

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

API NUMBER: 105 41246

Approval Date: 12/28/2017
Expiration Date: 06/28/2018

Straight Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 19 Twp: 28N Rge: 17E County: NOWATA
SPOT LOCATION: SW SE SW NE FEET FROM QUARTER: FROM NORTH FROM EAST
SECTION LINES: 2434 1967

Lease Name: KOTTKE Well No: 19-4M Well will be 1967 feet from nearest unit or lease boundary.
Operator Name: RIVER ROCK OPERATING LLC Telephone: 4056067481 OTC/OCC Number: 23862 0

RIVER ROCK OPERATING LLC
211 N ROBINSON AVE STE 200
OKLAHOMA CITY, OK 73102-7109

NEAL & LEE KOTTKE
141 WEST JACKSON BLVD
1620 CHICAGO BOARD OF TRADE
CHICAGO IL 60604

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

Name	Depth	Name	Depth
1 SUMMIT	395	6 RIVERTON COAL	940
2 MULKY COAL	430	7 MISSISSIPPI CHAT	950
3 IRON POST COAL	450	8	
4 CROWEBERG	490	9	
5 ROWE COAL	860	10	

Spacing Orders: No Spacing

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers:

Special Orders:

Total Depth: 1250 Ground Elevation: 800 **Surface Casing: 0** Depth to base of Treatable Water-Bearing FM: 160

Cement will be circulated from Total Depth to the Ground Surface on the Production Casing String.

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

PIT 1 INFORMATION

Type of Pit System: ON SITE
Type of Mud System: AIR

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: 4

Liner not required for Category: 4

Pit Location is NON HSA

Pit Location Formation: OOLOGAH

Mud System Change to Water-Based or Oil-Based Mud Requires an Amended Intent (Form 1000).

Approved Method for disposal of Drilling Fluids:

A. Evaporation/dewater and backfilling of reserve pit.

H. CBL REQUIRED

Notes:

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.

Category	Description
ALTERNATE CASING	12/6/2017 - G71 - APPROVED; COPY OF CBL NEEDS TO BE SUBMITTED TO THE TECHNICAL STAFF IMMEDIATELY. A COMPLETION ATTEMPT, IN CASES WHERE THE PROTECTION OF THE TREATABLE WATER IS QUESTIONABLE, IS STRICTLY PROHIBITED. RULE 165: 10-3-4 (D)(4)(C)
COMMINGLE - 459421	12/28/2017 - G58 - DESIGNATES NOWATA COUNTY CBM FIELD FOR MLKY, IRNPT, BVIR, CRBG, WRPB, BJCK, ROWCL, AND RVTN; ALLOWS COMMINGLE AS AN EXCEPTION TO 165:10-3-39 PROVIDED THERE IS UNIFORM OWNERSHIP
COMMINGLE - 473443	12/28/2017 - G58 - MOD 459421 TO INCLUDE SMMT
COMMINGLE - 500189	12/28/2017 - G58 - MOD 459421 TO INCLUDE TEBO, NTRL
HYDRAULIC FRACTURING	12/5/2017 - 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
SPACING	12/28/2017 - G58 - FORMATIONS UNSPACED; 80 ACRE LEASE