

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

API NUMBER: 045 23310

Approval Date: 02/19/2013
Expiration Date: 08/19/2013

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 02 Twp: 17N Rge: 24W County: ELLIS
SPOT LOCATION: SE SE SW SW FEET FROM QUARTER: FROM SOUTH FROM WEST
SECTION LINES: 250 1300

Lease Name: KNOWLES Well No: 2-1H Well will be 250 feet from nearest unit or lease boundary.
Operator Name: EOG RESOURCES INC Telephone: 4052463226; 7136517 OTC/OCC Number: 16231 0

EOG RESOURCES INC
3817 NW EXPRESSWAY STE 500
OKLAHOMA CITY, OK 73112-1483

KENNETH K. KNOWLES
HCR 63, BOX 6
ARNETT OK 73832

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

Name	Depth	Name	Depth
1 MARMATON	9650	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: 579146

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201300531

Special Orders:

Total Depth: 14140

Ground Elevation: 2382

Surface Casing: 1500

Depth to base of Treatable Water-Bearing FM: 630

Under Federal Jurisdiction: No

Fresh Water Supply Well Drilled: No

Surface Water used to Drill: Yes

PIT 1 INFORMATION

Type of Pit System: CLOSED Closed System Means Steel Pits

Type of Mud System: WATER BASED

Chlorides Max: 100000 Average: 5000

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: C

Liner not required for Category: C

Pit Location is BED AQUIFER

Pit Location Formation: OGALLALA

Approved Method for disposal of Drilling Fluids:

D. One time land application -- (REQUIRES PERMIT)

PERMIT NO: 13-22601

H. CLOSED SYSTEM=STEEL PITS PER OPERATOR OPTION

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.

HORIZONTAL HOLE 1

Sec 02 Twp 17N Rge 24W County ELLIS

Spot Location of End Point: W2 NE NW NW

Feet From: NORTH 1/4 Section Line: 330

Feet From: WEST 1/4 Section Line: 850

Depth of Deviation: 9922

Radius of Turn: 508

Direction: 355

Total Length: 4218

Measured Total Depth: 14140

True Vertical Depth: 9650

End Point Location from Lease,
Unit, or Property Line: 330

Notes:

Category	Description
DEEP SURFACE CASING	2/19/2013 - G71 - APPROVED CONTINGENT ON NOTIFYING OCC FIELD STAFF IMMEDIATELY OF ANY LOSS OF CIRCULATION OR FAILURE TO CIRCULATE CEMENT TO SURFACE ON ANY CONDUCTOR OR SURFACE CASING
PENDING CD - 201300531	2/19/2013 - G30 - 2-17N-24W X579146 MRMN SHL NCT 250 FSL, NCT 1300 FWL POE NCT 330 FSL, NCT 1300 FWL BHL NCT 330 FNL, NCT 850 FWL REC 2/19/13 (LEAVITT, BY INITIALS)
SPACING - 579146	2/19/2013 - G30 - (640 HOR) 2-17N-24W EST MRMN, OTHERS POE TO BHL: NCT 660' FB (SUPERSEDE NON-DEVELOPED NON-HORIZONTAL SPACING; COEXIST WITH PRODUCING NON-HORIZONTAL SPACING)

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.