API NUMBER: 093 25044

Oil & Gas

Horizontal Hole

PO BOX 18496

OKLAHOMA CITY.

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

11/22/2016 Approval Date: 05/22/2017 Expiration Date:

17441 0

Well will be 210 feet from nearest unit or lease boundary.

OTC/OCC Number:

ILL

	PERMIT TO DRILL
SPOT LOCATION. (SE) (SE) (SE)	County: MAJOR EET FROM QUARTER: FROM SOUTH FROM EAST ECTION LINES: 210 890
Lease Name: CAULDER 31-23-14	Well No: 1H
Operator CHESAPEAKE OPERATING LLC Name:	Telephone: 4059353425; 4059358
CHESAPEAKE OPERATING LLC	

OK

73154-0496

WAYNE AND DONA CAULDER PO BOX 835

HENNESSEY OK 73742

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

	Name	Depth	Name	Depth
1	MISSISSIPPI LIME	7150	6	
2			7	
3			8	
4			9	
5			10	
Spacing Orders:	No Spacing	Location Exception Orders:		Increased Density Orders:
Pending CD Nur	mbers: 201605164			Special Orders:

201605165

Total Depth: 12350 Ground Elevation: 1337 Surface Casing: 1500 Depth to base of Treatable Water-Bearing FM: 560

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: WATER BASED Chlorides Max: 25000 Average: 8000

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?

Pit is not located in a Hydrologically Sensitive Area.

Category of Pit: 2

Liner not required for Category: 2 Pit Location is NON HSA

Pit Location Formation: FLOWERPOT

A. Evaporation/dewater and backfilling of reserve pit.

Approved Method for disposal of Drilling Fluids:

D. One time land application -- (REQUIRES PERMIT) PERMIT NO: 16-31827

H. SEE MEMO

PIT 2 INFORMATION

Type of Pit System: ON SITE

Type of Mud System: OIL BASED

Chlorides Max: 300000 Average: 160000

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: 3
Liner required for Category: 3
Pit Location is NON HSA

Pit Location Formation: FLOWERPOT

HORIZONTAL HOLE 1

Sec. 31 Twp 23N Rge 14W County **MAJOR** Spot Location of End Point: NW NE NF NF Feet From: NORTH 1/4 Section Line: 50 Feet From: EAST 1/4 Section Line: 430

Depth of Deviation: 6939 Radius of Turn: 500

Direction: 5

Total Length: 4625

Measured Total Depth: 12350

True Vertical Depth: 7300

End Point Location from Lease,
Unit, or Property Line: 50

Notes:

Category Description

DEEP SURFACE CASING 11/17/2016 - 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 11/17/2016 - G71 - OCC 165:10-3-10 REQUIRES: 1) THE CHEMICAL DISCLOSURE OF

HYDRAULIC FRACTURING INGREDIENTS FOR ALL WELLS BE REPORTED TO FRACFOCUS USING THE FOLLOWING LINK HTTP://FRACFOCUS.ORG/ WITH NOTICE GIVEN 48 HOURS IN ADVANCE OF FRACTURING TO THE LOCAL OCC DISTRICT OFFICE; AND, 2) PRIOR TO COMMENCEMENT OF FRACTURING OPERATIONS FOR HORIZONTAL WELLS, NOTICE ALSO

GIVEN FIVE BUSINESS DAYS IN ADVANCE TO OFFSET OPERATORS WITH WELLS COMPLETED IN THE SAME COMMON SOURCE OF SUPPLY WITHIN 1/2 MILE.

MEMO 11/17/2016 - G71 - PITS 1 & 2 - CONCRETE LINED PIT PER OPERATOR REQUEST, PIT 2 - OBM

RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT

PENDING CD - 201605164 11/21/2016 - G64 - (E.O.)(640)(HOR) 31-23N-14W

EST MSSLM

POE TO BHL NLT 660' FB

(COEXIST SP. ORDER 55352 MRMC)

REC. 11-21-2016 (LEAVITT)

PENDING CD - 201605165 11/21/2016 - G64 - (E.O.) 31-23N-14W

X201605164 MSSLM

COMPL. INT. NCT 150' FSL, NCT 150' FNL, NCT 330' FEL

NO OP. NAMED

REC. 11-21-2016 (LEAVITT)

TOPOGRAPHIC LAND SURVEYORS OF OKLAHOMA
6709 NORTH CLASSEN BLVD., OKLA. CITY, OKLA. 73116 * LOCAL (405) 843-4847 * OUT OF STATE (800) 654-3219

Certificate of Authorization No. 1293 LS NAD-27 X= 1785507.3 Y= 522885.2 NAD-83 X= 1753905.2 Y= 522912.2 **MAJOR** MAJOR County, Oklahoma
210'FSL - 890'FEL Section 31 Township 23N Range API: 093 25044 14W I.M. BOTTOM HOLE BOTTOM HOLE 50'FNL-430'FEL NAD-27 (US Feet) 36'26'02.7" N 98'43'50.2" W 36.434097' N 98.730601' W X= 1785076.8 NAD-27 X= 1782872.4 Y= 522904.0 NAD-83 X= 1751270.2 Y= 522931.0 NAD-27 X= 1780518.9 Y= 522920.9 NAD-83 X= 1748916.8 Y= 522947.9 430 BOTTOM HOLE 2205 123N-R15W LOT 1 EXISTING WELL DISTANCE TO: SHL: 3766' LP: 3566' Y= 522838.3 NAD-83 (US Feet) 36'26'02.9" N 98'43'51.5" W 36.434134' N 98.730964' W BHL: 1580' PDP: 918' 2593 E/2-NW/4 X= 1753474.7 Y= 522865.2 LOT 2 NAD-27 X= 1785484.3 Y= 520243.8 NAD-83 X= 1753882.2 Y= 520270.8 520266.2 1748896.9 520293.1 LANDING POIN 500'FSL-430'FEL NAD-27 (US Feet) 36'25'16.0" N 98'43'50.2" W DRILL 1731 \parallel 36.421101' N 98.730617' W X= 1785036.7 0GR46 Y= 518107.4 LOT 3 11 NAD-83 (US Feet) 36'25'16,1" N -N−5 36°25'16.1" N 98°43'51.5" W 1999 2429 36.421138' N 98.730980' W X= 1753434.6 Y= 518134.3 E/2-SW/4 EXISTING WELL NAD-27 X= 1785462.6 Y= 517605.7 NAD-83 X= 1753860.5 Y= 517632.7 DISTANCE TO: SHL: 1347' LP: 1473' BHL: 4104' PDP: 1227' LANDING POINT LOT 4 GRID NAD-27 X= 1782827. Y= 517615.8 NAD-83 X= 1751225. Y= 517642. NAD-27 ok north US Feet 1000' SURFACE HOLE NAD-83 (US Feet) 36'25'13.2" N 98'43'57.2" W 36.420337' N 98.732544' W T23N-R14W NAD-27 X= 1780466.1 Y= 517624.8 NAD-83 X= 1748863.9 Y= 517651.7 T22N-R14W 2635 NOTE: X= 1752972.2 Y= 517846.0 LANDING POINT, BOTTOM HOLE AND DRILL PATH INFORMATION The information shown herein is for PROVIDED BY OPERATOR LISTED, NOT SURVEYED.

The information shown herein is for construction purposes ONLY. **ELEVATION:** Operator: CHESAPEAKE OPERATING, L.L.C. 1337' Gr. at Stake NAVD88 1337' Gr. at Stake NGVD29 Lease Name: CAULDER 31-23-14 Well No.: 1H Topography & Vegetation Loc. fell in tall weed pasture, ±136' North to pipeline, ±170' South to water line, ±176' South to fence Reference Stakes or Alternate Location Stakes Set None Good Drill Site? __ Best Accessibility to Location From South off county road Distance & Direction from Hwy Jet or Town From Jet. US Hwy. 412 and US Hwy. 281, South of Waynoka, OK, go ±8.0 mi. East on US Hwy. 412, then ±0.6 mi. North on county road, then ±1.0. mi. East to the SE Cor. of Sec. 31-T23N-R14W Date of Drawing: Sep. 26, 2016 POE SSIONAL TANK Invoice # 265422 Date Staked: Sep. 19, 2016 NAD−27 NAD−27 LAT: 36'25'13.1"N LONG: 98'43'55.9"W **CERTIFICATE:** SURVE LAT: 36.420300° N THOMAS L. Thomas L. Howell an Oklahoma Licensed Land HOWELL LONG: 98.732181° W Surveyor and an authorized agent of Topographic Land 1433 STATE PLANE Surveyors of Oklahoma, do hereby certify to the OK LAHOMA COORDINATES: (US Feet) information shown herein ZONE: OK NORTH Thema I. Nave X: 1784574.3 Oklahoma Lic. No. 1433 517819.1