

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, 2014

5. Lease Serial No.  
NMLC061873B

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.  
COTTON DRAW UNIT 498H

9. API Well No.

10. Field and Pool, or Exploratory  
PADUCA / DELAWARE

11. Sec., T. R. M. or Blk. and Survey or Area  
SEC 18 / T25S / R32E / NMP

12. County or Parish  
LEA

13. State  
NM

1a. Type of work: ☒ DRILL

☐ REENTER

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☒ Multiple Zone

2. Name of Operator  
DEVON ENERGY PRODUCTION COMPANY LP

3a. Address  
333 West Sheridan Avenue Oklahoma City OK

3b. Phone No. (include area code)  
(405)552-6571

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

At surface NWNE / 175 FNL / 1740 FEL / LAT 32.1370945 / LONG -103.7114525

At proposed prod. zone SWSE / 290 FSL / 1680 FEL / LAT 32.1238742 / LONG -103.7113238

14. Distance in miles and direction from nearest town or post office\*  
21 miles

15. Distance from proposed\*  
location to nearest  
property or lease line, ft.  
(Also to nearest drig. unit line, if any)  
175 feet

16. No. of acres in lease  
1759.31

17. Spacing Unit dedicated to this well  
160

18. Distance from proposed location\*  
to nearest well, drilling, completed, 540 feet  
applied for, on this lease, ft.

19. Proposed Depth  
8272 feet / 12775 feet

20. BLM/BIA Bond No. on file  
FED: CO1104

21. Elevations (Show whether DF, KDB, RT, GL, etc.)  
3423 feet

22. Approximate date work will start\*  
10/01/2017

23. Estimated duration  
45 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)

Linda Good / Ph: (405)552-6558

Date

09/01/2016

Title

Regulatory Compliance Professional

Approved by (Signature)

(Electronic Submission)

Name (Printed/Typed)

Cody Layton / Ph: (575)234-5959

Date

03/06/2017

Title

Supervisor Multiple Resources

Office

HOBBS

Application 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**

Ka  
03/13/17



APD ID: 10400005100

Submission Date: 09/01/2016

Highlight

All Changes

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Federal/Indian APD: FED

Well Name: COTTON DRAW UNIT

Well Number: 498H

Well Type: OIL WELL

Well Work Type: Drill

## Application

### Section 1 - General

APD ID: 10400005100

Tie to previous NOS?

Submission Date: 09/01/2016

BLM Office: HOBBS

User: Linda Good

Title: Regulatory Compliance  
Professional

Federal/Indian APD: FED

Is the first lease penetrated for production Federal or Indian? FED

Lease number: NMLC061873B

Lease Acres: 1759.31

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? YES

Permitting Agent? NO

APD Operator: DEVON ENERGY PRODUCTION COMPANY LP

Operator letter of designation:

Keep application confidential? YES

### Operator Info

Operator Organization Name: DEVON ENERGY PRODUCTION COMPANY LP

Operator Address: 333 West Sheridan Avenue

Zip: 73102

Operator PO Box:

Operator City: Oklahoma City

State: OK

Operator Phone: (405)552-6571

Operator Internet Address: aletha.dewbre@dvn.com

### Section 2 - Well Information

Well in Master Development Plan? NO

Master Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** COTTON DRAW UNIT

**Well Number:** 498H

**Well Name:** COTTON DRAW UNIT

**Well Number:** 498H

**Well API Number:**

**Field/Pool or Exploratory?** Field and Pool

**Field Name:** PADUCA

**Pool Name:** DELAWARE

**Is the proposed well in an area containing other mineral resources?** NATURAL GAS,OIL,POTASH

**Describe other minerals:**

**Is the proposed well in a Helium production area?** N

**Use Existing Well Pad?** NO

**New surface disturbance?**

**Type of Well Pad:** MULTIPLE WELL

**Multiple Well Pad Name:**

**Number:** 288H/449H/498H

**Well Class:** HORIZONTAL

**COTTON DRAW UNIT**

**Number of Legs:**

**Well Work Type:** Drill

**Well Type:** OIL WELL

**Describe Well Type:**

**Well sub-Type:** INFILL

**Describe sub-type:**

**Distance to town:** 21 Miles

**Distance to nearest well:** 540 FT

**Distance to lease line:** 175 FT

**Reservoir well spacing assigned acres Measurement:** 160 Acres

**Well plat:** CDU 498H\_C-102\_4658\_signed\_08-31-2016.pdf

**Well work start Date:** 10/01/2017

**Duration:** 45 DAYS

### Section 3 - Well Location Table

**Survey Type:** RECTANGULAR

**Describe Survey Type:**

**Datum:** NAD83

**Vertical Datum:** NAVD88

**Survey number:** 4658A

**STATE:** NEW MEXICO

**Meridian:** NEW MEXICO PRINCIPAL **County:** LEA

**Latitude:** 32.1370945

**Longitude:** -103.7114525

**SHL**

**Elevation:** 3423

**MD:** 0

**TVD:** 0

**Leg #: 1**

**Lease Type:** FEDERAL

**Lease #:** NMLC061873A

**NS-Foot:** 175

**NS Indicator:** FNL

**EW-Foot:** 1740

**EW Indicator:** FEL

**Twsp:** 25S

**Range:** 32E

**Section:** 18

**Aliquot:** NWNE

**Lot:**

**Tract:**



**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** COTTON DRAW UNIT

**Well Number:** 498H

	<b>STATE:</b> NEW MEXICO	<b>Meridian:</b> NEW MEXICO PRINCIPAL	<b>County:</b> LEA
	<b>Latitude:</b> 32.1370945	<b>Longitude:</b> -103.7114525	
KOP	<b>Elevation:</b> -4214	<b>MD:</b> 7638	<b>TVD:</b> 7637
<b>Leg #: 1</b>	<b>Lease Type:</b> FEDERAL	<b>Lease #:</b> NMLC061873A	
	<b>NS-Foot:</b> 175	<b>NS Indicator:</b> FNL	
	<b>EW-Foot:</b> 1740	<b>EW Indicator:</b> FEL	
	<b>Twsp:</b> 25S	<b>Range:</b> 32E	<b>Section:</b> 18
	<b>Aliquot:</b> NWNE	<b>Lot:</b>	<b>Tract:</b>
	<b>STATE:</b> NEW MEXICO	<b>Meridian:</b> NEW MEXICO PRINCIPAL	<b>County:</b> LEA
	<b>Latitude:</b> 32.1370945	<b>Longitude:</b> -103.7114525	
PPP	<b>Elevation:</b> -4748	<b>MD:</b> 8324	<b>TVD:</b> 8171
<b>Leg #: 1</b>	<b>Lease Type:</b> FEDERAL	<b>Lease #:</b> NMLC061873A	
	<b>NS-Foot:</b> 539	<b>NS Indicator:</b> FNL	
	<b>EW-Foot:</b> 1735	<b>EW Indicator:</b> FEL	
	<b>Twsp:</b> 25S	<b>Range:</b> 32E	<b>Section:</b> 18
	<b>Aliquot:</b> NWNE	<b>Lot:</b>	<b>Tract:</b>
	<b>STATE:</b> NEW MEXICO	<b>Meridian:</b> NEW MEXICO PRINCIPAL	<b>County:</b> LEA
	<b>Latitude:</b> 32.1238742	<b>Longitude:</b> -103.7113238	
EXIT	<b>Elevation:</b> -4849	<b>MD:</b> 12775	<b>TVD:</b> 8272
<b>Leg #: 1</b>	<b>Lease Type:</b> FEDERAL	<b>Lease #:</b> NMLC061873B	
	<b>NS-Foot:</b> 290	<b>NS Indicator:</b> FSL	
	<b>EW-Foot:</b> 1680	<b>EW Indicator:</b> FEL	
	<b>Twsp:</b> 25S	<b>Range:</b> 32E	<b>Section:</b> 18
	<b>Aliquot:</b> SWSE	<b>Lot:</b>	<b>Tract:</b>
	<b>STATE:</b> NEW MEXICO	<b>Meridian:</b> NEW MEXICO PRINCIPAL	<b>County:</b> LEA
	<b>Latitude:</b> 32.1238742	<b>Longitude:</b> -103.7113238	
BHL	<b>Elevation:</b> -4849	<b>MD:</b> 12775	<b>TVD:</b> 8272
<b>Leg #: 1</b>	<b>Lease Type:</b> FEDERAL	<b>Lease #:</b> NMLC061873B	
	<b>NS-Foot:</b> 290	<b>NS Indicator:</b> FSL	
	<b>EW-Foot:</b> 1680	<b>EW Indicator:</b> FEL	



**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** COTTON DRAW UNIT

**Well Number:** 498H

**Twsp:** 25S

**Range:** 32E

**Section:** 18

**Aliquot:** SWSE

**Lot:**

**Tract:**

## Drilling Plan

### Section 1 - Geologic Formations

**ID:** Surface formation

**Name:** UNKNOWN

**Lithology(ies):**

ALLUVIUM

**Elevation:** 3423

**True Vertical Depth:** 0

**Measured Depth:** 0

**Mineral Resource(s):**

NONE

**Is this a producing formation?** N

**ID:** Formation 1

**Name:** RUSTLER

**Lithology(ies):**

DOLOMITE

**Elevation:** 2818

**True Vertical Depth:** 605

**Measured Depth:** 605

**Mineral Resource(s):**

NONE

**Is this a producing formation?** N

**ID:** Formation 2

**Name:** SALADO

**Lithology(ies):**

SALT

**Elevation:** 2785

**True Vertical Depth:** 638

**Measured Depth:** 638

**Mineral Resource(s):**

NONE

**Is this a producing formation?** N

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** COTTON DRAW UNIT

**Well Number:** 498H

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 7

**Name:** CHERRY CANYON

**Lithology(ies):**

SANDSTONE

**Elevation:** -1944

**True Vertical Depth:** 5367

**Measured Depth:** 5367

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 8

**Name:** BRUSHY CANYON

**Lithology(ies):**

SANDSTONE

**Elevation:** -3347

**True Vertical Depth:** 6770

**Measured Depth:** 6770

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 9

**Name:** BRUSHY CANYON LOWER

**Lithology(ies):**

SANDSTONE

**Elevation:** -4682

**True Vertical Depth:** 8105

**Measured Depth:** 8105

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** Y

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** COTTON DRAW UNIT

**Well Number:** 498H

## Section 2 - Blowout Prevention

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**Pressure Rating (PSI):** 3M

**Rating Depth:** 8272

**Equipment:** BOP/BOPE will be installed per Onshore Oil & Gas Order #2 requirements prior to drilling below 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system. BOP/BOPE will be tested by an independent service company per Onshore Oil & Gas Order #2 requirements and MASP (Maximum Anticipated Surface Pressure) calculations. If the system is upgraded, all the components installed will be functional and tested.

**Requesting Variance?** YES

**Variance request:** A variance is requested for the use of a flexible choke line from the BOP stack to the choke manifold. See attached for specs for hydrostatic test chart.

**Testing Procedure:** A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

**Choke Diagram Attachment:**

CDU 498H\_3M BOPE Double Ram and CLS Schem\_08-31-2016.pdf

**BOP Diagram Attachment:**

CDU 498H\_3M BOPE Double Ram and CLS Schem\_08-31-2016.pdf

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**Pressure Rating (PSI):** 3M

**Rating Depth:** 4200

**Equipment:** BOP/BOPE will be installed per Onshore Oil & Gas Order #2 requirements prior to drilling below 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system. BOP/BOPE will be tested by an independent service company per Onshore Oil & Gas Order #2 requirements and MASP (Maximum Anticipated Surface Pressure) calculations. If the system is upgraded, all the components installed will be functional and tested.

**Requesting Variance?** YES

**Variance request:** A variance is requested for the use of a flexible choke line from the BOP stack to the choke manifold. See attached for specs for hydrostatic test chart.

**Testing Procedure:** A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

**Choke Diagram Attachment:**

CDU 498H\_3M BOPE Double Ram and CLS Schem\_08-31-2016.pdf

**BOP Diagram Attachment:**

CDU 498H\_3M BOPE Double Ram and CLS Schem\_08-31-2016.pdf

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## Section 3 - Casing

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**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** COTTON DRAW UNIT

**Well Number:** 498H

**String Type:** PRODUCTION

**Other String Type:**

**Hole Size:** 8.75

**Top setting depth MD:** 0

**Top setting depth TVD:** 0

**Top setting depth MSL:** 3423

**Bottom setting depth MD:** 12775

**Bottom setting depth TVD:** 9135

**Bottom setting depth MSL:** -5712

**Calculated casing length MD:** 12775

**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:** 2.18

**Burst Design Safety Factor:** 2.7

**Joint Tensile Design Safety Factor type:** BUOYANT

**Joint Tensile Design Safety Factor:** 3.21

**Body Tensile Design Safety Factor type:** BUOYANT

**Body Tensile Design Safety Factor:** 3.21

**Casing Design Assumptions and Worksheet(s):**

CDU 498H\_Production Casing Assumptions\_08-31-2016.pdf

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 498H

String Type: SURFACE

Other String Type:

Hole Size: 17.5

Top setting depth MD: 0

Top setting depth TVD: 0

Top setting depth MSL:

Bottom setting depth MD: ~~680~~ 770

Bottom setting depth TVD: ~~680~~ 770

Bottom setting depth MSL: 2743

Calculated casing length MD: ~~680~~ 770

Casing Size: 13.375

Other Size

Grade: J-55

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 498H\_Surface Casing Assumptions\_08-31-2016.pdf

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** COTTON DRAW UNIT

**Well Number:** 498H

**String Type:** INTERMEDIATE

**Other String Type:**

**Hole Size:** 12.25

**Top setting depth MD:** 0

**Top setting depth TVD:** 0

**Top setting depth MSL:** 3423

**Bottom setting depth MD:** 4200

**Bottom setting depth TVD:** 4200

**Bottom setting depth MSL:** -777

**Calculated casing length MD:** 4200

**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 498H\_Intermediate Casing Assumptions\_08-31-2016.pdf

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### **Section 4 - Cement**

**Casing String Type:** SURFACE



Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 498H

Stage Tool Depth:

Lead

Top MD of Segment: 0

Bottom MD Segment: ~~680~~ 770

Cement Type: C

Additives: 1% Calcium Chloride

Quantity (sks): 550

Yield (cu.ff./sk): 1.34

Density: 14.8

Volume (cu.ft.): 730

Percent Excess: 50

Casing String Type: INTERMEDIATE

Stage Tool Depth:

Lead

Top MD of Segment: 0

Bottom MD Segment: 3200

Cement Type: C

Additives: Poz (Fly Ash): 6% BWOC  
Bentonite + 5% BWOW Sodium  
Chloride + 0.125 lbs/sks Poly-E-Flake

Quantity (sks): 705

Yield (cu.ff./sk): 1.85

Density: 12.9

Volume (cu.ft.): 1300

Percent Excess: 30

Tail

Top MD of Segment: 3200

Bottom MD Segment: 4200

Cement Type: H

Quantity (sks): 320

Yield (cu.ff./sk): 1.33

Additives: 0.125 lbs/sks Poly-R-Flake

Volume (cu.ft.): 426

Percent Excess: 30

Density: 14.8

Casing String Type: PRODUCTION

Stage Tool Depth:

Lead

Top MD of Segment: 4000

Bottom MD Segment: 8100

Cement Type: TUNED

Additives: N/A

Quantity (sks): 365

Yield (cu.ff./sk): 3.27

Density: 9

Volume (cu.ft.): 1190

Percent Excess: 25

Tail

Top MD of Segment: 8100

Bottom MD Segment: 12775

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

Quantity (sks): 1132

Yield (cu.ff./sk): 1.2

Density: 14.5

Volume (cu.ft.): 1360

Percent Excess: 25

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** COTTON DRAW UNIT

**Well Number:** 498H

### Section 5 - Circulating Medium

**Mud System Type:** Closed

**Will an air or gas system be Used?** NO

**Description of the equipment for the circulating system in accordance with Onshore Order #2:**

**Diagram of the equipment for the circulating system in accordance with Onshore Order #2:**

**Describe what will be on location to control well or mitigate other conditions:** Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

**Describe the mud monitoring system utilized:** PVT/Pason/Visual Monitoring

### Circulating Medium Table

**Top Depth:** 0

**Bottom Depth:** 4250

**Mud Type:** SALT SATURATED

**Min Weight (lbs./gal.):** 10

**Max Weight (lbs./gal.):** 11

**Density (lbs/cu.ft.):**

**Gel Strength (lbs/100 sq.ft.):**

**PH:**

**Viscosity (CP):** 2

**Filtration (cc):**

**Salinity (ppm):**

**Additional Characteristics:**

**Top Depth:** 0

**Bottom Depth:** 640

**Mud Type:** WATER-BASED MUD

**Min Weight (lbs./gal.):** 8.5

**Max Weight (lbs./gal.):** 9

**Density (lbs/cu.ft.):**

**Gel Strength (lbs/100 sq.ft.):**

**PH:**

**Viscosity (CP):** 2

**Filtration (cc):**

**Salinity (ppm):**

**Additional Characteristics:**

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** COTTON DRAW UNIT

**Well Number:** 498H

**Top Depth:** 4250

**Bottom Depth:** 12777

**Mud Type:** WATER-BASED MUD

**Min Weight (lbs./gal.):** 8.5

**Max Weight (lbs./gal.):** 9.3

**Density (lbs/cu.ft.):**

**Gel Strength (lbs/100 sq.ft.):**

**PH:**

**Viscosity (CP):** 12

**Filtration (cc):**

**Salinity (ppm):**

**Additional Characteristics:**

## Section 6 - Test, Logging, Coring

**List of production tests including testing procedures, equipment and safety measures:**

Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.

**List of open and cased hole logs run in the well:**

CALIPER, DS, GR, MWD, MUDLOG

**Coring operation description for the well:**

N/A

## Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 3722

**Anticipated Surface Pressure:** 1902.16

**Anticipated Bottom Hole Temperature(F):** 140

**Anticipated abnormal pressures, temperatures, or potential geologic hazards?** NO

**Describe:**

**Contingency Plans geohazards description:**

**Contingency Plans geohazards attachment:**

**Hydrogen Sulfide drilling operations plan required?** YES

**Hydrogen sulfide drilling operations plan:**

CDU 498H\_H2S Plan\_08-31-2016.pdf



**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** COTTON DRAW UNIT

**Well Number:** 498H

## Section 8 - Other Information

**Proposed horizontal/directional/multi-lateral plan submission:**

CDU 498H\_Directional Plan\_08-31-2016.pdf

**Other proposed operations facets description:**

Multi-bowl Verbiage

Multi-bowl Wellhead

Closed Loop Design Plan

Production Cement Contingency

**Other proposed operations facets attachment:**

CDU 498H\_Multi-Bowl Verbiage\_3M\_08-31-2016.pdf

CDU 498H\_Multi-Bowl Wellhead\_08-31-2016.pdf

CDU 498H\_Closed Loop Design Plan\_08-31-2016.pdf

CDU 498H\_ProdCmtContg\_11-11-2016.pdf

**Other Variance attachment:**

CDU 498H\_H\_P Co-flex hose\_08-31-2016.pdf

SUPO

## Section 1 - Existing Roads

**Will existing roads be used?** YES

**Existing Road Map:**

CDU 498H\_Existing Access Rd\_08-31-2016.pdf

**Existing Road Purpose:** ACCESS,FLUID TRANSPORT

**Row(s) Exist?** NO

### ROW ID(s)

**ID:**

**Do the existing roads need to be improved?** YES

**Existing Road Improvement Description:** Improve road to accommodate Drilling and Completion operations.

**Existing Road Improvement Attachment:**

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** COTTON DRAW UNIT

**Well Number:** 498H

## Section 2 - New or Reconstructed Access Roads

**Will new roads be needed?** YES

**New Road Map:**

CDU 498H\_Access Rd for\_CDUE\_449H\_498H\_288H\_P\_AA000000000\_08-31-2016.pdf

**New road type:** COLLECTOR,RESOURCE

**Length:** 2101.08

**Feet**

**Width (ft.):** 16

**Max slope (%):** 6

**Max grade (%):** 4

**Army Corp of Engineers (ACOE) permit required?** NO

**ACOE Permit Number(s):**

**New road travel width:** 14

**New road access erosion control:** Water drainage ditch.

**New road access plan or profile prepared?** YES

**New road access plan attachment:**

CDU 498H\_Access Rd for\_CDUE\_449H\_498H\_288H\_P\_AA000000000\_08-31-2016.pdf

**Access road engineering design?** NO

**Access road engineering design attachment:**

**Access surfacing type:** GRAVEL

**Access topsoil source:** ONSITE

**Access surfacing type description:**

**Access onsite topsoil source depth:** 6

**Offsite topsoil source description:**

**Onsite topsoil removal process:** See attached Interim reclamation diagram.

**Access other construction information:**

**Access miscellaneous information:**

**Number of access turnouts:**

**Access turnout map:**

## Drainage Control

**New road drainage crossing:** OTHER

**Drainage Control comments:** N/A

**Road Drainage Control Structures (DCS) description:** N/A

**Road Drainage Control Structures (DCS) attachment:**

## Access Additional Attachments

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** COTTON DRAW UNIT

**Well Number:** 498H

**Additional Attachment(s):**

### Section 3 - Location of Existing Wells

**Existing Wells Map?** YES

**Attach Well map:**

CDU 498H\_1 Mile Map\_08-31-2016.pdf

**Existing Wells description:**

### Section 4 - Location of Existing and/or Proposed Production Facilities

**Submit or defer a Proposed Production Facilities plan?** DEFER

**Estimated Production Facilities description:** All flowlines will be buried going to the CDU 13-18 DL CTB.

### Section 5 - Location and Types of Water Supply

#### Water Source Table

**Water source use type:** STIMULATION

**Water source type:** RECYCLED

**Describe type:**

**Source latitude:**

**Source longitude:**

**Source datum:**

**Water source permit type:** OTHER

**Source land ownership:** FEDERAL

**Water source transport method:** PIPELINE,TRUCKING

**Source transportation land ownership:** FEDERAL

**Water source volume (barrels):** 85000

**Source volume (acre-feet):** 10.955914

**Source volume (gal):** 3570000

**Water source and transportation map:**

CDU 498H\_Wtr Xfr Map\_rev\_11-11-2016.pdf

**Water source comments:** The attached Water Transfer Map is a proposal only and the final route and documentation will be provided by a Devon contractor prior to installation. When available Devon will always follow existing disturbance.

**New water well?** NO

#### New Water Well Info

**Well latitude:**

**Well Longitude:**

**Well datum:**



**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** COTTON DRAW UNIT

**Well Number:** 498H

**Well target aquifer:**

**Est. depth to top of aquifer(ft):**

**Est thickness of aquifer:**

**Aquifer comments:**

**Aquifer documentation:**

**Well depth (ft):**

**Well casing type:**

**Well casing outside diameter (in.):**

**Well casing inside diameter (in.):**

**New water well casing?**

**Used casing source:**

**Drilling method:**

**Drill material:**

**Grout material:**

**Grout depth:**

**Casing length (ft.):**

**Casing top depth (ft.):**

**Well Production type:**

**Completion Method:**

**Water well additional information:**

**State appropriation permit:**

**Additional information attachment:**

## Section 6 - Construction Materials

**Construction Materials description:** Dirt fill and caliche will be used to construct well pad.

**Construction Materials source location attachment:**

CDU 498H\_Caliche Pit\_12-19-2016.pdf

CDU 498H\_CALICHE\_12-19-2016.pdf

## Section 7 - Methods for Handling Waste

**Waste type:** DRILLING

**Waste content description:** Water based cuttings.

**Amount of waste:** 1335 barrels

**Waste disposal frequency :** Daily

**Safe containment description:** N/A

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY

**Disposal location ownership:** COMMERCIAL

**Disposal type description:**

**Disposal location description:** All cuttings will be disposed of at R360, Sundance, or equivalent.

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** COTTON DRAW UNIT

**Well Number:** 498H

**Waste type:** COMPLETIONS/STIMULATION

**Waste content description:** Flow back water during completion operations.

**Amount of waste:** 3000 barrels

**Waste disposal frequency :** One Time Only

**Safe containment description:** N/A

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL

**Disposal type description:**

**Disposal location description:** Various disposal locations in Lea and Eddy counties.

**Waste type:** FLOWBACK

**Waste content description:** Produced water during flowback operations. This amount is a daily average during flowback (BWPD).

**Amount of waste:** 1500 barrels

**Waste disposal frequency :** Daily

**Safe containment description:** N/A

**Safe containmant attachment:**

**Waste disposal type:** ON-LEASE INJECTION **Disposal location ownership:** PRIVATE

**Disposal type description:**

**Disposal location description:** One of three company owned SWD facilities in the area: CDU 181, CDU 89, CDU 84.

**Waste type:** PRODUCED WATER

**Waste content description:** Produced water during production operations. This amount is a daily average during the first year of production (BWPD).

**Amount of waste:** 1000 barrels

**Waste disposal frequency :** Daily

**Safe containment description:** N/A

**Safe containmant attachment:**

**Waste disposal type:** ON-LEASE INJECTION **Disposal location ownership:** PRIVATE

**Disposal type description:**

**Disposal location description:** One of three company owned SWD facilities in the area: CDU 181, CDU 89, CDU 84.

### Reserve Pit

**Reserve Pit being used?** NO

**Temporary disposal of produced water into reserve pit?**

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** COTTON DRAW UNIT

**Well Number:** 498H

**Reserve pit length (ft.)**

**Reserve pit width (ft.)**

**Reserve pit depth (ft.)**

**Reserve pit volume (cu. yd.)**

**Is at least 50% of the reserve pit in cut?**

**Reserve pit liner**

**Reserve pit liner specifications and installation description**

### **Cuttings Area**

**Cuttings Area being used? NO**

**Are you storing cuttings on location? NO**

**Description of cuttings location**

**Cuttings area length (ft.)**

**Cuttings area width (ft.)**

**Cuttings area depth (ft.)**

**Cuttings area volume (cu. yd.)**

**Is at least 50% of the cuttings area in cut?**

**WCuttings area liner**

**Cuttings area liner specifications and installation description**

### **Section 8 - Ancillary Facilities**

**Are you requesting any Ancillary Facilities?: NO**

**Ancillary Facilities attachment:**

**Comments:**

### **Section 9 - Well Site Layout**

**Well Site Layout Diagram:**

CDU 498H\_3 Well Pad Rig Location Layout\_09-01-2016.pdf

**Comments:**

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** COTTON DRAW UNIT

**Well Number:** 498H

## Section 10 - Plans for Surface Reclamation

**Type of disturbance:** NEW

**Recontouring attachment:**

CDU 498H\_Interium Reclamation Diagram\_09-01-2016.pdf

**Drainage/Erosion control construction:** All areas disturbed shall be reclaimed as early and as nearly as practicable to their original condition or their final land use and shall be maintained to control dust and minimize erosion to the extent practicable.

**Drainage/Erosion control reclamation:** Topsoils and subsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns. The disturbed area then shall be reseeded in the first favorable growing season.

**Wellpad long term disturbance (acres):** 1.707

**Wellpad short term disturbance (acres):** 3.776

**Access road long term disturbance (acres):** 0.96

**Access road short term disturbance (acres):** 0.96

**Pipeline long term disturbance (acres):** 3.5823278

**Pipeline short term disturbance (acres):** 5.970512

**Other long term disturbance (acres):** 0.437

**Other short term disturbance (acres):** 0.0437

**Total long term disturbance:** 6.686328

**Total short term disturbance:** 10.750212

**Reconstruction method:** Operator will use Best Management Practices "BMP" to mechanically recontour to obtain the desired outcome.

**Topsoil redistribution:** Topsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns.

**Soil treatment:** Topsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns.

**Existing Vegetation at the well pad:** Shinnery, yucca, grasses and mesquite.

**Existing Vegetation at the well pad attachment:**

**Existing Vegetation Community at the road:** Shinnery, yucca, grasses and mesquite.

**Existing Vegetation Community at the road attachment:**

**Existing Vegetation Community at the pipeline:** Shinnery, yucca, grasses and mesquite.

**Existing Vegetation Community at the pipeline attachment:**

**Existing Vegetation Community at other disturbances:** Shinnery, yucca, grasses and mesquite.

**Existing Vegetation Community at other disturbances attachment:**

**Non native seed used?** NO

**Non native seed description:**

**Seedling transplant description:**

**Will seedlings be transplanted for this project?** NO

**Seedling transplant description attachment:**

**Will seed be harvested for use in site reclamation?** NO

**Seed harvest description:**

**Seed harvest description attachment:**



Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 498H

## Seed Management

### Seed Table

Seed type:

Seed source:

Seed name:

Source name:

Source address:

Source phone:

Seed cultivar:

Seed use location:

PLS pounds per acre:

Proposed seeding season:

### Seed Summary

Total pounds/Acre:

Seed Type

Pounds/Acre

Seed reclamation attachment:

### Operator Contact/Responsible Official Contact Info

First Name: Mark

Last Name: Smith

Phone: (575)746-5559

Email: mark.smith@dvn.com

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? NO

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: Maintain weeds on an as need basis.

Weed treatment plan attachment:

Monitoring plan description: Monitor as needed.

Monitoring plan attachment:

Success standards: N/A

Pit closure description: N/A

Pit closure attachment:

## Section 11 - Surface Ownership

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** COTTON DRAW UNIT

**Well Number:** 498H

**Disturbance type:** NEW ACCESS ROAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Disturbance type:** EXISTING ACCESS ROAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** COTTON DRAW UNIT

**Well Number:** 498H

**Disturbance type:** WELL PAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Disturbance type:** PIPELINE

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** COTTON DRAW UNIT

**Well Number:** 498H

## Section 12 - Other Information

**Right of Way needed?** NO

**Use APD as ROW?**

**ROW Type(s):**

### ROW Applications

**SUPO Additional Information:** Electrical Survey Flow line Survey

**Use a previously conducted onsite?** NO

**Previous Onsite information:**

### Other SUPO Attachment

CDU 498H\_Electric for 449H, 498H, 288H - EL7757\_09-01-2016.PDF

CDU 498H\_Flowline\_12-19-2016.pdf

PWD

## Section 1 - General

**Would you like to address long-term produced water disposal?** NO

## Section 2 - Lined Pits

**Would you like to utilize Lined Pit PWD options?** NO



**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** COTTON DRAW UNIT

**Well Number:** 498H

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Lined pit PWD on or off channel:**

**Lined pit PWD discharge volume (bbl/day):**

**Lined pit specifications:**

**Pit liner description:**

**Pit liner manufacturers information:**

**Precipitated solids disposal:**

**Describe precipitated solids disposal:**

**Precipitated solids disposal permit:**

**Lined pit precipitated solids disposal schedule:**

**Lined pit precipitated solids disposal schedule attachment:**

**Lined pit reclamation description:**

**Lined pit reclamation attachment:**

**Leak detection system description:**

**Leak detection system attachment:**

**Lined pit Monitor description:**

**Lined pit Monitor attachment:**

**Lined pit: do you have a reclamation bond for the pit?**

**Is the reclamation bond a rider under the BLM bond?**

**Lined pit bond number:**

**Lined pit bond amount:**

**Additional bond information attachment:**

### **Section 3 - Unlined Pits**

**Would you like to utilize Unlined Pit PWD options? NO**

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Unlined pit PWD on or off channel:**

**Unlined pit PWD discharge volume (bbl/day):**

**Unlined pit specifications:**

**Precipitated solids disposal:**

**Describe precipitated solids disposal:**

**Precipitated solids disposal permit:**

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** COTTON DRAW UNIT

**Well Number:** 498H

**Unlined pit precipitated solids disposal schedule:**

**Unlined pit precipitated solids disposal schedule attachment:**

**Unlined pit reclamation description:**

**Unlined pit reclamation attachment:**

**Unlined pit Monitor description:**

**Unlined pit Monitor attachment:**

**Do you propose to put the produced water to beneficial use?**

**Beneficial use user confirmation:**

**Estimated depth of the shallowest aquifer (feet):**

**Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?**

**TDS lab results:**

**Geologic and hydrologic evidence:**

**State authorization:**

**Unlined Produced Water Pit Estimated percolation:**

**Unlined pit: do you have a reclamation bond for the pit?**

**Is the reclamation bond a rider under the BLM bond?**

**Unlined pit bond number:**

**Unlined pit bond amount:**

**Additional bond information attachment:**

## **Section 4 - Injection**

**Would you like to utilize Injection PWD options? NO**

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Injection PWD discharge volume (bbl/day):**

**Injection well mineral owner:**

**Injection well type:**

**Injection well number:**

**Injection well name:**

**Assigned injection well API number?**

**Injection well API number:**

**Injection well new surface disturbance (acres):**

**Minerals protection information:**

**Mineral protection attachment:**

**Underground Injection Control (UIC) Permit?**

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** COTTON DRAW UNIT

**Well Number:** 498H

**UIC Permit attachment:**

## Section 5 - Surface Discharge

**Would you like to utilize Surface Discharge PWD options?** NO

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Surface discharge PWD discharge volume (bbl/day):**

**Surface Discharge NPDES Permit?**

**Surface Discharge NPDES Permit attachment:**

**Surface Discharge site facilities information:**

**Surface discharge site facilities map:**

## Section 6 - Other

**Would you like to utilize Other PWD options?** NO

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Other PWD discharge volume (bbl/day):**

**Other PWD type description:**

**Other PWD type attachment:**

**Have other regulatory requirements been met?**

**Other regulatory requirements attachment:**

## Bond Info

### Bond Information

**Federal/Indian APD:** FED

**BLM Bond number:** CO1104

**BIA Bond number:**

**Do you have a reclamation bond?** NO

**Is the reclamation bond a rider under the BLM bond?**

**Is the reclamation bond BLM or Forest Service?**

**BLM reclamation bond number:**

**Forest Service reclamation bond number:**

**Forest Service reclamation bond attachment:**

**Reclamation bond number:**

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** COTTON DRAW UNIT

**Well Number:** 498H

**Reclamation bond amount:**

**Reclamation bond rider amount:**

**Additional reclamation bond information attachment:**

## Operator Certification

### Operator Certification

*I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.*

**NAME:** Linda Good

**Signed on:** 09/01/2016

**Title:** Regulatory Compliance Professional

**Street Address:** 333 West Sheridan Avenue

**City:** Oklahoma City

**State:** OK

**Zip:** 73102

**Phone:** (405)552-6558

**Email address:** Linda.Good@dvn.com

### Field Representative

**Representative Name:** Brad Oates

**Street Address:** 6488 Seven Rivers Hwy

**City:** Artesia

**State:** NM

**Zip:** 88210

**Phone:** (575)748-1810

**Email address:** brad.oates@dvn.com

## Payment Info

### Payment

**APD Fee Payment Method:** PAY.GOV

**pay.gov Tracking ID:** 25TLJFIR