

Form 3160-3
(March 2012)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 20141a. Type of work: ☒ DRILL ☐ REENTER1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone2. Name of Operator
DEVON ENERGY PRODUCTION COMPANY LP3a. Address
333 West Sheridan Avenue Oklahoma City OK3b. Phone No. (include area code)
(405)552-6571

4. Location of Well (Report location clearly and in accordance with any State requirements.)*

At surface NENW / 530 FNL / 1750 FWL / LAT 32.1361178 / LONG -103.7173555

At proposed prod. zone SESW / 290 FSL / 2280 FWL / LAT 32.1238724 / LONG -103.7156688

14. Distance in miles and direction from nearest town or post office*
21 miles15. Distance from proposed*
location to nearest
property or lease line, ft.
(Also to nearest drig. unit line, if any)
530 feet16. No. of acres in lease
1759.3117. Spacing Unit dedicated to this well
16018. Distance from proposed location*
to nearest well, drilling, completed, 186 feet
applied for, on this lease, ft.19. Proposed Depth
10378 feet / 14619 feet20. BLM/BIA Bond No. on file
FED: CO110421. Elevations (Show whether DF, KDB, RT, GL, etc.)
3411 feet22. Approximate date work will start*
03/15/201723. Estimated duration
30 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature
(Electronic Submission)Name (Printed/Typed)
Tami Laird / Ph: (405)228-2816Date
07/21/2016Title
Regulatory Compliance ProfessionalApproved by (Signature)
(Electronic Submission)Name (Printed/Typed)
Cody Layton / Ph: (575)234-5959Date
03/06/2017Title
Supervisor Multiple ResourcesOffice
CARLSBADApplication approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

*(Instructions on page 2)

APPROVED WITH CONDITIONS

KZ 03/27/10
REQUIRES NSL

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 448H

CDU 448H_3M BOPE Double Ram and CLS Schem_07-20-2016.pdf

CDU 448H_3M BOPE Double Ram and CLS Schem_07-20-2016.pdf

Section 3 - Casing

String Type: PRODUCTION

Other String Type:

Hole Size: 8.75

Top setting depth MD: 0

Top setting depth TVD: 0

Top setting depth MSL: 3411

Bottom setting depth MD: 14619

Bottom setting depth TVD: 10378

Bottom setting depth MSL: -6967

Calculated casing length MD: 14619

Casing Size: 5.5

Other Size

Grade: P-110

Other Grade:

Weight: 17

Joint Type: BUTT

Other Joint Type:

Condition: NEW

Inspection Document:

Standard: API

Spec Document:

Tapered String?: N

Tapered String Spec:

Safety Factors

Collapse Design Safety Factor: 1.7

Burst Design Safety Factor: 2.11

Joint Tensile Design Safety Factor type: BUOYANT

Joint Tensile Design Safety Factor: 2.51

Body Tensile Design Safety Factor type: BUOYANT

Body Tensile Design Safety Factor: 2.51

Casing Design Assumptions and Worksheet(s):

CDU 448H_Production Casing Assumptions_07-20-2016_07-20-2016.pdf

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 448H

String Type: SURFACE

Other String Type:

Hole Size: 17.5

Top setting depth MD: 0

Top setting depth TVD: 0

Top setting depth MSL: 3411

Bottom setting depth MD: 630

Bottom setting depth TVD: 630

Bottom setting depth MSL: 2781

Calculated casing length MD: 630

Casing Size: 13.375

Other Size

Grade: H-40

Other Grade:

Weight: 48

Joint Type: STC

Other Joint Type:

Condition: NEW

Inspection Document:

Standard: API

Spec Document:

Tapered String?: N

Tapered String Spec:

Safety Factors

Collapse Design Safety Factor: 1.74

Burst Design Safety Factor: 2.45

Joint Tensile Design Safety Factor type: BUOYANT

Joint Tensile Design Safety Factor: 4.13

Body Tensile Design Safety Factor type: BUOYANT

Body Tensile Design Safety Factor: 4.13

Casing Design Assumptions and Worksheet(s):

CDU 448H_Surface Casing Assumptions_07-20-2016.pdf

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 448H

String Type: INTERMEDIATE

Other String Type:

Hole Size: 12.25

Top setting depth MD: 0

Top setting depth TVD: 0

Top setting depth MSL: 3411

Bottom setting depth MD: 4205

Bottom setting depth TVD: 4205

Bottom setting depth MSL: -794

Calculated casing length MD: 4205

Casing Size: 9.625

Other Size

Grade: J-55

Other Grade:

Weight: 40

Joint Type: LTC

Other Joint Type:

Condition: NEW

Inspection Document:

Standard: API

Spec Document:

Tapered String?: N

Tapered String Spec:

Safety Factors

Collapse Design Safety Factor: 1.19

Burst Design Safety Factor: 1.42

Joint Tensile Design Safety Factor type: BUOYANT

Joint Tensile Design Safety Factor: 3.98

Body Tensile Design Safety Factor type: BUOYANT

Body Tensile Design Safety Factor: 3.98

Casing Design Assumptions and Worksheet(s):

CDU 448H_Intermediate Casing Assumptions_07-20-2016_07-20-2016.pdf

Section 4 - Cement

Casing String Type: SURFACE

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 448H

Stage Tool Depth:

Lead

Top MD of Segment: 0

Bottom MD Segment: 630

Cement Type: C

Additives: 1% Calcium Chloride

Quantity (sks): 490

Yield (cu.ff./sk): 1.34

Density: 14.8

Volume (cu.ft.): 657

Percent Excess:

Casing String Type: INTERMEDIATE

Stage Tool Depth:

Lead

Top MD of Segment: 0

Bottom MD Segment: 3205

Cement Type: C

Additives: Poz (Fly Ash): 6% BWOC
Bentonite + 5% BWOW Sodium

Quantity (sks): 706

Yield (cu.ff./sk): 1.85

Chloride + 0.125 lbs/sks Poly-E-Flake

Volume (cu.ft.): 1305

Percent Excess: 30

~~Density: 12.9~~
Fail

Top MD of Segment: 3205

Bottom MD Segment: 4205

Cement Type: C

Quantity (sks): 310

Yield (cu.ff./sk): 1.33

Additives: 0.125 lbs/sks Poly-R-Flake

Volume (cu.ft.): 410

Percent Excess: 30

Density: 14.8

Casing String Type: PRODUCTION

Stage Tool Depth: 4255

Lead

Top MD of Segment: 4005

Bottom MD Segment: 4155

Cement Type: C

Additives: Enhancer 923 + 10% BWOC
Bentonite + 0.05% BWOC SA-1015 +
0.3% BWOC HR-800 + 0.2% BWOC
FE-2 + 0.125 lb/sk Pol-E-Flake + 0.5
lb/sk D-Air 5000

Quantity (sks): 20

Yield (cu.ff./sk): 3.31

Volume (cu.ft.): 66

Percent Excess: 25

Density: 10.9

Bottom MD Segment: 4255

Cement Type: H

Quantity (sks): 30

Yield (cu.ff./sk): 1.33

Top MD of Segment: 4155

Volume (cu.ft.): 39

Percent Excess: 25

Additives: 0.125 lbs/sack Poly-E-Flake

Density: 14.8

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 448H

Stage Tool Depth: 4255

Lead

Top MD of Segment: 4255

Bottom MD Segment: 10300

Cement Type: C

Additives: Enhancer 923 + 10% BWOC **Quantity (sks):** 1046

Bentonite + 0.05% BWOC SA-1015 +

0.3% BWOC HR-800 + 0.2% BWOC

FE-2 + 0.125 lb/sk Pol-E-Flake + 0.5

lb/sk D-Air 5000

Density: 14.5

Volume (cu.ft.): 1255

Yield (cu.ff./sk): 1.2

Percent Excess: 25

Tail

Bottom MD Segment: 14619

Cement Type: H

Quantity (sks): 1046

Yield (cu.ff./sk): 1.2

Top MD of Segment: 10300

Volume (cu.ft.): 1255

Percent Excess: 25

Additives: Poz (Fly Ash) + 0.5% bwoc

HALAD-344 + 0.4% bwoc CFR-3 +

0.2% BWOC HR-601 + 2% bwoc

Bentonite

Density: 14.5

Stage Tool Depth: 4255

Lead

Top MD of Segment: 4005

Bottom MD Segment: 10300

Cement Type: Tuned

Additives: NA

Quantity (sks): 600

Yield (cu.ff./sk): 3.27

Density: 9

Volume (cu.ft.): 1830

Percent Excess: 25

Tail

Top MD of Segment: 10300

Bottom MD Segment: 14619

Cement Type: H

Additives: Poz (Fly Ash) + 0.5% bwoc

HALAD-344 + 0.4% bwoc CFR-3 +

0.2% BWOC HR-601 + 2% bwoc

Bentonite

Density: 14.5

Quantity (sks): 1046

Yield (cu.ff./sk): 1.2

Volume (cu.ft.): 1255

Percent Excess: 25