

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

API NUMBER: 085 21334

Approval Date: 10/01/2021
Expiration Date: 04/01/2023

Multi Unit Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Section: 12 Township: 8S Range: 2E County: LOVE

SPOT LOCATION: NE NE NW NE FEET FROM QUARTER: FROM NORTH FROM EAST
SECTION LINES: 275 1325

Lease Name: THE COWMAN Well No: 1-12H1X36 Well will be 275 feet from nearest unit or lease boundary.
Operator Name: TRAILHEAD EXPLORATION LLC Telephone: 8173306172 OTC/OCC Number: 24401 0

TRAILHEAD EXPLORATION LLC
505 MAIN ST STE 340
FORT WORTH, TX 76102-5417

OUTER RANGE HOLDINGS, LLC
505 MAIN STREET
SUITE 340
DALLAS TX 75214

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

Name	Code	Depth
1 WOODFORD	319WDFD	17736

Spacing Orders: 711600 Location Exception Orders: 720185 Increased Density Orders: No Density
710628
720184

Pending CD Numbers: No Pending Working interest owners' notified: *** Special Orders: No Special

Total Depth: 28000 Ground Elevation: 655 Surface Casing: 3000 Depth to base of Treatable Water-Bearing FM: 690

Deep surface casing has been approved

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

Approved Method for disposal of Drilling Fluids:
D. One time land application -- (REQUIRES PERMIT) PERMIT NO: 21-37828
H. (Other) SEE MEMO

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: AP/TE DEPOSIT
Pit Location Formation: TERRACE

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

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.

MULTI UNIT HOLE 1

Section: 36 Township: 7S Range: 2E Meridian: IM Total Length: 10230
 County: LOVE Measured Total Depth: 28166
 Spot Location of End Point: NE NW NE NE True Vertical Depth: 17936
 Feet From: **NORTH** 1/4 Section Line: 165 End Point Location from
 Feet From: **EAST** 1/4 Section Line: 820 Lease,Unit, or Property Line: 165

NOTES:

Category	Description
DEEP SURFACE CASING	[9/16/2021 - GC2] - APPROVED; (1) NOTIFYING OCC FIELD INSPECTOR IMMEDIATELY OF ANY LOSS OF CIRCULATION OR FAILURE TO CIRCULATE CEMENT TO SURFACE ON ANY CONDUCTOR OR SURFACE CASING (2) DV TOOL TO BE SET AT 100' BELOW BTW
HYDRAULIC FRACTURING	[9/16/2021 - GC2] - OCC 165:10-3-10 REQUIRES: 1) NOTICE SHALL BE GIVEN AT LEAST 5 BUSINESS DAYS PRIOR TO COMMENCEMENT OF HYDRAULIC FRACTURING OPERATIONS ON A HORIZONTAL WELL TO OPERATORS PRODUCING WELLS WITHIN 1 MILE OF THE COMPLETION INTERVAL OF THE SUBJECT WELL. THE NOTICE TO SUCH OPERATORS SHALL CONTAIN THE INFORMATION IN FORM 6000NOO. IF THE HYDRAULIC FRACTURING OPERATIONS SCHEDULE CHANGES AFTER NOTICE HAS BEEN PROVIDED, RESULTING IN A DELAY OF OPERATIONS OF MORE THAN 5 DAYS FROM THE INITIAL NOTICE, NEW NOTICE IS REQUIRED TO BE GIVEN; 2) NOTICE WILL BE GIVEN TO THE OCC CENTRAL OFFICE AND LOCAL DISTRICT OFFICES AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF HYDRAULIC FRACTURING OPERATIONS. FORM 6000NHF SHALL BE USED AND IS FOUND AT THIS LINK: OCCWEB.COM/OG/OGFORMS.HTML ; AND, 3) THE CHEMICAL DISCLOSURE OF HYDRAULIC FRACTURING INGREDIENTS FOR ALL WELLS IS TO BE REPORTED TO FRACFOCUS WITHIN 60 DAYS AFTER THE CONCLUSION OF HYDRAULIC FRACTURING OPERATIONS, FOUND AT FRACFOCUS.ORG
LOCATION EXCEPTION - 720185 (202101309)	[10/1/2021 - GC2] - (I.O.) 1-8S-2E & 36-7S-2E X711600 WDFD, OTHER 1-8S-2E X710628 WDFD, OTHER 36-7S-2E COMPL. INT. (1-8S-2E) NCT 165' FSL, NCT 0' FNL, NCT 330' FEL COMPL. INT. (36-7S-2E) NCT 0' FSL, NCT 165' FNL, NCT 330' FEL TRAILHEAD EXPLORATION, LLC 8-24-2021
MEMO	[9/16/2021 - GC2] - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT
SPACING - 710628	[10/1/2021 - GC2] - (640)(HOR) 36-7S-2E VAC 245730 WDFD, OTHER EST WDFD, OTHER COMPL. INT. NCT 165' FSL/FNL, NCT 330' FEL/FWL
SPACING - 711600	[10/1/2021 - GC2] - (640)(HOR) 1-8S-2W VAC 230504 WDFDP, OTHERS EST WDFD, OTHER COMPL. INT. NCT 165' FNL/FSL, NCT 330' FEL/FWL
SPACING - 720184 (202101308)	[10/1/2021 - GC2] - (I.O.) 1-8S-2E & 36-7S-2E EST MULTIUNIT HORIZONTAL WELL X711600 WDFD, OTHER 1-8S-2E X710628 WDFD, OTHER 36-7S-2E 50% 1-8S-2E 50% 36-7S-2E TRAILHEAD EXPLORATION, LLC 8-24-2021

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