API NUMBER: 045 23542

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: 11/25/2014
Expiration Date: 05/25/2015

PERMIT TO DRILL

WELL LOCATION:	Sec:	20	Twp:	19N	Rge:	24V	1	County:	ELLIS	3		
SPOT LOCATION:	NE	NE	N)	W	NW		FEET FROM QU	JARTER:	FROM	NORTH	FROM	WEST
							SECTION LINES	3:		270		1000
Lanca Name.		C 47 /	10.07					14/-	II Na.	411		

Lease Name: EULA MAE 17-19-27 Well No: 1H Well will be 270 feet from nearest unit or lease boundary.

Operator CHESAPEAKE OPERATING LLC Telephone: 4059358143; 4059358 OTC/OCC Number: 17441 0

CHESAPEAKE OPERATING LLC

PO BOX 18496

OKLAHOMA CITY, OK 73154-0496

RANDY SHIRRILL P.O. BOX 293

ARNETT OK 73832

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

	Name	Depth	Name	Depth
1	CLEVELAND	8652	6	
2			7	
3			8	
4			9	
5			10	
Spacing Orders:	104550	Location Exception Orders:	625446	Increased Density Orders: 625445
3	105512			
	611804			

Pending CD Numbers: Special Orders:

Total Depth: 13750 Ground Elevation: 2390 Surface Casing: 1500 Depth to base of Treatable Water-Bearing FM: 600

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? N

Pit is located in a Hydrologically Sensitive Area.

Category of Pit: 1B

Liner required for Category: 1B

Pit Location is BED AQUIFER

Pit Location Formation: OGALLALA

Approved Method for disposal of Drilling Fluids:

A. Evaporation/dewater and backfilling of reserve pit.

D. One time land application -- (REQUIRES PERMIT) PERMIT NO: 14-28882

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 located in a Hydrologically Sensitive Area.

Category of Pit: 3

Liner required for Category: 3

Pit Location is BED AQUIFER

Pit Location Formation: OGALLALA

HORIZONTAL HOLE 1

Sec 17 Twp 19N Rge 24W County **ELLIS** NW Spot Location of End Point: ΝE ΝE NW Feet From: NORTH 1/4 Section Line: 200 Feet From: WEST 1/4 Section Line: 1000

Depth of Deviation: 8170
Radius of Turn: 780
Direction: 360
Total Length: 4355

Measured Total Depth: 13750

True Vertical Depth: 8950

End Point Location from Lease,
Unit, or Property Line: 200

Notes:

Category Description

DEEP SURFACE CASING 11/13/2014 - G71 - APPROVED; NOTIFY OCC FIELD INSPECTOR IMMEDIATELY FOR ANY LOSS

OF CIRCULATION OR FAILURE TO CIRCULATE CEMENT TO SURFACE ON CONDUCTOR OR

SURFACE CASING

INCREASED DENSITY - 625445 11/25/2014 - G75 - 17-19N-24W

X104550/105512/611804 CLVD

1 WELL

CHESAPEAKE OP., INC. (NOW CHESAPEAKE OP., L.L.C.)

5-14-2014

LOCATION EXCEPTION - 625446 11/25/2014 - G75 - (I.O.) 17-19N-24W

X104550/105512/611804 CLVD

COMPL. INT. NCT 330 FSL, NCT 330 FNL, NCT 660 FWL CHESAPEAKE OP., INC. (NOW CHESAPEAKE OP., LLC)

5-14-2014

MEMO 11/13/2014 - G71 - PIT 1 & 2 - CONCRETE-LINED PIT PER OPERATOR REQUEST; PIT 2 - OBM TO

VENDOR, OBM CUTTINGS PER DISTRICT

SPACING - 104550 11/25/2014 - G75 - (640) 17-19N-24W

EXT OTHERS

EXT 92369 CLVD, OTHERS

SPACING - 105512 11/25/2014 - G75 - NUNC PRO TUNC 104550 FOR 33-20N-24W

SPACING - 611804 11/25/2014 - G75 - 17-19N-24W

CLARIFY OTHER

CLARIFY 104550/105512 & 198997 CLVD, OTHERS FOR TOP & BASE OF FORMATION

This permit does not address the right of entry or settlement of surface damages. The duration of this permit is SIX 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.

045 23542 EULA MAE 17-19-27 1H