

**HOBBS OCD**

**AUG 03 2017**

**RECEIVED**

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. COTTON DRAW / NNMN70928X	
8. Lease Name and Well No. COTTON DRAW UNIT 509H (300675)	
9. API Well No. 30-025-43916	
10. Field and Pool, or Exploratory NC-025-G-06 5257206M; BS	
11. Sec., T. R. M. or Blk. and Survey or Area SEC 18 / T2S5 / R32E / NMP	
12. County or Parish LEA	13. State NM
14. Distance in miles and direction from nearest town or post office*	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 290 feet	16. No. of acres in lease 1759.31
17. Spacing Unit dedicated to this well 320	
18. Distance from proposed location* to nearest well, drilling, completed, 330 feet applied for, on this lease, ft.	19. Proposed Depth 10534 feet / 19975 feet
20. BLM/BIA Bond No. on file FED: CO1104	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3409 feet	22. Approximate date work will start* 09/30/2017
	23. Estimated duration 35 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.   | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan.  | 5. Operator certification   |
| 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). | 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 04/17/2017
Title Regulatory Compliance Professional		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Mustafa Haque / Ph: (575)234-5910	Date 08/01/2017
Title Petroleum Engineer Office CARLSBAD		

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**

*KZ 08/03/17*

## INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM 1: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

## NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to allow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

**BURDEN HOURS STATEMENT:** Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

## Additional Operator Remarks

### Location of Well

1. SHL: SESE / 540 FSL / 570 FEL / TWSP: 25S / RANGE: 32E / SECTION: 18 / LAT: 32.1245605 / LONG: -103.7077354 ( TVD: 0 feet, MD: 0 feet )  
PPP: SESE / 660 FSL / 441 FEL / TWSP: 25S / RANGE: 32E / SECTION: 7 / LAT: 32.1511788 / LONG: -103.706849 ( TVD: 10502 feet, MD: 15687 feet )  
PPP: NENE / 660 FNL / 470 FEL / TWSP: 25S / RANGE: 32E / SECTION: 18 / LAT: 32.1245605 / LONG: -103.7077354 ( TVD: 10510 feet, MD: 14367 feet )  
PPP: SESE / 917 FSL / 578 FEL / TWSP: 25S / RANGE: 32E / SECTION: 18 / LAT: 32.1245605 / LONG: -103.7077354 ( TVD: 10499 feet, MD: 10661 feet )  
BHL: NENE / 330 FNL / 330 FEL / TWSP: 25S / RANGE: 32E / SECTION: 7 / LAT: 32.1511788 / LONG: -103.706849 ( TVD: 10534 feet, MD: 19975 feet )

### BLM Point of Contact

Name: Deborah McKinney  
Title: Legal Instruments Examiner  
Phone: 5752345931  
Email: dmckinne@blm.gov

CONFIDENTIAL

**Review and Appeal Rights**

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 509H

**Casing Attachments**

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**Casing ID:** 1            **String Type:** SURFACE

**Inspection Document:**

**Spec Document:**

**Taperd String Spec:**

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

CDU\_509H\_SurfCsg\_Ass\_04-12-2017.pdf

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**Casing ID:** 2            **String Type:** INTERMEDIATE

**Inspection Document:**

**Spec Document:**

**Taperd String Spec:**

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

CDU\_509H\_Int\_Csg\_Ass\_04-12-2017.pdf

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**Casing ID:** 3            **String Type:** PRODUCTION

**Inspection Document:**

**Spec Document:**

**Taperd String Spec:**

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

CDU\_509H\_ProdCasing\_Ass\_04-12-2017.pdf

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 509H

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

**Contingency Plans geohazards attachment:**

**Hydrogen sulfide drilling operations plan:**

CDU\_509H\_H2S\_Plan\_04-07-2017.pdf

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

CDU\_509H\_Dir\_Plan\_04-12-2017.pdf

**Other Facets:**

CDU\_509H\_MB\_Wellhd\_04-07-2017.pdf

CDU\_509H\_Drilling\_Plan\_04-12-2017.pdf

CDU\_509H\_Gas\_Capture\_Plan\_07-10-2017.pdf

CDU\_509H\_Clsd\_Loop\_07-10-2017.pdf

**Other Variances:**

CDU\_509H\_Co\_flex\_04-07-2017.pdf

## Surface Use Plan of Operations

**Existing Road Map:**

CDU\_509H\_Ex\_Access\_Rd\_04-07-2017.pdf

**New Road Map:**

CDU\_509H\_Access\_Rd\_04-07-2017.pdf

**Attach Well map:**

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 509H

CDU\_509H\_1Mile\_Map\_04-07-2017.pdf

**Water source and transportation map:**

CDU\_509H\_Wtr\_Xfr\_Map\_04-07-2017.pdf

**Construction Materials source location attachment:**

CDU\_509H\_Caliche\_Pit\_04-07-2017.pdf

**Methods for Handling Waste**

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**Waste type:** FLOWBACK

**Safe containment attachment:**

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**Waste type:** DRILLING

**Safe containment attachment:**

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**Waste type:** COMPLETIONS/STIMULATION

**Safe containment attachment:**

---

**Waste type:** PRODUCED WATER

**Safe containment attachment:**

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**Well Site Layout Diagram:**

CDU\_509H\_Rig\_Layout\_04-07-2017.pdf

**Recontouring attachment:**

CDU\_509H\_Reclamation\_04-07-2017.pdf

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 509H

**Other SUPO Attachment:**

CDU\_509H\_Electric\_1\_04-11-2017.pdf

CDU\_509H\_Electric\_2\_04-11-2017.pdf

CDU\_509H\_Flowline\_Coridor\_04-17-2017.PDF

CDU\_509H\_Flowline\_Plat\_04-17-2017.pdf

**Produced Water Disposal**

**Bonds**

APD ID: 10400013181

Submission Date: 04/17/2017

Highlight  
All ChangesOperator Name: DEVON ENERGY PRODUCTION COMPANY  
LP

Federal/Indian APD: FED

Well Name: COTTON DRAW UNIT

Well Number: 509H

Well Type: OIL WELL

Well Work Type: Drill

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Application

**Section 1 - General**

APD ID: 10400013181

Tie to previous NOS?

Submission Date: 04/17/2017

BLM Office: CARLSBAD

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? YES

Federal or Indian agreement: FEDERAL

Agreement number: NMNM70928X

Agreement name: COTTON DRAW

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? EXISTING

Mater Development Plan name: Cotton Draw 1 MDP

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:** 509H

**Well Name:** COTTON DRAW UNIT

**Well Number:** 509H

**Well API Number:**

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

**Field Name:** PADUCA

**Pool Name:** BONE SPRING

**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

506H/507H/508H/509H

**Number of Legs:** 1

**Well Work Type:** Drill

**Well Type:** OIL WELL

**Describe Well Type:**

**Well sub-Type:** INFILL

**Describe sub-type:**

**Distance to town:**

**Distance to nearest well:** 330 FT

**Distance to lease line:** 290 FT

**Reservoir well spacing assigned acres Measurement:** 320 Acres

**Well plat:** CDU\_509H\_C\_102\_Plats\_signed\_04-07-2017.pdf

**Well work start Date:** 09/30/2017

**Duration:** 35 DAYS

### Section 3 - Well Location Table

**Survey Type:** RECTANGULAR

**Describe Survey Type:**

**Datum:** NAD83

**Vertical Datum:** NAVD88

**Survey number:** 5173

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
SHL Leg #1	540	FSL	570	FEL	25S	32E	18	Aliquot SESE	32.1245605	-103.7077354	LEA	NEW MEXI CO	NEW MEXI CO	F	NMLC0 61873B	3409	0	0
KOP Leg #1	540	FSL	570	FEL	25S	32E	18	Aliquot SESE	32.1245605	-103.7077354	LEA	NEW MEXI CO	NEW MEXI CO	F	NMLC0 61873B	-6552	9961	9961
PPP Leg #1	917	FSL	578	FEL	25S	32E	18	Aliquot SESE	32.1245605	-103.7077354	LEA	NEW MEXI CO	NEW MEXI CO	F	NMLC0 61873B	-7090	10661	10499

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 509H

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
PPP Leg #1	660	FNL	470	FEL	25S	32E	18	Aliquot NENE	32.1245605	-103.7077354	LEA	NEW MEXI CO	NEW MEXI CO	F	NMLC0 61873A	-7101	14367	10510
PPP Leg #1	660	FSL	441	FEL	25S	32E	7	Aliquot SESE	32.1511788	-103.706849	LEA	NEW MEXI CO	NEW MEXI CO	F	NMLC0 61873	-7093	15687	10502
EXIT Leg #1	330	FNL	330	FEL	25S	32E	7	Aliquot NENE	32.1511788	-103.706849	LEA	NEW MEXI CO	NEW MEXI CO	F	NMLC0 61863A	-7125	19975	10534
BHL Leg #1	330	FNL	330	FEL	25S	32E	7	Aliquot NENE	32.1511788	-103.706849	LEA	NEW MEXI CO	NEW MEXI CO	F	NMLC0 61863A	-7125	19975	10534

### Drilling Plan

#### Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
17691	UNKNOWN	3404	0	0	ALLUVIUM	NONE	No
17746	RUSTLER	2681	723	723	LIMESTONE	NONE	No
18574	SALADO	2353	1051	1051	SALT	NONE	No
17722	BASE OF SALT	-897	4301	4301	SALT	NONE	No
15315	DELAWARE	-1125	4529	4529	SANDSTONE	NATURAL GAS,OIL	No
17688	BONE SPRING	-5013	8417	8417	LIMESTONE	NATURAL GAS,OIL	Yes

#### Section 2 - Blowout Prevention

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

**Rating Depth:** 10534

**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

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 509H

**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\_509H\_3M\_BOPE\_CK\_04-12-2017.pdf

**BOP Diagram Attachment:**

CDU\_509H\_3M\_BOPE\_CK\_04-12-2017.pdf

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

**Rating Depth:** 4350

**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\_509H\_3M\_BOPE\_CK\_04-12-2017.pdf

**BOP Diagram Attachment:**

CDU\_509H\_3M\_BOPE\_CK\_04-12-2017.pdf

### Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	788	0	788	-7125	-7913	788	H-40	48	STC	1.74	2.45	BUOY	4.13	BUOY	4.13
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	4350	0	4350	-7125	-11475	4350	J-55	40	LTC	1.19	1.42	BUOY	3.98	BUOY	3.98
3	PRODUCTION	8.75	5.5	NEW	API	N	0	19975	0	10534	-7125	-17520	19975	P-110	17	BUTT	2.18	2.7	BUOY	3.21	BUOY	3.21

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 509H

**Casing Attachments**

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**Casing ID:** 1      **String Type:** SURFACE

**Inspection Document:**

**Spec Document:**

**Taperd String Spec:**

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

CDU\_509H\_SurfCsg\_Ass\_04-12-2017.pdf

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**Casing ID:** 2      **String Type:** INTERMEDIATE

**Inspection Document:**

**Spec Document:**

**Taperd String Spec:**

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

CDU\_509H\_Int\_Csg\_Ass\_04-12-2017.pdf

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**Casing ID:** 3      **String Type:** PRODUCTION

**Inspection Document:**

**Spec Document:**

**Taperd String Spec:**

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

CDU\_509H\_ProdCasing\_Ass\_04-12-2017.pdf

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**Section 4 - Cement**

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 509H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	788	613	1.34	14.8	821	50	C	1% Calcium Chloride
INTERMEDIATE	Lead		0	3350	737	1.85	12.9	1363	30	C	Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sks Poly-E-Flake
INTERMEDIATE	Tail		3350	4350	306	1.33	14.8	407	30	C	0.125 lbs/sks Poly-R-Flake
PRODUCTION	Lead		4150	1066 1	629	3.27	9	2057	25	TUNED	N/A
PRODUCTION	Tail		1066 1	1997 5	2460	1.2	14.5	2952	25	H	Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite

### 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	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
788	4350	OTHER : SATURATED BRINE	10	11				2			

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 509H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	788	OTHER : FRESH WATER GEL	8.5	9				2			
4350	1997 5	OTHER : CUT BRINE	8.5	9.3				12			

### 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:**

MWD, MUDLOG

**Coring operation description for the well:**

N/A

### Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 4658

**Anticipated Surface Pressure:** 2340.52

**Anticipated Bottom Hole Temperature(F):** 164

**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\_509H\_H2S\_Plan\_04-07-2017.pdf

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 509H

### Section 8 - Other Information

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

CDU\_509H\_Dir\_Plan\_04-12-2017.pdf

**Other proposed operations facets description:**

Multi-Bowl Wellhead  
Drilling Plan  
Gas Capture Plan  
Closed-Loop Design

**Other proposed operations facets attachment:**

CDU\_509H\_MB\_Wellhd\_04-07-2017.pdf  
CDU\_509H\_Drilling\_Plan\_04-12-2017.pdf  
CDU\_509H\_Gas\_Capture\_Plan\_07-10-2017.pdf  
CDU\_509H\_Clsd\_Loop\_07-10-2017.pdf

**Other Variance attachment:**

CDU\_509H\_Co\_flex\_04-07-2017.pdf

SUPO

### Section 1 - Existing Roads

**Will existing roads be used?** YES

**Existing Road Map:**

CDU\_509H\_Ex\_Access\_Rd\_04-07-2017.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:** 509H

## Section 2 - New or Reconstructed Access Roads

**Will new roads be needed?** YES

**New Road Map:**

CDU\_509H\_Access\_Rd\_04-07-2017.pdf

**New road type:** COLLECTOR,RESOURCE

**Length:** 1819 Feet **Width (ft.):** 30

**Max slope (%):** 6 **Max grade (%):** 4

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

**ACOE Permit Number(s):**

**New road travel width:** 30

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

**New road access plan or profile prepared?** NO

**New road access plan attachment:**

**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

**Additional Attachment(s):**

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 509H

**Additional Attachment(s):**

### Section 3 - Location of Existing Wells

**Existing Wells Map?** YES

**Attach Well map:**

CDU\_509H\_1Mile\_Map\_04-07-2017.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 Cotton Draw Unit 18-18 CTB 1.

### 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):** 170000

**Source volume (acre-feet):** 21.911827

**Source volume (gal):** 7140000

**Water source and transportation map:**

CDU\_509H\_Wtr\_Xfr\_Map\_04-07-2017.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:** 509H

**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\_509H\_Caliche\_Pit\_04-07-2017.pdf

### Section 7 - Methods for Handling Waste

**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:** DRILLING

**Waste content description:** WATER BASED CUTTINGS

**Amount of waste:** 1810 barrels

**Waste disposal frequency :** Daily

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 509H

**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.

**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:** 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?**

**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**

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 509H

**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\_509H\_Rig\_Layout\_04-07-2017.pdf

**Comments:**

**Section 10 - Plans for Surface Reclamation**

**Type of disturbance:** NEW

**Recontouring attachment:**

CDU\_509H\_Reclamation\_04-07-2017.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):** 1.386

**Wellpad short term disturbance (acres):** 3.381

**Access road long term disturbance (acres):** 0.291

**Access road short term disturbance (acres):** 0.291

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 509H

**Pipeline long term disturbance (acres):** 6.7546787

**Pipeline short term disturbance (acres):** 6.7546787

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

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

**Total long term disturbance:** 8.431679

**Total short term disturbance:** 10.426679

**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:**

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

**Existing Vegetation Community at the road:**

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

**Existing Vegetation Community at the pipeline:**

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

**Existing Vegetation Community at other disturbances:**

**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:**

**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:**

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 509H

**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**

**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:**

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 509H

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**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:**

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 509H

**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:**

### Section 12 - Other Information

**Right of Way needed?** NO

**Use APD as ROW?**

**ROW Type(s):**

### ROW Applications

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 509H

**SUPO Additional Information:** Flowline Coridor Plats Flowline Plats Electrical Plats

**Use a previously conducted onsite?** YES

**Previous Onsite information:** Aug 2016, CDU 18-18, Well Pad 4.

### Other SUPO Attachment

CDU\_509H\_Electric\_1\_04-11-2017.pdf

CDU\_509H\_Electric\_2\_04-11-2017.pdf

CDU\_509H\_Flowline\_Coridor\_04-17-2017.PDF

CDU\_509H\_Flowline\_Plat\_04-17-2017.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

**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:**

**Decribe precipitated solids disposal:**

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 509H

**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:**

**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:**

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 509H

**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?**

**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:**

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 509H

**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:**

**Reclamation bond amount:**

**Reclamation bond rider amount:**

**Additional reclamation bond information attachment:**

**Operator Certification**

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

**Well Name:** COTTON DRAW UNIT

**Well Number:** 509H

### 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:** 04/17/2017

**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@dnv.com

### Field Representative

**Representative Name:** Ray Vaz

**Street Address:** 6488 Seven Rivers Hwy

**City:** Artesia

**State:** NM

**Zip:** 88210

**Phone:** (575)748-1871

**Email address:** ray.vaz@dnv.com

### Payment Info

#### Payment

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

**pay.gov Tracking ID:** 261TKF2A