

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

API NUMBER: 143 24327

Approval Date: 09/17/2019

Expiration Date: 03/17/2021

Straight Hole

Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 12 Twp: 21N Rge: 12E

County: TULSA

SPOT LOCATION: ☐ SE ☐ NW ☐ SW ☐ SE

FEET FROM QUARTER: FROM SOUTH FROM EAST

SECTION LINES: 700 2300

Lease Name: CHALKY WHITE UNIT

Well No: 8

Well will be 700 feet from nearest unit or lease boundary.

Operator  
Name: LDO LLC

Telephone: 9185741320

OTC/OCC Number: 24147 0

LDO LLC  
8929 S JOPLIN AVE  
TULSA, OK 74137-3020

MSH PROPERTIES LLC  
2525 EAST 66TH STREET NORTH  
TULSA OK 74130

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

	Name	Depth	Name	Depth
1	CLEVELAND	200	6	
2	BARTLESVILLE	1160	7	
3	BURGESS	1400	8	
4			9	
5			10	

Spacing Orders: No Spacing

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers:

Special Orders:

Total Depth: 1500

Ground Elevation: 619

**Surface Casing: 100**

Depth to base of Treatable Water-Bearing FM: 40

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: ON SITE

A. Evaporation/dewater and backfilling of reserve pit.

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 located in a Hydrologically Sensitive Area.

**Category of Pit: 4**

**Liner not required for Category: 4**

Pit Location is ALLUVIAL

Pit Location Formation: ALLUVIUM

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

Notes:

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.

Category	Description
HYDRAULIC FRACTURING	<p>8/28/2019 - G71 - OCC 165:10-3-10 REQUIRES:</p> <p>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;</p> <p>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: <a href="http://OCCWEB.COM/OG/OGFORMS.HTML">OCCWEB.COM/OG/OGFORMS.HTML</a>; AND,</p> <p>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: <a href="http://FRACFOCUS.ORG">FRACFOCUS.ORG</a></p>
SPACING	<p>9/16/2019 - GC3 - FORMATIONS UNSPACED; 200-ACRE LEASE (E2 E2 SW4 &amp; SE4)</p>