API NUMBER: 017 25421

Oil & Gas

Horizontal Hole

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

Approval Date: 03/25/2019
Expiration Date: 09/25/2020

PERMIT TO DRILL

WELL LOCATION:	Sec:	18	Twp:	13N	Rge:	6W	County:	CANADIAN
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SPOT LOCATION: SW SE SE FEET FROM QUARTER: FROM SOUTH FROM EAST SECTION LINES: 285 1145

Lease Name: BROOKIE 1306 Well No: 4LMH-18 Well will be 285 feet from nearest unit or lease boundary.

Operator CHAPARRAL ENERGY LLC Telephone: 4054788770; 4054264 OTC/OCC Number: 16896 0

CHAPARRAL ENERGY LLC 701 CEDAR LAKE BLVD

OKLAHOMA CITY, OK 73114-7800

THOMAS & ELIZABETH J. DETERMAN

7301 NORMAN ROAD

WARR ACRES OK 73132

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

Name Depth Name Depth MISSISSIPPIAN 1 8846 6 2 7 3 8 4 9 5 10 641397 Spacing Orders: Location Exception Orders: Increased Density Orders:

Pending CD Numbers: 201900771 Special Orders:

201900767

Total Depth: 13700 Ground Elevation: 1309 Surface Casing: 1500 Depth to base of Treatable Water-Bearing FM: 330

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: WATER BASED D. One time land application -- (REQUIRES PERMIT) PERMIT NO: 19-36367

Chlorides Max: 5000 Average: 3000 H. SEE MEMO

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

 $\mbox{Pit} \quad \mbox{is not} \quad \mbox{located in a Hydrologically Sensitive Area}.$

Category of Pit: C

Liner not required for Category: C

Pit Location is NON HSA

Pit Location Formation: CHICKASHA

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 not located in a Hydrologically Sensitive Area.

Category of Pit: C

Liner not required for Category: C
Pit Location is NON HSA

Pit Location Formation: CHICKASHA

HORIZONTAL HOLE 1

Sec 18 Twp 13N Rge 6W County CANADIAN

Spot Location of End Point: NE NE NW NE
Feet From: NORTH 1/4 Section Line: 165
Feet From: EAST 1/4 Section Line: 1380

Depth of Deviation: 7960 Radius of Turn: 492 Direction: 355

Total Length: 4966

Measured Total Depth: 13700

True Vertical Depth: 8860

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

Notes:

MEMO

Category Description

DEEP SURFACE CASING 3/13/2019 - 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 3/13/2019 - 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

3/13/2019 - G71 - PITS 1 & 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, PIT 2 -

OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT

PENDING CD - 201900771 3/25/2019 - GB1 - (I.O.) 18-13N-6W

X641397 MSSP

X165:10-3-28(C)(2)(B) MSSP MAY BE CLOSER THAN 600' TO SMITH 1, DETERMAN 1, MERRELL

A-1, NIEMANN A-1, AND NIEMANN A-2

COMPL. INT. NCT 165' FSL, NCT 165' FNL, NCT 330' FEL

NO OP. NAMED

REC. 3/12/2019 (P. PORTER)

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.

017 25421 BROOKIE 1306 4LMH-18

Category SPACING - 641397

ategory Description

3/25/2019 - GB1 - (640)(HOR) 18-13N-6W EST MSSP, OTHERS COMPL. INT. (MSSP) NLT 660' FB (COEXIST WITH SP # 122201 MISS) API 35-017-25421 TOPOGRAPHIC LAND SURVEYORS OF OKLAHOMA

13800 Wireless Way, Okla. City, OK. 73134 * LOCAL (405) 843-4847 * OUT OF STATE (800) 654-3219

Certificate of Authorization No. 1293 LS CANADIAN County, Oklahoma 285'FSL-1145'FEL 18 Township 13N Range Section 5403 X 2033454 Y 221844 X 2036207 Y 221852 X 2038857 Y 221859 PROPOSED BOTTOM HOLE 165'FNL-1380'FEL NAD-27 (US Feet) 35'36'32.2" N 97'52'26.2" W LOT 1 35.608954515° 97.873932934° X 2037477 Y 221690 EXISTING WELL ±843' TO DRILL PATH E/2-NW/4 Range LOT 2 00.00 OGRAD EXISTING WELL ±601' TO DRILL PATH X 2033470 Y 219175 1950 8 LOT 3 GRID EXISTING WEL DETERMAN ±727' TO DRILL PATH NAD-27 OK NORTH US Feet SCALE: PROPOSED LANDING POINT 165'FSL-1380'FEL NAD-27 (US Feet) 35'35'43.1" N 97'52'26.3" W 35.595311708 N = 1000'500' 1000' E/2-SW/4 PROPOSED BROOKIE LOT 4 97.873971718° W PROPOSED BROOKIE X 2037471 Y 216724 X 2033480 Y 216542 5372 LANDING POINT, BOTTOM HOLE, AND DRILL PATH INFORMATION PROVIDED BY OPERATOR LISTED, NOT SURVEYED. THE INFORMATION SHOWN HEREIN IS FOR CONSTRUCTION PURPOSES ONLY Operator: CHAPARRAL ENERGY, LLC. **ELEVATION:** Lease Name: BROOKIE 1306 Well No.: 4LMH-18 1309' Gr. at Stake Topography & Vegetation Location fell in sloping pasture. Reference Stakes or Alternate Location Good Drill Site? _____ Yes Stakes Set None Best Accessibility to Location From South off county road. Distance & Direction From the junction of US Hwy. 81 and St. Hwy. 3, go East on St. Hwy. 3 ±4 miles, then from Hwy Jct or Town_ THO' South ±4.75 miles, then East ±1 mile to the Southeast Corner of Section 18-T13N-R6W. Date of Drawing: Mar. 12, 2019 DATUM:_ Project # 124649B Date Staked: Mar. 6, 2019 NAD-27 LAT: 35'35'44.3" N LONG: 97'52'23.4" W **CERTIFICATE:** LAT: 35.59**5642**412° N CENSED Thomas L. Howell an Oklahoma Licensed Land LONG: 37.00 ED 49 STATE PLANE COORDINATES 70NE: OK URVE LONG: 97.873180243° W Surveyor and an authorized agent of Topographic Land Surveyors of Oklahoma, do hereby certify to the COORDINATES: (US Feet) information shown herein. ZONE: OK NORTH X: 2037707 umu OKLAHOMA A HOUSE Y: 216845 Oklahoma Lic. No. _