

API NUMBER: 085 21331 C

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

Approval Date: 08/12/2021

Expiration Date: 02/12/2023

Horizontal Hole Oil & Gas

Amend reason: OCC CORRECTION - CHANGE DRILLING TYPE
AND UPDATE ORDERS

AMEND PERMIT TO DRILL

WELL LOCATION: Section: 05 Township: 8S Range: 3E County: LOVE

SPOT LOCATION: SW SE SE SW FEET FROM QUARTER: FROM SOUTH FROM WEST
SECTION LINES: 280 2235

Lease Name: THE RANGER Well No: 1-5H8X17 Well will be 260 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

DONALD CRAIG WILLIAMS & PAMELA S WILLIAMS
7401 FM 281
SUNRAY TX 79086

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

	Name	Code	Depth
1	MISSISSIPPIAN	359MSSP	15369
2	WOODFORD	319WDFD	17733
3	SYLVAN	203SLVN	17933

Spacing Orders: 720800

Location Exception Orders: 721046

Increased Density Orders: No Density

Pending CD Numbers: No Pending

Working interest owners' notified: ***

Special Orders: No Special

Total Depth: 26720

Ground Elevation: 647

Surface Casing: 3600

Depth to base of Treatable Water-Bearing FM: 670

Deep surface casing has been approved

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

Approved Method for disposal of Drilling Fluids:

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

PERMIT NO: 21-37697

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: ALLUVIAL

Pit Location Formation: ALLUVIUM

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: ALLUVIAL

Pit Location Formation: ALLUVIUM

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.

HORIZONTAL HOLE 1

Section: 17	Township: 8S	Range: 3E	Meridian: IM	Total Length: 9045
County: LOVE				Measured Total Depth: 26051
Spot Location of End Point: SE	SW	NW	SE	True Vertical Depth: 18000
Feet From: SOUTH	1/4 Section Line: 1			End Point Location from
Feet From: EAST	1/4 Section Line: 1			Lease, Unit, or Property Line: 1

NOTES:

Category	Description
DEEP SURFACE CASING	[8/12/2021 - 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) 2-STAGE CEMENTING TOOL TO BE SET AT 100' BELOW BTW (3) COPY OF CBL NEEDS TO BE SUBMITTED TO TECHNICAL
HYDRAULIC FRACTURING	[7/13/2021 - 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: OCCEWEB.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 - 721046 (202101307)	[12/17/2021 - GC2] - (I.O.) 8, FRAC SECTIONS 9, 17, & 20, S2 SW4 & LOT 4 SECTION 4, SE4 SE4, E2 SW4 SE4, & E2 W2 SW4 SE4 5-8S-3E X720800 MSSP, WDFD, SLVN COMPL. INT. (8-8S-3E) NCT 0' FNL, NCT 330' FWL COMPL. INT. (17-8S-3E) NCT 0' FSL, NCT 330' FWL TRAILHEAD EXPLORATION, LLC 10/11/2021
MEMO	[8/12/2021 - GC2] - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT
SPACING - 720800	[12/17/2021 - GC2] - (1280)(IRR UNIT)(HOR) 8, FRAC SECTIONS 9, 17, & 20, S2 SW4 & LOT 4 SECTION 4, SE4 SE4, E2 SW4 SE4, & E2 W2 SW4 SE4 5-8S-3E EST MSSP, WDFD, SLVN COMPL INT. (MSSP) NCT 660' FWUB/FNUB COMPL INT. (WDFD/SLVN) NCT 165' FNUB, NCT 330' FWUB