API NUMBER: 151 24544

Oil & Gas

Horizontal Hole

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

Approval Date: 09/20/2018 Expiration Date: 03/20/2020

PERMIT TO DRILL

WELL LOCATION:	Sec:	11	Twp:	23N	Rge:	14W	County:	WOODS
----------------	------	----	------	-----	------	-----	---------	-------

SPOT LOCATION: NW FEET FROM QUARTER: NW || NE NE NORTH FROM EAST SECTION LINES: 1070

Lease Name: LEE 11-23-14 Well No: 1H Well will be 255 feet from nearest unit or lease boundary.

CHESAPEAKE OPERATING LLC Operator OTC/OCC Number: Telephone: 4059353425; 4059358 17441 0 Name:

CHESAPEAKE OPERATING LLC

PO BOX 18496

OKLAHOMA CITY. OK 73154-0496 TAMMIE LYNNE WARREN-BETZ, EXECUTOR

KENNETH LEE WARREN ESTATE

9609 NORTH ADRIAN AVE

KANSAS CITY МО 64154

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

	Name	Depth	Name	Depth
1	MANNING	6560	6	
2			7	
3			8	
4			9	
5			10	
Spacing Orders	pacing Orders: 154982 Location Exc			Increased Density Orders:
Pending CD Nu	mbers: 201806394			Special Orders:

Pending CD Numbers: 201806394

> 201806395 201806396

Total Depth: 12200 Ground Elevation: 1504 Surface Casing: 290 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

Type of Pit System: CLOSED Closed System Means Steel Pits

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? Y Wellhead Protection Area?

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 Approved Method for disposal of Drilling Fluids:

D. One time land application -- (REQUIRES PERMIT) PERMIT NO: 18-35381

H. CLOSED SYSTEM=STEEL PITS (REQUIRED - FIELD RULE 312654)

HORIZONTAL HOLE 1

Sec 11 Twp 23N Rge 14W County WOODS

Spot Location of End Point: SW SW SE SE
Feet From: SOUTH 1/4 Section Line: 150
Feet From: EAST 1/4 Section Line: 1100

Depth of Deviation: 6342
Radius of Turn: 573
Direction: 181
Total Length: 4957

Measured Total Depth: 12200

True Vertical Depth: 6727

End Point Location from Lease,
Unit. or Property Line: 150

Notes:

Category Description

HYDRAULIC FRACTURING 9/13/2018 - 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:

OCCEWEB.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

PENDING CD - 201806394 9/17/2018 - G57 - 11-23N-14W

X154982 MNNG 1 WELL NO OP. NAMED

REC 9-4-2018 (FOREMAN)

PENDING CD - 201806395 9/17/2018 - G57 - (I.O.) 11-23N-14W

X154982 MNNG

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

NO OP. NAMED

REC 9-4-2018 (FOREMAN)

PENDING CD - 201806396 9/17/2018 - G57 - (I.O.) 11-23N-14W

X154982 MNNG

X165:10-3-28(C)(2)(B) MNNG (LEE 11-23-14 1H) MAY BE CLOSER THAN 600' FROM THE TIM 1-11

NO OP. NAMED

REC 9-4-2018 (FOREMAN)

PUBLIC WATER SUPPLY WELLS 9/13/2018 - G71 - ALVA - 8 PWS/WPA, 4 - NE/4 11-23N-14W, 3 - SW/4 2-23N-14W, & 1 - SE/4 2-23N

-14W

SPACING - 154982 9/17/2018 - G57 - (640) 11-23N-14W

EXT 132716 MNNG EXT OTHER

