API NUMBER: 129 24000

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: 09/11/2014
Expiration Date: 03/11/2015

PERMIT TO DRILL

WELL LOCATION: Sec: 04 Twp: 15N Rge: 24W County: ROGER MILLS

SPOT LOCATION: NW SE SE SW FEET FROM QUARTER: FROM SOUTH FROM WEST SECTION LINES: 520 2000

Lease Name: KEAHEY 4-15-24 Well No: 1H Well will be 520 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

CHARLES V & AMELIA KEAHEY

18170 E 815 RD.

CRAWFORD OK 73638

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

Name Depth Name Depth 1 **DOUGLAS** 7838 6 2 TONKAWA 8580 7 3 8 4 9 10 139578 Spacing Orders: Location Exception Orders: 628310 Increased Density Orders: 628273

Pending CD Numbers: Special Orders:

Total Depth: 13500 Ground Elevation: 2328 Surface Casing: 800 Depth to base of Treatable Water-Bearing FM: 550

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?

Wellhead Protection Area? Y

Pit is located in a Hydrologically Sensitive Area.

Category of Pit: 1A

Liner required for Category: 1A

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)

H. SEE MEMO

PERMIT NO: 14-28321

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? Y

Wellhead Protection Area? Y

Pit is located in a Hydrologically Sensitive Area.

Category of Pit: 1A

Liner required for Category: 1A

Pit Location is BED AQUIFER

Pit Location Formation: OGALLALA

HORIZONTAL HOLE 1

Sec 04 Twp 15N Rge 24W County ROGER MILLS

Spot Location of End Point: NE NW NE NW
Feet From: NORTH 1/4 Section Line: 200
Feet From: WEST 1/4 Section Line: 1900

Depth of Deviation: 7916 Radius of Turn: 780 Direction: 359

Total Length: 4359

Measured Total Depth: 13500

True Vertical Depth: 8696

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

Notes:

Category Description

INCREASED DENSITY - 628273 9/11/2014 - G91 - 4-15N-24W

X 139578 TNKW

1 WELL

CHESAPEAKE OPERATING, INC.

7-24-2014

LOCATION EXCEPTION - 628310 9/11/2014 - G91 - (I.O.) 4-15N-24W

X 139578 DGLS, TNKW

COMP. INT. NCT 300 FNL, NCT 430 FSL, NCT 500 FWL

CHESAPEAKE OPERATING, INC.

7-25-2014

MEMO 9/11/2014 - G76 - PITS 1 & 2 - CONCRETE LINED PIT PER OPERATOR REQUEST, PIT 2 - OBM

RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT

PUBLIC WATER SUPPLY/WELL HEAD

PROTECTION AREA

9/11/2014 - G76 - ROGER MILLS RWD #2 (RED STAR) - 3 PWS/WPA - SE/4 4-15N-24W

SPACING - 139578 9/11/2014 - G91 - (640) 4-15N-24W

EXT 61499 DGLS EXT 79514 TNKW EST OTHERS