

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

OCD Hobbs

HOBBS OCD

MAR 13 2017

RECEIVED

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMLC061863A	
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator DEVON ENERGY PRODUCTION COMPANY LP (6137)		7. If Unit or CA Agreement, Name and No.	
3a. Address 333 West Sheridan Avenue Oklahoma City OK		8. Lease Name and Well No. (300635) COTTON DRAW UNIT 452H	
3b. Phone No. (include area code) (405)552-6571		9. API Well No. 30-025-43886	
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface NENE / 45 FNL / 610 FEL / LAT 32.1374523 / LONG -103.7078011 At proposed prod. zone NENE / 290 FNL / 360 FEL / LAT 32.1512884 / LONG -103.7069459		10. Field and Pool, or Exploratory WC-025 G-06 S253206M / BONE SPRIN 97899	
14. Distance in miles and direction from nearest town or post office* 21.5 miles		11. Sec., T. R. M. or Blk. and Survey or Area SEC 18 / T25S / R32E / NMP	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 45 feet		12. County or Parish LEA	
16. No. of acres in lease 1882.6		13. State NM	
17. Spacing Unit dedicated to this well 160		18. Distance from proposed location* to nearest well, drilling, completed, 1480 feet applied for, on this lease, ft.	
19. Proposed Depth 10500 feet / 15272 feet		20. BLM/BIA Bond No. on file FED: CO1104	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3424 feet		22. Approximate date work will start* 09/10/2017	
		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. | 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 08/16/2016
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Title
Regulatory Compliance Professional

Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575)234-5959	Date 03/06/2017
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Title
Supervisor Multiple Resources
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

KA
03/13/17

APD ID: 10400004356

Submission Date: 08/16/2016

Highlight

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Federal/Indian APD: FED

All Changes

Well Name: COTTON DRAW UNIT

Well Number: 452H

Well Type: OIL WELL

Well Work Type: Drill

Application

Section 1 - General

APD ID: 10400004356

Tie to previous NOS?

Submission Date: 08/16/2016

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: NMLC061863A

Lease Acres: 1882.6

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: 452H

Well Name: COTTON DRAW UNIT

Well Number: 452H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: WC-025 G-06
S253206M

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:
COTTON DRAW UNIT

Number:
451H/452H/264H/499H

Well Class: HORIZONTAL

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: 1480 FT

Distance to lease line: 45 FT

Reservoir well spacing assigned acres Measurement: 160 Acres

Well plat: CDU 452H_C-102_Revised- 3180C_signed_08-16-2016.pdf

Well work start Date: 09/10/2017

Duration: 45 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83

Vertical Datum: NAVD88

Survey number: 3180C

STATE: NEW MEXICO

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

Latitude: 32.1374523

Longitude: -103.7078011

SHL

Elevation: 3424

MD: 0

TVD: 0

Leg #: 1

Lease Type: FEDERAL

Lease #: NMLC061873A

NS-Foot: 45

NS Indicator: FNL

EW-Foot: 610

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: 452H

	STATE: NEW MEXICO	Meridian: NEW MEXICO PRINCIPAL	County: LEA
	Latitude: 32.1374523	Longitude: -103.7078011	
KOP	Elevation: -6477	MD: 9910	TVD: 9901
Leg #: 1	Lease Type: FEDERAL	Lease #: NMLC061873A	
	NS-Foot: 46	NS Indicator: FNL	
	EW-Foot: 401	EW Indicator: FEL	
	Twsp: 25S	Range: 32E	Section: 18
	Aliquot: NENE	Lot:	Tract:
	STATE: NEW MEXICO	Meridian: NEW MEXICO PRINCIPAL	County: LEA
	Latitude: 32.1374523	Longitude: -103.7078011	
PPP	Elevation: -6937	MD: 10445	TVD: 10361
Leg #: 1	Lease Type: FEDERAL	Lease #: NMLC061873	
	NS-Foot: 186	NS Indicator: FSL	
	EW-Foot: 399	EW Indicator: FEL	
	Twsp: 25S	Range: 32E	Section: 7
	Aliquot: SESE	Lot:	Tract:
	STATE: NEW MEXICO	Meridian: NEW MEXICO PRINCIPAL	County: LEA
	Latitude: 32.1512884	Longitude: -103.7069459	
EXIT	Elevation: -7076	MD: 15272	TVD: 10500
Leg #: 1	Lease Type: FEDERAL	Lease #: NMLC061863A	
	NS-Foot: 290	NS Indicator: FNL	
	EW-Foot: 360	EW Indicator: FEL	
	Twsp: 25S	Range: 32E	Section: 7
	Aliquot: NENE	Lot:	Tract:
	STATE: NEW MEXICO	Meridian: NEW MEXICO PRINCIPAL	County: LEA
	Latitude: 32.1512884	Longitude: -103.7069459	
BHL	Elevation: -7076	MD: 15272	TVD: 10500
Leg #: 1	Lease Type: FEDERAL	Lease #: NMLC061863A	
	NS-Foot: 290	NS Indicator: FNL	
	EW-Foot: 360	EW Indicator: FEL	

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 452H

Twsp: 25S

Range: 32E

Section: 7

Aliquot: NENE

Lot:

Tract:

Drilling Plan

Section 1 - Geologic Formations

ID: Surface formation

Name: ---

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: 452H

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? N

ID: Formation 5

Name: LAMAR

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: 452H

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: BONE SPRING

Lithology(ies):

SANDSTONE

Elevation: -4906

True Vertical Depth: 8330

Measured Depth: 8330

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: 452H

ID: Formation 10

Name: BONE SPRING 1ST

Lithology(ies):

SANDSTONE

Elevation: -5971

True Vertical Depth: 9395

Measured Depth: 9395

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? N

ID: Formation 11

Name: 2ND BONE SPRING LIME

Lithology(ies):

SANDSTONE

Elevation: -6176

True Vertical Depth: 9600

Measured Depth: 9600

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? N

ID: Formation 12

Name: BONE SPRING 2ND

Lithology(ies):

SANDSTONE

Elevation: -6536

True Vertical Depth: 9960

Measured Depth: 9960

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? Y

Section 2 - Blowout Prevention

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 452H

Pressure Rating (PSI): 3M

Rating Depth: 10500

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 452H_3M BOPE Double Ram and CLS Schem_08-16-2016.pdf

BOP Diagram Attachment:

CDU 452H_3M BOPE Double Ram and CLS Schem_08-16-2016.pdf

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 452H_3M BOPE Double Ram and CLS Schem_08-16-2016.pdf

BOP Diagram Attachment:

CDU 452H_3M BOPE Double Ram and CLS Schem_08-16-2016.pdf

Section 3 - Casing

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 452H

* See
DOA

String Type: SURFACE

Other String Type:

Hole Size: 17.5

Top setting depth MD: 0

Top setting depth TVD: 0

Top setting depth MSL: -7076

Bottom setting depth MD: 725 790

Bottom setting depth TVD: 725- 790

Bottom setting depth MSL: -7801

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 452H_Surface Casing Assumptions_08-16-2016.pdf

9 of 30

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 452H

*f-See
COA*

String Type: INTERMEDIATE

Other String Type:

Hole Size: 12.25

Top setting depth MD: 0

Top setting depth TVD: 0

Top setting depth MSL: -7076

Bottom setting depth MD: ~~4255~~ 4400

Bottom setting depth TVD: ~~4255~~ 4400

Bottom setting depth MSL: -11331

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 452H_Intermediate Casing Assumptions_08-16-2016.pdf

10 of 30

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 452H

String Type: PRODUCTION

Other String Type:

Hole Size: 8.75

Top setting depth MD: 0

Top setting depth TVD: 0

Top setting depth MSL: -7076

Bottom setting depth MD: 15272

Bottom setting depth TVD: 10500

Bottom setting depth MSL: -17576

Calculated casing length MD: 15272

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 452H_Production Casing Assumptions_08-16-2016.pdf

Section 4 - Cement

Casing String Type: SURFACE

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 452H

Stage Tool Depth:

Lead

Top MD of Segment: 0

Bottom MD Segment: ~~725~~ 790

Cement Type: C

Additives: 1% Calcium Chloride

Quantity (sks): 575

Yield (cu.ff./sk): 1.35

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

Fall

Bottom MD Segment: ~~4255~~ 4400

Cement Type: H

Top MD of Segment: 3255

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: 4305

Lead

Top MD of Segment: 4105

Bottom MD Segment: 4205

Cement Type: C

Additives: Enhancer 923 + 10% BWOC
Bentonite + 0.05% BWOC SA-1015 +
0.3% BWOC HR-800 + 0.2% BWOC

Quantity (sks): 20

Yield (cu.ff./sk): 3.31

FE-2 + 0.125 lb/sk Pol-E-Flake + 0.5
lb/sk D-Air 5000

Density: 10.9

Volume (cu.ft.): 66

Percent Excess: 25

Bottom MD Segment: 4305

Cement Type: H

Quantity (sks): 30

Yield (cu.ff./sk): 1.33

Top MD of Segment: 4205

Volume (cu.ft.): 39

Percent Excess: 25

Additives: 0.125 lbs/sack Poly-E-Flake

Density: 14.8

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 452H

Stage Tool Depth: 4305

Lead

Top MD of Segment: 4055	Bottom MD Segment: 10350	Cement Type: TUNED
Additives: NA	Quantity (sks): 560	Yield (cu.ff./sk): 3.27
Density: 9	Volume (cu.ft.): 1830	Percent Excess: 25

Tail

Top MD of Segment: 10350	Bottom MD Segment: 15272	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): 1195	Yield (cu.ff./sk): 1.2
Density: 14.5	Volume (cu.ft.): 1430	Percent Excess: 25

Stage Tool Depth: 4305

Lead

Top MD of Segment: 4305	Bottom MD Segment: 10350	Cement Type: C
Additives: Enhancer 923 + 10% BWOC Bentonite + 0.05% BWOC SA-1015 + 0.3% BWOC HR-800 + 0.2% BWOC	Quantity (sks): 530	Yield (cu.ff./sk): 3.31
Density: 10.9	Volume (cu.ft.): 1756	Percent Excess: 25

Tail

Top MD of Segment: 10350	Bottom MD Segment: 15272	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): 1195	Yield (cu.ff./sk): 1.2
Density: 14.5	Volume (cu.ft.): 1430	Percent Excess: 25

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 452H

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: 725 710
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:	
Top Depth: 0	Bottom Depth: 4255 4400
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:	

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 452H

Top Depth: ~~4255~~ 4400

Bottom Depth: 15272

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:

NA

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 4725

Anticipated Surface Pressure: 2415

Anticipated Bottom Hole Temperature(F): 165

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 452H_V-Door South H2S Plan_08-16-2016.pdf

CDU 452H_V-Door West H2S Plan_08-16-2016.pdf

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 452H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

CDU 452H_Directional Plan_08-16-2016.pdf

Other proposed operations facets description:

Multi-Bowl Verbiage
Multi-Bowl Wellhead
Closed-Loop Design Plan

Other proposed operations facets attachment:

CDU 452H_Multi-Bowl Verbiage_3M_08-16-2016.pdf
CDU 452H_Multi-Bowl Wellhead_08-16-2016.pdf
CDU 452H_Closed Loop Design Plan_08-16-2016.pdf

Other Variance attachment:

CDU 452H_H_P Co-flex hose_08-16-2016.pdf

SUPO

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

CDU 452H_Existing Access Rd_08-16-2016.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:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

CDU 452H_Access Rd for CDU 264H, 451H, 452H, 499H-R1_08-16-2016.pdf

New road type: COLLECTOR,RESOURCE

Length: 343

Feet

Width (ft.): 16

Max slope (%): 6

Max grade (%): 4

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 452H

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 452H_Access Rd for CDU 264H, 451H, 452H, 499H-R1_08-16-2016.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: NA

Road Drainage Control Structures (DCS) description: NA

Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Additional Attachment(s):

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

CDU 452H_1 Mile Map_08-16-2016.pdf

Existing Wells description:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 452H

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 7-7 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): 150000

Source volume (acre-feet): 19.333965

Source volume (gal): 6300000

Water source and transportation map:

CDU 452H_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:

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:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 452H

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. Attached is a map showing where the caliche pits are in relation to the proposed wells.

Construction Materials source location attachment:

CDU 452H_Caliche Pit_12-12-2016.pdf

CDU 451H, 452H, 499H, 264H Caliche_12-12-2016.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: NA

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: 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: NA

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.

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 452H

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: NA

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: NA

Safe containmant attachment:

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

Disposal type description:

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

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

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? NO

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 452H

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 452H_4 Well Pad Rig Location Layout_V-Door South_08-16-2016.pdf

CDU 452H_4 Well Pad Rig Location Layout_V-Door West_08-16-2016.pdf

Comments: Depending on which well is drilled first the V-door could be South or West.

Section 10 - Plans for Surface Reclamation

Type of disturbance: NEW

Recontouring attachment:

CDU 452H_Interim Reclamation Site_08-16-2016.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.

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 452H

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:

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

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 452H

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: NA

Pit closure description: NA

Pit closure attachment:

Section 11 - Surface Ownership

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:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 452H

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:

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:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 452H

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

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 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_12-12-2016.PDF

CDU 264H Electric Line - Approved Sundry_12-12-2016.pdf

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 452H

CDU 452H_Flowline_12-12-2016.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

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:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 452H

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:

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:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 452H

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:

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:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 452H

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 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: 08/16/2016

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

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: COTTON DRAW UNIT

Well Number: 452H

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: 25TBV2KC