, 2018
Invoice # 304003 Date Staked: Oct. 16, 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

