API NUMBER: 045 23369

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: 07/09/2013
Expiration Date: 01/09/2014

17441 0

Well will be 200 feet from nearest unit or lease boundary.

OTC/OCC Number:

TX

76133

PERMIT TO DRILL

WELL LOCATION:	Sec: 27	Twp:	18N	Rge:	24W	/ Cour	nty: ELLI	IS		
SPOT LOCATION:	SES	W SE		SE		FEET FROM QUARTER:	FROM	SOUTH	FROM	EAST
						SECTION LINES:		200		760
Lease Name:	ARMOUR 27-	18-24				٧	Vell No:	1H		
Operator Name:	CHESAPE	AKE OPI	ERATII	NG INC	;			Telepl	hone:	4059358143

CHESAPEAKE OPERATING INC

PO BOX 18496

OKLAHOMA CITY, OK 73154-0496

SHIRLEY M. ARMOUR 3725 WREN AVE. FORT WORTH

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

	Name	Depth		Name	Dept	h
1	CLEVELAND	9117	6			
2	MARMATON	9400	7			
3			8			
4			9			
5			10			
Spacing Orders:	593424	Location Exception Orders:	612434		Increased Density Orders:	612433
	577117	·			,	
	584466					

Pending CD Numbers: Special Orders:

Total Depth: 14100 Ground Elevation: 2415 Surface Casing: 960 Depth to base of Treatable Water-Bearing FM: 710

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: 13-23787

H. SEE MEMO

PIT 2 INFORMATION

Type of Pit System: ON SITE

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: 3

Liner required for Category: 3

Pit Location is BED AQUIFER

Pit Location Formation: OGALLALA

## **HORIZONTAL HOLE 1**

Sec 27 Twp 18N Rge 24W County **ELLIS** NE Spot Location of End Point: ΝE NW ΝE Feet From: NORTH 1/4 Section Line: 200 Feet From: EAST 1/4 Section Line: 760

Depth of Deviation: 8660
Radius of Turn: 780
Direction: 360

Total Length: 4215

Measured Total Depth: 14100

True Vertical Depth: 9440

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

Notes:

Category Description

INCREASED DENSITY - 612433 7/9/2013 - G75 - 27-18N-24W

X584466/593424 CLVD

1 WELL

CHESAPEAKE OP., INC.

6-6-2013

LOCATION EXCEPTION - 612434 7/9/2013 - G75 - (I.O.) 27-18N-24W

X584466/593424 CLVD X577117 MRMN

COMPL. INT. NCT 330 FSL, NCT 330 FNL, NCT 560 FEL

CHESAPEAKE OP., INC.

6-6-2013

MEMO 7/5/2013 - G71 - PIT 1 & 2 - CONCRETE-LINED PIT PER OPERATOR REQUEST; PIT 2 - OBM TO

VENDOR, OBM CUTTINGS PER DISTRICT

SPACING - 577117 7/9/2013 - G75 - (640)(HOR) 27-18N-24W

EST MRMN, OTHERS POE TO BHL NCT 660 FB

(SUPERSEDE NON-DEVELOPED NON-HORIZONTAL SPACING UNITS; COEXIST WITH

PRODUCING NON-HORIZONTAL SPACING UNITS)

SPACING - 584466 7/9/2013 - G75 - (640)(HOR) 27-18N-24W

VAC 361109 CLVD, OTHERS CONFIRM 577117 MRMN EST CLVDU, OTHER POE TO BHL NCT 660 FB

SPACING - 593424 7/9/2013 - G75 - (640)(HOR) 27-18N-24W

AMD 584466 CHANGING CLVDU TO CLVD

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 23369 ARMOUR 27-18-24 1H