

<b>APD ID:</b> 10400004793	<b>Submission Date:</b> 08/25/2016	Highlight All Changes
<b>Operator Name:</b> DEVON ENERGY PRODUCTION COMPANY LP	<b>Federal/Indian APD:</b> FED	
<b>Well Name:</b> COTTON DRAW UNIT	<b>Well Number:</b> 499H	
<b>Well Type:</b> OIL WELL	<b>Well Work Type:</b> Drill	

Application

**Section 1 - General**

<b>APD ID:</b> 10400004793	<b>Tie to previous NOS?</b>	<b>Submission Date:</b> 08/25/2016
<b>BLM Office:</b> HOBBS	<b>User:</b> Linda Good	<b>Title:</b> Regulatory Compliance Professional
<b>Federal/Indian APD:</b> FED	<b>Is the first lease penetrated for production Federal or Indian?</b> FED	
<b>Lease number:</b> NMLC061873B	<b>Lease Acres:</b> 1759.31	
<b>Surface access agreement in place?</b>	<b>Allotted?</b>	<b>Reservation:</b>
<b>Agreement in place?</b> NO	<b>Federal or Indian agreement:</b>	
<b>Agreement number:</b>		
<b>Agreement name:</b>		
<b>Keep application confidential?</b> YES		
<b>Permitting Agent?</b> NO	<b>APD Operator:</b> DEVON ENERGY PRODUCTION COMPANY LP	
<b>Operator letter of designation:</b>		
<b>Keep application confidential?</b> YES		

**Operator Info**

**Operator Organization Name:** DEVON ENERGY PRODUCTION COMPANY LP  
**Operator Address:** 333 West Sheridan Avenue  
**Operator PO Box:** Zip: 73102  
**Operator City:** Oklahoma City      **State:** OK  
**Operator Phone:** (405)552-6571  
**Operator Internet Address:** aletha.dewbre@dvn.com

**Section 2 - Well Information**

<b>Well in Master Development Plan?</b> NO	<b>Mater Development Plan name:</b>
<b>Well in Master SUPO?</b> NO	<b>Master SUPO name:</b>
<b>Well in Master Drilling Plan?</b> NO	<b>Master Drilling Plan name:</b>

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 499H

**Well Name:** COTTON DRAW UNIT

**Well Number:** 499H

**Well API Number:**

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

**Field Name:** PADUCA NORTH

**Pool Name:** DELAWARE

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

**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:**

**Well Class:** HORIZONTAL

COTTON DRAW UNIT

264H/499H/451H/452H

**Number of Legs:**

**Well Work Type:** Drill

**Well Type:** OIL WELL

**Describe Well Type:**

**Well sub-Type:** INFILL

**Describe sub-type:**

**Distance to town:** 21.5 Miles

**Distance to nearest well:** 1436 FT

**Distance to lease line:** 75 FT

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

**Well plat:** CDU 499H\_C-102 revised\_signed\_08-25-2016.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:** 4657

**STATE:** NEW MEXICO

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

**Latitude:** 32.1373698

**Longitude:** -103.7079631

SHL

**Elevation:** 3424

**MD:** 0

**TVD:** 0

**Leg #:** 1

**Lease Type:** FEDERAL

**Lease #:** NMLC061873A

**NS-Foot:** 75

**NS Indicator:** FNL

**EW-Foot:** 660

**EW Indicator:** FEL

**Twsp:** 25S

**Range:** 32E

**Section:** 18

**Aliquot:** NENE

**Lot:**

**Tract:**

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 499H

	<b>STATE:</b> NEW MEXICO	<b>Meridian:</b> NEW MEXICO PRINCIPAL	<b>County:</b> LEA
	<b>Latitude:</b> 32.1373698	<b>Longitude:</b> -103.7079631	
KOP	<b>Elevation:</b> -4234	<b>MD:</b> 7676	<b>TVD:</b> 7658
<b>Leg #: 1</b>	<b>Lease Type:</b> FEDERAL	<b>Lease #:</b> NMLC061873A	
	<b>NS-Foot:</b> 27	<b>NS Indicator:</b> FNL	
	<b>EW-Foot:</b> 300	<b>EW Indicator:</b> FEL	
	<b>Twsp:</b> 25S	<b>Range:</b> 32E	<b>Section:</b> 18
	<b>Aliquot:</b> NENE	<b>Lot:</b>	<b>Tract:</b>
	<b>STATE:</b> NEW MEXICO	<b>Meridian:</b> NEW MEXICO PRINCIPAL	<b>County:</b> LEA
	<b>Latitude:</b> 32.1373698	<b>Longitude:</b> -103.7079631	
PPP	<b>Elevation:</b> -4782	<b>MD:</b> 8408	<b>TVD:</b> 8206
<b>Leg #: 1</b>	<b>Lease Type:</b> FEDERAL	<b>Lease #:</b> NMLC061873A	
	<b>NS-Foot:</b> 457	<b>NS Indicator:</b> FNL	
	<b>EW-Foot:</b> 360	<b>EW Indicator:</b> FEL	
	<b>Twsp:</b> 25S	<b>Range:</b> 32E	<b>Section:</b> 18
	<b>Aliquot:</b> NENE	<b>Lot:</b>	<b>Tract:</b>
	<b>STATE:</b> NEW MEXICO	<b>Meridian:</b> NEW MEXICO PRINCIPAL	<b>County:</b> LEA
	<b>Latitude:</b> 32.1238734	<b>Longitude:</b> -103.7070609	
EXIT	<b>Elevation:</b> -4861	<b>MD:</b> 12938	<b>TVD:</b> 8285
<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> 360	<b>EW Indicator:</b> FEL	
	<b>Twsp:</b> 25S	<b>Range:</b> 32E	<b>Section:</b> 18
	<b>Aliquot:</b> SESE	<b>Lot:</b>	<b>Tract:</b>
	<b>STATE:</b> NEW MEXICO	<b>Meridian:</b> NEW MEXICO PRINCIPAL	<b>County:</b> LEA
	<b>Latitude:</b> 32.1238734	<b>Longitude:</b> -103.7070609	
BHL	<b>Elevation:</b> -4861	<b>MD:</b> 12938	<b>TVD:</b> 8285
<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> 360	<b>EW Indicator:</b> FEL	

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 499H

**Twsp:** 25S

**Range:** 32E

**Section:** 18

**Aliquot:** SESE

**Lot:**

**Tract:**

## Drilling Plan

### Section 1 - Geologic Formations

**ID:** Surface formation

**Name:** UNKNOWN

**Lithology(ies):**

ALLUVIUM

**Elevation:** 3424

**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:** 2799

**True Vertical Depth:** 625

**Measured Depth:** 625

**Mineral Resource(s):**

NONE

**Is this a producing formation?** N

**ID:** Formation 2

**Name:** SALADO

**Lithology(ies):**

SALT

**Elevation:** 2766

**True Vertical Depth:** 658

**Measured Depth:** 658

**Mineral Resource(s):**

NONE

**Is this a producing formation?** N

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 499H

**ID:** Formation 3

**Name:** BASE OF SALT

**Lithology(ies):**

SALT

**Elevation:** -771

**True Vertical Depth:** 4195

**Measured Depth:** 4195

**Mineral Resource(s):**

NONE

**Is this a producing formation?** N

**ID:** Formation 4

**Name:** DELAWARE

**Lithology(ies):**

SANDSTONE

**Elevation:** -1022

**True Vertical Depth:** 4446

**Measured Depth:** 4446

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** Y

**ID:** Formation 5

**Name:** LAMAR LS

**Lithology(ies):**

SANDSTONE

**Elevation:** -1026

**True Vertical Depth:** 4450

**Measured Depth:** 4450

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 6

**Name:** BELL CANYON

**Lithology(ies):**

SANDSTONE

**Elevation:** -1044

**True Vertical Depth:** 4468

**Measured Depth:** 4468

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 499H

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 7

**Name:** CHERRY CANYON

**Lithology(ies):**

SANDSTONE

**Elevation:** -1963

**True Vertical Depth:** 5387

**Measured Depth:** 5387

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 8

**Name:** BRUSHY CANYON

**Lithology(ies):**

SANDSTONE

**Elevation:** -3366

**True Vertical Depth:** 6790

**Measured Depth:** 6790

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 9

**Name:** BRUSHY CANYON LOWER

**Lithology(ies):**

SANDSTONE

**Elevation:** -4701

**True Vertical Depth:** 8125

**Measured Depth:** 8125

**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:** 499H

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## Section 2 - Blowout Prevention

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

**Rating Depth:** 4255

**Equipment:** 3M rotating head, mud-gas separator, panic line, and flare will be rigged up prior to drilling out surface casing.

**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 499H\_3M BOPE Double Ram and CLS Schem\_08-25-2016.pdf

**BOP Diagram Attachment:**

CDU 499H\_3M BOPE Double Ram and CLS Schem\_08-25-2016.pdf

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

**Rating Depth:** 8285

**Equipment:** 3M rotating head, mud-gas separator, panic line, and flare will be rigged up prior to drilling out surface casing.

**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 499H\_3M BOPE Double Ram and CLS Schem\_08-25-2016.pdf

**BOP Diagram Attachment:**

CDU 499H\_3M BOPE Double Ram and CLS Schem\_08-25-2016.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: 499H

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: ~~725~~ 790

Bottom setting depth TVD: ~~725~~ 790

Bottom setting depth MSL: 2699

Calculated casing length MD: ~~725~~ 790

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 499H\_Surface Casing Assumptions\_08-25-2016.pdf

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 499H

*KSee  
COA*

String Type: INTERMEDIATE

Other String Type:

Hole Size: 12.5

Top setting depth MD: 0

Top setting depth TVD: 0

Top setting depth MSL: 3424

Bottom setting depth MD: ~~4255~~ 4400

Bottom setting depth TVD: ~~4255~~ 4400

Bottom setting depth MSL: -831

Calculated casing length MD: ~~4255~~ 4400

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 499H\_Intermediate Casing Assumptions\_08-25-2016.pdf

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 499H

**String Type:** PRODUCTION

**Other String Type:**

**Hole Size:** 8.75

**Top setting depth MD:** 0

**Top setting depth TVD:** 0

**Top setting depth MSL:** 3424

**Bottom setting depth MD:** 12938

**Bottom setting depth TVD:** 8285

**Bottom setting depth MSL:** -4861

**Calculated casing length MD:** 12938

**Casing Size:** 5.5

**Other Size**

**Grade:** ~~P-105~~ 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 499H\_Production Casing Assumptions\_08-25-2016.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: 499H

**Stage Tool Depth:**

Lead

**Top MD of Segment:** 0

**Bottom MD Segment:** 725

**Cement Type:** C

**Additives:** 1% Calcium Chloride

**Quantity (sks):** 575

**Yield (cu.ff./sk):** 1.34

**Density:** 14.8

**Volume (cu.ft.):** 755

**Percent Excess:** 50

**Casing String Type:** INTERMEDIATE

**Stage Tool Depth:**

Lead

**Top MD of Segment:** 0

**Bottom MD Segment:** 3255

**Cement Type:** C

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

**Quantity (sks):** 718

**Yield (cu.ff./sk):** 1.85

**Density:** 12.9

**Volume (cu.ft.):** 1325

**Percent Excess:** 30

Tail

**Top MD of Segment:** 3255

**Bottom MD Segment:** 4255

**Cement Type:** H

**Additives:** 0.125 lbs/sks Poly-R-Flake

**Quantity (sks):** 320

**Yield (cu.ff./sk):** 1.33

**Density:** 14.8

**Volume (cu.ft.):** 426

**Percent Excess:** 30

**Casing String Type:** PRODUCTION

**Stage Tool Depth:**

Lead

**Top MD of Segment:** 4055

**Bottom MD Segment:** 8100

**Cement Type:** Tuned

**Additives:** n/a

**Quantity (sks):** 360

**Yield (cu.ff./sk):** 3.27

**Density:** 9

**Volume (cu.ft.):** 1175

**Percent Excess:** 25

Tail

**Top MD of Segment:** 8100

**Bottom MD Segment:** 12938

**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):** 1171

**Yield (cu.ff./sk):** 1.2

**Density:** 14.5

**Volume (cu.ft.):** 1405

**Percent Excess:** 25

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 499H

### 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: <del>4255</del> <b>4400</b>	Bottom Depth: 12938
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):
Filtration (cc):	Salinity (ppm):
Additional Characteristics:	
Top Depth: 0	Bottom Depth: <del>725</del> <b>790</b>
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):
Filtration (cc):	Salinity (ppm):
Additional Characteristics:	

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 499H

**Top Depth:** 0

**Bottom Depth:** 4255 <sup>4400</sup>

**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):**

**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:** 3728

**Anticipated Surface Pressure:** 1905.3

**Anticipated Bottom Hole Temperature(F):** 141

**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 499H\_H2S Plan\_V-Door South\_08-25-2016.pdf

CDU 499H\_H2S Plan\_V-Door West\_08-25-2016.pdf

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 499H

## Section 8 - Other Information

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

CDU 499H\_Directional Proposal\_08-25-2016.pdf

**Other proposed operations facets description:**

Closed Loop Design Plan  
Multi-bowl Wellhead Verbiage  
Multi-bowl Wellhead  
Production Cement Contingency

**Other proposed operations facets attachment:**

CDU 499H\_Closed Loop Design Plan\_08-25-2016.pdf  
CDU 499H\_Multi-Bowl Verbiage\_3M\_08-25-2016.pdf  
CDU 499H\_Multi-Bowl Wellhead\_08-25-2016.pdf  
CDU 499H\_ProdCmtContg\_12-13-2016.pdf

**Other Variance attachment:**

CDU 499H\_H\_P Co-flex hose\_08-25-2016.pdf

SUPO

## Section 1 - Existing Roads

**Will existing roads be used?** YES

**Existing Road Map:**

CDU 499H\_Existing Access Rd\_08-25-2016.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:** 499H

## Section 2 - New or Reconstructed Access Roads

**Will new roads be needed?** YES

**New Road Map:**

CDU 499H\_Access Rd for CDU 264H, 451H, 452H,499H-R1\_08-25-2016.pdf

**New road type:** COLLECTOR,RESOURCE

**Length:** 343                      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 499H\_Access Rd for CDU 264H, 451H, 452H,499H-R1\_08-25-2016.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:** 499H

**Additional Attachment(s):**

### Section 3 - Location of Existing Wells

**Existing Wells Map?** YES

**Attach Well map:**

CDU 499H\_1 Mile Map\_08-25-2016.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 499H\_Wtr Xfr Map\_rev\_12-12-2016.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:** 499H

**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 452H\_Caliche Pit\_12-13-2016.pdf

CDU 451H, 452H, 499H, 264H Caliche\_12-13-2016.pdf

## Section 7 - Methods for Handling Waste

**Waste type:** DRILLING

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

**Amount of waste:** 1400 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 disposed of at R360, Sundance, or equivalent.

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 499H

**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

**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

### 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:** 499H

**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 499H\_4 Well Pad Rig Location Layout\_V-Door South\_08-25-2016.pdf

CDU 499H\_4 Well Pad Rig Location Layout\_V-Door West\_08-25-2016.pdf

**Comments:**

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 499H

## Section 10 - Plans for Surface Reclamation

**Type of disturbance:** NEW

**Recontouring attachment:**

CDU 499H\_Interim Reclamation Site\_08-25-2016.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):** 1.849

**Wellpad short term disturbance (acres):** 3.779

**Access road long term disturbance (acres):** 0.157

**Access road short term disturbance (acres):** 0.157

**Pipeline long term disturbance (acres):** 1.0865564

**Pipeline short term disturbance (acres):** 1.8109275

**Other long term disturbance (acres):** 0

**Other short term disturbance (acres):** 0

**Total long term disturbance:** 3.0925565

**Total short term disturbance:** 5.7469273

**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:** 499H

## 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
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**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:** 499H

**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:** 499H

**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:** 499H

## Section 12 - Other Information

**Right of Way needed?** NO

**Use APD as ROW?**

**ROW Type(s):**

### ROW Applications

**SUPO Additional Information:** Electric Line: Attached is an approved sundry for the 264H electric line (Survey EL 7763). The sundry shows the 264H padded with the 263H, but the route will remain unchanged and will now service the 4-well pad as planned. The route in the approved sundry will work in conjunction with the electric line submitted with the CDU 288H, 498H, and 499H APDs to connect to the Xcel lateral line (Survey EL 7757, also attached). Flowlines: The CDU 451H and 499H will take production to the CDU 13-18 CTB (Survey No. 4691), and the CDU 452H and 264H will take production to the CDU 7 DL CTB (Survey No. 4872).

**Use a previously conducted onsite?** NO

**Previous Onsite information:**

### Other SUPO Attachment

CDU 452H\_ELECTRIC\_P\_12-13-2016.PDF

CDU 264H Electric Line - Approved Sundry\_12-13-2016.pdf

CDU 499H\_Flowline\_12-13-2016.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: 499H

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:** 499H

**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:** 499H

**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:** 499H

**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:** 08/25/2016

**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:** 25TH6UDK