

# Carlsbad Field Office

## OCD Hobbs

**HOBBS OCD**

Form 3160-3  
(March 2012)

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

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FEB 09 2017

### APPLICATION FOR PERMIT TO DRILL OR REENTER

RECEIVED

|  |   |  |                 |
|--|---|--|-----------------|
| 1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER   |   | 5. Lease Serial No.<br>NMNM 94186                                    |                 |
| 1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone   |   | 6. If Indian, Allottee or Tribe Name                                 |                 |
| 2. Name of Operator<br>DEVON ENERGY PRODUCTION COMPANY LP (6137)   |   | 7. If Unit or CA Agreement, Name and No.                             |                 |
| 3a. Address<br>333 West Sheridan Avenue Oklahoma City Ok   |   | 8. Lease Name and Well No. (30884)<br>THISTLE UNIT 152H              |                 |
| 3b. Phone No. (include area code)<br>(405)552-6571   |   | 9. API Well No.<br>30-025-43588                                      |                 |
| 4. Location of Well (Report location clearly and in accordance with any State requirements.)*<br>At surface SWSW / 340 FSL / 1230 FWL / LAT 32.2548475 / LONG -103.5818244<br>At proposed prod. zone NWNW / 330 FNL / 380 FWL / LAT 32.2820463 / LONG -103.5845822 |   | 10. Field and Pool, or Exploratory (59900)<br>TRIPLE X / BONE SPRING |                 |
| 14. Distance in miles and direction from nearest town or post office*  |   | 12. County or Parish<br>LEA  | 13. State<br>NM |
| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)<br>340 feet  | 16. No. of acres in lease<br>960                    | 17. Spacing Unit dedicated to this well<br>320                       |                 |
| 18. Distance from proposed location* to nearest well, drilling, completed, 280 feet applied for, on this lease, ft.  | 19. Proposed Depth<br>9960 feet / 19767 feet        | 20. BLM/BIA Bond No. on file<br>FED: CO1104                          |                 |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.)<br>3662 feet   | 22. Approximate date work will start*<br>09/05/2018 | 23. Estimated duration<br>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<br>(Electronic Submission)                  |  | Name (Printed/Typed)<br>Rebecca Deal / Ph: (405)228-8429 | Date<br>09/15/2016 |
| Title<br>Regulatory Compliance Professional               |  |  |                    |
| Approved by (Signature)<br>(Electronic Submission)        |  | Name (Printed/Typed)<br>Cody Layton / Ph: (575)234-5959  | Date<br>01/30/2017 |
| Title<br>Supervisor Multiple Resources<br>Office<br>HOBBS |  |  |                    |

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

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

(Continued on page 2)

\*(Instructions on page 2)

**APPROVED WITH CONDITIONS**

KZ  
02/09/17

|   |                             |                       |
|---|-----------------------------|-----------------------|
| APD ID: 10400005765                               | Submission Date: 09/15/2016 | Highlight All Changes |
| Operator Name: DEVON ENERGY PRODUCTION COMPANY LP | Federal/Indian APD: FED     |                       |
| Well Name: THISTLE UNIT                           | Well Number: 152H           |                       |
| Well Type: OIL WELL                               | Well Work Type: Drill       |                       |

**HOBBS OCD**  
FEB 09 2017  
**RECEIVED**

Application

**Section 1 - General**

|                                    |   |   |
|------------------------------------|---|---|
| APD ID: 10400005765                | Tie to previous NOS?  | Submission Date: 09/15/2016               |
| BLM Office: HOBBS                  | User: Rebecca Deal  | Title: Regulatory Compliance Professional |
| Federal/Indian APD: FED            | Is the first lease penetrated for production Federal or Indian? FED |   |
| Lease number: NMNM 94186           | Lease Acres: 960  |   |
| 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  
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**

|                                     |                              |
|-------------------------------------|------------------------------|
| Well in Master Development Plan? NO | Mater 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:** THISTLE UNIT

**Well Number:** 152H

**Well Name:** THISTLE UNIT

**Well Number:** 152H

**Well API Number:**

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

**Field Name:** TRIPLE X

**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?** YES

**New surface disturbance?** N

**Type of Well Pad:** MULTIPLE WELL

**Multiple Well Pad Name:**  
THISTLE UNIT

**Number:** 152H, 153H, 157H,

**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:**

**Distance to nearest well:** 280 FT

**Distance to lease line:** 340 FT

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

**Well plat:** THISTLE UNIT 152H\_C-102 Signed\_09-15-2016.pdf

**Well work start Date:** 09/05/2018

**Duration:** 45 DAYS

### Section 3 - Well Location Table

**Survey Type:** RECTANGULAR

**Describe Survey Type:**

**Datum:** NAD83

**Vertical Datum:** NAVD88

**Survey number:** 4718

**STATE:** NEW MEXICO

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

**Latitude:** 32.2548475

**Longitude:** -103.5818244

**SHL**

**Elevation:** 3662

**MD:** 0

**TVD:** 0

**Leg #: 1**

**Lease Type:** STATE

**Lease #:** STATE

**NS-Foot:** 340

**NS Indicator:** FSL

**EW-Foot:** 1230

**EW Indicator:** FWL

**Twsp:** 23S

**Range:** 33E

**Section:** 33

**Aliquot:** SWSW

**Lot:**

**Tract:**

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: THISTLE UNIT

Well Number: 152H

|                 |                             |                                       |                    |
|-----------------|-----------------------------|---------------------------------------|--------------------|
|                 | <b>STATE:</b> NEW MEXICO    | <b>Meridian:</b> NEW MEXICO PRINCIPAL | <b>County:</b> LEA |
|                 | <b>Latitude:</b> 32.2548475 | <b>Longitude:</b> -103.5818244        |                    |
| KOP             | <b>Elevation:</b> -5895     | <b>MD:</b> 9605                       | <b>TVD:</b> 9557   |
| <b>Leg #: 1</b> | <b>Lease Type:</b> STATE    | <b>Lease #:</b> STATE                 |                    |
|                 | <b>NS-Foot:</b> 340         | <b>NS Indicator:</b> FSL              |                    |
|                 | <b>EW-Foot:</b> 420         | <b>EW Indicator:</b> FWL              |                    |
|                 | <b>Twsp:</b> 23S            | <b>Range:</b> 33E                     | <b>Section:</b> 33 |
|                 | <b>Aliquot:</b> SWSW        | <b>Lot:</b>                           | <b>Tract:</b>      |
|                 | <b>STATE:</b> NEW MEXICO    | <b>Meridian:</b> NEW MEXICO PRINCIPAL | <b>County:</b> LEA |
|                 | <b>Latitude:</b> 32.2548475 | <b>Longitude:</b> -103.5818244        |                    |
| PPP             | <b>Elevation:</b> -6373     | <b>MD:</b> 10358                      | <b>TVD:</b> 10035  |
| <b>Leg #: 1</b> | <b>Lease Type:</b> STATE    | <b>Lease #:</b> STATE                 |                    |
|                 | <b>NS-Foot:</b> 820         | <b>NS Indicator:</b> FSL              |                    |
|                 | <b>EW-Foot:</b> 415         | <b>EW Indicator:</b> FWL              |                    |
|                 | <b>Twsp:</b> 23S            | <b>Range:</b> 33E                     | <b>Section:</b> 33 |
|                 | <b>Aliquot:</b> SWSW        | <b>Lot:</b>                           | <b>Tract:</b>      |
|                 | <b>STATE:</b> NEW MEXICO    | <b>Meridian:</b> NEW MEXICO PRINCIPAL | <b>County:</b> LEA |
|                 | <b>Latitude:</b> 32.2820463 | <b>Longitude:</b> -103.5845822        |                    |
| EXIT            | <b>Elevation:</b> -6298     | <b>MD:</b> 19767                      | <b>TVD:</b> 9960   |
| <b>Leg #: 1</b> | <b>Lease Type:</b> FEDERAL  | <b>Lease #:</b> NMNM94186             |                    |
|                 | <b>NS-Foot:</b> 330         | <b>NS Indicator:</b> FNL              |                    |
|                 | <b>EW-Foot:</b> 380         | <b>EW Indicator:</b> FWL              |                    |
|                 | <b>Twsp:</b> 23S            | <b>Range:</b> 33E                     | <b>Section:</b> 28 |
|                 | <b>Aliquot:</b> NWNW        | <b>Lot:</b>                           | <b>Tract:</b>      |
|                 | <b>STATE:</b> NEW MEXICO    | <b>Meridian:</b> NEW MEXICO PRINCIPAL | <b>County:</b> LEA |
|                 | <b>Latitude:</b> 32.2820463 | <b>Longitude:</b> -103.5845822        |                    |
| BHL             | <b>Elevation:</b> -6298     | <b>MD:</b> 19767                      | <b>TVD:</b> 9960   |
| <b>Leg #: 1</b> | <b>Lease Type:</b> FEDERAL  | <b>Lease #:</b> NMNM94186             |                    |
|                 | <b>NS-Foot:</b> 330         | <b>NS Indicator:</b> FNL              |                    |
|                 | <b>EW-Foot:</b> 380         | <b>EW Indicator:</b> FWL              |                    |

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: THISTLE UNIT

Well Number: 152H

Twsp: 23S

Range: 33E

Section: 28

Aliquot: NWNW

Lot:

Tract:

## Drilling Plan

### Section 1 - Geologic Formations

ID: Surface formation

Name: UNKNOWN

Lithology(ies):

OTHER - Surface

Elevation: 3662

True Vertical Depth: 0

Measured Depth: 0

Mineral Resource(s):

NONE

Is this a producing formation? N

ID: Formation 1

Name: RUSTLER

Lithology(ies):

ANHYDRITE

Elevation: 2326

True Vertical Depth: 1335

Measured Depth: 1335

Mineral Resource(s):

NONE

Is this a producing formation? N

ID: Formation 2

Name: TOP OF SALT

Lithology(ies):

SALT

Elevation: 1826

True Vertical Depth: 1835

Measured Depth: 1835

Mineral Resource(s):

NONE

Is this a producing formation? N

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

**Well Name:** THISTLE UNIT

**Well Number:** 152H

**ID:** Formation 3

**Name:** BASE OF SALT

**Lithology(ies):**

SALT

**Elevation:** -1242

**True Vertical Depth:** 4903

**Measured Depth:** 4903

**Mineral Resource(s):**

NONE

**Is this a producing formation?** N

**ID:** Formation 4

**Name:** DELAWARE

**Lithology(ies):**

SANDSTONE

**Elevation:** -1484

**True Vertical Depth:** 5145

**Measured Depth:** 5145

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 5

**Name:** BRUSHY CANYON LOWER

**Lithology(ies):**

SANDSTONE

**Elevation:** -5199

**True Vertical Depth:** 8860

**Measured Depth:** 8860

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 6

**Name:** BONE SPRING LIME

**Lithology(ies):**

LIMESTONE

**Elevation:** -5427

**True Vertical Depth:** 9088

**Measured Depth:** 9088

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

**Well Name:** THISTLE UNIT

**Well Number:** 152H

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 7

**Name:** BONE SPRING

**Lithology(ies):**

SILTSTONE

**Elevation:** -5614

**True Vertical Depth:** 9275

**Measured Depth:** 9275

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 8

**Name:** BONE SPRING

**Lithology(ies):**

SILTSTONE

**Elevation:** -5938

**True Vertical Depth:** 9600

**Measured Depth:** 9600

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 9

**Name:** BONE SPRING

**Lithology(ies):**

SILTSTONE

**Elevation:** -6283

**True Vertical Depth:** 9945

**Measured Depth:** 9945

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** Y

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

**Well Name:** THISTLE UNIT

**Well Number:** 152H

**ID:** Formation 10

**Name:** BONE SPRING 1ST

**Lithology(ies):**

SANDSTONE

**Elevation:** -6538

**True Vertical Depth:** 10200

**Measured Depth:** 10200

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

## Section 2 - Blowout Prevention

---

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

**Rating Depth:** 5100

**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:**

Thistle Unit 152H\_3M BOPE Double Ram and CLS Schematic\_09-15-2016.pdf

**BOP Diagram Attachment:**

Thistle Unit 152H\_3M BOPE Double Ram and CLS Schematic\_09-15-2016.pdf

---

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

**Rating Depth:** 10034

**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:**

Thistle Unit 152H\_3M BOPE Double Ram and CLS Schematic\_09-15-2016.pdf

**BOP Diagram Attachment:**

Thistle Unit 152H\_3M BOPE Double Ram and CLS Schematic\_09-15-2016.pdf

---

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

**Well Name:** THISTLE UNIT

**Well Number:** 152H

### Section 3 - Casing

---

**String Type:** SURFACE

**Other String Type:**

**Hole Size:** 17.5

**Top setting depth MD:** 0

**Top setting depth TVD:** 0

**Top setting depth MSL:** -6298

**Bottom setting depth MD:** 1400

**Bottom setting depth TVD:** 1400

**Bottom setting depth MSL:** -7698

**Calculated casing length MD:** 1400

**Casing Size:** 13.375

**Other Size**

**Grade:** H-40

**Other Grade:**

**Weight:** 48

**Joint Type:** STC

**Other Joint Type:**

**Condition:** NEW

**Inspection Document:**

**Standard:** API

**Spec Document:**

**Tapered String?:** N

**Tapered String Spec:**

### Safety Factors

**Collapse Design Safety Factor:** 1.18

**Burst Design Safety Factor:** 2.64

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

**Joint Tensile Design Safety Factor:** 8.05

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

**Body Tensile Design Safety Factor:** 8.05

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

Thistle Unit 152H\_Surface Casing Assumptions\_09-15-2016.docx

---

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

**Well Name:** THISTLE UNIT

**Well Number:** 152H

**String Type:** INTERMEDIATE

**Other String Type:**

**Hole Size:** 12.25

**Top setting depth MD:** 0

**Top setting depth TVD:** 0

**Top setting depth MSL:** -6298

**Bottom setting depth MD:** 5100

**Bottom setting depth TVD:** 5100

**Bottom setting depth MSL:** -11398

**Calculated casing length MD:** 5100

**Casing Size:** 9.625

**Other Size**

**Grade:** J-55

**Other Grade:**

**Weight:** 40

**Joint Type:** OTHER

**Other Joint Type:** BTC

**Condition:** NEW

**Inspection Document:**

**Standard:** API

**Spec Document:**

**Tapered String?:** N

**Tapered String Spec:**

### **Safety Factors**

**Collapse Design Safety Factor:** 1.15

**Burst Design Safety Factor:** 1.77

**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):**

Thistle Unit 152H\_Intermediate Casing Assumptions\_09-15-2016.docx

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

**Well Name:** THISTLE UNIT

**Well Number:** 152H

**String Type:** INTERMEDIATE

**Other String Type:**

**Hole Size:** 12.25

**Top setting depth MD:** 4300

**Top setting depth TVD:** 4300

**Top setting depth MSL:** -10598

**Bottom setting depth MD:** 5100

**Bottom setting depth TVD:** 5100

**Bottom setting depth MSL:** -11398

**Calculated casing length MD:** 800

**Casing Size:** 9.625

**Other Size**

**Grade:** HCK-55

**Other Grade:**

**Weight:** 40

**Joint Type:** OTHER

**Other Joint Type:** btc

**Condition:** NEW

**Inspection Document:**

**Standard:** API

**Spec Document:**

**Tapered String?:** N

**Tapered String Spec:**

### **Safety Factors**

**Collapse Design Safety Factor:** 1.58

**Burst Design Safety Factor:** 1.47

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

**Joint Tensile Design Safety Factor:** 4.5

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

**Body Tensile Design Safety Factor:** 4.5

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

Thistle Unit 152H\_Intermediate Casing Assumptions\_09-15-2016.docx

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: THISTLE UNIT

Well Number: 152H

String Type: PRODUCTION

Other String Type:

Hole Size: 8.75

Top setting depth MD: 0

Top setting depth TVD: 0

Top setting depth MSL: -6298

Bottom setting depth MD: 19767

Bottom setting depth TVD: 9660

Bottom setting depth MSL: -5998

Calculated casing length MD: 19767

Casing Size: 5.5

Other Size

Grade: P-110

Other Grade:

Weight: 17

Joint Type: OTHER

Other Joint Type: BTC

Condition: NEW

Inspection Document:

Standard: API

Spec Document:

Tapered String?: N

Tapered String Spec:

### Safety Factors

Collapse Design Safety Factor: 1.56

Burst Design Safety Factor: 1.93

Joint Tensile Design Safety Factor type: BUOYANT

Joint Tensile Design Safety Factor: 2.09

Body Tensile Design Safety Factor type: BUOYANT

Body Tensile Design Safety Factor: 2.09

Casing Design Assumptions and Worksheet(s):

Thistle Unit 152H\_Production Casing Assumptions\_09-15-2016.docx

### Section 4 - Cement

Casing String Type: INTERMEDIATE

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: THISTLE UNIT

Well Number: 152H

**Stage Tool Depth:**

Lead

Top MD of Segment: 0

Bottom MD Segment: 0

Cement Type: N/A

Additives: N/A

Quantity (sks): 0

Yield (cu.ff./sk): 0

Density: 0

Volume (cu.ft.): 0

Percent Excess: 0

**Casing String Type: SURFACE**

**Stage Tool Depth: 300**

Lead

Top MD of Segment: 0

Bottom MD Segment: 300

Cement Type: C

Additives: N/A

Quantity (sks): 185

Yield (cu.ff./sk): 1.72

Density: 13.5

Volume (cu.ft.): 312

Percent Excess: 50

Tail

Top MD of Segment: 300

Bottom MD Segment: 1400

Cement Type: C

Additives: N/A

Quantity (sks): 825

Yield (cu.ff./sk): 1.33

Density: 14.8

Volume (cu.ft.): 1106

Percent Excess: 50

**Stage Tool Depth: 300**

Lead

Top MD of Segment: 0

Bottom MD Segment: 300

Cement Type: C

Additives: N/A

Quantity (sks): 235

Yield (cu.ff./sk): 1.33

Density: 14.8

Volume (cu.ft.): 312

Percent Excess: 50

**Stage Tool Depth:**

Lead

Top MD of Segment: 0

Bottom MD Segment: 1400

Cement Type: C

Additives: 1% Calcium Chloride

Quantity (sks): 1090

Yield (cu.ff./sk): 1.34

Density: 14.8

Volume (cu.ft.): 1459

Percent Excess: 50

**Casing String Type: INTERMEDIATE**

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: THISTLE UNIT

Well Number: 152H

**Stage Tool Depth:**

Lead

**Top MD of Segment:** 0

**Bottom MD Segment:** 4100

**Cement Type:** C

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

**Quantity (sks):** 905

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

**Volume (cu.ft.):** 1669

**Percent Excess:** 30

~~Lead~~  
**Density:** 12.9

**Top MD of Segment:** 4100

**Bottom MD Segment:** 5100

**Cement Type:** H

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

**Quantity (sks):** 320

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

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

**Percent Excess:** 30

**Density:** 14.8

**Casing String Type:** PRODUCTION

**Stage Tool Depth:** 5500

Lead

**Top MD of Segment:** 4800

**Bottom MD Segment:** 4900

**Cement Type:** C

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

**Quantity (sks):** 20

**Yield (cu.ff./sk):** 3.31

**Volume (cu.ft.):** 66

**Percent Excess:** 25

~~Tail~~  
lb/sk D-Air 5000

**Density:** 10.9

**Bottom MD Segment:** 5000

**Cement Type:** H

**Quantity (sks):** 30

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

**Top MD of Segment:** 4900

**Volume (cu.ft.):** 39

**Percent Excess:** 25

**Additives:** 0.125 lbs/sack Poly-E-Flake

**Density:** 14.8

**Stage Tool Depth:**

Lead

**Top MD of Segment:** 4900

**Bottom MD Segment:** 10000

**Cement Type:** H

**Additives:** Poz (Fly Ash) + 0.3% BWOC  
HR-601 + 10% bwoc Bentonite

**Quantity (sks):** 580

**Yield (cu.ff./sk):** 2.31

**Density:** 11.9

**Volume (cu.ft.):** 1389

**Percent Excess:** 25

Tail

**Top MD of Segment:** 10000

**Bottom MD Segment:** 19767

**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):** 2265

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

**Volume (cu.ft.):** 2714

**Percent Excess:** 25

**Density:** 14.5

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: THISTLE UNIT

Well Number: 152H

Stage Tool Depth: 5500

Lead

Top MD of Segment: 5000

Bottom MD Segment: 10000

Cement Type: C

Additives: Enhancer 923 + 10% BWOC Quantity (sks): 420

Yield (cu.ff./sk): 3.31

Bentonite + 0.05% BWOC SA-1015 +  
0.3% BWOC HR-800 + 0.2% BWOC

Volume (cu.ft.): 1389

Percent Excess: 25

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

lb/sk D-Air 5000

Density: 10.9

Bottom MD Segment: 19767

Cement Type: H

Quantity (sks): 2265

Yield (cu.ff./sk): 1.2

Top MD of Segment: 10000

Volume (cu.ft.): 2714

Percent Excess: 25

Additives: Poz (Fly Ash) + 0.5% bwoc

HALAD-344 + 0.4% bwoc CFR-3 +

0.2% BWOC HR-601 + 2% bwoc

Bentonite

Density: 14.5

### 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: 1400

Mud Type: WATER-BASED MUD

Min Weight (lbs./gal.): 8.5

Max Weight (lbs./gal.): 9

Density (lbs/cu.ft.):

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

PH:

Viscosity (CP): 2

Filtration (cc):

Salinity (ppm):

Additional Characteristics:

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

**Well Name:** THISTLE UNIT

**Well Number:** 152H

**Top Depth:** 0

**Bottom Depth:** 5100

**Mud Type:** SALT SATURATED

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

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

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

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

**PH:**

**Viscosity (CP):** 2

**Filtration (cc):**

**Salinity (ppm):**

**Additional Characteristics:**

---

**Top Depth:** 5100

**Bottom Depth:** 19767

**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:**

GR

**Coring operation description for the well:**

N/A

## Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 4363

**Anticipated Surface Pressure:** 2155.3

**Anticipated Bottom Hole Temperature(F):** 160

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

**Describe:**

**Contingency Plans geohazards description:**

**Contingency Plans geohazards attachment:**

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: THISTLE UNIT

Well Number: 152H

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Thistle Unit 152H\_H2S Plan\_09-15-2016.pdf

## Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Thistle Unit 152H\_Directional Plan\_09-15-2016.pdf

Other proposed operations facets description:

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

Other proposed operations facets attachment:

Thistle Unit 152H\_Closed Loop Design Plan\_09-15-2016.pdf  
Thistle Unit 152H\_Multi-Bowl Verbiage\_3M\_09-15-2016.pdf  
Thistle Unit 152H\_Multi-Bowl Wellhead\_09-15-2016.pdf  
Thistle Unit 152H\_AC Report\_09-15-2016.pdf

Other Variance attachment:

Thistle Unit 152H\_H\_P Co-flex hose\_09-15-2016.pdf

SUPO

## Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

Thistle Unit 152H\_Access Route Map\_09-15-2016.pdf  
THISTLE UNIT 152H\_ROAD\_RE\_ROUTE\_P\_11-03-2016.PDF

Existing Road Purpose: ACCESS,FLUID TRANSPORT

Row(s) Exist? NO

### ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: THISTLE UNIT

Well Number: 152H

## Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

THISTLE UNIT 152H\_ROAD\_RE\_ROUTE\_P\_11-16-2016.PDF

New road type: RESOURCE

Length: 716.2 Feet Width (ft.): 20

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

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 20

New road access erosion control: The terrain is flat in this area. No major issue with erosion.

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: OTHER

Access topsoil source: ONSITE

Access surfacing type description: Caliche - from the Brinstool Caliche Pit in the NENE of Section 20 - T23S-R33E

Access onsite topsoil source depth: 6

Offsite topsoil source description:

Onsite topsoil removal process: NA

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: N/A

Road Drainage Control Structures (DCS) attachment:

## Access Additional Attachments

Additional Attachment(s):

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: THISTLE UNIT

Well Number: 152H

Additional Attachment(s):

### Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

Thistle Unit 152H\_one mile map\_09-15-2016.pdf

Existing Wells description:

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

Submit or defer a Proposed Production Facilities plan? SUBMIT

Estimated Production Facilities description: Thistle Unit 33 CTB 1

Production Facilities description: Thistle Unit 33 CTB 1 Plat. Battery Connect, Battery Connect Electric, Flowline Plat 400733XYZ attached stating three 4" flowlines & one 4" gaslift line buried in same ditch from Thistle Unit 152H, 153H, & 157H to Thistle Unit 33 CBT1.

Production Facilities map:

Thistle Unit 152H\_Thistle Unit 33 CTB 1 Flowline\_12-07-2016.pdf

Thistle Unit 152H\_THISTLE\_UNIT\_33\_CTB\_1\_BAT\_ELECTRIC\_P\_12-07-2016.PDF

Thistle Unit 152H\_THISTLE\_UNIT\_33\_CTB\_1\_BATCON\_P\_R1\_12-07-2016.pdf

Thistle Unit 152H\_THISTLE\_UNIT\_33\_CTB\_1\_P\_R1\_12-07-2016.pdf

### 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: STATE

Water source transport method: PIPELINE,TRUCKING

Source transportation land ownership: STATE

Water source volume (barrels): 270000

Source volume (acre-feet): 34.801136

Source volume (gal): 11340000

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

**Well Name:** THISTLE UNIT

**Well Number:** 152H

**Water source and transportation map:**

Thistle Unit 152H\_Water Transfer Map\_11-15-2016.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. Reason for showing two routes: 10" or 12" layflat hose. Preference is for 12", based on availability. The treated water is the preferred line. If we can't get enough volume we would supplement with fresh water.

**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:**

**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. Caliche will be coming from the Brininstool Caliche Pit in the NENE of Section 20 - T23S-R33E. Caliche Map attached.

**Construction Materials source location attachment:**

Thistle Unit 152H\_Caliche map\_12-14-2016.pdf

### Section 7 - Methods for Handling Waste

**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

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

**Well Name:** THISTLE UNIT

**Well Number:** 152H

**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:** Average produced BWPD over the flowback period (first 30 days of production).

**Amount of waste:** 2000                  barrels

**Waste disposal frequency :** Daily

**Safe containment description:** N/A

**Safe containmant attachment:**

**Waste disposal type:** RECYCLE                                  **Disposal location ownership:** STATE

**Disposal type description:**

**Disposal location description:** All produced water will be recycled at our Thistle water reuse facility. Any excess water that cannot be recycled will be sent to one of our 3 SWD's (Caballo 9 St 1, Rio Blanco 33 Fed 2, Rio Blanco 4 Fed Com 3) or to OWL (third-party; state tie-in).

**Waste type:** PRODUCED WATER

**Waste content description:** Average produced BWPD over the first year of production.

**Amount of waste:** 500                  barrels

**Waste disposal frequency :** Daily

**Safe containment description:** N/A

**Safe containmant attachment:**

**Waste disposal type:** RECYCLE                                  **Disposal location ownership:** STATE

**Disposal type description:**

**Disposal location description:** All produced water will be recycled at our Thistle water reuse facility. Any excess water that cannot be recycled will be sent to one of our 3 SWD's (Caballo 9 St 1, Rio Blanco 33 Fed 2, Rio Blanco 4 Fed Com 3) or to OWL (third-party; state tie-in).

**Waste type:** DRILLING

**Waste content description:** Water Based Cuttings

**Amount of waste:** 1650                  barrels

**Waste disposal frequency :** Daily

**Safe containment description:** N/A

**Safe containmant attachment:**

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

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

**Well Name:** THISTLE UNIT

**Well Number:** 152H

**Disposal type description:**

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

### 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

**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:**

Thistle Unit 152H\_Rig Layout\_11-16-2016.pdf

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: THISTLE UNIT

Well Number: 152H

Comments:

## Section 10 - Plans for Surface Reclamation

Type of disturbance: NEW

Recontouring attachment:

Thistle Unit 152H\_Interim Reclamation\_09-15-2016.pdf

Drainage/Erosion control construction: N/A

Drainage/Erosion control reclamation: N/A

Wellpad long term disturbance (acres): 1.64

Wellpad short term disturbance (acres): 3.779

Access road long term disturbance (acres): 0.014

Access road short term disturbance (acres): 0.014

Pipeline long term disturbance (acres): 2.122865

Pipeline short term disturbance (acres): 2.122865

Other long term disturbance (acres): 0

Other short term disturbance (acres): 0

Total long term disturbance: 3.776865

Total short term disturbance: 5.915865

**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: THISTLE UNIT

Well Number: 152H

### Seed Management

#### Seed Table

Seed type: Seed source:  
 Seed name:  
 Source name: Source address:  
 Source phone:  
 Seed cultivar:  
 Seed use location:  
 PLS pounds per acre: Proposed seeding season:

#### Seed Summary

Total pounds/Acre:

| Seed Type | Pounds/Acre |
|-----------|-------------|
|-----------|-------------|

Seed reclamation attachment:

#### Operator Contact/Responsible Official Contact Info

First Name: JAMES

Last Name: CRITTENDEN

Phone: (575)748-1854

Email: JAMES.CRITTENDEN@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:** THISTLE UNIT

**Well Number:** 152H

**Disturbance type:** PIPELINE

**Describe:**

**Surface Owner:** STATE GOVERNMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:** HOBBS FIELD OFFICE OCD

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Disturbance type:** NEW ACCESS ROAD

**Describe:**

**Surface Owner:** STATE GOVERNMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:** HOBBS FIELD OFFICE OCD

**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:** THISTLE UNIT

**Well Number:** 152H

**Disturbance type:** EXISTING ACCESS ROAD

**Describe:**

**Surface Owner:** STATE GOVERNMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:** HOBBS FIELD OFFICE OCD

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Disturbance type:** WELL PAD

**Describe:**

**Surface Owner:** STATE GOVERNMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:** HOBBS FIELD OFFICE OCD

**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: THISTLE UNIT

Well Number: 152H

## Section 12 - Other Information

Right of Way needed? NO

Use APD as ROW?

ROW Type(s):

### ROW Applications

**SUPO Additional Information:** Thistle Unit 33 CTB 1. Battery Connect, Battery Connect Electric, Flowline Plat 400733XYZ attached stating three 4" flowlines & one 4" gaslift line buried in same ditch from Thistle Unit 152H, 153H, & 157H to Thistle Unit 33 CBT1. Caliche will be coming from the Brininstool Caliche Pit in the NENE of Section 20 - T23S-R33E. Caliche Map attached. Water Info - Reason for showing two routes: 10" or 12" layflat hose. Preference is for 12", based on availability. The treated water is the preferred line. If we can't get enough volume we would supplement with fresh water.

Use a previously conducted onsite? YES

Previous Onsite information: Previously conducted on-site 6/14/16 for Thistle Unit 152H 157H, 153H

### Other SUPO Attachment

Thistle Unit 152H\_THISTLE\_UNIT\_33\_CTB\_1\_BATCON\_P\_R1\_12-07-2016.pdf

Thistle Unit 152H\_THISTLE\_UNIT\_33\_CTB\_1\_P\_R1\_12-07-2016.pdf

Thistle Unit 152H\_THISTLE\_UNIT\_33\_CTB\_1\_BAT\_ELECTRIC\_P\_12-07-2016.PDF

Thistle Unit 152H\_Thistle Unit 33 CTB 1 Flowline\_12-07-2016.pdf

Thistle Unit 152H\_Caliche map\_12-14-2016.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:** THISTLE UNIT

**Well Number:** 152H

**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:** THISTLE UNIT

**Well Number:** 152H

**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: THISTLE UNIT

Well Number: 152H

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:** THISTLE UNIT

**Well Number:** 152H

**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:** Rebecca Deal

**Signed on:** 09/15/2016

**Title:** Regulatory Compliance Professional

**Street Address:** 333 West Sheridan Avenue

**City:** Oklahoma City

**State:** OK

**Zip:** 73102

**Phone:** (405)228-8429

**Email address:** Rebecca.Deal@dvn.com

### Field Representative

**Representative Name:** JAMES CRITTENDEN

**Street Address:** 6488 SEVEN RIVERS HWY

**City:** ARTESIA

**State:** NM

**Zip:** 88210

**Phone:** (575)748-1854

**Email address:** JAMES.CRITTENDEN@DVN.COM

## Payment Info

### Payment

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

**pay.gov Tracking ID:** 25TT6KDS